

South Australian Year Book



1979

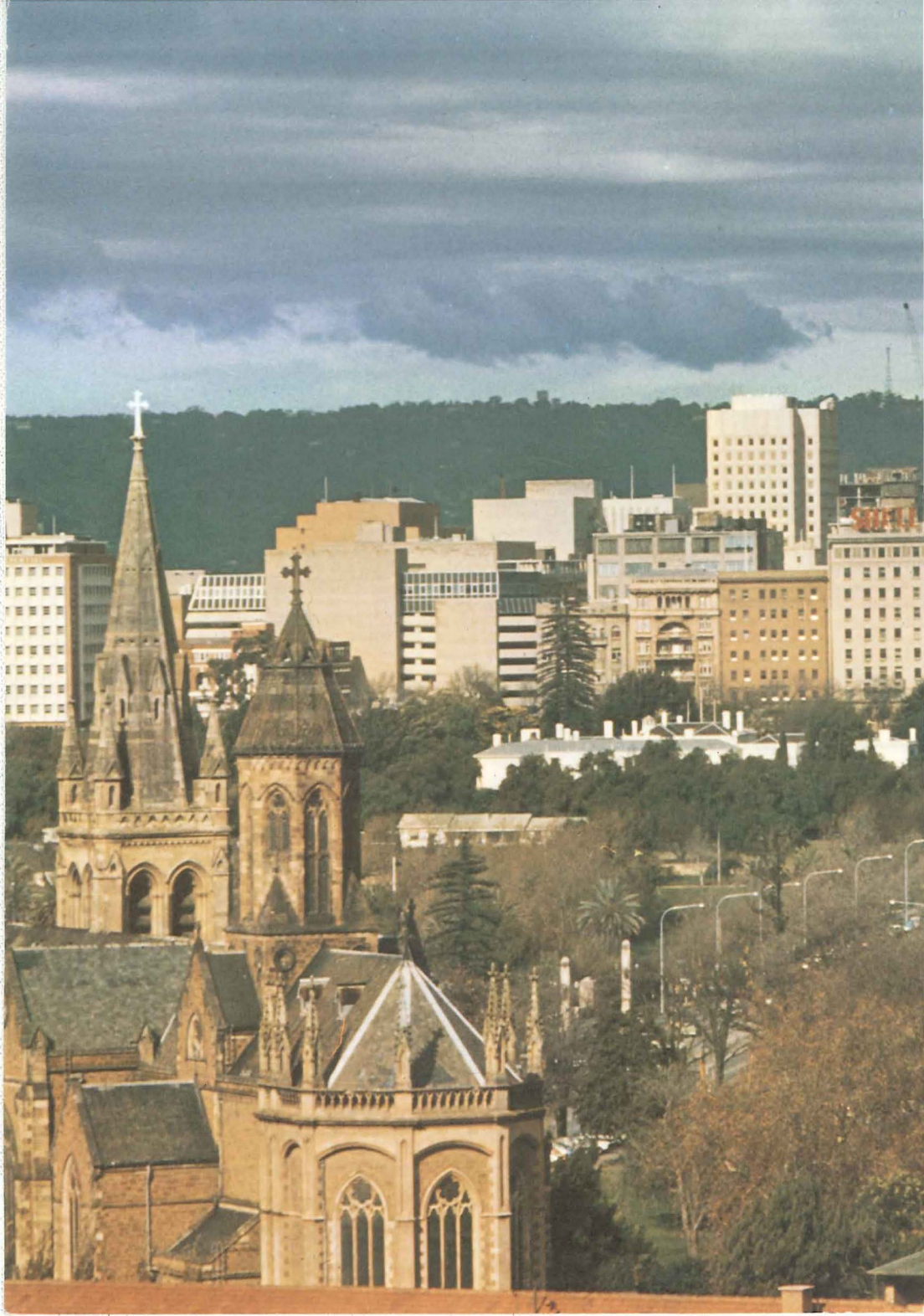
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SOUTH AUSTRALIAN
YEAR BOOK
1979

PDS Premier's Department
View of City of Adelaide, looking south from North Adelaide.





*South
Australian
Year Book*

No. 14 : 1979

B. E. LEONARD

*Deputy Commonwealth Statistician
and Government Statist*

**AUSTRALIAN BUREAU OF STATISTICS
SOUTH AUSTRALIAN OFFICE**

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PREFACE

The *South Australian Year Book* is a general reference work presenting an authoritative and comprehensive statistical and descriptive portrayal of South Australia. It includes studies of the historical and geographical background and of the social, physical and financial development of the State culminating in a picture of South Australia as it is today.

This volume, the fourteenth issue of the Year Book, includes special articles on Spiders and other Arachnids of South Australia, the Wine Industry of South Australia and Yorke Peninsula. Some chapters or portions of chapters have been condensed to make room for the additional material but in such cases appropriate cross-references are given indicating in which earlier volumes the more complete information may be found. A list of special articles which appeared in previous issues is shown on pages 695-6.

Other official statistics of South Australia are published in different media, each chosen as the most appropriate to meet a particular need, whether this be for a compact reference guide, or for more detailed historical or up-to-date data, either on a specific subject or embracing wider fields.

A comprehensive range of statistics is published also by the Australian Statistician covering the whole of Australia (but giving some broad details about the States) and by other Deputy Commonwealth Statisticians for their respective States. The details of such publications are available at each office of the Bureau.

This Office maintains an Information Service, which, on request, supplies available statistical information and advice on which publications are appropriate, and a library in which all publications of the Australian Bureau of Statistics are available for reference. Businessmen, government officers and members of the public are invited to make use of these services.

I gratefully acknowledge the valuable assistance given by contributors of special articles, the Government Printing Office staff and the staff of Griffin Press Limited. My thanks are tendered to the staff of this Bureau especially Mr I. R. Milne, B.Ec., under whose direction the Year Book was compiled by Mr. G. D. Carey, B.Ec., A.A.S.A. (Senior).

B. E. LEONARD
Deputy Commonwealth Statistician
and Government Statist

Australian Bureau of Statistics
195 North Terrace
Adelaide
October 1979

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METRICATION

In this publication quantities are shown in metric units.

1 millimetre	= 0.03937 inches
1 metre	= 3.28083 feet
1 kilometre	= 0.621371 miles
1 hectare	= 2.47105 acres
1 square kilometre	= 0.386102 square miles
1 kilogram	= 2.20462 pounds (lb)
1 tonne	= 0.984207 ton
1 tonne	= 36.7437 bushels of wheat
1 tonne	= 44.0925 bushels of barley
1 tonne	= 55.1156 bushels of oats
1 cubic metre	= 35.3147 cubic feet
1 cubic metre	= 423.776 super feet
1 cubic metre	= 27.4961 bushels
1 litre	= 0.219969 gallons

EXPLANATORY NOTES

In general, statistics in this volume relate to South Australia. A few tables, which are appropriately footnoted, include details for the Northern Territory.

Values are shown in Australian dollars (\$) or \$A) and cents unless another currency is specified.

In tables any discrepancies between totals and sums of components are because of rounding.

Symbols Used

<i>n.a.</i>	not collected, not available for publication
. .	not applicable
<i>n.e.c.</i>	not elsewhere classified
<i>n.e.i.</i>	not elsewhere included
<i>n.e.s.</i>	not elsewhere specified
—	nil or less than half the final digit shown
<i>n.y.a.</i>	figures not yet available
<i>p</i>	preliminary
————	break in continuity of series (where drawn across a column between two consecutive figures)

Citation of Acts

Acts of the Commonwealth Parliament are cited in *italics* with the relevant year in roman type *e.g. Census and Statistics Act 1905*.

Acts of the South Australian Parliament are cited in roman type *e.g. Licensing Act, 1967-1978*.

PART 1

NATURAL ENVIRONMENT

1.1 DESCRIPTION

Size and Location

The State of South Australia has the Southern Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately three kilometres to the west of this meridian.

The State is approximately 1 201 kilometres from east to west at the northern boundary and 1 143 kilometres at the head of the Great Australian Bight; from north to south it varies from 630 kilometres near the western extremity to approximately 1 325 kilometres near the eastern boundary; its coastline, excluding islands, measures approximately 3 700 kilometres. South Australia covers a total area of 984 377 square kilometres (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant economic use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

A comparison of the areas, length of coastline and standard time of the various States and Territories is shown in the following table. The areas and length of coastline were determined by the Division of National Mapping by manually digitising these features from the 1:250 000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60 000 points were digitised at an approximate

spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

Area, Coastline and Standard Times, Australia

State or Territory	Estimated Area (a)		Length of Coastline (a)	Standard Time	
	Total	Percentage of Total Area		Meridian Selected	Ahead of G.M.T.
	'000 km ²		km		Hours
New South Wales	802	10.43	1 900	150° E	(b) 10.0
Victoria	228	2.96	1 800	150° E	(b) 10.0
Queensland	1 727	22.48	7 400	150° E	10.0
South Australia	984	12.81	3 700	142° 30' E	(b) 9.5
Western Australia	2 526	32.87	12 500	120° E	8.0
Tasmania	68	0.88	3 200	150° E	(b) 10.0
Northern Territory	1 346	17.52	6 200	142° 30' E	9.5
Australian Capital Territory .	2	0.03	35	150° E	(b) 10.0
Australia	7 682	100.00	36 735		

(a) As determined by the Division of National Mapping.

(b) Because of 'daylight saving' an hour should be added from late October to early March.

Standard Time

In terms of The Standard Time Act, 1898 South Australia has used 'the mean time of the meridian of longitude one hundred and forty-two and a half degrees east of Greenwich' as standard time since 1 May 1899. This time, known in Australia as Central Standard Time, is nine hours thirty minutes ahead of Greenwich Mean Time, one hour thirty minutes ahead of Western Standard Time used in Western Australia and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

Before 1 February 1895 the meridian of Adelaide 138° 35' east (i.e. 9 hours 14 minutes ahead of Greenwich) was used to determine standard time in South Australia and subsequently from 1 February 1895 to 30 April 1899 the meridian 135° (i.e. 9 hours ahead of Greenwich) was used.

The Daylight Saving Act Amendment Act, 1972, assented to on 12 October 1972, provided for the observance of daylight saving in the summer of 1972-73, and in each subsequent summer, from the last Sunday in October until the first Sunday in March, South Australian summer time being adopted during this period.

A special article on the basis of time keeping and the determination of time standards was included on pages 1-2 of the *South Australian Year Book* 1973. An article on the determination of the time of sunrise and sunset was included on pages 3-5 of the same issue.

Physical Features

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50 per cent of the State is less than 150 metres above sea level and over 80 per cent is less than 300 metres. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 1 200 metres and have at no point proved difficult barriers to communications.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively

shallow depressions cut into the settled areas a distance of approximately 300 and 150 kilometres respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, approximately 480 kilometres in circumference and covering 4 350 square kilometres, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The effect of the vast ocean area to the south is a more temperate climate than would be suggested by the latitude while the trend of the coastline exposes the coastal areas to the westerly rain-bearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 800 kilometres to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty, the highest peak, being 727 metres. The western side of these ranges presents steep scarps to the Adelaide Plains while on the eastern side more gentle slopes merge into the Murray Basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary Peak of 1 166 metres is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence which results in higher rainfall in the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray Basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake, and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (1 440 metres), the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middle-back Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one-seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than 22 metres over the 642 kilometres between the border and the sea. For the 216 kilometres to Overland Corner the river occupies a wide valley and then passes through a narrower steeper-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is 15 metres below mean sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 240 kilometres in length.

General Geological Background

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat-lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extends over a distance of 800 kilometres. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St Vincent to the west, the plains of the Murray River to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert which, with the great coastal Nullarbor Plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which have played an important role in the industrial development of the State. The basin areas are important as sources of artesian water and are the areas in which important oil and natural gas discoveries have been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

A more complete discussion on the geology of South Australia was included on pages 3-18 of the *South Australian Year Book* 1970.

Seismicity

The most active area of the Australian continent is that of the South Australian seismic zones. The South Australian area has been monitored since 1962 by a small network of stations operated by the University of Adelaide.

The South Australian epicentres occur mainly in two belts, the major one being within the Adelaide Geosyncline and referred to as the Adelaide Seismic Zone. It extends from Kangaroo Island through the Mount Lofty and Flinders Ranges to Leigh Creek in the north. The epicentres generally follow the ranges and also the western boundary of the Upper Proterozoic Sequence and the fold trends in that part of the Geosyncline curving around to the east of Lake Torrens. The other main South Australian seismic zone is on Eyre Peninsula.

A discussion on earthquakes in South Australia was included on pages 18-19 of the *South Australian Year Book* 1970.

Eclipses

A special article on eclipses was included on pages 5-11 of the *South Australian Year Book* 1977.

1.2 CLIMATE AND METEOROLOGY

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes that are experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout the State. In South Australia daily weather reporting stations are established at nearly 80 representative localities and there are over 900 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Forecasting Centre, Adelaide. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

RAINFALL

Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four-fifths of the State receiving an average of less than 250 millimetres of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall, South Australia and Australia

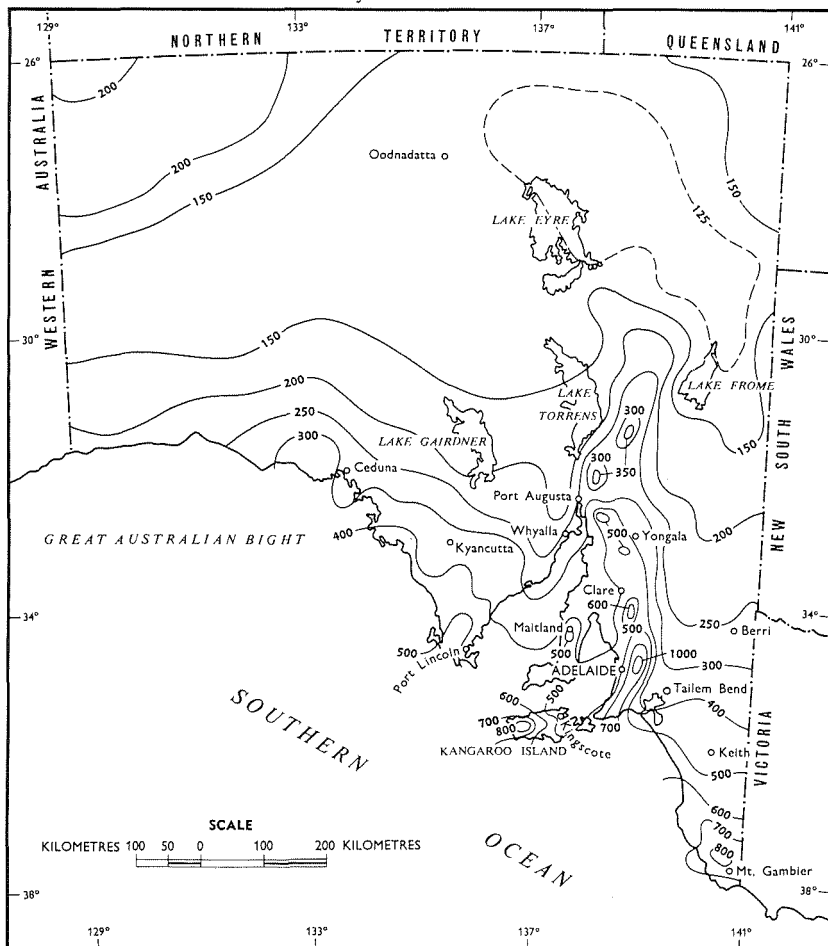
Average Annual Rainfall	Proportion of Total Area	
	South Australia	Australia
	Per cent	Per cent
Under 250 mm	82.6	38.8
250 mm and under 400 mm	9.1	19.8
400 mm and under 500 mm	4.5	11.2
500 mm and under 600 mm	2.6	9.5
600 mm and under 750 mm	0.8	7.5
750 mm and under 1 000 mm	0.4	6.2
1 000 mm and over	(a)	7.0
Total	100.0	100.0

(a) Less than 0.05 per cent—an area of the order of 750 hectares in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain is from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide in the vicinity of Mount Lofty, where the average annual rainfall is about 1 200 millimetres. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

SOUTH AUSTRALIA AVERAGE ANNUAL RAINFALL

Based on all years of records
Isohyets in millimetres



As can be seen from the map on page 6, the isohyets generally show highest annual averages along the ranges and southern parts of the coast. Averages fall off rapidly to less than 250 millimetres within 150 to 250 kilometres inland, and then decrease more gradually to below 125 millimetres in the vicinity of Lake Eyre. This area is the driest part of Australia and there have been protracted periods when the annual average there has been less than 75 millimetres.

Average monthly rainfalls at seventeen selected recording stations are shown in the table below. The average number of days receiving 0.2 millimetres or more of rain is also shown.

Average Rainfall and Days of Rain: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (a) (millimetres)													
Adelaide	20	21	24	44	68	71	66	61	51	45	31	26	528
Berri	15	22	11	20	28	22	23	29	28	23	23	22	266
Ceduna	10	14	15	22	39	37	41	37	28	28	21	22	314
Clare	26	26	25	48	76	79	81	79	71	57	36	30	634
Keith	19	23	22	35	57	52	55	57	51	45	32	26	474
Kingscote	15	18	18	37	60	73	79	64	46	37	24	19	490
Kyancutta	13	18	14	22	37	41	44	43	33	28	23	20	336
Maitland	18	22	20	44	64	69	67	63	50	43	28	22	510
Mount Gambier	25	33	34	61	76	77	103	91	70	66	47	38	721
Oodnadatta	21	26	14	10	16	12	11	10	11	11	9	13	164
Port Augusta	15	17	17	19	26	27	19	23	22	23	18	16	242
Port Lincoln	14	15	19	37	58	74	78	67	49	36	23	18	488
Port Pirie	19	19	18	29	40	41	33	36	34	33	23	21	346
Stirling	39	37	43	96	143	183	161	156	124	99	61	48	1 190
Tailem Bend	19	24	22	28	43	39	40	41	39	38	28	27	388
Whyalla	20	25	17	18	28	25	22	25	25	26	22	20	273
Yongala	22	21	17	26	37	41	40	46	38	33	27	25	373
AVERAGE NUMBER OF DAYS OF RAIN (b)													
Adelaide	4	4	5	9	13	15	16	16	13	11	8	6	120
Berri	3	4	3	6	9	6	8	11	8	5	5	4	72
Ceduna	3	4	4	7	12	10	14	13	11	9	6	5	98
Clare	4	4	5	9	13	14	16	15	13	11	8	6	118
Keith	4	4	4	8	12	12	15	15	12	11	8	6	111
Kingscote	4	4	5	9	13	16	18	17	13	10	7	5	121
Kyancutta	3	3	3	7	11	10	14	13	11	8	6	5	94
Maitland	4	4	4	9	12	14	15	15	12	10	7	5	111
Mount Gambier	8	9	11	15	18	18	22	22	18	15	12	186	
Oodnadatta	4	2	3	3	3	3	2	4	3	2	4	2	35
Port Augusta	3	3	3	4	6	9	8	7	5	6	4	4	62
Port Lincoln	4	4	5	10	14	16	18	18	13	11	7	6	126
Port Pirie	3	3	3	5	8	10	10	10	8	7	5	4	76
Stirling	6	6	7	13	15	17	18	18	15	14	11	9	149
Tailem Bend	4	4	4	7	11	11	13	13	11	9	7	6	100
Whyalla	3	3	3	5	7	7	8	8	6	6	4	4	64
Yongala	4	3	4	6	10	11	13	13	10	8	6	5	93

(a) For all years of record to end of 1976 except for Adelaide (see page 16). (b) Days receiving 0.2 millimetres or more.

Seasonal Distribution of Rainfall

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but rarely is completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view. The first significant falls generally arrive during April or May; June, July and August are usually the wettest months, with rains tending to show a marked decrease during September and October.

By contrast, the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 75

millimetres may occur in any month of the year, but on the other hand at least two or three months without any significant rain at all are experienced practically every year.

Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 100 millimetres an hour over a five-minute period have been recorded. These would have been thunderstorm rains, and intense falls can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of 24 hours ending at 9 a.m. were at:

Ardrossan (18 February 1946)	206 mm
Oodnadatta (9 February 1976)	200 mm
Carpa, 25 km SW of Cowell (18 February 1946)	199 mm
Hesso, 50 km NW of Port Augusta (18 February 1946)	187 mm
Wilmington (1 March 1921)	181 mm
Wynbring, 100 km W of Tarcoola (28 February 1921)	178 mm

Other Yorke Peninsula towns besides Ardrossan also recorded over 175 millimetres on 18 February 1946. These, however, are very much below the 24-hour falls which have been recorded in tropical parts of Queensland and Western Australia. Crohamhurst in Queensland once recorded 907 millimetres in one day, and more than twenty other centres in Queensland have had daily readings exceeding 600 millimetres.

Snow and Hail

The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist for a very long period because of the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 132 days of snow experienced over a period of 138 years to the end of 1978. While most falls have occurred during the months June to September snow has been experienced as early as 25 April (1916) and as late as 3 December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

Floods

Various areas of South Australia are prone to localised flooding. However, most local flooding is associated with intense rainfall, and consequently, is of comparatively short duration. Exceptions have occurred in parts of the south-east and far north of the State where, because of topography and other soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

Droughts

When dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The worst years in South Australia were 1863-67, 1896-98, 1901-03, 1913-16, 1926-30, 1939-40, 1943-45, 1959-62

and 1965 in the interior, and 1859-60, 1884-86, 1895-98, 1911-15, 1928-29, 1943-45, 1959, 1967 and 1976-77 in the settled areas.

The driest year in terms of actual rainfall was 1967, when an all-time low figure for the year of 257 millimetres was recorded in Adelaide. However, the 1914 drought is generally recognised as being the most severe experienced, and in that year districts where drought was almost unknown were seriously affected. The average wheat yield fell to only 0.09 tonnes per hectare, little more than one tenth of the yield in previous seasons. In places the River Murray was just a series of waterholes.

The northern areas suffer more frequent droughts than areas near the coast. In 1896 the track north-west of Port Augusta was closed to all traffic because of the drought stricken nature of the country. At about this time the drought was particularly severe in the north-east of the State, and this pastoral country was entering its eighth consecutive year of drought before relief rains fell in March 1902.

A more detailed discussion with special reference to rainfall deciles was included on pages 8-10 of the *South Australian Year Book* 1967. Further details of droughts appear in the Bureau of Meteorology publications *Droughts in Australia* by J. C. Foley (Bulletin No. 43) and *Rainfall Deciles as Drought Indicators* by W. J. Gibbs and J. V. Maher (Bulletin No. 48).

Rainfall Probability

A special article on rainfall probability, *i.e.* the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period, was included on pages 6-9 of the *South Australian Year Book* 1966.

TEMPERATURE

Seasonal Temperature Conditions

Air temperature is normally recorded under standard conditions in a Stevenson Screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperature in a mid-winter month (July) are shown on the maps on pages 11 and 12 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than 75 to 150 kilometres inland maximum daily temperatures usually exceed 32.5°C and are quite often over 37.5°C. In general, areas to the north of the 32.5°C isotherm on the January map average more than 20 days annually during which the maximum temperature exceeds 37.5°C; while it is only on the extreme south-east coastal fringe and Kangaroo Island where the average number of such 'very hot days' is less than five a year. Air masses prevalent at this time of the year are relatively dry; hence cooling during the night is marked—a fall of 10°C to 20°C from day to night is usual.

During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 10°C, and these low temperatures cause vegetation growth to become very slow, although it does not cease altogether.

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. In this period severe frosts are sometimes experienced and these can cause considerable damage to fruit crops

during the bud, flower and small fruit stages. When hot, dry, northerly winds persist over the State for two or more consecutive days, developing crops may suffer stress.

Monthly mean maximum and minimum temperatures at seventeen selected recording stations within the State are shown in the following tables. These are based as nearly as possible on a standard period except for the figures for Adelaide which are based on all years of record.

Mean Maximum Temperatures: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	*Celsius												
Adelaide	29.5	29.3	26.8	22.7	18.7	15.8	15.0	16.4	18.9	22.0	25.1	27.7	22.3
Berri	31.1	30.2	28.1	22.5	18.9	15.7	15.4	17.2	20.7	23.4	26.8	29.7	23.3
Ceduna	28.5	27.4	26.6	23.7	20.6	18.2	17.0	18.3	21.4	23.3	25.8	27.2	23.2
Clare	29.3	29.0	26.3	21.1	16.9	13.6	12.9	14.6	17.5	20.8	22.0	27.7	21.2
Keith	30.1	28.8	26.9	21.9	17.6	15.4	14.7	15.7	18.5	21.5	24.2	27.3	21.9
Kingscote	23.5	23.2	22.0	19.5	17.2	15.2	14.3	14.8	16.3	18.3	20.4	22.1	18.9
Kyancutta	32.9	31.8	30.1	24.9	21.1	17.8	16.9	18.4	21.8	25.2	28.3	30.7	25.0
Maitland	28.9	27.2	25.4	21.7	17.4	15.6	13.8	14.9	17.5	20.7	24.2	25.3	21.1
Mt Gambier	24.9	23.8	22.6	18.6	15.5	13.7	12.8	13.8	15.8	17.4	19.7	22.3	18.4
Oodnadatta	37.4	36.1	33.4	27.9	22.8	19.7	19.3	21.6	26.1	29.7	33.4	35.9	28.6
Port Augusta	32.1	31.3	29.8	25.2	21.2	17.7	17.1	19.1	22.6	25.3	28.3	30.5	25.0
Port Lincoln	24.9	24.5	23.6	21.0	18.6	16.3	15.6	16.3	18.2	19.7	21.4	23.2	20.3
Port Pirie	31.9	31.4	29.6	24.6	20.2	17.1	16.3	17.9	21.4	24.6	27.7	30.0	24.4
Stirling	24.9	24.3	22.8	18.0	14.4	11.6	10.6	11.8	14.6	16.9	19.9	22.6	17.7
Tailem Bend	29.6	28.3	26.8	22.6	18.7	16.0	15.4	16.6	20.0	22.1	24.8	27.2	22.3
Whyalla	28.8	28.2	26.6	23.5	20.2	17.9	16.4	17.7	20.2	23.3	25.3	26.6	22.9
Yongala	30.6	29.5	27.1	21.4	16.8	13.4	12.4	13.4	17.8	21.7	25.5	28.3	21.5

Mean Minimum Temperatures: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	*Celsius												
Adelaide	16.4	16.6	15.1	12.6	10.3	8.3	7.3	7.8	9.0	10.9	12.9	15.0	11.9
Berri	15.2	14.9	13.4	10.1	7.8	6.1	5.3	5.9	7.7	9.9	12.1	14.2	10.2
Ceduna	14.5	14.6	12.8	10.3	8.5	7.3	6.6	6.1	7.7	9.6	11.8	13.7	10.3
Clare	13.8	13.8	11.4	8.3	5.8	4.4	3.3	3.9	5.2	7.3	10.2	12.3	8.3
Keith	12.6	12.3	10.7	9.1	7.4	6.1	5.1	5.2	6.6	7.8	9.4	11.2	8.6
Kingscote	14.6	15.1	14.1	12.2	10.6	9.3	8.3	8.1	8.9	10.2	11.7	13.3	11.4
Kyancutta	14.1	13.8	12.2	9.2	7.2	5.3	4.7	4.8	6.1	8.3	10.4	12.7	9.1
Maitland	14.9	14.6	13.6	11.7	9.3	7.6	6.3	6.7	7.8	9.5	11.5	12.9	10.5
Mt Gambier	10.3	10.9	9.7	7.8	6.8	5.4	4.7	4.9	5.8	6.8	7.8	9.4	7.5
Oodnadatta	22.4	21.8	19.0	14.3	9.7	6.8	6.0	7.1	10.4	14.7	18.1	20.8	14.3
Port Augusta	18.7	18.7	17.0	13.3	10.1	7.7	6.8	7.8	9.9	12.6	15.1	17.3	12.9
Port Lincoln	15.3	15.5	14.8	12.8	11.0	9.4	8.5	8.4	9.2	10.6	12.2	13.9	11.8
Port Pirie	17.1	17.2	15.7	12.5	10.2	8.2	7.4	7.8	9.4	11.6	13.8	15.8	12.2
Stirling	11.5	11.6	10.6	8.6	6.8	5.3	4.6	4.8	5.9	7.1	8.7	10.2	7.9
Tailem Bend	13.7	13.6	11.9	9.7	8.2	6.2	5.3	5.9	7.2	8.8	10.7	12.3	9.5
Whyalla	18.6	18.3	16.9	13.9	10.3	8.3	6.9	7.8	9.8	12.1	14.5	15.9	12.8
Yongala	13.2	12.9	10.8	7.2	4.5	2.9	2.3	2.1	4.0	6.2	9.1	11.4	7.2

The highest temperature recorded in South Australia was 50.7°C at Oodnadatta on 2 January 1960, and the lowest -8.2°C at Yongala on 20 July 1976.

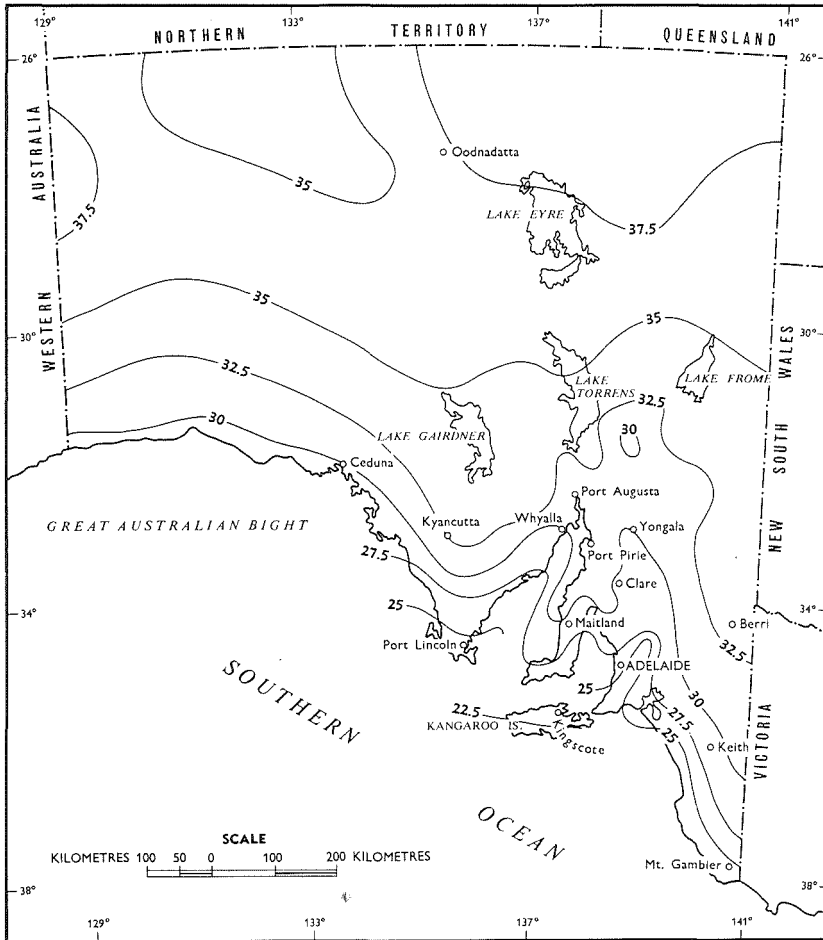
HUMIDITY

'Relative humidity' at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the lowest relative humidity values tend to occur during the warmest part of the afternoon when measurements of under 20 per cent are not uncommon.

SOUTH AUSTRALIA MEAN MAXIMUM TEMPERATURE: JANUARY

Based on all years of records

Isotherms in ° Celsius



The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

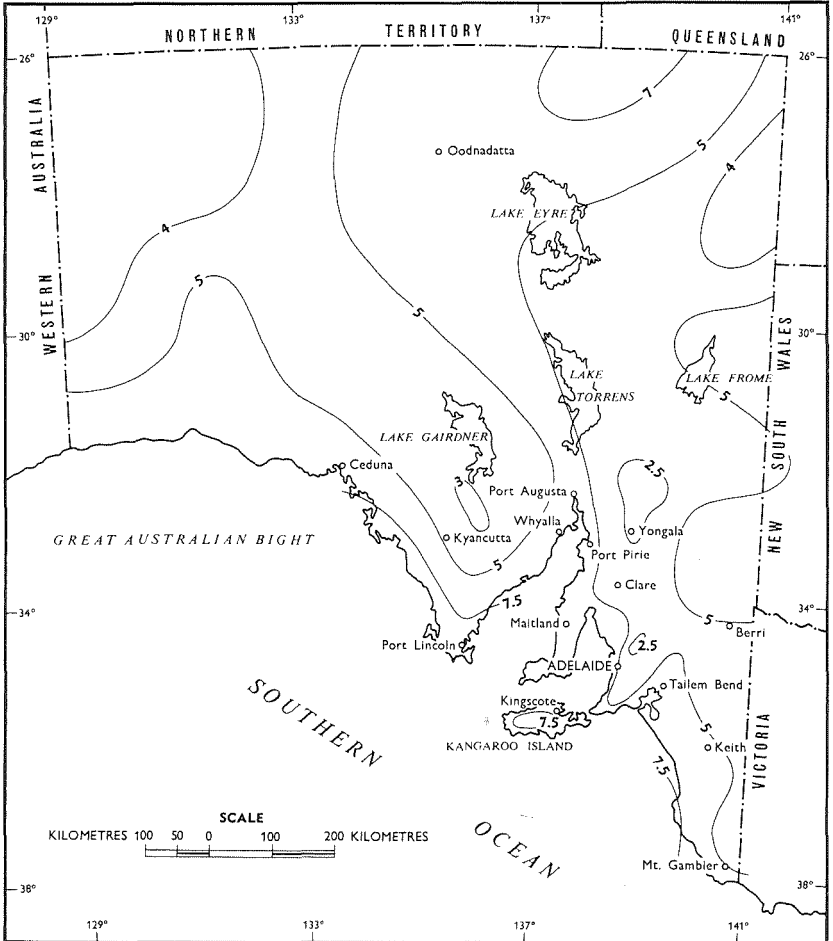
With an average index of mean relative humidity of under 35 per cent in summer

increasing to about 50 per cent in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern parts of the State have an average index of mean relative humidity of about 45 per cent to 55 per cent in summer, increasing to about 70 per cent to 80 per cent in winter.

SOUTH AUSTRALIA MEAN MINIMUM TEMPERATURE: JULY

Based on all years of records

Isotherms in ° Celsius



SUNSHINE AND CLOUD

The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2 000 hours along parts of the southern coastal fringe to 3 500 hours near the northern border of the State. Adelaide has an average of just over 2 500 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about 10.5 hours over interior districts. During the June and July winter months daily averages are still as high as seven hours in the far north interior, but over the southern coastal fringe the daily average of just over eight hours for summer is reduced to about three hours during winter.

WIND

During the summer months winds from the southern quadrants are the most prevalent and a well defined sea breeze is common along the whole of the coastal fringe from October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11 April 1948 when wind averaged over 60 km/h for six hours in central and south-eastern districts, the naval frigate *Barcoo* was grounded at Glenelg and the Glenelg jetty was wrecked. Frequent gusts over 100 km/h and a strongest gust of 130 km/h were recorded in Adelaide.

Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—158 km/h at Woomera on 4 November 1969, 148 km/h at Leigh Creek on 3 December 1953 and also at Adelaide on 13 July 1964.

EVAPORATION

Evaporation is determined by measuring the amount of water evaporated from a free water surface exposed in a standard tank or pan. Before 1967, measurements were made using the sunken tank method *i.e.* tanks, each 0.91 metres internal diameter and 0.91 metres deep, sunk into the soil so that the rim was only 25 millimetres or so above the ground.

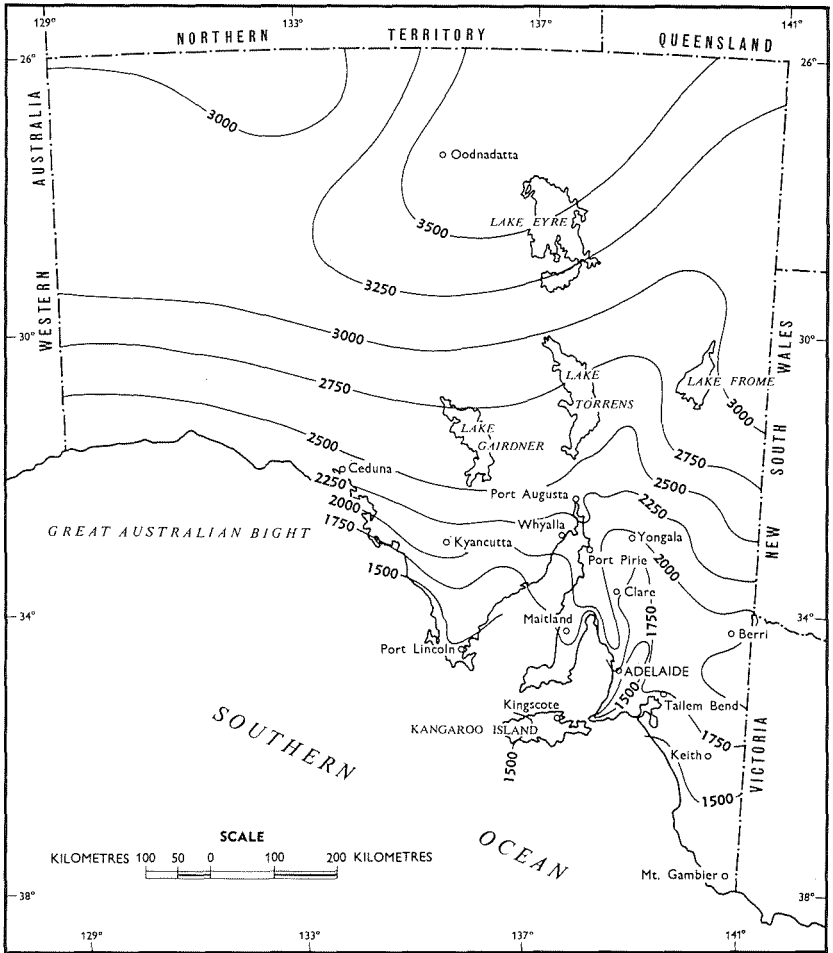
Early in 1967 a change-over to the American Class A evaporation pan was made after this instrument had been accepted as the standard evaporimeter for Australia. These pans, 1.22 metres in diameter and 0.3 metres deep, are placed above ground level on wooden pallets. Wire mesh guards are fitted to the pans to prevent birds and stray animals drinking from them. All evaporation figures quoted in this section are for a Class A pan fitted with a bird guard.

The annual average evaporation varies from below 1 500 millimetres in parts of the Mount Lofty Ranges and the lower South East to greater than 3 500 millimetres over an area around and to the north east of Oodnadatta in the far north of the State (see map on page 14).

About half the State has an average evaporation rate exceeding 3 000 millimetres a year. This high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 150 millimetres.

SOUTH AUSTRALIA AVERAGE ANNUAL EVAPORATION

Based on all years of records in millimetres,
for a Class A Pan with Birdguard



CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836 when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of

1839. No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856. During the first year or two, observations were made at his private residence in Adelaide and, for some months, in Government House grounds.

In May 1860 the Observatory on West Terrace was completed and the instruments were moved to that site. For over 100 years the observational site at Adelaide remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 metres of the original observatory site.

In February 1977, the Adelaide Regional Office of the Bureau of Meteorology moved from West Terrace to College Road, Kent Town. Although a new observation site was set up at Kent Town, observations continued at the West Terrace site for some time so that a comparison could be made between the two sites.

Temperature records at Adelaide date from 1857, when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced and this showed maximum temperatures during the warmer months to be 1° to 1.5°C lower on average. Other temperatures were not significantly affected. Both screens were in continuous operation until 1947 when use of the Greenwich Stand was discontinued. However, the Greenwich Stand readings remained the official record until 1947, thus there is a slight discontinuity in the temperature records in that year and means are weighted towards the Greenwich Stand method of measurement.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of 47.6°C in the Greenwich Stand on 12 January 1939 is the highest recorded in any of the capital cities.

Climatological Data, Adelaide

(1) *Temperature and Relative Humidity*

Month	Temperature					Relative Humidity (9 a.m.)		
	Maximum		Minimum		Mean	Mean	Highest Monthly Mean	Lowest Monthly Mean
	Mean	Highest Recorded	Mean	Lowest Recorded				
Years of Record	122	122	122	122	122	109	109	109
	°C	°C	°C	°C	°C	%	%	%
January	29.5	47.6	16.4	7.3	23.0	41	59	29
February	29.3	45.3	16.6	7.5	23.0	44	63	30
March	26.8	43.6	15.1	6.6	21.0	47	62	29
April	22.7	37.0	12.6	4.2	17.7	57	72	37
May	18.7	31.9	10.3	2.7	14.5	67	77	49
June	15.8	25.6	8.3	0.3	12.1	75	84	63
July	15.0	26.6	7.3	0.0	11.1	76	87	66
August	16.4	29.4	7.8	0.2	12.1	70	80	54
September	18.9	35.1	9.0	0.4	13.9	61	72	44
October	22.0	39.4	10.9	2.3	16.5	52	67	29
November	25.1	45.3	12.9	4.9	19.1	45	64	31
December	27.7	45.9	15.0	6.1	21.3	42	56	31
Year	22.4	47.6	11.9	0.0	17.1	54	87	29

Climatological Data, Adelaide (continued)

(2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest Monthly and Yearly Total	Highest in One Day	Mean Days of Rain (a)	Average Speed	Highest Gust	Prevailing Direction	
							9 a.m.	3 p.m.
Years of Record	140	140	140	140	21	60	30	30
	mm	mm	mm	No.	km/h	km/h		
January	20	84	58	4	13	116	SW	SW
February	21	155	141	4	12	106	NE	SW
March	24	117	89	5	11	126	S	SW
April	44	154	80	9	11	130	NE	SW
May	68	197	70	13	11	113	NE	NW
June	72	218	54	15	12	108	NE	N
July	66	138	44	16	12	148	NE	NW
August	61	157	57	15	13	121	NE	SW
September	51	148	40	13	13	111	NNE	SW
October	44	133	57	11	13	121	NNE	SW
November	31	113	75	8	13	130	SW	SW
December	26	101	61	6	13	121	SW	SW
Year	528	786	141	120	12	148	NE	SW

(3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (b)	Mean Amount Of Cloud (c)	Days of Fog	Days of Lightning	Amount of Evaporation (d)	Vapour Pressure 9 a.m.	Mean Barometric Pressure (e)
Years of Record	95	58	107	77	105	12	108	121
	Hours	No.		No.	No.	mm	mb	mb
January	10.0	12.4	3.1	0.0	2.0	254	11.9	1 013.2
February	9.3	10.9	3.3	0.0	1.7	216	12.5	1 014.3
March	7.9	10.9	3.5	0.0	1.7	176	12.0	1 017.2
April	6.0	6.6	4.5	0.0	1.4	120	11.5	1 019.9
May	4.8	4.6	5.1	0.4	1.5	79	10.8	1 020.1
June	4.2	4.0	5.3	1.1	1.5	56	10.0	1 019.9
July	4.3	3.6	5.2	1.3	1.4	60	9.5	1 020.0
August	5.3	4.9	4.9	0.6	1.7	78	9.7	1 019.0
September	6.2	5.7	4.6	0.2	1.7	110	10.0	1 017.7
October	7.2	5.7	4.5	0.0	2.6	164	10.2	1 016.0
November	8.6	6.6	4.2	0.0	3.0	196	10.5	1 015.0
December	9.4	9.0	3.7	0.0	2.2	241	11.3	1 013.3
Year	6.9	85.0	4.3	3.6	22.4	1751	10.5	1 017.1

(a) Days receiving 0.2 mm or more of rain. (b) With less than two-eighths cloud. (c) Scale 0 (clear) to 8 (overcast) at 9 a.m. and 3 p.m. daily. (d) From Class A pan (period 1967-1977). (e) Mean of 9 a.m. and 3 p.m. readings corrected to sea level.

Temperature

In the summer months, Adelaide maximum temperatures frequently exceed 30°C and from time to time 'heat waves', with readings at or near 35°C for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when fourteen days out of fifteen exceeded 30°C and of those fourteen days thirteen exceeded 35°C and six exceeded 40°C. During this heat wave the record temperature of 46.8°C recorded on 26 January 1858 was exceeded, first on 10 January 1939 when the temperature reached 47.2°C and then two days later on 12 January when the highest ever temperature of 47.6°C (46.1°C in the Stevenson Screen) was recorded.

July is the coldest month, when the mean maximum is only 15°C with the extreme

lowest minimum recorded in the Greenwich Stand being 0°C (0.6°C in the Stevenson Screen) on 24 July 1908. August is only slightly warmer than July, but after August steadily rising temperatures are experienced.

Rainfall

Adelaide's summer rainfall is light and unreliable. The average monthly fall from January to March is under 25 millimetres and completely rainless months in this period are not uncommon. In fact, each of the five months December to April has at some time been recorded as completely dry, and in the period January to March 1893 there were sixty-nine consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7 February 1925 rainfall was 141 millimetres—a record for one day.

Each month from May to September rainfall averages over 50 millimetres and in this period the rain is fairly reliable. June is the wettest month but the average is still under 75 millimetres for the month. The 140 year annual rainfall average is 528 millimetres, and annual totals have ranged from a low of 257 millimetres in 1967 to a high of 786 millimetres in 1851.

Other Conditions

Relative humidity in Adelaide is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 41 per cent. This low value of the relative humidity reduces the severity of heat waves in Adelaide. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching 76 per cent in July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the 'gully wind', blows from the east or south-east out of the Adelaide hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

WEATHER CONDITIONS IN SOUTH AUSTRALIA: 1978

Summer 1977-78

Despite some heavy rainfall during the last month of spring, the rain came too late to be of real benefit to the already drought stricken areas.

Serious rainfall deficits continued in nearly all districts during the summer months. Summer rainfall deficits ranged from 25-50 per cent in the north west, western agricultural areas and County Light to 50-90 per cent in the remainder of the districts.

Mean maximum and minimum summer temperatures were near normal throughout most of the State.

Lack of rain and strong winds caused serious soil erosion in many parts of the State in the latter half of the summer when stubble paddocks were bare after grazing. Livestock numbers had to be reduced because of shortage of feed and fodder.

Gale force winds during thunderstorms caused widespread structural damage to several places in the north of the State and at Cleve on 1 December, and at Andamooka on 23 January.

Several major bush and grass fires were reported during the summer but no stock or property losses were reported.

Autumn 1978

After severe to serious rain deficits during the summer in most of the State, drought conditions persisted during autumn in several parts of the State.

Rainfall deficits during autumn were 1 per cent in the Lower Murray Valley and 7 per cent in County Light, but in the remainder of the districts the deficits ranged from 20 to 60 per cent. Light to useful rain in May brought about an improvement in the agricultural outlook but had not provided the long awaited general break of the drought.

During a short hot spell in the second week of March daily maximum temperatures were up to 16°C above normal. However, hot spells during autumn were generally short lived.

Mean monthly maximum autumn temperatures were 1°C to 2°C above normal in the Far West, Far North and in an area around Keith, but for the remainder of the State the mean maxima were within 1°C of normal.

Mean monthly minimum autumn temperatures were 1°C to 2°C above normal in the Upper and Lower South East and Victor Harbor, but were within 1°C of normal in the remainder of the State.

Handfeeding of stock was widespread but fodder reserves were low.

Soil erosion continued in the dry sandy districts.

Winter 1978

Apart from some isolated stations in the Mount Lofty Ranges and the South East districts, all other stations recorded above average winter rainfall. Several stations in the northern pastoral districts, Western Agricultural and Upper North districts received two to three times their total average winter rainfall.

Average district winter rainfall ranged from 60 to 160 per cent above normal in the purely pastoral districts, Western Agricultural and Upper North districts to 20 to 60 per cent in the remainder.

Heavy rainfall during the winter season flooded and closed many roads in the north of the State on several occasions and cut the rail link between Port Augusta and Alice Springs.

A few stations in the Upper and Lower North districts recorded their highest June rainfall since records commenced in the late 1800s.

The Murray Mallee district recorded its highest average July rainfall since records commenced in 1913.

With a late start to the growing season about 80 per cent of the total grain crop had been sown by the end of June. Pastoral growth was well in excess of livestock demand.

Mean winter maximum temperatures were below normal throughout the State. Only Port Lincoln and Kingscote recorded slightly above normal winter maxima.

Mean winter minimum temperatures were generally above normal. Only at Elliston and Cape Northumberland was the mean minima more than 1°C below normal. For the remainder the mean winter minima were within 1°C of normal.

A fierce storm swept through Adelaide's north-eastern suburbs, damaging 11 aircraft at Parafield on 22 July.

Spring 1978

Following the above average winter rainfall throughout most of the State, most stations recorded above average rainfall during spring. September and November were the months with the highest rainfall, while October totals were generally below normal.

The Western Agricultural district recorded its highest average district rainfall for

September since records commenced in 1913 and Yorke Peninsula and Kangaroo Island their highest September district average since 1958.

Average district spring rainfall ranged from 40-150 per cent above normal in the purely pastoral districts to 15-38 per cent above normal in most of the remainder of the districts.

With the below average rainfall during October, late sown cereal crops suffered heat stress during two hot spells which were accompanied by strong northerly winds. However, the timely arrival of rain and cool to mild conditions in early November consolidated a sound agricultural productive outlook.

Mean spring maximum temperatures were 1 to 2°C below normal in the Far North, North West, Adelaide Plains, most of the Western Agricultural district and in parts of the Lower Murray Valley and Lower North district. For the remainder the mean maxima were within 1°C of normal.

Mean spring minimum temperatures were within 1°C of normal throughout the State.

Light snowfall was reported on Mount Lofty on 12 and 13 September.

Heavy rainfall closed roads in the northern districts on several occasions during spring.

On the 22 September heavy rainfall flooded streets and threatened houses in Adelaide's northern suburbs and caused damage to vegetable crops. Damage was caused in the Salisbury Plains area when the Old Cobblers Creek broke its banks on the same day.

1.3 NATURAL RESOURCES

MINERALS

The opal fields at Coober Pedy, Mintabie, Andamooka and Stuart Creek supply most of the world's precious opal. The estimated value of raw opal production in South Australia was \$35 million in 1978. Most of this is exported to Hong Kong, Japan, USA and Germany.

Iron ore is mined in the Middleback Ranges on Upper Eyre Peninsula. These ranges lie to the west of Whyalla, a coastal port with a steelworks and shipbuilding facilities, and extend discontinuously from Iron Knob in the north to Iron Duke nearly 65 kilometres to the south. In excess of 150 million tonnes of ore have been mined since 1900. Currently production is at the rate of approximately 3.5 million gross tonnes per annum.

Copper ore is being mined at Burra and Mount Gunson by open-cut mining methods and, until recently, at Kanmantoo. The Mount Gunson Mine, 145 kilometres north-west of Port Augusta and 56 kilometres south-east of Woomera, is being mined at the annual rate of approximately 500 000 tonnes of ore of more than 2 per cent copper for the production of copper sulphide concentrates for export. The Burra Mine, 161 kilometres north of Adelaide, has the treatment capacity for approximately 300 000 tonnes of ore per annum of 1.5 per cent copper. The copper oxide produced at Burra is used for the production of fertilisers, agricultural chemicals and copper sulphate.

Vast deposits of copper-uranium mineralisation have been discovered at Olympic Dam on Roxby Downs Station, 80 kilometres north of Woomera and 55 kilometres west of Andamooka. Copper-uranium mineralisation, with minor gold and rare earths, has been intersected at a depth of approximately 350 metres and the area has the potential to develop into a very large mining operation.

Leigh Creek coal field, operated by the Electricity Trust of South Australia, is the only deposit which is being mined at present and to date approximately 35 million tonnes of coal have been mined for power generation at the Playford Power Station in Port Augusta.

Permian sub-bituminous coal has been defined by drilling at Lake Phillipson, 80 kilometres south of Coober Pedy. The deposit consists of a number of seams in two main elongated troughs which together total approximately 2 000 million tonnes. The Wakefield Tertiary lignite deposits held by the Electricity Trust of South Australia, have estimated reserves of 2 000 million tonnes.

Barite is obtained from about twenty localities in the Flinders Ranges. The Oraparinna Mine is the largest producer of industrial grade barite in Australia. Oil drilling grade barite is mined at Mount Mulga, north of Olary and at several deposits in the Flinders Ranges.

The largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general formed in coastal basins, the largest of these occurring at Lake MacDonnell and on Kangaroo Island. Other deposits, mainly of seed gypsum, are found inland at Moonabie, Lake Fowler, Cooke Plains and along the River Murray.

High grade kaolin is produced from weathered shales at Birdwood and altered metasediments at Williamstown in the Mount Lofty Ranges. Sillimanite and damourite (mica) are also obtained from the open-cut at Williamstown. White burning plastic clays are mined near Adelaide at Golden Grove, One Tree Hill and McLaren Vale and clays for refractory and ceramic uses are supplied from Tregolana and Longwood.

High quality dolomite for steel making is quarried at Ardrossan and for glass making at Tantanoola.

Feldspar is being mined from pegmatites north of Olary. Flint for ceramic and grinding purposes is gathered from the beaches near Port MacDonnell and screened from clay at Longwood.

Conditions in South Australia are ideal for the production of salt from sea water by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Price (Gulf St Vincent), and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake MacDonnell.

South Australia contains many deposits of limestone and apart from quarries worked for construction purposes the main deposits are at Rapid Bay for steel making, Angaston and Klein Point for cement, Mount Gambier for whiting and building stone, and Penrice for chemicals and cement.

Magnesite is mined on a small scale, north-west of Copley.

Monumental stone is produced from white marble at Angaston, black granite from Black Hill, blue granite from Kingston, brown granite from Sienna, and red granite from Calca. Billiard table slate and paving stone is supplied from Mintaro and Jones Hill in the northern Flinders Ranges. Walling and paving stone is also obtained from Willunga and Wistow.

Nephrite jade, which occurs as lenses north-west of Cowell, is mined for ornaments and jewellery, and is also exported in crude form. Banded calcite, used for ornamental purposes, occurs in narrow veins near Warrioota in the Flinders Ranges.

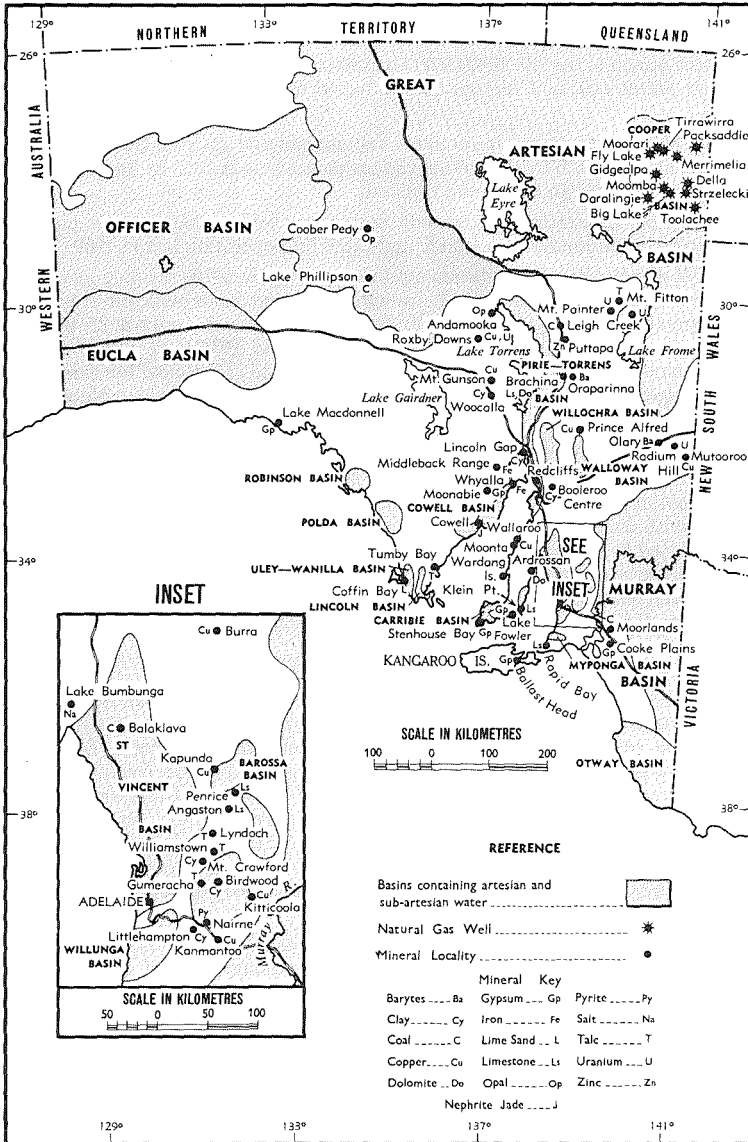
Talc is produced from Mount Fitton in the Flinders Ranges, Gumeracha, Lyndoch and Tumby Bay for use in ceramics and cosmetics.

High grade zinc ore is mined at Puttapa 30 kilometres south of Leigh Creek as markets allow.

Significant deposits of uranium have been discovered in the Lake Frome region but no mining has commenced.

A special article on the Minerals of South Australia was included on pages 21-39 of the *South Australian Year Book 1975*.

SOUTH AUSTRALIA
MINERAL RESOURCES AND
ARTESIAN WATER



PETROLEUM RESOURCES

Before the late 1940s South Australia had no satisfactory indigenous source of primary energy. A number of deposits of sub-bituminous coal including those at Leigh Creek, Moorlands, Balaklava and Lake Phillipson were known but none of these were considered worthy of development.

Industrial unrest in the late 1940s led to a growing awareness of the State's dependence on eastern States coal and foreign oil and led to the development of the Leigh Creek coalfield.

The search for petroleum was actively encouraged and assisted from the mid-1950s. This culminated in the discovery of the Gidgealpa gas field in 1963 by Santos Limited and the then Delhi Australian Petroleum Limited.

Following the discovery of a second major gas field at Moomba, a pipeline was constructed from Moomba to Adelaide and came into operation late in 1969.

A revival of petroleum exploration activity in the early 1970s resulted in a number of new discoveries of both gas and oil. An agreement was made with the Australian Gas Light Company Limited to supply gas to the Sydney area, over a 25 year period. Adequate reserves were demonstrated to exist by late 1972, and supply to this new market commenced in December 1976. Twenty gas fields have now been discovered in the South Australian portion of the Cooper Basin and there is considerable potential for further discoveries.

Total reserves of petroleum are estimated to be 93 000 million cubic metres of natural gas and 48 million cubic metres of petroleum liquids.

An interest in the gas reserves and exploration potential of the Cooper Basin and other areas of South Australia included in Petroleum Exploration Licences No. 5 and 6 has been purchased by the South Australian Oil and Gas Corporation Ltd, jointly owned by the State Government and the South Australian Gas Company. An independent exploration program, financed by the Government, is being carried out by the Corporation to further define the State's energy resources.

UNDERGROUND WATER

South Australia is the driest of the Australian States with more than 82 per cent of its area receiving an average annual rainfall of less than 250 mm. The wettest parts of the State are the south and south-eastern coastal areas and the Mount Lofty-Flinders Ranges. Only small areas of the Mount Lofty Ranges, Kangaroo Island and the lower South East receive more than 600 mm per year. As a consequence of the rainfall pattern, South Australia is notably deficient in rivers. The River Murray, the only large permanent river, originates outside the State. The few streams commencing in the ranges are short and seasonal in flow. In this situation groundwater is of considerable importance and it is estimated that at least 100 000 wells have been drilled or dug in the search for water.

Annual groundwater use in South Australia is estimated to be 357 000 megalitres which is approximately 35 per cent of total water use. The greatest use of groundwater is for irrigation which accounts for an estimated 227 000 megalitres per year. Principal areas of use are the South East, including the Angas-Bremer irrigation area near Langhorne Creek, the Adelaide Plains and the Mount Lofty Ranges. Stock and industry account for an estimated 100 000 megalitres per year, which includes approximately 77 000 megalitres flowing from artesian wells in the Great Artesian Basin.

Most public water supplies in South Australia originate from reservoirs in the Mount Lofty and Flinders Ranges and on Eyre Peninsula and from the River Murray. These

sources provide an estimated 92 per cent of reticulated supplies with groundwater supplying the remaining 8 per cent, or approximately 20 000 megalitres per year.

Approximately fifty towns and districts are fully or partly dependent on groundwater for public water supplies. The two main areas of use are the South East and Eyre Peninsula which together account for approximately 93 per cent of groundwater used for public water supplies.

Although saline groundwater occurs over much of the western part of the State there are a number of large sedimentary basins where low salinity groundwater is available. These include the Greater Artesian Basin, Murray and Otway Basins and St Vincent Basin. In addition there are a number of smaller basins which are important sources of groundwater for irrigation, town water supplies or stock.

Artesian flows occur in some of these basins but the largest flows are from the Great Artesian and Otway Basins. The Great Artesian Basin has a total area of 1 700 000 square kilometres of which 310 000 square kilometres are in South Australia, covering 30 per cent of the State. The main intake area for the principal aquifer lies along the western margin of the Great Dividing Range in New South Wales and Queensland. Minor intake also occurs along the western margin of the basin in South Australia. Natural outlets for the basin are the mound springs west and south of Lake Eyre. Total discharge from the springs is estimated to be 30 000 megalitres per year. Deep wells are necessary to tap the artesian aquifer, and individual wells may yield 4 500 kilolitres per day or more. The water is generally unsuitable for irrigation because of its chemical composition and it is used mainly for the watering of stock, with town water supplies being a minor use.

The Murray Basin has a total area of 278 000 square kilometres, mainly in Victoria and New South Wales, the area in South Australia being 73 000 square kilometres. The southern and central portions of the basin contain relatively low salinity groundwater suitable for most purposes. Salinity increases steadily in a north and north-westerly direction and the groundwater becomes unusable in the vicinity of the River Murray. Very large yields can often be developed from cavernous limestone aquifers occurring at relatively shallow depth and in some places from sand dunes and other local aquifers. Towns in the central part of the basin are supplied with groundwater, which is also extensively developed for stock supplies and for irrigation. Towns along the western margin, as far south as Keith, are provided with water by pipeline from the River Murray. At Padthaway, an area marginal to the Murray Basin, where groundwater occurs at shallow depth, annual withdrawal for irrigation is approximately 24 000 megalitres per year.

The Otway Basin in South Australia lies south of Kingston and extends along the southern coast of Victoria. Large supplies of low salinity groundwater are available from the Gambier Limestone aquifer over much of the basin. A deeper confined aquifer provides artesian supplies in the Kingston-Beachport area, the water being used mainly for flood irrigation of pasture, and for town water supplies.

The Eucla Basin, occurring in the south-western part of the State, has an area of 41 000 square kilometres in South Australia, but the greater part (135 000 square kilometres) lies in Western Australia. Little use is made of groundwater from the basin because of its high salinity, but water suitable for stock is available from the limestone aquifer in some areas, particularly near the head of the Great Australian Bight.

The Adelaide Plains Sub-Basin is part of the St Vincent Basin, extending 160 kilometres north of Adelaide, on the western side of the Mount Lofty Ranges. Good quality groundwater is obtainable in certain parts of the plains and it is extensively used for the irrigation of market gardens in the Northern Adelaide Plains. Pumping in this area has greatly exceeded the groundwater recharge rate for a number of years and it is a

Proclaimed Region under the Water Resources Act, 1976 and the use of groundwater is subject to controls.

In the Adelaide Metropolitan area the reticulated water supply has been augmented by groundwater on a number of occasions since 1915, the last time in 1967-68 when 9 500 megalitres were pumped over a seven month period.

Other small basins within or adjacent to the St Vincent Basin include Willunga and Noarlunga embayments and Myponga and Hindmarsh Tiers areas. In all these areas groundwater is used for stock and increasingly for irrigation.

The Pirie-Torrens Basin extends from Port Broughton to the northern end of Lake Torrens. Groundwater from the basin is used mainly for stock except in the Nelshaby-Napperby area east of Port Pirie where it is suitable for the irrigation of market gardens.

The Willochra and Walloway Basins located near Quorn and Orroroo respectively, also provide mainly stock water supplies. However, there is limited irrigation of pastures in both basins. In the Barossa Valley groundwater generally has a low salinity and it is being used increasingly for irrigation of vines.

There are several important groundwater basins on Eyre Peninsula including Lincoln, Uley-Wanilla, Uley South and Polda Basins. They provide more than half the water for the reticulation system covering much of Eyre Peninsula. The fractured rocks of the Mount Lofty Ranges contain significant groundwater resources which are used for irrigation in several areas *e.g.* Piccadilly Valley.

The exploration and testing of the groundwater resources of the State is a continuing responsibility of the South Australian Department of Mines and Energy, which provides the services of geologists and an extensive drilling organisation. Pamphlets on the groundwater occurrences throughout the State, particularly those in the more important basins are published by the Department.

The Water Resources Act, 1976, administered by the Engineering and Water Supply Department, covers the drilling for and development of groundwater over the whole State.

SOILS

General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are found near Bordertown and Tanunda, while some show a marked textural contrast with depth, such as the sand over clay soils of the South East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus—low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contained 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they receive and the phosphorus content of soils in some areas has been so built up over the years that its residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface soils and depletion of nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as

medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths, are well represented in this State. The irrigated horticultural settlements established on these soils along the River Murray have been notably successful, but where dry land arable farming is practised these soils are susceptible to wind erosion.

There are other important features that affect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture and Fisheries and in a bulletin published by the Department entitled *Soils of South Australia's Farm Lands*. The extent of country covered by the different soil groups is illustrated by the *Atlas of Australian Soils* which is being compiled by the Division of Soils, Commonwealth Scientific and Industrial Research Organization (CSIRO). The first sheet of this Atlas, published in 1960, includes the areas of higher rainfall country in South Australia and refers to the many soil surveys made in this State.

A special article on the Soils of South Australia was included on pages 21-31 of the *South Australian Year Book* 1969.

Building Soils

The soils of Adelaide and environs have varying engineering properties and provide varying foundation conditions for buildings. They may be classified as follows:

- (a) Expansive clay soils which show changes in volume with changes in moisture content; these soils are often commonly known as 'Bay of Biscay' soils;
- (b) Collapsing soils which, when wetted beyond a certain limit, lose strength and are liable to settle suddenly, even under their own weight; they are usually fine limey silts of windblown origin;
- (c) Compressible soils, occurring chiefly on the coastal river estuaries, are associated with high water tables and restricted surface drainage; these soils are unable to carry building loads without long-term settlement;
- (d) Stable Soils, which include alluvial sands and gravel, and most weathered rocks.

Different types of house footing have been designed or adapted to cope with these problem soils, and further details are given in the pamphlet entitled *Soil Tests and House Foundations in Adelaide*, published by the Department of Mines and Energy.

1.4 FLORA AND FAUNA

FLORA

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 250 millimetre annual isohyet. To the north of the Line, in the Eremaean Province, lies about 80 per cent of the State, experiencing arid to desert conditions where short, erratic growing seasons prevail. Areas to the south, in the temperate region, have climates geared to an equable seasonal cycle of winter rainfall and summer drought.

Eremaean Areas

These vast areas of inland South Australia are not well known botanically. Vegetation ranges structurally from low layered woodland, through shrub savannah, to exceedingly sparse vegetation of very low stature (shrub steppe). As in arid situations elsewhere throughout the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The woody perennial vegetation

is of genera adapted to the dry conditions. Predominant trees and shrubs are frequently species of *Acacia* (mulga, myall, ironwood) *Cassia*, *Grevillea* etc. but other genera (*Hakea*, *Myoporum*, *Casuarina*, and less frequently *Eucalyptus*) are often found. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (Blue Bush, Salt Bush) are often prominent in the shrub stratum, and *Triodia* (Porcupine Grass) is the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and overstocking for long periods, especially in times of drought, has led to the depletion of, and alteration to, much of the vegetation of this area.

Temperate Areas

In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 750-1 000 millimetres) dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *Eucalyptus rubida* (the candlebark) are sometimes prominent. Such forest is replete with lesser trees *Acacia melanoxylon* (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is being invaded by aliens. Lower rainfall areas down to about 400 millimetres per annum support mainly savannah woodlands and layered woodlands with South Australian bluegum (*Eucalyptus leucoxylo-* *lon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees include river redgum (*Eucalyptus camaldulensis*) especially along river and creek frontages, sheoak (*casuarina* spp.), and manna gum (*Eucalyptus viminalis*). In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas.

In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer (*Callitris* spp.) and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:

(i) *Heath*. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are superimposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such 'light land' is the scene of contemporary agricultural expansion.

(ii) *Mallee*. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalyptus, the various stems of which all rise from underground lignotubers. The term 'mallee' refers both to eucalypt species exhibiting this growth habit, and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

A more detailed description of the vegetation was included on pages 26-37 of the *South Australian Year Book* 1967 and should be referred to for a description of the plant species included in the vegetation formations shown in the map on page 28 of this issue.

FAUNA

South Australia, centrally situated and sharing borders with every other mainland State, is in a sense the zoological cross-roads of the continent. A number of typically western, eastern, and northern species extend to some point within the State, which has few species that are uniquely South Australian.

Only 8-3 per cent of South Australia—a fragmented, southern fringe—is favoured with an annual rainfall of 400 or more millimetres; more than 80 per cent receives 250 millimetres or less. The moister areas are restricted mainly to three peninsulas, to Kangaroo Island and the extreme south-east and these are divided by gulfs, straits, and stretches of drier country. Further north, the semi-arid to arid zone is deeply cut into and split by Spencer Gulf and the central highlands. Because of this geographical background the distribution of South Australian fauna, notably of birds and reptiles, is very complex.

Highly developed agriculture in the limited favourable areas and the wide-spread pastoral occupation beyond have depleted the fauna, particularly the mammals. A series of national parks and reserves is being established which will preserve samples of the various habitat types and, it is hoped, their indigenous fauna. The National Parks and Wildlife Service controls over 30 000 square kilometres on the mainland (see Part 6.4), and administers the Flinders Chase Reserve (549 square kilometres) on Kangaroo Island which is free from the introduced fox.

The land mammals of South Australia at the time of European settlement numbered about 90 species—some 38 per cent of the total Australian mammal fauna. The two monotremes have survived; the spiny ant-eater is wide-spread but nowhere common, while the platypus (once found in the River Onkaparinga as well as in the River Murray) is extremely rare except where it has been introduced in Flinders Chase. The marsupials have been affected most severely; more than a quarter of the 50 or so species are now extinct in South Australia although a number of these survive beyond the State. Originally the marsupial fauna was relatively rich with some 45 per cent of the total number of Australian species represented.

Marsupials that are still common are the brushtailed possum (*Trichosurus vulpecula*) and the western grey kangaroo (*Macropus fuliginosus*). In the dry interior the red kangaroo (*Megaleia rufa*) at times greatly increases in number, probably because of changes caused by livestock grazing and the provision of extra water. Today South Australia is almost the sole custodian of the hairy-nosed wombat (*Lasiorhinus latifrons*) which is still numerous in the far west of the State, but elsewhere the species has been reduced to a few small isolated colonies.

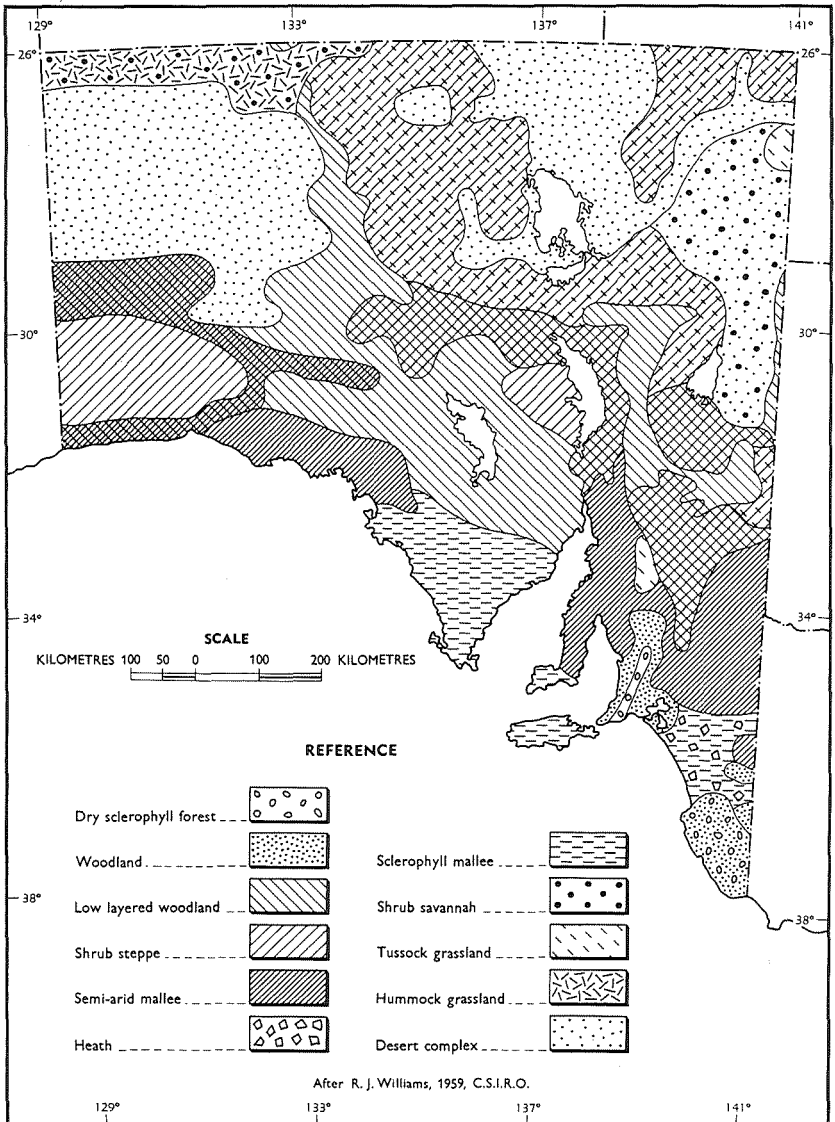
Of the native placental mammals possibly one of the 15 or so species of bats and three or four of the 18 rodents have become extinct.

A special article on the mammals of South Australia was included on pages 42-9 of the *South Australian Year Book* 1970.

About 400 of the 700 species of Australian birds have been recorded in the State, a number that includes 40 or more vagrants and non-breeding visitors. Many species have declined greatly since settlement but probably not more than two have become extinct. The diminutive Kangaroo Island emu disappeared soon after the European settlement and the night or spinifex parrot (*Geopsittacus occidentalis*) is almost extinct in South Australia.

Many species of birds can be observed close to Adelaide in the Mount Lofty Ranges and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has caused the disappearance of many in certain districts. Within the State may be found the boundaries between numerous western and eastern species and sub-species of birds.

SOUTH AUSTRALIA VEGETATION MAP



A special article on the birds of South Australia was included on pages 28-40 of the *South Australian Year Book* 1972.

Well over 100 species of reptiles have been recorded. Of the few that are peculiar to the State, the white dragon lizard (*Amphibolurus maculosus*) found on the salt-encrusted margins of Lake Eyre and other inland playas is of particular interest. Undescribed species of lizards are known to occur in the Flinders Ranges. A special article on the reptiles of South Australia was included on pages 32-42 of the *South Australian Year Book* 1973.

The nineteen species of frogs include one that is restricted to the State. This number is only 16 per cent of the Australian frog fauna (123 species) and reflects, in large degree, the predominantly arid nature of the State.

Marine and freshwater fishes number about 390 species—not a very rich fauna for a State with a coastline of nearly 4 000 kilometres. There is, however, an abundance of certain species of economic importance. A special article on the freshwater fish of South Australia was included on pages 27-34 of the *South Australian Year Book* 1971.

The insects of the coastal regions show affinities with those of similar regions to the east and west, while many of the restricted number of species of the inland extend widely through arid Australia.

Among insect groups that are prominent elsewhere in Australia but are scarce in this State are butterflies and cicadas, while insects that depend on permanent streams or swamps, such as dragonflies and caddisflies, are rather poorly represented. Similarly, few species of freshwater crustaceans occur. In eastern and western Australia hosts of wasps, native bees, jewel beetles and other insects are attracted to the flowers of native shrubs in spring and summer. These insects are less numerous in South Australia largely because of the nature and limited extent of the bushland.

Among the restricted range of insects of the arid interior are a number of interesting forms. Of these certain desert-adapted grasshoppers (*Acrididae*) are notable. Other groups with specialised species are lacewings (*Neuroptera*) and beetles and moths. Some are never abundant but the populations of others may fluctuate enormously. Moths can prolong the pupal stage to survive dry periods and may emerge in great numbers after heavy rain.

A special article on the insects of South Australian homes and gardens was included on pages 32-42 of the *South Australian Year Book* 1976.

SPIDERS AND OTHER ARACHNIDS OF SOUTH AUSTRALIA*

Arachnids are usually eight-legged arthropods, mainly terrestrial, who prey on invertebrate animals (with notable exceptions amongst the mites) and drink fluid from their prey after some external digestion. The three best known subclasses of arachnids are the spiders, scorpions and mites (including ticks). There are many species of spiders which are important in controlling insect numbers. Only a limited number of species are known to be dangerous. The scorpions include few species, have a distinctive shape and are also regarded as dangerous. Although mites are a large subclass, of the greatest economic and medical interest amongst the arachnids, people generally are not aware of them because of their small size.

About 540 named species of arachnids are recorded as occurring in South Australia, many of which are unique to Australia. A small proportion appear to be found only in this State. A limited number were probably introduced by European man. It is difficult to estimate the total number of species in the South Australian arachnid fauna. However, an estimate can be reached of the number of named species to be expected if the

* Contributed by D. C. Lee and R. V. Southcott, South Australian Museum

arachnids had been classified to a degree comparable to that for insects. Statements about numbers of named insects known in the world, Australia and South Australia, indicate ratios between these faunas. These ratios can be applied as percentages to estimates of the named arachnid species in the world belonging to subclasses recorded from South Australia. The figures indicate that about 6 per cent of the world's named insect species are known from Australia, and that 25 per cent of these (1.5 per cent of the world's named insects) are recorded from South Australia. Applied in the table below, the results give an estimated number of named arachnid species in different subclasses and from different geographical zones, followed by the actual number and a percentage representing the actual number as a fraction of the estimate.

Named Species belonging to Arachnid Subclasses

	World		Australia		South Australia		
	100%	Estimate (6% of World)	Actual	Actual as Percentage of Estimate	Estimate (1.5% of World)	Actual	Actual as Percentage of Estimate
Microwhip- scorpions	35	2	1	50	1	1	100
Pseudoscorpions ...	1 750	105	85	81	26	12	46
Harvestmen	3 750	225	120	53	56	6	11
Mites	30 000	1 800	1 300	72	450	320	71
Scorpions	700	42	30	71	11	12	109
Spiders	35 000	2 100	1 500	71	525	190	36
Total	71 235	4 274	3 036	71	1 070	540	50

The table suggests that the process of describing Australian arachnids lags behind that for Australian insects by thirty per cent and in South Australia by a further twenty per cent. This depends very much on whether or not the ratios are correct and assumes that these arachnid faunas are not scanty. The harvestmen are apparently a poorly studied group throughout Australia. However, in South Australia there may well be relatively few species of harvestmen actually present because of the absence of suitably stable moist habitats. The pseudoscorpions and spiders, although they are in fact well represented, are obviously poorly known in South Australia. This reflects the economics of a small, recently settled European population in an area with a diverse fauna.

Some estimates of total (named and unnamed) number of species have been made. Surveys suggest that only about 40-50 per cent of the Australian insect species are named and the proportion of named arachnids is likely to be even less, so probably there are over 2 000 species of arachnids in this State. It has also been estimated that there are up to a half million more mites in the world awaiting discovery. There could therefore be 7 500 species of mites alone in South Australia.

The arachnid body is regarded as having two parts: the cephalothorax and the abdomen. The cephalothorax carries the mouth appendages (chelicerae and palps) and the legs. The chelicerae are either pincers or may be modified to fangs or stylets, whilst the palps are usually like small legs but may be modified to swollen claws or pincers. The abdomen sometimes carries appendages or a tail but may be without either. Like other arthropods, the arachnids have a more or less rigid exoskeleton which has to be replaced occasionally to allow for growth. Most arachnids do not moult after reaching maturity.

South Australian arachnids are considered below under systematic headings, with the least familiar groups first: microwhipscorpions, pseudoscorpions, harvestmen, mites (including ticks), scorpions and spiders.

MICROWHIPSCORPIONS

Microwhipscorpions are minute, slender, white arachnids, about a millimetre long, and are the only South Australian representative of the four subclasses of 'Whipscorpions'. These subclasses include relatively few species, but some are large (80 mm), robust, dark coloured animals, unlike the microwhipscorpions. On the microwhipscorpions the chelicerae are pincer-like, the palps leg-like, the abdomen segmented, and there is a slim tail which is about as long as the body, and easily breaks off. The single species in Australia, *Koenenia mirabilis*, is known only from an area just south east of Adelaide, including Fullarton, Glen Osmond, Mount Osmond and Waterfall Gully. This species was originally described from the Mediterranean region and was possibly introduced into South Australia with vine cuttings. Little is known about its biology, but it probably feeds on other minute animals or their eggs.

PSEUDOSCORPIONS

Members of this subclass are like small, tail-less scorpions. Usually brown or olive coloured, about 1-6 mm long, with small pincer-like chelicerae, large pincer-like palps and a segmented abdomen. They live hidden in litter on the ground, or under stones or bark, lying in wait with their palps open ready to grasp a passing animal. Sometimes they catch prey much larger than themselves, such as ants, and some species are aided by poison glands opening on their palpal pincers. They are capable of producing silk from glands opening on their cheliceral pincers, with which they build a small nest for moulting, breeding or hibernation. A pseudoscorpion attached to another arthropod may not be preying on it, since females of some species are known to be phoretic (dispersing to new environments by riding on an insect or other animal).

The three orders of pseudoscorpions are distinguishable by whether or not the terminal leg segments are divided in two. The Chthoniinea have the terminal segment of the third and fourth legs divided. They are all very small (less than 2 mm long), with slender legs and palpal pincers, small abdomen and square-fronted cephalothorax. One species is known from the Naracoorte Caves, but unidentified specimens are common in litter in the Mount Lofty Ranges. The Neobisiinea have the terminal segment of all the legs divided, are larger (more than 2 mm) with a relatively bigger abdomen, and are represented in South Australia by the families Garypidae and Olpiidae. The Garypidae have four eyes and the cephalothorax tapers to a point anteriorly; five species of one genus, *Synsphyronus*, are known in this State. The Olpiidae, with six eyes and blunter anteriorly, are represented by two species. The third order, Cheliferinea, without any of the terminal leg segments divided and with either two or no eyes, is superficially similar to the Neobisiinea. It is represented in South Australia by four species, belonging to the families Cheliferidae, Atemnidae and Chernetidae.

HARVESTMEN

The harvestmen (Opiliones), also referred to as 'harvest-spiders', are superficially similar to small (about 2.5 - 12 mm long) spiders but lack a narrow stalk separating the body into two parts. The chelicerae are pincer-like and may be very enlarged as on the males of some native Australian phalangids. The palps are leg-like but may be swollen and armed with spines, and the abdomen is segmented and broadly attached to the cephalothorax. They live under cover on the ground or, under bark, but may wander about freely at night. They prey on small arthropods but readily feed on dead animal or other organic matter. There is a gland opening above the second leg which secretes a repugnant fluid causing potential invertebrate predators to retreat, but it is not usually discernible by man.

There are three orders of harvestmen. One, *Cyphophthalmi*, is small, mite-like, rare and although represented in Queensland rainforests, is not known in South Australia. The other two orders can be roughly distinguished by the Laniatores having shorter legs (often less than four times the body length) and more conspicuous palps (often more than half the length of, and stouter than, the first legs). The Palpatores includes the Phalangidae. Some of these round-bodied, very long-legged harvestmen are often regarded as characteristic of the order and are sometimes referred to as 'daddy-long-legs'.

The Laniatores include the majority of known species of harvestmen and are found mainly in tropical or southern latitudes, preferring humid situations. Over four-fifths of known Australian species belong to this order. The four species known from South Australia all belong to the triaenonychid subfamily *Triaenonychinae* and were collected from near Adelaide or from Kangaroo Island. The Palpatores include about 900 of the known species of harvestmen and although strongly represented in New Zealand they appear to be uncommon in Australia. The two known South Australian species are phalangids: one, *Megalopsalis hoggi*, belongs to the *Megalopsalinae* which is endemic to Australia; whilst the other, *Nelima doriae*, belongs to the *Leiobuninae* and is found in large numbers in suburban gardens around Adelaide and probably originated in southern Europe.

MITES (including TICKS)

The Acari or Acarina contains the mites and ticks. They are usually very small (mostly less than 1.5 mm long) and the body shows very little sign of segmentation. This subclass has the greatest divergence in form, habitat and behaviour. The chelicerae may be pincer-like or modified to stylets; the palps are basically leg-like but are often modified or very much reduced. The number of adult legs may be reduced from eight to six, four, or two. The body can be anything from worm-like to globular or angular and may be covered by elaborate ridges or hairs. Acari are found in virtually every environment. They may prey on other animals, or suck blood or plant juices, whilst some members are the only arachnids capable of ingesting solid food particles. Many mites that are pests, or are of medical importance, are cosmopolitan and were introduced to South Australia by European man, but others, and most soil mites, are endemic to Australia.

It has been suggested that the Acari represent two distinct phylogenetic lines, but are classified here in six orders, these being distinguished largely according to the position of the stigmata (external openings of breathing tubes). One of the orders, the *Notostigmata*, does not occur in Australia.

Tetrastigmata

This is a very small group of mites that are large and brown when adult, and are free-living in ground habitats. Regarded as primitive they are, therefore, of considerable interest to systematists, yet little is known about them and an important diagnostic stage, the larva, has never been seen. A species on Mauritius secretes a fluid when handled which produces unpleasant symptoms in humans, and death to ducks or geese when accidentally eaten. The single known South Australian species, *Allothyrus* (or *Holothyrus*) *australasiae*, almost 3 mm long, is found in the Mount Lofty and Southern Flinders Ranges and feeds on dead slaters (*Oniscidae*) and hoppers (*Talitridae*).

Mesostigmata

The members of this order that are most evident in South Australia are the introduced, parasitic blood-suckers in the *Dermanyssidae*: the 'red poultry mite' (*Dermanyssus gallinae*), 'tropical rat mite' (*Ornithonyssus bacoti*), 'northern fowl mite' (*O. sylviarum*), 'starling mite' or 'tropical fowl mite' (*O. bursa*) and 'snake mite' (*Ophionyssus natricis*). Endemic, related species are found on native animals. The introduced mites can cause

skin disease, debilitating loss of blood, and spread bacterial and viral infections while on their normal hosts. Sometimes the first three of the above species infest humans for a few days causing temporary dermatitis. The starling mite is the most regular attacker of people, usually in the summer and autumn. When unfed they are like moving flecks of dust, but are red or blackish after a blood-meal. Their normal hosts, besides starlings, are sparrows, pigeons and poultry.

A species of interest in agriculture is *Typhlodromus occidentalis*, superficially similar to, but even smaller than the starling mite. It feeds on the two-spot spider mite (*Tetranychus urticae*), a pest of economic plants. The main control of this pest was the larva of an endemic species of ladybird beetle which has suffered from insecticide spraying. A strain of *T. occidentalis*, originally from Canada, which is resistant to organophosphate insecticide, has been successfully introduced to control the two-spot spider mite in a number of orchards in the Mount Lofty Ranges.

Members of this order are common in surface soil and plant litter where they are involved in the process of re-cycling plant nutrients, mainly the Gamasina as predators and the Uropodina as fungus feeders.

Metastigmata

The Metastigmata, or ticks, are blood suckers and are relatively large (an engorged female can be 15 mm long). The chelicerae are pincer-like and lie above a special harpoon-like structure with backward pointing spines which anchors a tick to its host's skin. Ticks are not an obligatory parasite of man and man is rarely bitten. With a small number of species, there is a danger of disease transmission, poisoning from toxic saliva, local infection and allergic reaction.

There are two major groups of ticks. The Ixodidae or 'hard ticks' have a relatively smooth leathery skin, a hard dorsal shield limited to the leg region in the female, and conspicuous mouthparts which can be seen from above. They usually remain on the host for a few days. The Argasidae, or 'soft ticks', have a toad-like leathery skin, no shields and inconspicuous mouthparts. They are rapid feeders, often remaining in an animal's sleeping quarters, only feeding when it is resting.

Amongst the Ixodidae, two economically important Australian ticks, the 'cattle tick' (*Boophilus microplus*) and the 'paralysis tick' (*Ixodes holocyclus*), do not normally occur in South Australia. Despite the fact that a fair number of ixodid ticks do occur in South Australia, they are relatively rare on man (*Ixodes tasmani* is the commonest) and his domestic animals. An exception is the 'dog tick' (*Rhipicephalus sanguineus*), which was confined to the northern part of the State, but has spread southward to Adelaide and Mount Gambier. This southward spread may be associated with an increase in the artificial warming of houses in winter. Possibly the most noticeable ixodid ticks in this State are the three species often seen on the Stumpytail or Common Bluetongue Lizards. *Amblyomma albolimbatum* on Eyre Peninsula, *A. limbatum* in the northern part of the State and *Aponomma hydrosauri* roughly south of Port Augusta and Renmark.

Of the Argasidae, the 'poultry tick' (*Argas nr. persicus*) is widespread in South Australia although possibly absent from the south-east. It spreads fowl spirochaetosis or tick fever which can cause heavy losses of young chickens. The 'kangaroo soft tick' (*Ornithodoros gurneyi*), found in areas of South Australia where there is a resident population of the red kangaroo, may cause severe local and systemic disturbances in man. Bites from these ticks are only likely to occur when resting in the dust of 'kangaroo squats'.

Prostigmata

This is the most morphologically diverse order of mites. Those that are not of economic importance are rarely noticed, excepting the larger conspicuous species of Erythraeidae and Trombididae which are about 4 mm long and are often a brilliant red (South Australian species in the genera *Paratrombium*, *Caenotrombium*, *Ettmuelleria*, *Microtrombidium*, *Rainbowia* and *Erythrites*). An allied smaller species of *Xenotrombium* is illustrated. Besides the more normally shaped predators such as *Rhagidia* and *Tarsotomus*, members of the order can be like microscopic, milky-coloured grapes, with only one or two reduced pairs of legs and mouthparts, found clumped under the wings or in the breathing tubes of insects (Podapolipodidae), or they can still have four pairs of legs, but very much reduced so that they are like microscopic white worms in the hair follicles of mammals (Demodicidae). Other Prostigmata have a normal shape but still live in unusual environments such as on the nasal mucosa of birds and mammals (Speleognathidae, first discovered in South Australia), or on the surface slime and mantle cavity of slugs, but apparently not on snails in this State (*Ricardoella*). The Prostigmata are only further considered if of agricultural or medical and veterinary importance.

(a) *Prostigmata of agricultural importance*

Although prostigmatid plant pests in other families such as the tarsonemids and tenuipalps do occur in South Australia, the most important by far belong to the Eupodidae, Tetranychidae and the Eriophyoidea. The important pest species of Eupodidae are the 'red-legged earth mite' (*Halotydeus destructor*) and the 'blue oat mite' (*Penthaleus major*). Despite the contrast in common names they are similar, being basically black mites, about 1 mm long and with red legs and red anal region. The blue oat mite is unusual in having a dorsal rather than a posteroventral anus which can be seen with a hand lens as a red spot on the mite's back. Both can be serious pests of grasses and broad-leafed annual plants. The blue oat mite has a slightly wider distribution occurring in southern parts of the State to north of Ceduna, Bookaloo, Hawker and Yunta, although not on Kangaroo Island. On the other hand the red-legged earth mite occurs on Kangaroo Island, but Lock and Orroroo are the northernmost limits of its distribution.

The Tetranychidae are represented in South Australia by four pests belonging to *Tetranychus* and *Bryobia* over which there has been some taxonomic confusion. By far the most important is the 'two-spot spider mite' (*Tetranychus urticae*) which can cause considerable damage in commercial apple and pear orchards, as well as on cucumbers and other deciduous trees or annual plants. These mites are small (when fully grown only six-tenths of a millimetre long), pale green or white in the summer and orange in the winter, usually with a large dark spot on each side of the body. They spin silk from their palps, using it to become airborne and disperse, as well as to provide a protective mesh on the leaves where they are feeding. In the winter (April to August) they leave the host plant and survive as quiescent orange females in protected places on the ground. It was thought that there was a red stage in the life history of this mite, but this is now regarded as a separate species, the 'carmine spider mite' (*Tetranychus cinnabarinus*), with a distribution that extends further into tropical regions and which continues to reproduce on its host plant during the winter. It is sometimes found on perennial weeds in South Australian orchards. Two species of *Bryobia*, the 'clover mite' (*B. praetiosa*) and the 'brown almond mite' (*B. rubrioculus*) have also been confused. They are both small and reddish with long first legs. The body contains visible irregular dark brown globules, more extensive in the brown almond mite. The clover mite is found mainly on grasses and annual plants and breeds through the winter. It produces special resting eggs to survive the summer. The brown almond mite is found mainly on deciduous fruit trees, more often in disused rather than commercial orchards, and breeds in the summer and

over-winters as resting eggs. *Bryobia*, especially *B. praetiosa*, sometimes migrate in large numbers onto suburban houses in South Australia to lay their eggs or moult. Although they will do no harm and will leave, they make a mess when squashed.

The Eriophyoidea are worm-like, with only four legs, and are extremely small, being less than one third of a millimetre long and so essentially invisible to the unaided eye. On the other hand they often conspicuously affect the growth of their plant hosts producing galls, blisters or brooms etc. Two important pest species in South Australia are the 'grape leaf blister mite' (*Eriophyes vitis*) on vines and the 'bronze surface mite' (*Aculops lycopersici*) on tomatoes.

An eriophyoid species, *Aceria chondrilla*, was introduced into South Australia around 1970 to control skeleton weed with some success. But the most successful biological control by a mite in South Australia is probably that of one of the 'snout-mites' (Bdellidae), *Bdellodes lapidaria*, which preys on the lucerne flea (*Sminthurus viridis*). Large numbers of *B. lapidaria* were introduced into South Australia in 1932, and it now appears to be well distributed in the lower southeast, between Goolwa and Burra and around the southern tip of Eyre Peninsula. But its range, controlled by climatic conditions, does not extend as far north or as far inland as that of the lucerne flea.

(b) *Prostigmata of medical and veterinary importance*

Sometimes Prostigmata that normally feed on plants or invertebrate animals attack man although there are no records of the former for this State. The 'whirling mite' (*Anystis baccarum*), which preys on small insects and other mites, may give a painful bite to humans. The 'straw itch mite' (*Pyemotes tritici*) normally parasitises insect larvae found in dry grass and sometimes people handling straw or lucerne have been bitten, developing small itching papules at the site of the bites. Asthma or other general symptoms may also occur. One mite, the 'cheyletid rabbit fur mite' (*Cheyletiella parasitivorax*), is thought to feed on other fur mites and occurs on cats and dogs as well as rabbits, but can cause a nasty red skin rash on people.

Larvae of members of the Trombiculidae are notorious throughout the world as parasitic chiggers which pierce the skin and suck out lymph, while the nymphs and adults are free-living predators. The two species of *Leptotrombidium* infamous for transmitting scrub-typhus from rats to man are not known in South Australia. On the other hand, trombiculid species belonging to genera known to cause scrub-itch (*Eutrombicula*, *Schoengastia* and, in a few cases, *Neotrombicula*), an allergic reaction to the mite's saliva, are known here. The 'tea-tree itch mite' (*Eutrombicula samboni*) is locally common in the coastal strip between Kingston and Port MacDonnell in the southeast. It probably normally parasitises local marsupials and rabbits, but is notorious for producing a rash of small itchy papules on people. Another chigger, *Odontacarus adelaidae*, attacks sheep and cats and is capable of feeding on man under laboratory conditions.

Astigmata

These mites, which are able to ingest solid food particles, fall into two groups: the generally free-living Acaridia and the Psoroptidia which are usually ectoparasites of feathers, fur or skin.

The biggest populations of Acaridia in South Australia are probably those of *Tyrophagus similis* in pasture and haystacks and *T. putrescentiae* in stored food. Fortunately, the latter species has not become an important pest of stored grain as it is in some countries, possibly because of the relatively dry South Australian climate. These and other allied mites are known to cause dermatitis and, in rare instances, have been found in human lungs, urine and the intestine. The dead mites may also cause dermatitis or asthma in some instances, because of a person's hypersensitivity.

One family of Psoroptidia which are not parasites, the Pyroglyphidae, are found in nests of birds and rodents and in house dust. One species, *Dermatophagoides pteronysinus*, is recognised as a main causal agent of house dust allergy. It occurs in South Australia and has been cultured at the Waite Institute, Glen Osmond, for studies in relation to this, and as a possible causal agent of sudden death syndrome in infants. The Psoroptidia also includes a number of important parasites of birds and mammals, *Sarcoptes scabiei* being the best known as it burrows in skin causing scabies. Besides the human variety which occurs regularly and unfortunately now commonly in South Australia, *S. scabiei* var. *suis* is an important pest of South Australian pigs. The 'itch mite' of sheep (*Psorergates ovis*) has been found on Eyre Peninsula, and near Peterborough and Mount Gambier, but the incidence appears to be low. 'Scaly leg mite' of poultry (*Knemidocoptes mutans*) and 'cat head mange mite' (*Notoedres cati*) also occur in South Australia.

Cryptostigmata

Members of this order are often referred to as 'beetle mites' because some are dark brown and shiny like very small beetles. They are able to ingest solid food particles and are important in releasing nutrients from plant litter because they help break it down mechanically and chemically, and also disperse micro-organisms in the upper soil layers resulting in a more widespread decomposition. Some beetle mites act as an intermediate host of tapeworms, carrying the cysticeroid stage in their bodies up onto grass where they are eaten by sheep and cattle. Only five species of this order have been recorded in South Australia. A study of the group is currently proceeding at the South Australian Museum.

SCORPIONS

Scorpions are large (20-150 mm long) for arachnids. They are usually various shades of yellow or brown, but may be greenish. They have small pincer-like chelicerae and large pincer-like palps, and a stout, segmented tail with a terminal sting. They live under stones, logs or bark on growing trees, and some species make deep spiral burrows in the ground with characteristic crescent shaped entrances. Scorpions can survive for months without food. They feed on other arthropods, mainly at night, but may prey on small vertebrates. Like pseudoscorpions some species appear to wait for their prey to blunder into them (in case of burrowing species, at the mouth of the burrow), but the males wander in search of females. Other species forage, and one species (*Isometroides vescus*) seeks out and eats trapdoor spiders. The sting is rarely used to subdue prey, but is used in defence. Scorpion venom appears to be of two types; one, which is only produced by some species of Buthidae, is neurotoxic and can be extremely dangerous (*Androctonus australis* in North Africa has a toxicity almost equal to that of a cobra and has been known to kill a man within about four hours), whilst the other is comparatively harmless to man. It is probable that the venom of most Australian scorpions falls in the latter category. But the sting of one species of *Urodacus* can make people ill for a day or so, and *Lychas marmoreus* gives a locally painful sting with some short-term symptoms.

Recent work has greatly improved our knowledge of Australian scorpions, although a single specimen of *Isometrus melanodactylus* from near Innamincka already adds another genus and species to the South Australian list. Only one species, *Urodacus elongatus*, a large long-tailed scorpion found between the northern end of Yorke Peninsula and the Lake Eyre Basin, is restricted to South Australia, but nine of the twelve South Australian species are endemic to Australia. All three Australian families and all but one genus are represented here. In South Australia the Scorpionidae includes seven species of *Urodacus* which are larger, robust, more or less evenly brown and with powerful palpal pincers; the Buthidae includes four species belonging to either *Lychas*,

Isometroides or *Isometrus*, which are delicate with slim palpal pincers and have a variegated colouration or may be evenly straw coloured with some dark brown areas such as the distal tail segments and sting; the Bothriuridae includes only *Cercophonius squama* with a slightly variegated colouration and medium-sized palpal pincers.

The variety of scorpions lessens as one goes further south in South Australia. Between the latitudes of Adelaide and Naracoorte only four species are known: *Urodacus manicatus* (or *abruptus*), *U. armatus*, *Lychas marmoreus* and *Cercophonius squama*. South of Naracoorte there are as yet no records of scorpions, but since *C. squama* occurs in Tasmania it may well occur here.

SPIDERS

Spiders include the largest number of described species. They are variable in colouration and size, ranging from less than 1 mm to over 40 mm in South Australia. The chelicerae are simplified distally to single fangs, the palps are leg-like and on the males are swollen with a palpal organ used to transfer sperm to the female. The body is clearly divided by a narrow stalk into a hard cephalothorax carrying the legs and a softer abdomen with posterior spinnerets which spin out silk. In some species there is considerable sexual dimorphism, the size and colour of the male being different from the female.

Compared with Europe there are more larger spiders (Mygalomorpha and some Araneomorpha—Lycosidae, Zodariidae, Sparassidae) in this State, whilst the midget spiders (Linyphiidae) are poorly represented. This may reflect the hot, dry climate, since larger animals have a smaller surface area compared to volume through which to lose water. The climate certainly controls the apparent seasonal prevalence of particular species through its effect on potential prey. Spiders that catch flying insects are conspicuously present in the summer, while those that feed on ground insects are more evident in the winter.

The grouping of most spiders into families is relatively easy, but the higher classification is in a state of flux. This order has been classified under headings related to method of prey capture, with a final section on silk and toxicity of venom.

Snareless Ambushers (Primitive)

This group of allied species, the mygalomorphs, includes the trapdoor and funnel-web spiders. They live in burrows or silken tubes from which they rush out to grab passing prey. They are relatively large and hairy, with big chelicerae and parallel fangs used by rearing up the front part of the body and striking down, the fangs acting like two separate miniature pickaxes. In South Australia these spiders are usually most active in the winter, or, in the interior, where the rainfall is not seasonal, when it rains. The females stay in a single burrow for life (normally between five and twenty years). They go on moulting and growing after maturity. Usually males search out females in their burrows to mate at the onset of the wet season, while the young hatch during the dormant dry season and disperse at the onset of the next wet season. Four families are recorded from South Australia.

The 'brush-footed mygalomorphs', comprising two families, are not diverse. The claws on their legs are obscured by a brush of close set hairs. The Theraphosidae is represented by one species, *Selenocosmia stirlingi*, a very large (about 40 mm) medium brown spider, with elongate spinnerets, that lives in open burrows in the dry inland areas of South Australia. The Barychelidae is mainly represented by two species which are medium sized (about 25 mm), dark brown or black spiders (but may have pale hairs on the cephalothorax) with short spinnerets. They have shallow burrows with a trapdoor.

Idiommata blackwalli is mainly found north of Adelaide up to Woomera, and *Lampropodus scintillans* between Mallala and Keith.

The 'trapdoor spiders', or Ctenzidae, are a large family with about 20 species currently known from South Australia. They nearly all close their burrow with a door. They have short spinnerets and the females are generally large squat spiders with short stout legs, although *Dyarcycops andrewsi*, found around Adelaide and in the South East, is relatively slim and long-legged. *Aganippe* is the commonest genus, including light to dark brown species up to 30 mm long and with two pairs of small hairless discs dorsally on their abdomen. *A. subtristis*, common on the Adelaide Plain and Flinders Ranges, has wide-spaced eyes. *A. smeatoni* with closer set eyes, occurs near creeks on the Adelaide Plain. *A. simpsoni*, found in the Simpson Desert, is the only trapdoor spider able to live in desert sand dunes. It spins an especially thick silk burrow lining and has unusual brushes of hairs at the tips of its palps and first legs. *Blakistonia aurea* is widespread and common on the Adelaide Plains near the foothills. Its trapdoor has a long hinge line (about twice the breadth of the door) and sometimes the rim is notched. The 'mouse spiders' (*Missulena*) are widespread in South Australia. They have unusually large chelicerae and the smaller males are strikingly coloured. Their burrow entrance is also unusual in having two doors opening in opposite directions. *M. insignis* males are often seen around Adelaide. They have red chelicerae and red round the eyes, while the abdomen is dark blue and the rest of the body and legs are black.

The Dipluridae, currently with 20 named species recorded from South Australia, is represented by two of the three Australian subfamilies; the tube-weaving Macrothelinae and tunnel-digging Diplurinae—the species have long spinnerets and the Diplurinae in particular are relatively slim and long-legged compared with female ctenizids. The Macrothelinae includes *Cethegus* and *Atrax* (= *Hadronycha*), the latter being well known because of the highly venomous *A. robustus* or 'Sydney funnel-web spider'. Three species of *Atrax* occur in South Australia. All are atypical in being small and in making a well-defined, vertical burrow in the ground. Each species is confined to one of three regions: southern tip of Eyre Peninsula, Southern Flinders Ranges and Mount Lofty Ranges. Nothing is known about the toxicity of their venom. *Cethegus* species have spinnerets as long as their abdomens, with which they spin a massive sheet web with several funnel-like mouths. At least two species occur in dry parts of this State. The Diplurinae, is represented in South Australia by many species, only some of which are described. Most make an open burrow in the ground. Possibly the large brown *Chenistoni tepperi* and the smaller, paler *Stanwellia nebulosa* are the commonest. *S. nebulosa*, the 'pellet spider', makes a soil and silk pellet which it uses as a door to close off the bottom half of its burrow. *Dekana diversicolor*, called the 'black wish-bone spider' because of its colour and the shape of its double entranced burrow, is common in northern parts of the State, and is regularly mistaken for the 'Sydney funnel-web spider'.

Snareless Ambushers (Advanced)

This and all following groups are 'advanced' or araneomorph spiders. The chelicerae have fangs able to meet in a pincer-like fashion, rather than striking separately, and they require no raising of the anterior part of the body to strike. Most araneomorph burrowers are not ambushers, but hunt their prey. An exception is the segestriids, looking superficially like small mygalomorphs, which make silk tubes in holes in walls, fences and the ground from which silk 'trip-wires' radiate and signal when prey is passing.

There are also araneomorph snareless ambushers which lie in wait for their prey on vegetation. Being exposed they are usually well camouflaged. All 'crab spiders' (Thomisidae) belong to this group. They are mainly small, squat spiders, with their legs twisted and often spiny so that they can reach forward and grasp their prey. Thomisids



Mediterranean microwhipscorpion (*Koenenia mirabilis*). Length (excluding incomplete tail): 1.5 mm.



Cheliferid pseudoscorpion (*Cheliferidae*). Length: 3 mm.



Short-legged harvestman (*Triaenonychinae*). Length: 2.75 mm.



Native long-legged harvestman (*Megalopsaliinae*). Male with large folded chelicerae. Length: 4.75 mm.



Introduced daddy-long-legs harvestman (*Nelima* sp.). Length: 4 mm.



Tank mite (*Allothyrus australasiae*). Nymph. Length: 2.25 mm.



Gamasine soil mite (*Parasitidae*). Upside-down female. Length: 1 mm.



Bush tick (*Ixodes tasmani*). Female. Length: 3.75 mm.



Kangaroo soft tick (*Ornithodoros gurneyi*). Length: 7 mm.



Footballer mite (*Tarsotomus* sp.). Length: 0.65 mm.



Whirling mite (*Anystis* sp.) on human skin in front of mark caused by its bite. Length: 1.25 mm.



Red-legged earth mite (*Halotydeus destructor*). Upside-down adult. Length: 0.85 mm.



Brown almond mite (*Bryobia rubrioculus*).
Length: 0.7 mm.



Two-spot spider mites (*Tetranychus urticae*).
Congregation in own webbing on a nettlehead.
Length: up to 0.7 mm.



Giant blood-coloured mite (*Rainbowia imperator*). Length: 5.5 mm.



Furry velvet mite (*Xenotrombium* sp.). Length:
3 mm.



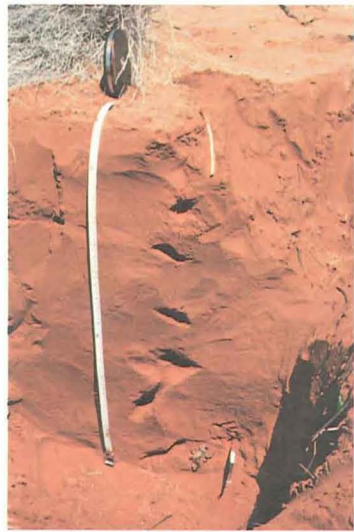
House-dust mite (*Dermatophagoides pteronyssinus*). Length: 0.35 mm.



Short-winged beetle mite (*Schelorbates* sp.).
Length: 0.75 mm.



Inland robust scorpion (*Urodacus yaschenkoï*).
Male. Length: 80 mm.



J. A. Forrest
Bisected spiral burrow dug in desert
sand by *U. yaschenkoï*. Depth: 700 mm.



Marbly slim scorpion (*Lychas marmoreus*).
Length: 40 mm.



Spider-hunter scorpion (*Isometroides vescus*).
Length: 47.5 mm.



Wood scorpion (*Cercophonius squama*). Length: 40 mm.



Barking spider (*Selenocosmia stirlingi*) on hand. Female. Length: 45 mm.



Four-spot trapdoor spider (*Aganippe subtristis*). Female. Length: 35 mm.



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Burrow entrance with open trapdoor of *A. subtristis*. Width: 20 mm.



Mouse spider (*Missulena* sp.). Male. Length: 17.5 mm.



Black wishbone spider (*Dekana diversicolor*). Female. Length: 30 mm.



H. McLennan

Burrowing funnel-web spider (*Atrax* sp. from Southern Flinders Ranges). Female. Length: 15 mm.



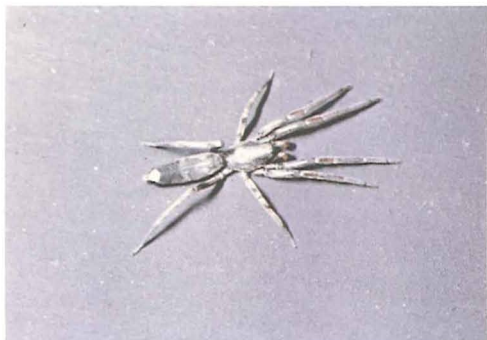
Six-spot crab spider (*Cymbacha* sp.). Female.
Length: 4 mm.



Bird-dropping spider (*Celaenia excavata*).
Female. Length: 12 mm.



A. F. Lees
Huntsman spider (*Isopoda* sp.). Male. Length:
25 mm.



White-tailed spider (*Lampona cylindrata*).
Length: 15 mm.



Pale sac spider (*Chiracanthium mordax*).
Female. Length: 15 mm.



A. F. Lees
Wolf spider (*Lycosa* sp.). Female coated with
young spiders. Length: 12.5 mm.



Gold-ring jumping spider (*Breda jovialis*).
Length: 7.5 mm.



Lynx spider (*Oxyopes* sp.). Length: 5 mm.



Spitting spider (*Scytodes thoracica*). Female
and prey, a mantis. Length: 5 mm.



Fiddle-back spider (*Loxosceles rufescens*).
Female and prey. Length: 7.5 mm.



Cent-sheet spider (*Oecobius annulipes*).
Female. Length: 2.75 mm.



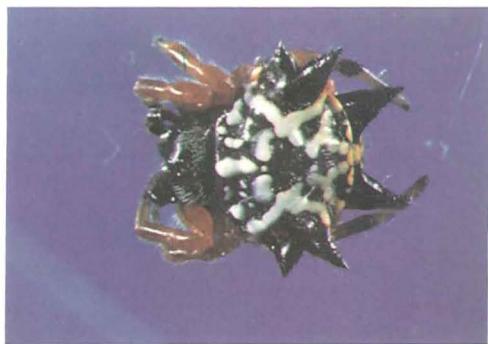
Blackhouse spider (*Ixauticus robustus*). Female
at funnel entrance. Width: 20 mm.



Daddy-long-legs spider (*Pholcus phalangioides*). Female carrying egg sac. Length: 7.5 mm.



Red-back spider (*Latrodectes mactans hasselti*). Underside of female nymph. Length: 10 mm.



Miniature jewel spider (*Gasteracantha minax*). Length: 7.5 mm.



Leaf-rolling spider (*Phonognatha graeffi*). Female. Length: 10 mm.



Night orb-weaving spider (*Araneus biapicatus*). Female. Length: 22.5 mm.



Golden orb-weaving spider (*Nephila* sp.). Female. Length: 25 mm.

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such as *Diaea* are a bright white or yellow and sit on flowers waiting for insects, whilst the drab thomisids such as *Cymbacha* or *Sidymella* sit on vegetation or bark. Both groups are common and diverse in South Australia although there are few published records. A few of the 'orb weavers' (Araneidae) have 'lost' their ability to spin webs. One, the 'bird-dropping spider' (*Celaenia excavata*), is common around Adelaide. It is superficially similar to a large thomisid but has a relatively larger abdomen. During the day it tucks its legs in, looking like a large, wrinkled cream and brown berry. At night it hangs with the front two pairs of legs outstretched, and possibly smelling like a female moth since it seems to feed entirely by grabbing male moths.

Hunters

These spiders seek out their prey. Usually they have long, robust legs and may have enlarged eyes. The recognition of some families is easy while others are drab, nondescript and hard to group, especially those of uncertain relationships with some cribellate and other sheet-web weaving spiders. A few families are mentioned here, firstly, those including mainly ground-living species and secondly those that live mainly on tree trunks and foliage.

Ground-living hunters of certain species make burrows to live in, especially in the dry interior. Other species sometimes live on tree trunks, especially under eucalypt bark, which, although drier, is similar to a ground habitat. Individuals of some species tend to stay in territories whilst others are vagabonds. The 'wolf spiders' (Lycosidae) have large eyes and are widespread and numerous. About thirty species are known in South Australia. Small non-burrowing wolf spiders, the females of which carry spherical egg sacs or their young, are very common in Adelaide suburban gardens and sometimes the larger species (about 30 mm long) such as *Lycosa godeffoyi* and *L. leuckartii* are seen. Species often have attractive complex patterns of subdued greys and browns on them, but the large burrowing *L. forresti* from the dry interior is a striking gold and black spider. The Miturgidae and Cycloctenidae are, in the main, superficially similar to wolf spiders but without large eyes and they never make burrows or carry their egg sacs about. The Zodariidae includes a number of conspicuous species, which are dark brown or black with white or yellow spots on their abdomen. Only five species are recorded from South Australia, but there are others, some which make burrows and some which are vagrants or ant-mimics. There are other common families such as the Clubionidae and Gnaphosidae. They are fairly nondescript but some of the gnaphosids species are flattened and similar to the huntsmen spiders. The 'fishing spiders' or Dolomedidae are like large, but small-eyed, wolf spiders and are found near water. There is a record from an Adelaide suburb of a fishing spider attacking and killing a 70 mm long goldfish, before being killed itself by the irate owner of the fish. Although these spiders catch aquatic animals, they take them out of the water to feed on them.

Of the tree trunk and foliage hunters, the large 'huntsmen spiders' (Sparassidae) are probably the best known in South Australia, especially members of the genera *Isopoda* and *Delena*. Flattened for living under bark, they regularly come into houses, scuttling across the walls, usually near the ceiling, with their large, backwardly twisted legs. The large eyed 'jumping spiders' (Salticidae) are duller in South Australia than many of their tropical cousins. Yet some are brightly coloured compared with most hunting spiders, while others are well camouflaged to look like bark. They are small compact spiders with short legs held close to the body. They make jerky movements, often with their pale furry palps perpetually moving, and they can jump. *Breda jovialis* with a golden patch on its dark abdomen is probably the commonest species in Adelaide. The 'lynx spiders' (Oxyopidae) can also jump, but are usually found on foliage rather than bark and walls.

They are greenish with pale longitudinal stripes and, although small (less than 7 mm long), the characteristic long black spines on the legs can be seen with the unaided eye.

Snare Weavers

The spiders which make a web snare for their prey are considered under four headings depending on the structure of their web. Most of these spiders are confined to the area of their web as they approach maturity, except for the male, which has to seek out a female. The nature of the silk strands making up a web snare varies. They can be simple and dry, viscid (carrying adhesive globules) or hackled (carrying many fine loops which catch on to parts of the prey). The hackled silk is produced from a special plate (the cribellum) just in front of the spinnerets and present on 'cribellate spiders'.

(a) *Portable-web weavers*

The cosmopolitan 'spitting spider', *Scytodes thoracica*, is included in this group. Besides secreting venom through its fangs this small, pale brown, mottled spider secretes mucilage which it spits onto its prey as sticky threads. It is a slow moving, nocturnal spider, fairly common in human habitation in South Australia. Another spider found around Adelaide, the 'ogre faced' or 'stick spider', *Dinopis schomburgki*, hangs at night with a small web held between its front two pairs of legs and when an insect passes it spreads the web out and throws it. On *Dinopis* one pair of eyes is very large and the body is elongate which gave rise to its common names. The small web it holds has hackled strands and so *Dinopis* is usually allied to *Uloborus*, a cribellate orb-web spider.

(b) *Sheet-web weavers*

Spiders of one family, the Agelenidae, are superficially like the hunting wolf spiders, but some species build a sheet of dry, non-hackled silk. An agelenid 'platform spider' (*Corasoides australis*) in South Australia has a sheet extending over low bushes for up to a metre from a silk funnel leading to a burrow in the ground. A common, brightly coloured spider, *Nicodamus bicolor*, spins a similar dry, small, tough sheet-web between the ground and tussocks, logs or rocks. But, unlike *Corasoides* which runs on the upper side of the sheet, it runs along the underneath like a linyphiid spider. On the other hand, a few agelenids also run along underneath their sheet-web. *Nicodamus* was included in the same family as the tangle-web weaving theridiids, but is now in the Nicodamidae, a family with uncertain relationships. *N. bicolor* has a purplish or black abdomen and a red cephalothorax and legs. Although harmless, it is often thought to be poisonous because of this colouration.

Two cribellate species, that are very common around human habitation in South Australia, build a sheet-web. The 'black house spider' *Ixeuticus robustus* is a medium sized (up to 20 mm) black spider which spins its retreat in holes and cracks around houses and even cars, normally with two entrances expanding out, funnel-like, into a hackled sheet. It is sometimes confused with the Sydney funnel-web spider, but is in fact a very different spider and, although there are records of short term unpleasant general symptoms after being bitten by it, it is very timid. *Oecobius annulipes*, a tiny pale buff-coloured, speckled spider, spins a small sheet-web, rarely more than 20 mm across, and having several layers obscuring the hackled effect. They are most common in the mortar lines of brick walls that are outside but dry and sheltered, although they sometimes occur inside houses.

The 'fiddle-back spider' (*Loxosceles rufescens*), well known because of the possible venom toxicity considered below, is recorded as weaving a sheet of sticky silk under stones and wood. Since it is allied to the spitting spiders rather than the viscid silk spinners amongst the Araneides, the stickiness may be of a special nature. This cosmopolitan spider is probably indigenous to the Mediterranean Region but appears to have

been in Adelaide since at least 1905, and has since been collected from Loxton and Melrose. In South Australia the records are all of wandering spiders, not in webs, from inside or near human habitation. The common name refers to a dark brown mark (sometimes obscure), broadest at the front of the cephalothorax and tapering backwards with a fiddle-like outline. They are nondescript mid-brown spiders, with a flattish cephalothorax bearing only six eyes on three quite conspicuous black spots near its front edge, and the legs are fairly long (up to one and a half times the body length).

The small 'midget spiders' (Linyphiidae) usually have a circular, horizontal sheet-web in foliage, which has some viscid strands. It may be drawn up in the middle so that the maker is called a 'tent spider'. A linyphiid subfamily, Erigoninae, includes species which are very small (under 2 mm long) and make tiny sheet-webs on the ground and amongst moss or grass. The linyphiids always run underneath their sheet-web and bite their prey through the web and then pull it through and wrap it up in silk. They occur in South Australia, but are mostly unstudied. Their numbers and diversity are nowhere near as great as in the Northern Temperate Regions.

(c) *Tangle-web weavers*

Most spiders with a tangle-web belong to either the 'comb-footed spiders' (Theridiidae) which spin some viscid strands or the 'daddy-long-legs spiders' (Pholciidae) which spin only dry strands. Both groups wrap their prey in silk and the web appears to be a structureless tangle. *Pholcus phalangioides* has spread with European man, making large cobwebs in the corners of rooms and outbuildings. This very long-legged spider hangs upside down in the web, sometimes holding a spherical, lightly spun egg-sac in its mouthparts, and vibrating itself to an indistinct blur when disturbed. The theridiids are a large and diverse family, poorly known in South Australia except for the common and infamous 'red-back spider' (*Latrodectes mactans hasselti*) and the common 'grey house spider' (*Achaearanea tepidariorum*), both of which occur near human habitation but rarely inside houses. Both species are similar in having a tangle of web with a number of vertical, viscid, contractile 'trap' strands, in the case of *L. mactans* always reaching to the ground. When touched by a walking insect the strand sticks to it, breaks and contracts, pulling the prey up off the ground.

(d) *Orb-web weavers*

The weavers of orb-webs can be divided into two types: the spinners of hackled strands and the spinners of viscid strands (although allied to the latter, *Cyrtophora* species spin only dry, non-hackled silk). The hackled web weavers are represented by the 'humpbacked spiders' (*Uloborus*). The cosmopolitan *U. geniculatus* is common in Adelaide around human habitation in sheds, while the smaller *U. congregabilis*, whose webs are clustered together and merge with each other, is found in more natural environments. The abdominal profile of these small spiders is a characteristic broad-based triangle and the egg-sacs are unusual in being a flat star shape usually with one axis extended. The *Uloboridae* are atypical in having no poison and only subdue their prey by wrapping them up in silk, as also do many poisonous snare weavers.

The structure of the viscid orb web of the Araneidae can vary considerably. The classic *Araneus* webs are mainly confined to the vertical plane with radiating dry scaffolding strands from a central hub and a spiral of viscid strands, which superficially look like concentric circles around the hub. The 'night orb weaver' (*A. biapicata* = *transmarinus* in part) is common in Adelaide and South Australia. It is an 'annual', maturing at the end of the summer, producing eggs and then dying. It spins a web on suitable evenings and then eats it next morning, although at the end of the summer it appears to give up this arduous process and the webs can be seen in the daytime. A

smaller species with a lumpier abdomen, the 'common orb weaver' (*A. pustulosus*) is not so common in Adelaide but its webs are more often seen in the day time.

Seven genera, regularly seen in South Australia, are commented on to illustrate the variations amongst orb weaving spiders. The orb-web may lie within a scaffolding of the tangle-like strands, have segments missing, or have branched radial strands. *Cyrtophora* species spin a web which is also exceptional in being horizontal and pulled up in the middle so that it is similar to the web of the linyphiid tent spiders. The 'leaf-rolling spider' (*Phonognatha graeffi*) has a missing sector in the upper part of the orb, with a rolled up leaf in this space which it uses as a lair. The 'scorpion-tailed spider' (*Arachnura higginsi*) has a similar missing sector, but the female puts a line of yellowish, woolly egg-sacs in the space. Although small (about 20 mm long), this spider often attracts attention because the abdomen is drawn out posteriorly into a vaguely scorpion-like tail. The small and attractive 'jewel spider' (*Gasteracantha minax*) is a shiny black and yellow with three pairs of robust black spines sticking out sideways from its abdomen. It is only about 8 mm long and spins small webs, often in dense aggregates with contacting foundation strands on low vegetation. The 'long-jawed orb weaver' (*Tetragnatha* species) with a slim body, long legs, and enormous forwardly protruding chelicerae, is often seen hanging stick-like in a flimsy orb-web amongst reeds. The most magnificent of the group are the 'golden-orb weavers' (*Nephila* species). Like *Gasteracantha*, this is basically a tropical genus. Even so, perhaps because they are so conspicuous, six species have been described from South Australia, including *N. adalaidensis*. The common name is derived from the fact that the viscid strands of the web are golden. The orb is suspended in a tangle of threads and lacks viscid strands in one sector. This space is occupied by a line of prey remains wrapped up in silk. Although species in South Australia are relatively small for the genus, adult females often exceed 25 mm. They hang like small silvery plums with long reddish legs. Apparently, they take almost two years to mature. The half grown spiders are not evident for the mid-part of the only winter they live through.

Silk and Poison

Although spider silk is similar chemically to the core of commercial silk produced by silk moth caterpillars it is not so heavy or strong, lacking an outer coat of sericin. Most spiders lay down a dragline of silk wherever they go. Silk is also used to line burrows, make egg sacs, put sperm on when the males transfer it from their genital openings to the palpal organs, wrap up prey, make snares and to balloon, which involves spinning out a line that is carried into the air by the wind, taking the spider with it. Some spiders from diverse groups use ballooning to disperse as immature stages. Sometimes the silk strands of ballooning spiders descend in large amounts and in Adelaide there have been a number of reports where people's backgardens have been draped with the silk covering fruit trees and clothes hoists alike. In one instance the spider apparently involved was a small wolf spider (*Lycosa*). This silk is sometimes referred to as 'Angel's hair' and by some is regarded as originating from UFOs.

Most spiders (uloborids are an exception) secrete a poison through the fangs of the chelicerae. The ability of the fangs to pierce human skin and the toxicity of the venom to humans varies considerably. Records of spiders biting people are much higher for spiders commonly found around human habitation suggesting that opportunity is a considerable factor determining whether or not a spider species is regarded as dangerous or not. The only spider that has ever caused death in South Australia is the red-back (*Latrodectes mactans hasselti*) and no deaths have occurred since the Commonwealth Serum Laboratories introduced an antivenene in 1956. This spider is usually timid but extremely common. Amongst the large mygalomorphs (dealt with above under primitive

snareless ambushers) the bite does not appear to be as bad as their fearsome appearance suggests. This is particularly true for the trapdoor spiders, although the brush-footed and diplurid mygalomorphs should be treated with more caution. Amongst the diplurids the three small species of *Atrax* from South Australia may be regarded as potentially dangerous because they are congeneric with the dangerous and much larger *A. robustus* from around Sydney. Of the araneomorph spiders, a number of hunting spiders of a few genera that occur in this State can be regarded as having bites that can cause unpleasant general symptoms. Such spiders belong to the genera *Miturga* and *Olios* and there are two species which occur regularly in houses: *Chiracanthium mordax* (= *diversum*) and *Lampona cylindrata*. *C. mordax* is about 10 mm long when full grown, fairly elongated, and pale, the cephalothorax and legs being light brown and the abdomen pale buff with indistinct markings. The 'white-tailed spider' (*L. cylindrata*) is 12-14 mm long when full grown, is even more elongate, but is very dark, almost black, with a pale spot at the tip of its abdomen. The snare building spiders have the advantage that they rarely wander from their webs. The dangerous, but small-fanged and timid red-back spider has already been mentioned. The only others in South Australia known to produce general symptoms are *Ixecticus robustus* and *Loxosceles rufescens* referred to above under 'Sheet-web weavers'. *Loxosceles* is a genus that includes about 70 species in the world, of which two species have produced serious symptoms or death in man, and six others some symptoms. No reports are known of bites by *L. rufescens* in Australia, but in Israel it has caused limited necrosis around the bite and short-term symptoms, whilst tests of its venom on rabbits have given similar results to venom tests for the two species producing serious symptoms in man.

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PART 2

EXPLORATION AND COLONISATION

EXPLORATION BEFORE COLONISATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Zeepaard* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia. On board the *Gulden Zeepaard* was Pieter Nuyts, 'Councillor Extraordinary of India', after whom this area was named 'A Landt Van P. Nuyts'.

As the South Australian coast presented no evidence of prospects for trade, the Dutch, being essentially a trading nation, were not inclined to closer investigation. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear-Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Great Australian Bight. He sailed to the head of the Bight, but then after so many miles of barren coast abandoned hope of finding anything other than desolate country, and sailed south for Van Diemen's Land (Tasmania). The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation .

The British who followed were far more interested in the possibility of colonisation to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a

possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia about 1800. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England on 18 July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia between January and April 1802. In addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian continent in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders; several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8 April 1802 that he met Captain Nicholas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Le Havre in October 1800 with instructions to explore several specified regions including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time *en route*. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacedpede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*) for charting work in shallow waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on 27 December Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonisation, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonisation, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804, the British sent Grimes, a government surveyor, to Kangaroo Island to report on it as a possible site for colonisation. The Grimes Report was most unfavourable, stating that the soil was poor

and that the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into establishing their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16), Goold (1827-28), Hart (1831-33), and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However, contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that the available fertile land was more than adequate for the founding of a colony.

The most significant explorations of the period immediately before colonisation were those of Captain Charles Sturt, who explored the Murray River from New South Wales down to its mouth; traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12 February 1830. Captain Sturt's journey has become something of an epic in Australian history; with a small party of soldiers and convicts he rowed 2 700 kilometres on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by Aborigines. However, the main object of Sturt's journey was accomplished; the settling of the long insoluble 'problem of the rivers' of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question, for his discoveries opened up 3 200 kilometres of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, a new significance. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists who believed that the entire produce of eastern Australia would eventually be shipped from this area. In fact, the Murray became the grand attraction of the scheme. However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formation of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the 'problem of the rivers' was replaced by the 'mystery of the Murray mouth'—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the mystery of the Murray. Barker, landing at Noarlunga on 17 April 1831 ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly arising out of navigational difficulties, in the area of the Murray mouth which tended to discourage navigation later. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St

Vincent. Interested people in England were so obsessed with the geographical fact of the great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself who, after his return to Sydney in May 1830, wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: 'My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary'. This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the Wakefield Plan could be applied without restriction. Sturt spared no efforts in converting opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17 February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. 'It is in the angle formed by the creek with the coastline that I would recommend the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital. . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle'. In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4 May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay, which he found unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement.

From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

COLONISATION

The colonisation of South Australia was in itself an experiment involving certain new principles and was to represent a turning point in British colonial policy. The period was conducive to colonisation as in Britain there was wide-spread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonisation of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, whose ideas were contained in a number of writings including the now famous *A Letter from Sydney* series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land; the use of the receipts for sponsoring emigrants; and the granting of some measure of self-government. Drawing on developments in New South Wales, Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by

selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans. In 1830 the National Colonization Society was formed with Gouger as its secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonisation followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834 the South Australian Association. This group was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on earlier plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on 15 August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 802 508 square kilometres, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50 000. All land alienated by the Crown was to be sold at a price of not less than '12 shillings' (\$1.20) per acre and the whole of the proceeds used in 'conducting the emigration of poor persons from Great Britain and Ireland'.

Although Parliament was prepared to authorise the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorised to borrow \$400 000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100 000 against the sale of land to start the migration program. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonisation another twelve

months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of \$40 000 be lodged as a guarantee for the venture. Secondly, land to the value of \$70 000 was to be sold before settlement.

A Board of Commissioners with Torrens as Chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 an acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of \$1.20 an acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the \$40 000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonisation. The South Australian Company was formed in January 1836, and in February two ships of the Company, the *John Pirie* and the *Duke of York*, sailed for Kangaroo Island to establish a settlement. Another Company ship the *Lady Mary Pelham* followed later.

The *Cygnets* carrying the Deputy Surveyor, G. S. Kingston and his staff left at the end of March and the *Rapid* with Colonel William Light, Surveyor-General, on board departed at the beginning of May. One of Light's most important tasks was to choose a site for the first settlement and details of his early movements are given on page 48. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh RN, arrived at Holdfast Bay on 28 December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for eighteen months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out difficult tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. His views prevailed and the city was surveyed to his plan and the land was allotted by March 1837. There were 700 one-acre lots in Adelaide south of the River Torrens and 342 one-acre lots in North Adelaide. Victoria Square was situated in the centre of the City and there were four other squares in Adelaide as well as one in North Adelaide. An important feature in Light's plan was the extensive parklands surrounding the City.

The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the volume of the unemployed.

Much of the inactivity of the colony was brought about by constant clashes between Hindmarsh and the Resident Commissioner J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realised that the divided authority as incorporated in the Colonization Act was impracticable, and the next Governor, Colonel George Gawler, was authorised to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending program. Surveying was considerably increased with the result that 200 000 hectares had been surveyed by mid-1841. At the same time an extensive public building and works program provided relief for the unemployed. Generally, Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown Colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had ceased with the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845, South Australia finally became self-supporting. Moreover prosperity was on the doorstep; copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 had a two-fold influence on the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. Secondly it gave great impetus to agriculture when the price of wheat rose sharply—the feeding of the miners became as attractive a proposition as was the actual mining. Four years later, when the miners returned, many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self-government.

EXPLORATION AFTER COLONISATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonisation exploration was of two forms; the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty

Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838 attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13 January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in eleven weeks with the cattle in good condition and only four head out of 300 lost *en route*. At the same time Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon and Bonney. In another journey starting in 1838, Eyre became the first to bring sheep overland to Adelaide, driving 1 000 sheep and 600 cattle along the Hawdon trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within an 80 kilometre radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realised, however, that very different conditions prevailed in the Lower South East, and by the mid-1840s this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by Edward John Eyre. In 1839 Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which came to bear his name, passed through Streaky Bay, and came to within 80 kilometres of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the north, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for eighteen years.

Thwarted in his efforts to go north, Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowlers Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out for King George Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George Sound in July after an extremely tortuous crossing.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after

reaching a 'desert-like' Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that there was no country as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes.

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonisation of South Australia, was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyre's Mount Hopeless from the other side of the lakes, the party moved to Mount Poole some 300 kilometres north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, the course of which they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 800 kilometres from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper Creek for almost 150 kilometres before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges *via* Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek, Horrocks made two trips, the first of about 30 kilometres and the second about 100 kilometres to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln, Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden *via* Fowlers Bay.

In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and thus he was virtually able to begin his expedition at Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline was thwarted however, and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart was successful, reaching the sea on 24 July 1862 and establishing a route which was to be followed by the Overland Telegraph ten years later. A special article on the Overland Telegraph Line was included on pages 526-31 of the *South Australian Year Book* 1972.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some seventeen years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne, John McKinlay from Adelaide, were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870 and 1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken 30 years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which forty years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 170 kilometres before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse returning from an unsuccessful attempt to reach Perth from Alice Springs, discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.

CONSTITUTION AND GOVERNMENT

3.1 SYSTEM OF GOVERNMENT

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs and defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain public corporations such as the State Bank of South Australia, the Electricity Trust of South Australia, the South Australian Housing Trust and the South Australian Meat Corporation.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House and in each the Upper House has restricted powers concerning money Bills.

Electorates

The State is a single multi-member electorate for elections for both the Commonwealth (Senate) and South Australian (Legislative Council) Parliaments. There are ten members elected from South Australia to the Commonwealth Senate; these members are elected for a period of six years with half of them generally retiring each three years.

After the next general election, the South Australian Legislative Council will consist of twenty-two members elected for a term of six years, with eleven generally retiring each three years. At present there are twenty-one Legislative Councillors, eleven having

been elected under the present system which was introduced by the Constitution and Electoral Acts Amendment Act, 1973 and ten under the system which applied before the election of 12 July 1975.

Although it is the respective Parliaments alone which have the power to make changes in the number, size, and distribution of electorates, it is customary to appoint electoral commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities. Because of a prescribed relationship between population and the distribution of House of Representatives electorates, the Chief Australian Electoral Officer determines the representational entitlement of the States during each Parliamentary triennium, based on the latest available statistics prepared by the Australian Statistician (rather than on Census figures). Should the representation entitlement of any State change consequent upon such a determination, a redistribution is required.

In South Australia the boundaries of electorates are defined in a schedule to the State Constitution, and these have been changed from time to time on the recommendations of various electoral commissions which were appointed at irregular intervals with specific instructions as to how they should divide up the State. However, following an amendment to the Constitution in 1975, a permanent Electoral Commission was appointed in 1976 with instructions to divide the State into forty-seven House of Assembly electoral districts, each district having the same number of electors, with a maximum tolerance of ten per cent from the electoral quota. This Commission also has the duty to review boundaries periodically to maintain equal numbers of electors in electorates.

Party System

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by the major political parties. Once policy has been determined at a party meeting, members generally observe party solidarity; speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

Cabinet and Executive Government

Both in the Commonwealth and in South Australia, executive government is based on the system which was evolved in Britain in the eighteenth century and which is generally known as 'cabinet' or 'responsible' government. Its main principles are that the head of the State, Her Majesty the Queen (or her representative, the Governor-General or Governor, acting on her behalf) should perform governmental acts on the advice of her ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party or coalition of parties commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the State; and that the Ministry should resign if it ceases to command a majority there.

The cabinet system operates chiefly by means of constitutional conventions, customs or understandings and through institutions that do not form part of the legal structure of government at all. The executive power of the Commonwealth is exercisable by the Governor-General and that of South Australia by the Governor, each being advised by an executive council which only meets for formal purposes. The whole policy of a Ministry is in practice determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

The Cabinet

The Cabinet does not form part of the legal mechanism of government. Its meetings are private and deliberative, the actual Ministers of the day alone are present, no records of the meetings are made public and the decisions taken have in themselves no legal effect. At present the fourteen senior Ministers of the Commonwealth Government constitute the Cabinet and other Ministers only attend Cabinet meetings when required, but from 1972 to 1975 all Ministers were members of the Cabinet. In South Australia, all thirteen Ministers are members of Cabinet.

As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls not only the general legislative program of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the State. In summoning, proroguing or dissolving Parliament, the Governor-General or the Governor is usually guided by the advice tendered him by the Cabinet through the Prime Minister or Premier, although legally the discretion is vested in the Governor-General or Governor himself.

Executive Council

The Executive Council is usually presided over by the Governor-General or Governor, the members holding office during his pleasure. All Ministers of State must be members of the Executive Council. Commonwealth Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the cabinet system that attendance should be limited to the Ministers of the day.

The meetings of the Executive Council are formal and official in character and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of Cabinet are, where necessary, given legal form, appointments are made, resignations accepted, proclamations issued and regulations approved.

Appointment of Ministers

Legally, Ministers hold office during the pleasure of the Governor-General or Governor, but in practice the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command a majority in the popular House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

Committees

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition there is a Committee system whereby a limited number of Members inquire into and report on particular matters, thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to inquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

Administration

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and South Australian Government departments, by local government authorities, and by public corporations deriving authority and responsibility from either Commonwealth or South Australian legislation. Within this framework numerous boards and committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary. Some items of Commonwealth legislation are completely, or almost completely, administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, *e.g.* the Births, Deaths and Marriages Registration Branch applies the *Marriage Act* 1961 in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, *e.g.* the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State land tax may be paid at Post Offices.

Judicature

The degree to which South Australians are subject to the jurisdiction of Commonwealth and South Australian courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to jurisdiction of Commonwealth courts in industrial matters.

Generally speaking, the decisions of the lower courts (the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Court, and the decisions of this higher court, acting in either its original or appellate jurisdiction, may be the subject of appeal to the High Court of Australia.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

3.2 COMMONWEALTH GOVERNMENT

Federation

The Commonwealth of Australia was proclaimed on 1 January 1901 in 'An Act to constitute the Commonwealth of Australia', a statute of the Imperial Parliament, which received Royal Assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at intercolonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland and Tasmania, and in 1900 by Western Australia.

Separation of Powers

The Constitution provides, in sections 52, 69, 86, 90 and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in section 51, for certain specified fields of interest to be common to both the Commonwealth and State Governments; in cases of conflicting legislation, that of the former prevails to the extent of the inconsistency. All other fields of interest remain the exclusive province of the State Governments until amendment is made to the Constitution Act or until the State Parliaments cede particular powers.

Financial Resources

Since Federation the distribution of financial resources between the Commonwealth and State Governments has been an almost constant problem. Under the original terms of the Constitution three-quarters of the net revenues from the duties of customs and excise, for ten years, was returned to the States; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 11—Public Finance.

COMMONWEALTH LEGISLATURE

The Constitution provides that 'the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives'. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

Franchise

Qualifications for franchise are possessed by any British subject, not under eighteen years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month before enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to Aboriginal natives of Australia.

A member of the Defence Forces on service outside Australia who is a British subject not less than eighteen years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections, whether enrolled or not.

Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer or, persons who are holders of temporary entry permits under the *Migration Act* 1958 or are prohibited immigrants under that Act are excluded from the franchise.

Membership

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, eighteen years of age or over, who has resided in Australia for at least three years and who is, or is qualified to become, an elector. The principal reasons for disqualification of persons otherwise eligible as members of either House are; membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the Public Service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons.

EXECUTIVE GOVERNMENT

Governor-General

On 8 December 1977 His Excellency the Hon. Sir Zelman Cowen, AK, GCMG, QC, was sworn in as the nineteenth Governor-General of the Commonwealth. His authority as the Queen's representative is derived from Letters Patent, instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

Executive Council

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

Ministry

Members of the forty-fifth Ministry (the third Fraser Ministry) are listed below.

Fraser Ministry at 31 May 1979**Inner Cabinet***Prime Minister*

The Rt Hon. J. M. Fraser, CH, MP (Vic.)

Deputy Prime Minister, Minister for Trade and Resources

The Rt Hon. J. D. Anthony, MP (NSW)

Minister for Industry and Commerce

The Rt. Hon. P. R. Lynch, MP (Vic.)

Minister for Primary Industry and Leader of the House

The Rt. Hon. I. McC. Sinclair, MP (NSW)

Minister for Education and Leader of the Government in the Senate

Senator the Hon. J. L. Carrick (NSW)

Minister for Industrial Relations

The Hon. A. A. Street, MP (Vic.)

Minister for Transport

The Hon. P. J. Nixon, MP (Vic.)

Treasurer

The Hon. J. W. Howard, MP (NSW)

Minister for Foreign Affairs

The Hon. A. S. Peacock, MP (Vic.)

Minister for Defence

The Hon. D. J. Killen, MP (Qld)

Minister for Social Security

Senator the Hon. M. G. C. Guilfoyle (Vic.)

Minister for Finance

The Hon. E. L. Robinson, MP (Qld)

Minister for Employment and Youth Affairs and Minister Assisting the Prime Minister

The Hon. R. I. Viner, MP (WA)

Attorney-General

Senator the Hon. P. O. Durack, QC (WA)

Outer Ministry*Minister for Health*

The Hon. R. J. D. Hunt, MP (NSW)

Minister for Immigration and Ethnic Affairs and Minister Assisting the Treasurer

The Hon. M. J. R. MacKellar, MP (NSW)

Minister for Veterans' Affairs and Minister Assisting the Minister for Primary Industry

The Hon. A. E. Adermann, MP (Qld)

Minister for Administrative Services and Minister Assisting the Minister for Defence

The Hon. J. E. McLeay, MP (SA)

Minister for National Development

The Hon. K. E. Newman, MP (Tas.)

Minister for Science and the Environment

Senator the Hon. J. J. Webster (Vic.)

Minister for Post and Telecommunications

The Hon. A. A. Staley, MP (Vic.)

Minister for Productivity and Minister Assisting the Minister for Industry and Commerce

The Hon. I. M. Macphee (Vic.)

Minister for Business and Consumer Affairs and Minister Assisting the Prime Minister in Federal Affairs

The Hon. W. C. Fife, MP (NSW)

Minister for Special Trade Representations and Minister Assisting the Minister for Trade and Resources

The Hon. R. V. Garland, MP (WA)

Minister for Home Affairs and Minister for the Capital Territory

The Hon. R. J. Ellicott, QC, MP (NSW)

Minister for Housing and Construction

The Hon. R. J. Groom, MP (Tas.)

Minister for Aboriginal Affairs and Minister Assisting the Minister for Education

Senator the Hon. F. M. Chaney (WA)

Salaries and Allowances

From 1 July 1978 the annual salary for each member has been \$25 692 with an electorate allowance of either \$9 000 or \$13 000 depending on the area of the member's electorate. Senators receive an electoral allowance of \$9 000.

The following additional payments are also made (effective from 17 August 1978 after the House of Representatives, by Resolution, disapproved the new determinations of the Remuneration Tribunal which were effective from 1 July 1978 and paid up to and including 16 August 1978):

Prime Minister—\$28 250 plus expense allowance of \$13 200;

Deputy Prime Minister—\$14 250 plus expense allowance of \$6 600;

Ministers (Inner Cabinet)—\$11 750 plus expense allowance of \$5 500;

Treasurer—\$13 250 plus expense allowance of \$6 600;

Leader of the House—\$11 750 plus expense allowance of \$6 600;

Ministers (Outer Ministry)—\$10 500 plus expense allowance of \$5 500;

Speaker (House of Representatives)—\$10 500 plus expense allowance of \$5 500;

President (Senate)—\$10 500 plus expense allowance of \$5 500;

- Chairman of Committees (House of Representatives)—\$4 500 plus expense allowance of \$1 100;
- Chairman of Committees (Senate)—\$4 500 plus expense allowance of \$1 100;
- Leader of the Opposition (House of Representatives)—\$11 750 plus expense allowance of \$6 600;
- Deputy Leader of the Opposition (House of Representatives)—\$8 500 plus expense allowance of \$5 250;
- Leader of the Opposition (Senate)—\$8 500 plus expense allowance of \$5 250;
- Deputy Leader of the Opposition (Senate)—\$4 250 plus expense allowance of \$1 100;
- Government Whip (House of Representatives)—\$4 250;
- Opposition Whip (House of Representatives)—\$3 750;
- Deputy Government Whip (House of Representatives)—\$1 250;
- Deputy Opposition Whip (House of Representatives)—\$600;
- Other Whips (House of Representatives)—\$2 500;
- Government Whip (Senate)—\$3 500;
- Opposition Whip (Senate)—\$3 500.

Superannuation

The *Parliamentary Contributory Superannuation Act* 1948 provides for the payment of superannuation retirement benefits to or in respect of former members of the Commonwealth Parliament. Contributions by Senators and members are compulsory.

Generally, contributions by members are at the rate of 11·5 per cent of the total of the parliamentary allowance and of any additional salary or allowance in the nature of salary payable by reason of service as a Prime Minister, a Minister, or Officer of Parliament. The contributions are reduced when a member completes 18 years parliamentary service, *i.e.* the rate becomes 5·75 per cent of the parliamentary allowance plus 11·5 per cent of the amount of any additional salary or allowance in the nature of salary received by reason of service as a Prime Minister, a Minister, or Officer of Parliament.

Members who retire involuntarily become eligible for a retiring allowance after eight years service (or less in certain circumstances) while those who retire voluntarily become eligible after twelve years service (or less in certain circumstances). A member who becomes entitled to a retiring allowance other than on the grounds of ill-health may elect to convert up to 50 per cent of that retiring allowance to a lump sum payment. Where there is no entitlement to a retiring allowance the benefit is a lump sum payment comprising a refund of contributions plus a supplement, the amount of which depends on whether retirement was involuntary or voluntary.

The scheme also provides for the payment of annuities to eligible widows and widowers of former members. Where the former member was in receipt of a retiring allowance at the time of death, the annuity payable is five-sixths of that allowance or, if the member had elected to commute part of that allowance, five-sixths of the allowance that would have been payable had the member not elected. Where the member died during parliamentary service, the annuity payable equals five-sixths of the retiring allowance that would have been payable to the member had the member retired involuntarily. An annuity is payable to an eligible dependant child if both parents have died.

THE SENATE

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

Representation

At present the Senate consists of sixty-four members—ten from each State, two from the Australian Capital Territory and two from the Northern Territory. The original provision was that each State, voting as a single electorate, should elect six Senators but by the Representation Act of 1948, which was effective for the 1949 elections, the number was raised to ten. By the *Senate (Representation of Territories) Act 1973*, the number of Senators was increased from sixty to sixty-four with the addition of two Senators from both the Australian Capital Territory and the Northern Territory. The Territories were represented in the Senate for the first time following the general election of 13 December 1975. Except in extraordinary circumstances each Senator is elected for a term of six years, five from each State and all Territory Senators retiring every three years.

After the election of 10 December 1977 representation in the Senate was as follows:

State or Territory	ALP	LP	NCP	AD	IND
New South Wales	4	4	1	1	—
Victoria	4	4	1	1	—
Queensland	4	3	3	—	—
South Australia	4	6	—	—	—
Western Australia	4	6	—	—	—
Tasmania	4	5	—	—	1
Australian Capital Territory	1	1	—	—	—
Northern Territory	1	—	1	—	—

ALP Australian Labor Party LP Liberal Party of Australia NCP National Country Party AD Australian Democrats
IND Independent

Elections for the Senate: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949	434 224	420 437	96.82	48 838	11.62
28 April 1951	440 454	427 593	97.08	24 792	5.80
9 May 1953	453 496	437 583	96.49	21 297	4.87
10 December 1955	462 747	444 827	96.13	39 802	8.95
22 December 1958	490 930	473 832	96.52	36 677	7.74
9 December 1961	521 396	501 312	96.15	28 284	5.64
5 December 1964	551 341	528 464	95.85	39 421	7.46
25 November 1967	594 480	568 823	95.68	32 864	5.78
21 November 1970	639 807	609 268	95.23	42 306	6.94
18 May 1974	750 308	722 434	96.28	82 191	11.38
13 December 1975	789 004	759 369	96.24	75 540	9.95
10 December 1977	824 205	783 669	95.08	81 451	10.39

The members representing South Australia in the Senate are:

To Retire 30 June 1981:

Davidson, Gordon Sinclair (LP)
 Bishop, the Hon. Reginald (ALP)
 Jessop, Donald Scott (LP)
 Cavanagh, the Hon. James Luke (ALP)
 Laucke, the Hon. Condor Louis (LP)

To Retire 30 June 1984:

Messner, Anthony John (LP)
 McLaren, Geoffrey Thomas (ALP)
 Young, Harold William (LP)
 Elstob, Ronald Charles (ALP)
 Teague, Baden Chapman (LP)

Voting System

Before the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used. This system was discussed in detail on pages 55-6 of the *South Australian Year Book 1971*.

THE HOUSE OF REPRESENTATIVES

Representation

The members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, 'until the Parliament otherwise provides', for allocating to each State its share of the available seats but stipulates that no original State shall have less than five members in the House. In addition one member is elected from the Northern Territory and two members are elected from the Australian Capital Territory. Preferential voting is used for elections for the House of Representatives.

Elections for the House of Representatives: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
29 May 1954	455 872	(a) 357 854	(a) 96.77	8 812	2.46
10 December 1955	462 747	444 827	96.13	18 050	4.06
22 December 1958	490 930	473 832	96.52	15 619	3.30
9 December 1961	521 396	501 312	96.15	15 629	3.12
30 November 1963	541 536	523 135	96.60	13 963	2.67
26 November 1966	585 465	563 341	96.22	16 220	2.88
25 October 1969	624 626	599 719	96.01	20 562	3.43
2 December 1972	671 081	644 211	96.00	16 845	2.61
18 May 1974	750 308	722 434	96.28	20 311	2.81
13 December 1975	789 004	759 369	96.24	18 201	2.40
10 December 1977	824 205	783 669	95.08	26 461	3.38

(a) Contested electorates only.

Following an electoral redistribution of House of Representatives seats in 1977 by Federal Electorate Redistribution Commissioners, the number of members of the House

of Representatives was reduced from 127 to 124. The number of South Australian seats in the House of Representatives was reduced from 12 to 11 with the seat of Angas being abolished.

After the election of 10 December 1977 representation in this House was as follows:

Party	NSW	Vic.	Qld	SA	WA	Tas.	ACT	NT	Total
ALP	17	10	3	6	1	—	1	—	38
LP	18	20	9	5	9	5	1	—	67
NCP	8	3	7	—	—	—	—	1	19

ALP Australian Labor Party LP Liberal Party of Australia NCP National Country Party

House of Representatives, 1977 Election
Voting and Party Representation in South Australian Electorates

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide	77 831	73 098	Hurford, C J.	ALP	35 786
Barker	73 369	70 029	Porter, J. R.	LP	43 129
Bonython	73 755	69 638	Blewett, N.	ALP	33 772
Boothby	75 691	71 897	McLeay, Hon. J. E.	LP	40 358
Grey	72 751	68 935	Wallis, L. G.	ALP	31 221
Hawker	77 262	72 867	Jacobi, R.	ALP	31 685
Hindmarsh	77 158	73 627	Cameron, Hon. C. R.	ALP	38 976
Kingston	73 465	70 680	Chapman, H. G. P.	LP	31 254
Port Adelaide	75 357	71 398	Young, M. J.	ALP	40 497
Sturt	74 785	71 509	Wilson, I. B. C.	LP	35 300
Wakefield	72 781	69 991	Giles, G. O'H.	LP	42 077

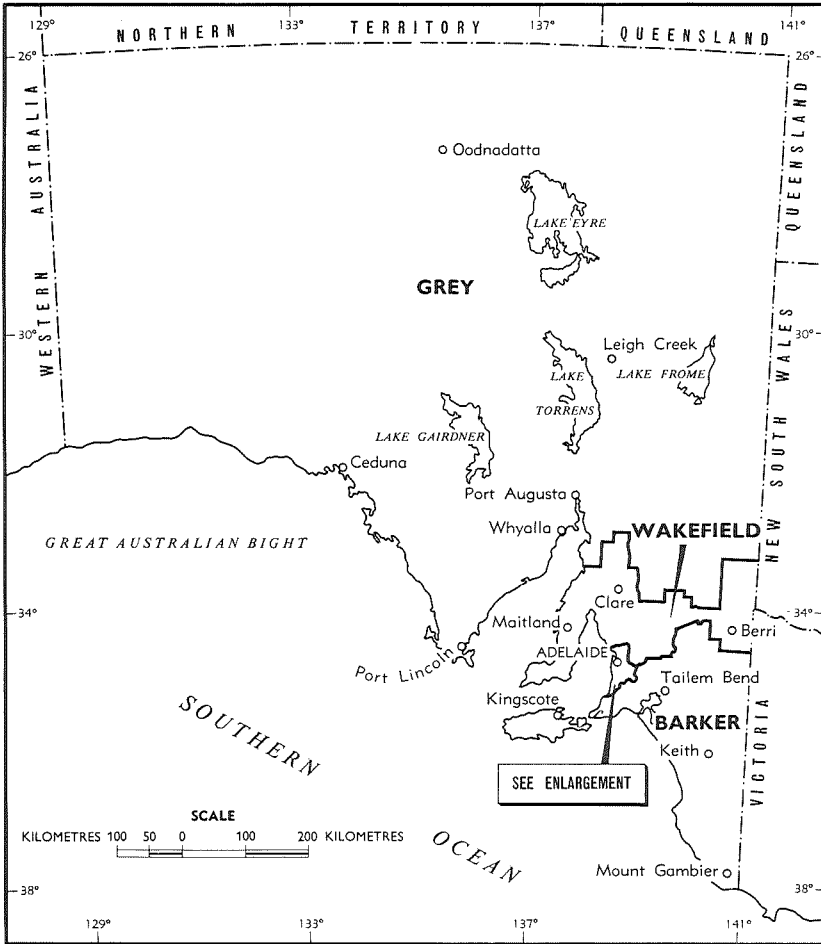
REFERENDA

Alteration to the Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the thirty-six proposals so far submitted to the people of Australia for amendment to the Constitution, only eight have been approved (one in each of 1906, 1910, 1928, 1946 and 1967, and three in 1977). In addition proposals concerning compulsory overseas military service were submitted to the people in 1916 and 1917 respectively; both proposals failed to gain the necessary majority of votes.

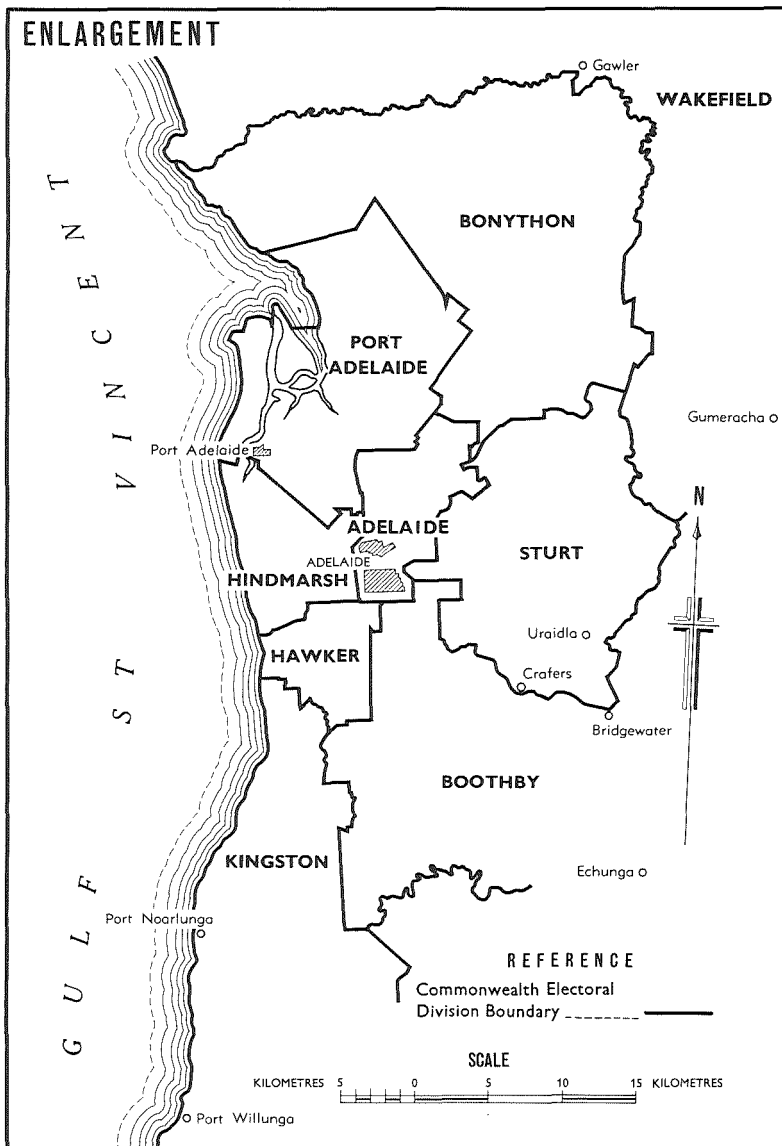
At the most recent referendum, held on 21 May 1977, four alterations to the Constitution were proposed. Three of the four referendum proposals were approved, but the Constitution Alteration (Simultaneous Elections) Referendum was defeated because it recorded a majority of votes in only three States (although it was approved by the majority of electors in Australia).

SOUTH AUSTRALIA
COMMONWEALTH ELECTORAL DIVISIONS
As proclaimed 11 November 1977



PORTION OF SOUTH AUSTRALIA COMMONWEALTH ELECTORAL DIVISIONS

As proclaimed 11 November 1977



3.3 GOVERNMENT OF SOUTH AUSTRALIA

The Constitution Act, 1855-1856, which inaugurated the system of responsible government in South Australia, was passed and came into force on 24 October 1856. A summary of early constitutional history and the introduction of responsible government was included on pages 60-2 of the *South Australian Year Book* 1971.

VICE-REGAL REPRESENTATION

Keith Douglas Seaman, OBE, was sworn in as the Queen's representative in South Australia on 1 September 1977.

The title of the vice-regal representative has been varied from time to time. The first three holders of the Office were styled 'Governor and Commander-in-Chief', the next two, 'Lieutenant-Governor', and the following two, 'Captain-General and Governor-in-Chief'. The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a 'Governor-General and Commander-in-Chief in and over the Commonwealth', the holder of the State office has been described simply as 'Governor', and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Foreign and Commonwealth Affairs, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to one per cent of the total amount appropriated from the State's general revenue by the Appropriation Acts for public service without specific Parliamentary authority.

Governors of South Australia

Name	From	To
Captain John Hindmarsh, RN, KH	28 December 1836	16 July 1838
Lt-Col George Gawler, KH	17 October 1838	15 May 1841
George Grey	15 May 1841	25 October 1845
Lt-Col Frederick Holt Robe	25 October 1845	2 August 1848
Sir Henry E. F. Young	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, CB	8 June 1855	4 March 1862
Sir Dominick Daly	4 March 1862	19 February 1868
Rt Hon. Sir James Fergusson, Bart	16 February 1869	18 April 1873
Sir Anthony Musgrave, KCMG	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F. D. Jervois, GCMG, CB	2 October 1877	9 January 1883
Sir Wm C. F. Robinson, GCMG	19 February 1883	5 March 1889
Rt Hon. the Earl of Kintore, PC, GCMG	11 April 1889	10 April 1895
Sir Thomas F. Buxton, Bart, GCMG	29 October 1895	29 March 1899
Rt Hon. the Lord Tennyson, KCMG	10 April 1899	17 July 1902
Sir George R. Le Hunte, KCMG	1 July 1903	18 February 1909
Admiral Sir Day Hort Bosanquet, GVO, KCB	18 February 1909	22 March 1914

Governors of South Australia (continued)

Name	From	To
Lt-Col Sir Henry L. Galway, KCMG, DSO	18 April 1914	30 April 1920
Lt-Col Sir Wm E. G. Archibald Weigall, KCMG	9 June 1920	30 May 1922
Lt-Gen. Sir George T. M. Bridges, KCB, KCMG, DSO	4 December 1922	4 December 1927
Brig-Gen. the Hon. Sir A. G. A. Hore-Ruthven, VC, KCMG, CB, DSO	14 May 1928	26 April 1934
Maj.-Gen. Sir W. J. Dugan, KCMG, CB, DSO	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, KCMG	12 August 1939	26 April 1944
Lt-Gen. Sir C. W. M. Norrie, KCMG, CB, DSO, MC	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, KCMG, KCVO, KBE, CB, MC	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyan, KCMG, KCVO, KBE, CB	4 April 1961	1 June 1968
Maj.-Gen. Sir James W. Harrison, KCMG, CB, CBE	4 December 1968	16 September 1971
Sir Mark L. Oliphant, KBE	1 December 1971	1 December 1976
Sir Douglas R. Nicholls, KCVO, OBE	1 December 1976	30 April 1977
Keith Douglas Seaman, OBE	1 September 1977	

A Governor is normally appointed for a term of five years, but he can be reappointed for one or more subsequent terms. At present he is granted a basic salary of \$20 000 a year and an expense allowance which is altered in accordance with the Consumer Price Index number for Adelaide. The amount appropriated from Consolidated Revenue for the Governor's salary and allowances for 1978-79 was \$57 700. The Governors' Pension Act, 1976 provides for a pension to be paid to former Governors and to the spouses of deceased Governors.

In the absence or prolonged illness of a Governor other persons have been appointed to administer the government of the State. These persons have been variously styled 'Lieutenant-Governor', 'Deputy-Governor', 'Deputy Lieutenant-Governor', and 'Administrator', and several of them have held office more than once. The eighteen persons so appointed have been:

Deputy Governors

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finnis	20/12/1854	8/6/1855	1	—	170
Lt-Col Francis G. Hamley	19/2/1868	16/2/1869	1	—	364
Maj. James Harwood Rocke	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson	7/12/1872	9/6/1873	1	—	184
Rt Hon. Sir Samuel J. Way, Bart	29/1/1877	17/11/1915	65	6	117
William W. Cairns, CMG	24/3/1877	17/5/1877	1	—	54

Deputy Governors (continued)

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
Hon. James P. Boucaut	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bunday	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, KCMG	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angas Parsons	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, KCMG	21/4/1942	17/5/1973	179	9	140
Hon. Sir Herbert Mayo	15/10/1946	9/1/1965	25	—	187
Hon. Sir G. S. Reed	24/7/1951	4/11/1957	5	—	31
Hon. J. J. Bray	25/6/1968	5/8/1973	8	—	72
Hon. D. S. Hogarth	8/7/1971	8/7/1971	1	—	1
Walter R. Crocker, KBE	7/9/1973	7/9/1977	25	1	5

CABINET AND EXECUTIVE GOVERNMENT

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-1856 provided that every Minister must be a member of either the Legislative Council or the House of Assembly or become a member within three months of appointment. However, in 1873 an amendment was made to the Act authorising the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953, and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was five; in 1873, six; 1901, four; 1908, six; 1953, eight; 1965, nine; 1970, ten; 1973, eleven; 1975, twelve and 1978, thirteen. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to five, in 1965 to six, in 1970 to seven and in 1973 to eight. This restriction on the number of Ministers from the lower House was removed by the Constitution Act Amendment Act (No. 2), 1975, and now it is permissible for all Ministers to be selected from the House of Assembly.

The Constitution of 1856 provided for salary payments to Ministers only and salary payments to other members did not commence until 1887. For details of salaries and allowances paid to members of Parliament see pages 74-5.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. In addition to government departments, statutory authorities also come under some degree of ministerial or parliamentary oversight.

Premiers

Since 1856 the following thirty-eight persons have held the office of Premier:

Premiers of South Australia

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finnis	24/10/1856- 21/8/1857	—	301
Hon. John Baker	21/8/1857- 1/9/1857	—	11
Hon. Robert R. Torrens	1/9/1857- 30/9/1857	—	29
Hon. Richard D. Hanson	30/9/1857- 9/5/1860	2	222
Hon. Thomas Reynolds	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse	8/10/1861- 4/7/1863	1	269
Hon. Francis S. Dutton	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, KCMG	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868;		
Hon. Arthur Blyth	22/1/1872- 22/7/1873 4/8/1864- 22/3/1865; 10/11/1871- 22/1/1872; 22/7/1873- 3/6/1875	4	35
Hon. John Hart, CMG	23/10/1865- 28/3/1866; 24/9/1868-13/10/1868; 30/5/1870-10/11/1871	2	254
Hon. James P. Boucaut, QC	28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876; 26/10/1877- 27/9/1878	1	339
Hon. H. B. Strangways	3/11/1868- 30/5/1870	3	11
Hon. John Colton	6/6/1876-26/10/1877; 16/6/1884- 16/6/1885;	1	208
Hon. William Morgan	27/9/1878- 24/6/1881	2	142
Hon. John C. Bray	24/6/1881- 16/6/1884	2	270
Hon. Sir J. W. Downer, KCMG, QC	16/6/1885- 11/6/1887; 15/10/1892- 16/6/1893	2	358
Hon. Thomas Playford	11/6/1887- 27/6/1889; 19/8/1890- 21/6/1892	2	239
Hon. J. A. Cockburn	27/6/1889- 19/8/1890	3	323
Hon. F. W. Holder	21/6/1892-15/10/1892; 8/12/1899- 15/5/1901	1	53
Rt Hon. C. C. Kingston, QC	16/6/1893- 1/12/1899	6	274
Hon. V. L. Solomon	1/12/1899- 8/12/1899	1	168
Hon. J. G. Jenkins	15/5/1901- 1/3/1905	—	7
Hon. Richard Butler	1/3/1905- 26/7/1905	3	290
Hon. Thomas Price	26/7/1905- 5/6/1909	—	147
Hon. A. H. Peake	5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915; 14/7/1917- 8/4/1920	3	314
Hon. John Verran	3/6/1910- 17/2/1912	6	312
Hon. Crawford Vaughan	3/4/1915- 14/7/1917	1	259
Hon. Sir H. N. Barwell, KCMG	8/4/1920- 16/4/1924	2	102
		4	8

Premiers of South Australia (continued)

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. John Gunn	16/4/1924- 28/8/1926	2	134
Hon. Lionel L. Hill	28/8/1926- 8/4/1927;		
	17/4/1930- 13/2/1933	3	160
Hon. R. L. Butler	8/4/1927- 17/4/1930;		
	18/4/1933- 5/11/1938	8	210
Hon. R. S. Richards	13/2/1933- 18/4/1933	—	64
Hon. Sir Thomas Playford, GCMG	5/11/1938- 10/3/1965	26	125
Hon. F. H. Walsh	10/3/1965- 1/6/1967	2	83
Hon. D. A. Dunstan, QC	1/6/1967- 17/4/1968;		
	2/6/1970- 15/2/1979	8	259
Hon. R. S. Hall	17/4/1968- 2/6/1970	2	47
Hon. J. D. Corcoran	15/2/79-18/9/1979	—	216
Hon. D. O. Tonkin	18/9/1979-		

Ministry

The Ministry is the sixty-fourth to hold office. The members at 18 September 1979 were:

Premier, Treasurer, Minister of State Development and Minister of Ethnic Affairs

Hon. David Oliver Tonkin, MP

Deputy Premier and Minister of Mines and Energy

Hon. Eric Roger Goldsworthy, MP

Attorney-General and Minister for Corporate Affairs

Hon. Kenneth Trevor Griffin, MLC

Minister of Industrial Affairs and Minister of Public Works

Hon. Dean Craig Brown, MP

Minister of Education and Minister of Aboriginal Affairs

Hon. Harold Allison, MP

Chief Secretary, Minister of Fisheries and Minister of Marine

Hon. William Allan Rodda, MP

Minister of Local Government, Minister of Housing, Minister of Arts and Minister Assisting the Premier in Ethnic Affairs

Hon. Charles Murray Hill, MLC

Minister of Agriculture and Minister of Forests

Hon. William Edwin Chapman, MP

Minister of Environment and Minister of Planning

Hon. David Charles Wotton, MP

Minister of Transport and Minister of Recreation and Sport

Hon. Michael Minell Wilson, MP

Minister of Community Welfare and Minister of Consumer Affairs

Hon. John Charles Burdett, MLC

Minister of Health and Minister of Tourism

Hon. Jennifer Lilian Adamson, MP

Minister of Water Resources, Minister of Irrigation, Minister of Lands and Minister of Repatriation

Hon. Peter Bruce Arnold, MP

PARLIAMENT

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House). The following table gives the dates and the number of House of Assembly sitting days for Parliamentary sessions in recent years.

Parliamentary Session	Period	House of Assembly Sitting Days
1971-72	13/7/71-6/4/72	74
1972	8/7/72-24/11/72	54
1973	19/6/73-27/6/73	4
1973-74	24/7/73-28/3/74	69
1974-75	23/7/74-18/6/75	74
1975-76	5/8/75-19/2/76	45
1976-77	8/6/76-28/4/77	65
1977	19/7/77-17/8/77	11
1977-78	6/10/77-22/3/78	45
1979	24/5/79-22/8/79	11

Voting System

Members for both Houses are elected by secret ballot; the preferential system of voting is used. In filling the vacancy for each House of Assembly District the candidate who has received the largest number of first preference votes is elected if this number constitutes an absolute majority (*i.e.* greater than one-half of the total formal votes). If no candidate has received an absolute majority of first preference votes a second count is made in which the second preferences of the candidate who has received the fewest first preference votes are distributed. This distribution of second preferences of the successive candidate with the fewest votes is repeated until one candidate has received an absolute majority of votes.

For Legislative Council elections before 12 July 1975, the State was divided into five 4-member electoral districts with two members for each district retiring at each Legislative Council election. The first vacancy in each district was filled in the same manner as those in the single-member House of Assembly districts discussed above. The second vacancy in each district was filled by re-arranging all ballot papers according to first preferences and allotting each ballot paper of the first elected candidate according to the second preferences. If a candidate then had an absolute majority he was elected, otherwise subsequent counts were made eliminating candidates with the fewest votes until one remaining candidate had received an absolute majority.

However, as a result of the passing of the Constitution and Electoral Acts Amendment Act, 1973, the number of electorates and the voting system has been changed for Legislative Council elections commencing with the election of 12 July 1975. This Act has increased the number of members of the Legislative Council from twenty to twenty-two and has introduced a system of proportional representation with the whole of the State as a single multi-member electoral district. Under the new system electors register preferences for groups of candidates rather than individuals (although a group may contain only one candidate) and a candidate's election depends on the proportion of

votes his group obtains and his position within the group on the ballot paper. Because an optional preference voting system applies it is not necessary for electors to indicate preferences for each group in order to register formal votes.

Members, Qualifications, and Privileges

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, persons under the age of eighteen, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by imprisonment for at least a year. Other requirements applicable only to one House or the other are mentioned on page 76.

Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All members of the Parliament are entitled to such privileges, immunities, and powers as were held by members of the House of Commons on 24 October 1856, the date on which the Constitution Act came into force.

Franchise

The franchises for the separate Houses are shown on pages 76-7. South Australia was the first, at the general election of 25 April 1896, of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary but the Electoral Act Amendment Act of 1942 made voting for the House of Assembly compulsory for persons whose names appear on the House of Assembly Electoral Roll.

Number of Members and Electorates

Alterations made to the number of members and number of electorates for each of the two Houses are shown in the following table:

Members and Electorates, South Australia

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856	18	1	36	17
1863	18	1	36	18
1875	18	1	46	22
1882	24	4	46	22
1884 (a)	24	4	52	26
1890	24	4	54	27
1902	18	4	42	13
1912 (b)	18	4	40	12
1915	20	5	46	19
1938	20	5	39	39
1970	20	5	47	47
1975	21	1	47	47

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth Government control.

Functions of Parliament

The function of Parliament is to legislate for the peace, order, and good government of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any member in either House except that money Bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money Bills although it may not effect such amendments itself. Most Bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent members usually confine their activities to examination, criticism, and amendment, of Government measures. Legislation, other than to amend the Constitution, may be passed by a simple majority of the votes of the members present.

Constitutional Amendment

Alteration to the Constitution Act is in the hands of Parliament itself. An alteration to the Constitution requires at the second and third readings of the Bill acceptance by a majority of all the members (not only those present or voting) of each House voting separately.

Deadlocks

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses.

Life of Parliament

Term of office of each Parliament is generally three years from the day on which it first meets for the dispatch of business but it may be prorogued or dissolved by the Governor before the expiration of this period.

Legislation introduced in 1933 extended the life of the twenty-eighth Parliament to five years and in 1937 the Constitution Act was amended for each subsequent Parliament to have a life of five years. However, the twenty-ninth Parliament repealed this provision and re-introduced three-year Parliaments.

Salaries and Allowances

Salaries and allowances for members of Parliament are determined periodically by the Parliamentary Salaries Tribunal, pursuant to the provisions of the Parliamentary Salaries and Allowances Act, 1965-1978.

The annual salary from 28 February 1979 is \$23 200 per member with allowances of between \$3 800 and \$14 000 depending on the area of the member's electorate and the distance from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$26 960, plus expense allowance of \$3 550.

Deputy Premier—\$18 940, plus expense allowance of \$2 950.

Leader of the Government in the Legislative Council—\$16 480, plus expense allowance of \$2 800.

Other Ministers—\$15 520, plus expense allowance of \$2 460.

President of Legislative Council and Speaker of House of Assembly—each \$13 000, plus expense allowance of \$1 400.

Chairman of Committees, House of Assembly—\$6 500, plus expense allowance of \$700.

Leader of the Opposition, House of Assembly—\$15 520, plus expense allowance of \$2 460.

Leader of the Opposition, Legislative Council—\$5 990, plus expense allowance of \$780.

Deputy Leader of the Opposition, House of Assembly—\$5 990, plus expense allowance of \$780.

Government Whip—\$4 000.

Opposition Whip—\$4 000.

In addition allowances are paid to the members of the various Parliamentary Committees.

Cost of Parliamentary Government

The following table shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in South Australia, comprising the Governor, the Ministry, the Legislative Council, House of Assembly and electoral activities.

Cost of Parliamentary Government, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78
			\$'000	
Governor's Establishment	352	324	470	436
Ministry	304	407	457	480
Parliament:				
Legislative Council(a)	310	443	503	528
House of Assembly(a)	719	946	1 078	1 114
Other(b)	2 004	2 372	2 861	3 353
Total Parliament	3 033	3 761	4 442	4 995
Electoral	156	627	395	1 055
Royal Commissions, Select Committees, etc.	51	89	231	588
Total	3 895	5 207	5 995	7 554

(a) Allowances to members (including Ministers' salaries as members), travelling and other expenses.

(b) Government contribution to members' superannuation funds, printing, reporting staff, library, etc.

Superannuation

All members are required to contribute to a Superannuation Fund established under the Parliamentary Superannuation Act, 1974, which provides for the payment of superannuation pensions to persons, or widows or widowers or eligible children of persons, who have served as members of the State Parliament. Members qualify for a pension after fifteen years service but can qualify for a pension after six years service if they retire involuntarily or are over sixty years of age.

Every member is required to contribute 11.5 per cent of his salary, including additional salary received as a Minister, officer of Parliament or member of a Parliamentary Committee. According to the length of service the pension payable to ordinary members

varies between 41.2 per cent of basic salary (presently \$9 558 a year) and 75 per cent of basic salary (presently \$17 400 a year). Greater amounts of pension accrue to those members who have made additional contributions based on additional salary as a Minister or an office holder. Pensions are increased or decreased on 1 October each year in accordance with the increase or decrease in the Consumer Price Index for the preceding year ending 30 June.

At 30 June 1978 there were sixty-eight contributors to the fund; thirty-one ex-members, twenty-one widows and one child were in receipt of pensions.

LEGISLATIVE COUNCIL

Members and Electorates

Before the passing of the Constitution and Electoral Acts Amendment Act, 1973 each member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 73, must have attained the age of thirty years, have been a British subject, and have resided in the State for at least three years. For the purpose of electing members to the Council the State was divided into five electorates each having four members. Each electorate normally elected two members every three years, and each member occupied his seat for a minimum of six years. When a casual vacancy occurred because of the death, resignation or disqualification of a member, such a casual vacancy was filled, at a by-election in the particular electorate, for the unexpired portion of the previous member's term.

The Constitution and Electoral Acts Amendment Act, 1973, assented to on 22 November 1973, increased the number of members in the Legislative Council from twenty to twenty-two and reduced the number of electorates to one with the whole State becoming a single electorate with members elected on a proportional representation basis. This amendment did not become fully effective for two general elections as only half the Legislative Councillors retire at each election and eleven members (not ten as previously) are now elected at each general Legislative Council election. At the general election of 15 September 1979, eleven members were elected to the Legislative Council and at present there are twenty-two members in this House. In future casual vacancies will be filled by a person chosen at a joint sitting of the members of both the Legislative Council and House of Assembly.

Franchise

Voting for the Legislative Council is voluntary for those persons whose names are on the Legislative Council Electoral Roll. Under the Constitution and Electoral Acts Amendment Act, 1973, all names which appear on the House of Assembly Electoral Roll are included on the Legislative Council Electoral Roll. Thus, all electors entitled to vote at House of Assembly elections are entitled also to vote at Legislative Council elections. Qualifications for House of Assembly electors are discussed below.

President and Chairman of Committees

At the first meeting of the Council in each Parliament the members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

HOUSE OF ASSEMBLY

Seat of Government

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in

this House. When it no longer controls such a majority in vital issues, particularly 'money Bills', the Government must resign or go to the polls. Once defeated in the Lower House on a 'money Bill', the government is unable to finance the administration of the State.

Franchise

A British subject at least eighteen years of age who:

- (i) has lived continuously in Australia for at least six months, and in South Australia for at least three months, and in a Subdivision for at least one month immediately preceding the date of his or her claim for enrolment; or
- (ii) is or has been (as qualified by the Constitution Act) a member of the Commonwealth Naval, Military or Air Force, or a member of the Mercantile Marine, during any war in which the Commonwealth is or has been engaged;

is entitled to vote at an election for a Member of the House of Assembly if, at the time of the election, he or she is enrolled on the Electoral Roll for a Subdivision of the Assembly District in which the election is held, and is not of unsound mind.

Persons convicted of an offence punishable with imprisonment for one year or more and persons attainted of treason are entitled to the same voting rights as ordinary citizens under the provisions of the Constitutional Act Amendment Act, 1976.

Enrolment for the House of Assembly is not compulsory but in practice, as a consequence of the operation of the Commonwealth and House of Assembly Joint Electoral Rolls, most persons enrolling for the Commonwealth Electoral Roll are also enrolled for the House of Assembly.

Membership

Subject to the exclusions mentioned on page 73 election to the House of Assembly is open to those eligible to vote in an election for the House. Members of this House are elected for a maximum of three years, for single-member districts. The seat of a member becomes vacant through his death, resignation or disqualification and, usually, is filled at a by-election.

Electoralates and Electoral Distribution

The present allocation of thirty-three metropolitan and fourteen country electoralates for the House of Assembly became operative from 23 August 1977 and was determined by the Electoral Districts Boundaries Commission. Before this date there were twenty-eight metropolitan and nineteen country House of Assembly electoral districts. The first election incorporating the present boundaries was held on 17 September 1977.

The Commission, constituted by the Constitution Act Amendment Act (No. 5), 1975, differs from previous commissions for redistribution of electoral boundaries in that each of those commissions was created by the Parliament to make a single report and recommendation to the Parliament. The boundaries so recommended did not become effective unless the recommendation was approved by the Parliament. However, the present Commission has perpetual succession and a common seal as a corporate entity. The reports made by the Commission do not require validating legislation and become operative three months after publication of the Commission's Order.

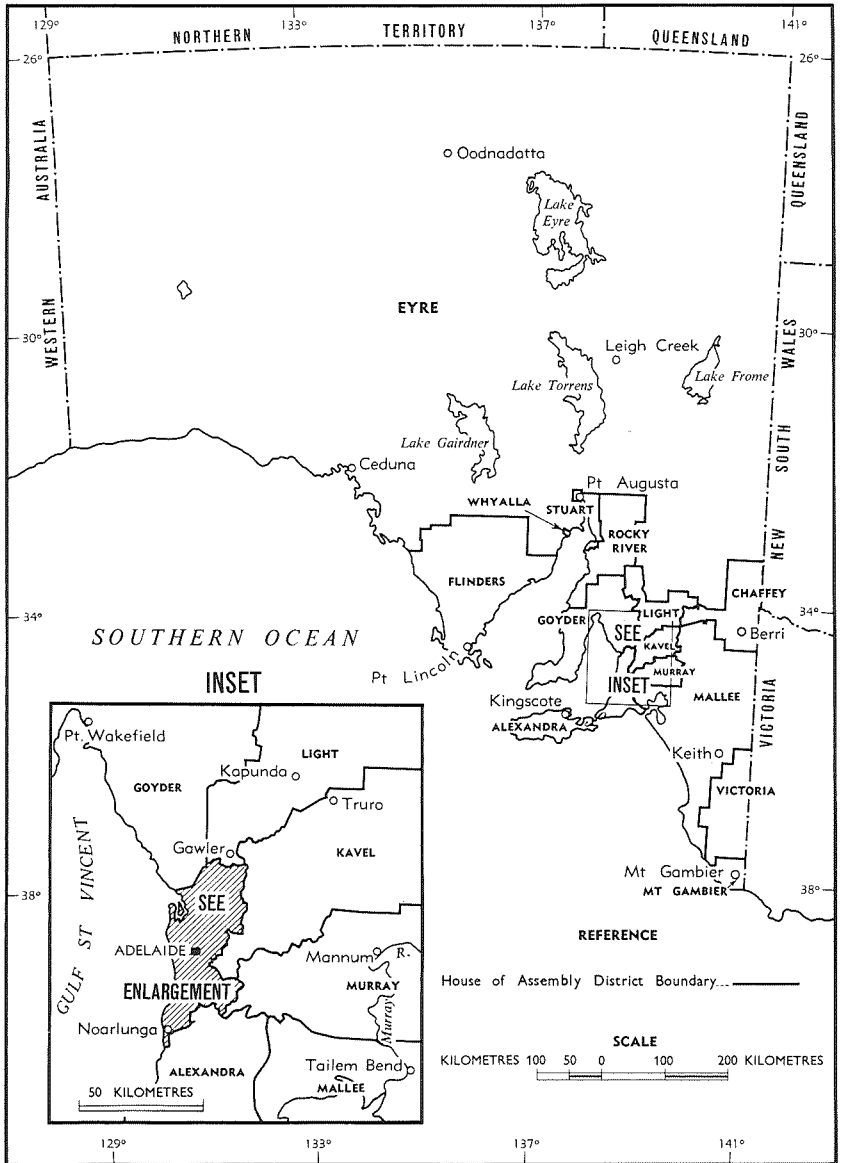
Under the Act any elector may, within one month of the Commission's Order, appeal to the Full Court of the Supreme Court.

Officers and their Functions

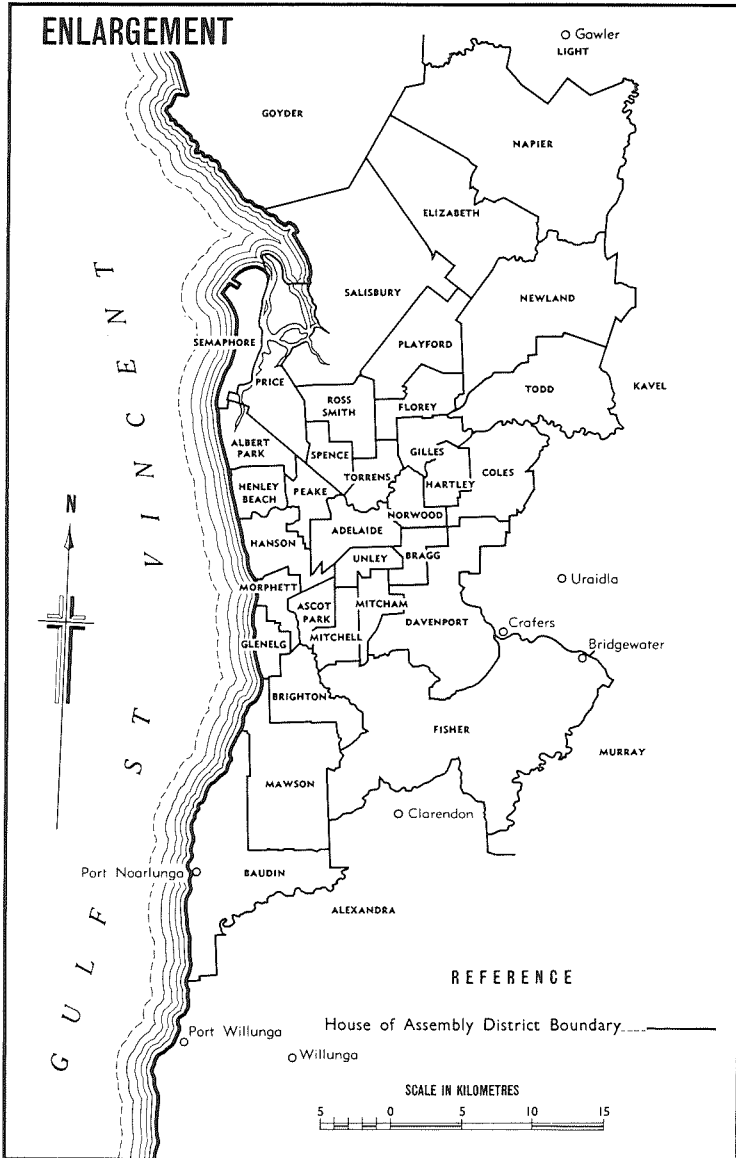
A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House

SOUTH AUSTRALIA SOUTH AUSTRALIAN ELECTORAL DISTRICTS

Operative from 23 August 1977



PORTION OF SOUTH AUSTRALIA
SOUTH AUSTRALIAN ELECTORAL DISTRICTS
Operative from 23 August 1977



officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

Other officers of the Parliament include the Leader and Deputy Leader of the Opposition in either House and the various party whips whose function is to ensure that their party members are present in the House for divisions and other important business.

ELECTIONS AND PARTY REPRESENTATION

The following table gives details of the numbers of electors on the Electoral Rolls and voting in contested electorates for all general elections from 1947 to 1979.

South Australian Parliament: Voting at Elections, 1947 to 1979

Date	Legislative Council			House of Assembly		
	Contested Electorates			Contested Electorates		
	Electors Enrolled	Electors Voting	Per Cent	Electors Enrolled	Electors Voting	Per Cent
8 March 1947	155 847	124 826	80.10	306 059	285 765	93.37
4 March 1950	68 347	52 954	77.48	311 658	290 306	93.15
7 March 1953	97 968	79 373	81.02	354 273	336 529	95.01
3 March 1956	22 963	16 002	69.69	299 048	280 811	93.90
7 March 1959	86 278	70 007	81.14	426 340	400 531	93.95
3 March 1962	118 218	98 786	83.56	444 197	417 462	93.98
6 March 1965	186 899	149 910	80.21	542 436	513 064	94.59
2 March 1968	275 701	262 328	95.15	609 626	575 948	94.48
30 May 1970 .....	..	..	..	635 533	603 952	95.03
10 March 1973	383 758	357 971	93.28	696 290	655 937	94.20
12 July 1975	771 414	719 753	93.30	771 414	721 770	93.56
17 September 1977 .....	..	..	..	818 335	764 072	93.37
15 September 1979	826 586	765 033	92.66	826 586	768 985	93.03

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1947.

South Australian Parliament: Party Representation at Elections, 1947 to 1979

Date	Legislative Council			House of Assembly		
	ALP	LP	Other	ALP	LP	Other
8 March 1947	4	16	—	13	23	3
4 March 1950	4	16	—	12	23	4
7 March 1953	4	16	—	14	21	4
3 March 1956	4	16	—	15	21	3
7 March 1959	4	16	—	17	20	2
3 March 1962	4	16	—	19	18	2
6 March 1965	4	16	—	21	17	1
2 March 1968	4	16	—	19	19	1
30 May 1970	4	16	—	27	20	—
10 March 1973	6	13	1	26	18	3
12 July 1975	10	9	2	23	20	4
17 September 1977	10	11	—	27	18	2
15 September 1979	10	11	(a) 1	19	25	(b) 3

(a) Australian Democrats. (b) 1 Australian Democrats, 1 National Country Party, 1 Independent.
ALP Australian Labor Party LP Liberal Party of Australia

At the general election held on 15 September 1979 there were forty-seven electorates represented in the House of Assembly, thirty-three metropolitan and fourteen country. The table below shows the electoral returns for that general election.

House of Assembly: Party Representation, 1979

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
Metropolitan:					
Adelaide	16 288	14 613	Wright, J. D.	ALP	7 436
Albert Park	18 112	16 915	Hamilton, K. C.	ALP	7 901
Ascot Park	16 432	15 387	Trainer, J. P.	ALP	7 066
Baudin	21 097	19 490	Hopgood, D. J.	ALP	8 918
Bragg	16 716	15 355	Tonkin, Hon. D. O.	LP	9 771
Brighton	18 654	17 434	Glazbrook, R. E.	LP	8 195
Coles	18 416	17 148	Adamson, Hon. J. L.	LP	9 502
Davenport	17 983	16 659	Brown, Hon. D. C.	LP	12 253
Elizabeth	18 583	17 126	Duncan, P.	ALP	8 809
Fisher	20 670	19 484	Evans, S. G.	LP	11 886
Florey	17 770	16 552	O'Neill, H. H.	ALP	7 679
Gilles	17 499	16 376	Slater, J. W.	ALP	7 489
Gleneig	17 058	15 697	Mathwin, J.	LP	9 527
Hanson	17 377	16 147	Becker, H.	LP	9 459
Hartley	18 504	17 278	Corcoran, J. D.	ALP	8 253
Henley Beach	18 417	17 217	Randall, R. J.	LP	7 244
Mawson	21 470	20 334	Schmidt, I.	LP	9 225
Mitcham	16 794	15 699	Millhouse, R. R.	AD	6 947
Mitchell	17 077	15 930	Payne, R. G.	ALP	7 624
Morphett	16 968	15 891	Oswald, J. K. G.	LP	7 959
Napier	17 748	16 145	Hemmings, T. H.	ALP	7 940
Newland	21 401	20 078	Billard, B.	LP	9 661
Norwood	16 670	15 335	Webster, F. R.	LP	6 899
Peake	16 493	15 367	Plunkett, K. H.	ALP	8 319
Playford	18 340	17 217	McRae, T. M.	ALP	7 524
Price	15 885	14 741	Whitten, G. T.	ALP	7 694
Ross Smith	16 031	14 883	Bannon, J. C.	ALP	8 997
Salisbury	20 557	19 172	Arnold, L. M. F.	ALP	10 840
Semaphore	18 029	17 056	Peterson, N. T.	IND	5 106
Spence	15 578	14 461	Abbott, R. K.	ALP	9 502
Todd	18 850	17 719	Ashenden, E. S.	LP	8 478
Torrens	16 684	15 160	Wilson, Hon. M. M.	LP	8 186
Unley	15 892	14 313	Langley, G. R. A.	ALP	6 424
Country:					
Alexandra	18 402	17 179	Chapman, Hon. W. E.	LP	11 584
Chaffey	18 074	17 049	Arnold, Hon. P. B.	LP	9 970
Eyre	15 317	13 644	Gunn, G. McD.	LP	7 856
Flinders	15 932	14 951	Blacker, P. D.	NCP	7 833

House of Assembly: Party Representation, 1979 (continued)

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
Country: (continued)					
Goyder	16 893	15 888	Russack, E. K.	LP	11 772
Kavel	17 923	16 814	Goldsworthy, Hon. E. R.	LP	11 248
Light	16 257	15 323	Eastick, Hon. B. C.	LP	9 412
Mallee	15 552	14 552	Lewis, I. P.	LP	6 488
Mount Gambier .	17 699	16 597	Allison, Hon. H.	LP	8 983
Murray	18 017	16 851	Wotton, Hon. D. C.	LP	10 180
Rocky River	17 071	16 125	Olsen, J. W.	LP	7 669
Stuart	17 038	16 050	Keneally, G. F.	ALP	10 236
Victoria	15 564	14 523	Rodda, Hon. W. A.	LP	9 476
Whyalla	16 602	15 240	Brown, M. J.	ALP	9 173

ALP Australian Labor Party NCP National Country Party AD Australian Democrats
LP Liberal Party of Australia IND Independent

Speaker: The Hon. B. C. Eastick, MP

Chairman of Committees: G. M. Gunn, MP

Leader of the Opposition: J. C. Bannon, MP

Deputy Leader of the Opposition: J. D. Wright, MP

Government Whip: The Hon. S. G. Evans, MP

Opposition Whip: D. J. Hopgood, MP

Acting Clerk of the House of Assembly: G. D. Mitchell

The members of the Legislative Council after the general election of 15 September 1979 were as follows:

Blevins, Hon. F. T. (ALP)	Dunford, Hon. J. E. (ALP)
Bruce, Hon. G. L. (ALP)	Foster, Hon. N. K. (ALP)
Burdett, Hon. J. C. (LP)	Griffin, Hon. K. T. (LP)
Cameron, Hon. M. B. (LP)	Hill, Hon. C. M. (LP)
Carnie, Hon. J. A. (LP)	Laidlaw, Hon. D. H. (LP)
Chatterton, Hon. B. A. (ALP)	Levy, Hon. J. A. W. (ALP)
Cornwall, Hon. J. R. (ALP)	Milne, Hon. K. L. (AD)
Creedon, Hon. C. W. (ALP)	Ritson, Hon. R. J. (LP)
Davis, Hon. L. H. (LP)	Sumner, Hon. C. J. (ALP)
Dawkins, Hon. M. B. (LP)	Whyte, Hon. A. M. (LP)
DeGaris, Hon. R. C. (LP)	Wiese, Hon. B. J. (ALP)

President and Chairman of Committees: Hon. A. M. Whyte, MLC

Leader of the Opposition: Hon. C. J. Sumner, MLC

Clerk of the Legislative Council: J. W. Hull

Court of Disputed Returns

In South Australia, provision is made in the Electoral Act, 1929-1976, for the constitution of a Court of Disputed Returns which has jurisdiction to hear and determine all questions of disputed returns affecting either House of the State Parliament which are referred to it by the House concerned. No return on an election writ may be disputed, except by a petition to this Court. A subsidiary function of the Court is to hear petitions for exoneration from liability for failure to file certain electoral returns or vouchers under Part XIV of the Electoral Act.

The Court is constituted by the senior puisne Judge of the Supreme Court, or where he is not available by the puisne Judge next in order of seniority who is available.

The Court sits as an open court, usually at Parliament House, Adelaide, and has power, *inter alia* :

- (a) to compel the attendance of witnesses and the production of documents;
- (b) to examine witnesses upon oath;
- (c) subject to any Supreme Court rules, to regulate the form and mode of its own proceedings;
- (d) to declare that any person who was returned as elected was not duly elected;
- (e) to declare any candidate duly elected who was not returned as elected;
- (f) to declare any election void;
- (g) to dismiss or uphold any petition in whole or in part;
- (h) to award any costs; and
- (i) to punish any contempt of its authority.

Most cases have related to House of Assembly elections. Since 1857, the Court of Disputed Returns has considered twenty-one petitions referred to it by the House of Assembly concerning the election of twenty-six members of that House. The Court's decisions in these cases are summarised hereunder:

Election voided and member unseated	15
Member unseated but other candidate declared to be duly elected	2
Petitions unsuccessful	2
Petitions dismissed	6
Petition withdrawn	1

REFERENDA

Since the inception of responsible government in South Australia in 1856 seven referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915, 1965 and 1970—and ten proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; one related to the establishment of a lottery (1965)—approved; and one related to extended shopping hours in the metropolitan area (1970)—not approved.

The last referendum, held on 19 September 1970, asked House of Assembly electors in the Adelaide Metropolitan Planning Area and the Municipality of Gawler 'Are you in favour of shops in the Metropolitan Planning Area and the Municipality of Gawler being permitted to remain open for trading until 9 p.m. on Fridays?' Of the 463 629 electors qualified to vote 177 296 voted 'Yes' and 190 826 voted 'No'.

ADMINISTRATION

The South Australian Public Service consists of thirty-four departments. In the following list, the departments have been grouped according to Ministerial control.

PREMIER, TREASURER, MINISTER OF STATE DEVELOPMENT AND
MINISTER OF ETHNIC AFFAIRS

Hon. David Oliver Tonkin, MP

Premier's Department	Department of the Public Service
Treasury Department	Board

DEPUTY PREMIER AND MINISTER OF MINES AND ENERGY

Hon. Eric Roger Goldsworthy, MP

Department of Service and Supply	Department of Mines and Energy
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ATTORNEY-GENERAL AND MINISTER OF CORPORATE AFFAIRS

Hon. Kenneth Trevor Griffin, MLC

Law Department	Department of the Corporate
Supreme Court Department	Affairs Commission
Electoral Department	

MINISTER OF INDUSTRIAL AFFAIRS AND MINISTER OF PUBLIC WORKS

Hon. Dean Craig Brown, MP

Department of Industrial Affairs and Employment	Department of Trade and Industry Public Buildings Department
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MINISTER OF EDUCATION AND MINISTER OF ABORIGINAL AFFAIRS

Hon. Harold Allison, MP

Minister of Education	Minister of Aboriginal Affairs
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CHIEF SECRETARY, MINISTER OF FISHERIES AND MINISTER OF MARINE

Hon. William Allan Rodda, MP

Police Department	Department of Fisheries
Department of Correctional Services	Department of Marine
Auditor-General's Department	

MINISTER OF LOCAL GOVERNMENT, MINISTER OF HOUSING, MINISTER
OF ARTS AND MINISTER ASSISTING THE PREMIER IN ETHNIC AFFAIRS

Hon. Charles Murray Hill, MLC

Department of Local Government	Art Gallery Department
Department for the Arts	

MINISTER OF AGRICULTURE AND MINISTER OF FORESTS

Hon. William Edwin Chapman, MP

Department of Agriculture	Department of Woods and Forests
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MINISTER OF ENVIRONMENT AND MINISTER OF PLANNING

Hon. David Charles Wotton, MP

Department of Urban and Regional
Affairs

Department for the Environment

MINISTER OF TRANSPORT AND MINISTER OF RECREATION AND SPORT

Hon. Michael Minell Wilson, MP

Highways Development

Department of Transport

MINISTER OF COMMUNITY WELFARE AND MINISTER OF CONSUMER
AFFAIRS

Hon. John Charles Burdett, MP

Department of Public and
Consumer Affairs

Department for Community Welfare

MINISTER OF HEALTH AND MINISTER OF TOURISM

Hon. Jennifer Lilian Adamson, MP

Hospitals Department

Department of Tourism

MINISTER OF WATER RESOURCES, MINISTER OF IRRIGATION, MINISTER
OF LANDS AND MINISTER OF REPATRIATION

Hon. Peter Bruce Arnold, MP

Engineering and Water Supply
Department

Department of Lands

SUPREME COURT JUDGES

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years standing. Judges of the Supreme Court at 1 December 1978 were:

Hon. Leonard James King (Chief Justice)	Hon. William Andrew Noye Wells
Hon. David Stirling Hogarth	Hon. Alexander Keith Sangster
Hon. Charles Hart Bright	Hon. Samuel Joshua Jacobs
Hon. Roma Flinders Mitchell, CBE	Hon. James Michael White
Hon. George Henry Walters	Hon. Christopher John Legoe
Hon. Howard Edgar Zelling, CBE	

THE OMBUDSMAN

The office of the Ombudsman is established under the Ombudsman Act, 1972-1974. The Ombudsman is empowered to investigate complaints from members of the public concerning the administrative acts of State Government departments, State statutory authorities and local government councils.

The jurisdiction of the Ombudsman does not extend to Commonwealth Government departments or authorities, judicial decisions, police actions, or actions by private individuals or companies.

A complaint to the Ombudsman is usually made by the person or enterprise directly affected by an administrative act, although, a Member of the South Australian Parliament or some other person may act on his behalf. Complaints may be by telephone or personal visit, but it is preferable for a complaint to be in writing giving full details including copies of any correspondence with the authority concerned.

The Ombudsman has the powers of a royal commission but conducts his investigations in private. Complainants are informed of the final result of any inquiry and where appropriate progress reports are given while an investigation is proceeding. The Ombudsman service is provided free-of-charge.

During 1977-78, 1 001 complaints were registered and of those fully investigated, approximately 29 per cent were found to be justified fully or in part.

LEGISLATION

During 1978, 120 Public Acts were passed by the South Australian Parliament. Details of some of the more important legislation passed during this period are given below.

Apprentices Act Amendment Act 1978 (No. 9) amended the Apprentices Act, 1950-1974 to remove the discrimination contained in the Act against adults being trained to be tradesmen.

Classification of Theatrical Performances Act, 1978 (No. 20). An Act to provide for the classification of theatrical performances on the basis of principles that have applied to the classification of films and publications.

Constitution Act Amendment Act (No. 2), 1978 (No. 64) amended the Constitution Act, 1934-1978 to increase the number of Ministers from twelve to thirteen.

Constitutional Museum of South Australia Act, 1978 (No. 31). An Act to establish a museum of South Australian constitutional history and to set up a trust for its management.

Criminal Injuries Compensation Act, 1978 (No. 2). An Act to provide for the compensation of persons who suffer injury in consequence of the commission of offences; to repeal the Criminal Injuries Compensation Act, 1969-1974.

Criminal Law Consolidation Act Amendment Act (No. 2), 1978 (No. 14) amended the Criminal Law Consolidation Act, 1935-1976 to make it mandatory for the Superintendent or Manager of a hospital to notify abortions and complications.

Criminal Law (Prohibition of Child Pornography) Act, 1978 (No. 92). An Act to prohibit the making of pornography involving children and for that purpose to amend the Criminal Law Consolidation Act, 1935-1978.

Debts Repayment Act, 1978 (No. 83). An Act to establish a debtors assistance office to assist persons in financial difficulties to overcome these difficulties.

Licensing Act Amendment Act, 1978 (No. 6) amended the Licensing Act, 1967-1976 to provide a limited restaurant licence for 'bring your own' restaurants.

Mining Act Amendment Act, 1978 (No. 34) amended the Mining Act, 1971-1976 to provide for a new tenement, referred to as a retention lease, which the Minister can issue under appropriate circumstances and with appropriate conditions, and where uranium occurs in association with other minerals approval may be given by the Minister for the mining of such deposits under appropriate conditions.

- Parliamentary Superannuation Act Amendment Act, 1978 (No. 112) amended the Parliamentary Superannuation Act, 1974-1978 to alter the formula for superannuation benefits for members who have during their Parliamentary career occupied Ministerial or other Parliamentary offices attracting additional salary.
- Police Offences Act Amendment Act 1978, (No. 38) amended the Police Offences Act, 1953-1976 to provide that a person reasonably suspected of having committed a serious offence outside this State may be apprehended and detained for a reasonable time until a warrant for his arrest has been issued in the State or Territory concerned.
- Police Regulation Act Amendment Act (No. 2), 1978 (No. 103) amended the Police Regulation Act, 1952-1975 to provide for the removal of either the Commissioner or the Deputy Commissioner of Police on the ground of incompetence, neglect of duty, misbehaviour or misconduct, or mental or physical incapacity.
- Residential Tenancies Act, 1978 (No. 13). An Act to regulate the relationship of landlord and tenant under residential tenancy agreements and to repeal the Excessive Rents Act, 1962-1973.
- South Australian Heritage Act, 1978 (No. 42). An Act to preserve, protect and enhance the physical, social and cultural heritage of the State; to amend the Planning and Development Act, 1966-1977 and City of Adelaide Development Control Act, 1976; and for other purposes.
- Superannuation Act Amendment Act, 1978 (No. 39) amended the Superannuation Act, 1974-1976 to provide that superannuation benefits may be extended by regulation to part-time employees in Government or semi-government employment, and for other purposes.

OVERSEAS REPRESENTATION

South Australia is represented in London by the Agent-General for South Australia, at South Australia House, 50 Strand, London. As official representative of the State, it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the State Government informed of political and economic developments overseas, to promote industrial development and investment in South Australia, to encourage immigration to the State and to foster trade with the United Kingdom and other countries. The present Agent-General and Trade Commissioner is Mr W. M. Scriven.

INTERSTATE REPRESENTATION

The South Australian Tourist Bureau maintains offices at 402 George Street, Sydney, NSW, and at 25 Elizabeth Street, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

CONSULAR REPRESENTATIVES

There are 22 countries represented in South Australia by consuls, vice-consuls, consular-agents or consul-generals.

Austria: John A. Nelson, Consul-General

Belgium: Sir Robert E. Porter, Consul (a)

Britain: William S. Ashford, OBE, Consul-General (b)

James E. Pepper, Vice-Consul (Commercial) (b)

Denmark: Trevor R. Taylor, Consul

- Dominican Republic*: Peter H. D. Lathlean, Consul
Finland: Colin C. Verco, OBE, Consul
France: Dr Rex J. Lipman, Consul
Germany: Bruce R. Macklin, OBE, Consul
Greece: Athanasios A. Camilos, Consul-General (b)
 Nicolaos M. Dictakis, Consular-Agent
Italy: Dr Rubens A. Fedele, Vice-Consul (b)
Japan: J. Langdon Parsons, Consul-General
Lebanon: Elias G. Nemer, Consul
Liberia: William B. Coombs, Consul
Mexico: Robert W. Clampett, Consul
Netherlands: Max L. Liberman, Consul
Norway: John N. Howe, Consul
Peru: Max J. Hill, Consul
Philippines: J. Rolfe Sabine, Consul
Portugal: Raymond F. Walters, Consul (c)
Sweden: Mrs June Tanner, Consul
Switzerland: Paul A. Richter, Vice-Consul
United States of America: William J. McGovern, Consular-Agent
- (a) Dean of the Consular Corps.
 (b) *Consul de Carriere*.
 (c) Secretary, Consular Corps.

STATE EMBLEMS

A description of the South Australian Coat-of-Arms, the State Badge, the State Flag and the Floral Emblem together with coloured illustrations was included on pages 94-5 of the *South Australian Year Book 1970*.

On 27 September 1970, the hairy-nosed wombat (*Lasiorhinus latifrons*) was adopted as South Australia's official Faunal Emblem.

3.4 PUBLIC CORPORATIONS

A public corporation is defined, for statistical purposes, as a body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, a State, or a Territory) created by or under legislation to carry out an activity or activities on behalf of a Government, or a body in which a Government has a controlling interest.

Some authorities, such as marketing boards which are set up by Acts of Parliament are not regarded as public corporations because their activities are carried out on behalf of industries rather than on behalf of any Government.

Most public corporations have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book reference is made to the activities of most of the public corporations which operate in South Australia.

3.5 LOCAL GOVERNMENT

LOCAL GOVERNMENT AUTHORITIES

Local Government Areas: Number, Size and Status

At 1 January 1979 there were 130 local government areas in South Australia including the site of Monarto which was constituted as a municipality under the Monarto Development Commission Act, 1973 with the Commission as the corporation and council of the municipality. Each local government area, with the exception of Monarto, is controlled by a council consisting of members elected by local ratepayers and exercising powers under the Local Government Act, 1934-1978.

The total area incorporated in local government areas at 1 January 1979 was 151 524 square kilometres; this is only slightly above 15 per cent of the total area of the State but contains almost 99 per cent of the State population.

There are two major types of local government areas—district council areas and municipalities. Usually district council areas consist predominantly of rural land and contain one or more towns. Generally, to qualify for proclamation as a municipality an area must be used predominantly for either residential, business, industrial, or manufacturing purposes (or a combination of these purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being 15 000 inhabitants for metropolitan municipalities (the twenty-one local government areas which form the metropolitan area as defined under the Local Government Act and which, before June 1966, corresponded to the statistical Urban Adelaide) and 10 000 persons in other areas.

Of the 130 local government areas at 1 January 1979, 37 were municipalities (including 25 cities) and 93 were district council areas.

The Governor may create, abolish, or vary the size, status, or organisation of, any local government area or portion thereof, provided certain requirements are satisfied. Such alterations usually stem from petitions by electors or a council.

As a result of legislation passed in 1969 district councils may apply to the Governor for mayoral status; in previous years only municipal councils had mayors. Since the legislation seventeen district councils, Berri, Clare, Gumeracha, Kadina, Kanyaka-Quorn, Kapunda, Kingscote, Loxton, Meadows, Millicent, Murat Bay, Murray Bridge, Penola, Strathalbyn, Victor Harbor, Waikerie and Willunga have been granted mayoral status.

Functions of Local Government

The Local Government Act, 1934-1978 prescribes most of the 'powers and authorities' which each council shall or may exercise 'for the good government' and 'the management of the affairs' of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary somewhat with the area concerned, but there are general functions which are common to them all. Many of these functions receive more detailed attention in the parts of this book dealing with the appropriate subjects, *e.g.* road construction and maintenance in Part 8.3, Roads; health services and Local Boards of Health in Part 6.5, Health; and libraries in Part 6.4, Culture and Recreation. Among the many other functions of local government authorities are the provision of street lighting, the licensing and inspection of slaughterhouses, the maintenance of cemeteries, the maintenance of foreshores and jetties, the control of the location of industries (especially noisy trades), the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds. Councils also employ social workers and carry out functions in relation to social welfare.

Organisation and Representation

Whereas a municipality must be divided into at least two areas known as wards, a district council need not have wards; however, only four district councils have undivided areas. No council may comprise less than five members, and each ward in a municipality must be represented by two councillors. No district council area may be divided into more than ten wards, and the number of councillors for each ward is established by proclamation.

A candidate for election as a councillor must be an adult British subject being an elector for the area for which he seeks election. Special magistrates, undischarged bankrupts, persons holding contracts or employment under the council, persons under sentence for crimes, persons overdue with council rates and any associated fines, and persons of unsound mind are ineligible for election.

Each year half the number of councillors retire. In councils with wards one councillor from each ward, the one who has been 'the longest in office without re-election', retires; in other councils the councillors who did not retire one year do so the next. In all cases a retiring councillor is eligible for re-election.

Any municipality may apply to add no less than three and no more than six aldermen to its council. The qualifications for councillors apply to aldermen, except that aldermen are not bound by the limits of wards, and an alderman must have served at least one year as a member of the council. Although the functions of aldermen are not specifically defined the concept is that they should impartially consider the interests of the area as a whole and so resolve any conflict which may arise between sectional interests represented by councillors.

Mayors of municipalities and of certain district councils are elected annually on the same basis as aldermen. The chairman of a district council is chosen annually by councillors from among their number.

Allowances

Council members, other than mayor or chairman, are not paid salaries or allowances, but may be reimbursed any expenses incurred in the performance of council business, and in the case of district councils, may be reimbursed the cost of travelling to and from council meetings.

The mayor or chairman receives an annual allowance which is determined at a council meeting in July of each year. This allowance, payable in advance, is to compensate for any expenses he is likely to incur in the execution of his official duty in the current financial year.

Franchise

Under the provisions of the Local Government Act, 1934-1978 universal adult franchise applied in local government elections and polls from 2 July 1977. A person is entitled to enrol as an elector if he is resident in a local government authority area, or if he is a ratepayer in respect of ratable property within the area. A body corporate is enrolled under the name of a nominated agent. Recent changes to the Act now provide the right of non-naturalised residents to be enrolled.

Officers and their Functions

Each council may appoint any officers it considers necessary to carry out its duties, including constables to facilitate the maintenance of law and order within its area. Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) as the chief executive officer, and an auditor.

Employment in local government administration is now regarded as a career; most town and district clerks are full-time employees, and councils are required to employ in those positions only those persons who have passed examinations qualifying them for the work. The characteristics of particular areas determine to some extent the nature of the duties performed by town and district clerks; they often undertake a very wide variety of functions, especially in smaller areas, where even the part-time employment of specialist officers for particular tasks is not warranted. Continuity of service between councils for long service leave and other purposes is provided for in the Local Government Act. The Minister of Local Government sets a minimum standard of superannuation benefits which must be made available to council employees. Other officers employed in local government are required to hold appropriate qualifications; these include engineers, overseer's, building surveyors and inspectors, health surveyors and authorised weed officers.

The auditor for each council is appointed for a term of two years. He is not eligible for appointment unless he holds a Local Government Auditor's Certificate of competence issued by the Local Government Auditors Examining Committee.

Whenever a council itself undertakes a new assessment of property values within its area it is required under the Local Government Act to appoint a valuer who recommends to the council a valuation of each property for rating purposes. A ratepayer may appeal against a council's valuation of his own property or that of another ratepayer. Instead of undertaking its own assessment of property values it is now not uncommon for a council to adopt the valuations of the Valuer-General. When this is done a council avoids the necessity of employing a valuer but a fee for each valuation is payable to the Valuer-General. There is no right of appeal to the council against valuations so based; in respect of the Government unimproved valuation the right of appeal lies against the Valuer-General when the valuation is made.

Finance

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and government grants. The relative importance of these sources of revenue varies between areas and through time within areas, *e.g.* in closely settled well-developed areas rate revenue is usually predominant; in large sparsely settled areas government grants, mainly for roadworks, may at times be the chief item of revenue; in areas being rapidly and extensively developed for housing or industrial purposes both government grants and loan funds may be prominent.

Specific purpose Commonwealth Government grants, generally, are not made direct to local government authorities but are administered by appropriate State Government

departments. The most important example of this is the distribution of portion of Commonwealth Aid Roads Grant to local government authorities by the Highways Department in conjunction with the State Treasury.

The Commonwealth Government makes available to the States for sharing by local government authorities an agreed percentage of income tax collected by the Commonwealth. The basis on which the States make the funds available to local government authorities must be agreed to by the Commonwealth Government and must include an approved distribution on a *per capita* basis with the balance distributed on an equalisation basis. South Australia is making 30 per cent of the State amount available to local government authorities on a *per capita* basis.

The State Government provides funds, subsidies and loans to local government for a wide range of functions including public libraries, recreation centres and facilities, public parks, caravan parks, effluent and stormwater drainage, and roads.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains. Further information is contained in Part 11.5, Local Government Finance.

South Australian Local Government Grants Commission

The South Australian Local Government Grants Commission was established in 1976 under the provisions of the South Australian Local Government Grants Commission Act, 1976.

It's main function is to recommend to the Minister the councils to which grants should be made and the amount of such grants. It has, for the purpose of its inquiries, the powers of a commission appointed under the Royal Commissions Act, 1917.

The Commission is required to ensure that all funds provided are distributed each year and that as far as possible, any grant to a council will be sufficient to enable the council to function at a standard not appreciably below similar councils. The grants recommended by the Commission are required to be free from any direction as to specific use.

The recommendations of the Commission must be forwarded to the Minister who may refer them back requesting further consideration. The Commission is required to reconsider its recommendation in the light of the request and following this the Minister, even though no amendments are made to original recommendations, must approve of those recommendations.

Local Government Advisory Commission

The Local Government Advisory Commission was established by Act of Parliament in 1976. The Commission comprises a Chairman who must be a person holding judicial office, one member being the person holding or acting in the position of Secretary for Local Government and another member appointed by the Governor.

The Commission is required to investigate and make recommendations on voluntary amalgamations of councils submitted to it and to advise the Minister on any matter relating to any petition or counter petitions referred to it for investigation.

The Commission has the powers of a royal commission.

Outback Areas Community Development Trust

The Outback Areas Community Development Trust Act, 1978 established the Outback Areas Community Development Trust to make funds available to improve community facilities in the isolated centres of the outback unincorporated areas of the State. The Trust is empowered to borrow \$1 million, and works closely with local community and progress associations in the determination of needs and priorities for funding.

3.6 TOWN AND REGIONAL PLANNING

Legislation

In 1920 the South Australian Parliament passed the Town Planning and Development Act which followed the Control of Subdivision of Land Act of 1917. These Acts were the first of their kind in Australia. The Act of 1920 made provision for the preparation of town planning schemes and by-laws, for the appointment of a Government Town Planner and a Town Planning Department. The Department prepared plans for various areas, including Colonel Light Gardens and the townships of Iron Knob and Barmera. The Acts of 1917 and 1920 were repealed by the Town Planning Act, 1929 which dealt only with the control of land subdivision.

The Town Planning Act, 1929 was amended in 1955 to provide for a Town Planning Committee which was required to prepare a plan to guide the future development of the metropolitan area of Adelaide. The Committee considered the probable future population of the metropolitan area, the provision of public transport, adequacy of highways, provision of open spaces such as parks and sports grounds, the zoning of industrial districts and the subdivision of land in relation to the economic provision of sewerage, water supply, electricity and gas services.

The Metropolitan Development Plan, together with its accompanying Report on the Metropolitan Area of Adelaide, was laid before both Houses of Parliament in October 1962, and an amendment to the Town Planning Act followed in 1963. The amendment required the Committee to call for and consider objections to the Plan as submitted to Parliament and the Committee was authorised to make regulations to implement the Plan.

The Planning and Development Act, which came into operation in 1967, repealed the Town Planning Act. It established an eleven-member State Planning Authority (with the Director of Planning as Chairman) and an independent Planning Appeal Board of four members. Provisions were made for the Planning Authority to implement and review the 1962 Development Plan, to prepare similar plans for other parts of the State and in conjunction with local government authorities to determine broad policies to guide the growth of towns and cities throughout the State.

The Planning and Development Act Amendment Act, 1971 reconstituted the State Planning Authority to include a wider representation of experts in the fields of local government, conservation and aesthetics. Further amendments in 1972, 1973, 1975, 1976, and 1978 provided for the appointment of permanent commissioners to the Planning Appeal Board, made provision for objector appeals, enabled the State Planning Authority to acquire and develop land within the Port Adelaide District Business Zone, prohibited subdivision of land within the Hills Face Zone, brought all land under subdivision control and made large shopping centres in residential areas subject to Ministerial control.

Development in the City of Adelaide is now controlled under the City of Adelaide Development Control Act, 1976. Authorities under the Act are the Corporation of the City of Adelaide, the City of Adelaide Planning Commission and the City of Adelaide Planning Appeals Tribunal.

Development Plans

Twelve planning areas have been declared covering the whole of the State. Development plans have been authorised for eleven of these areas, namely, Metropolitan (1 July 1967), South East (29 January 1970), Kangaroo Island (29 January 1970), Whyalla (24

September 1970), Mid North (15 June 1972), Flinders Ranges (8 February 1973), Eyre (21 March 1974), Outer Metropolitan (20 March 1975), Riverland (5 May 1977), Yorke Peninsula (2 June 1977) and Murray Mallee (11 May 1978). Work on preparing a development plan for the remaining area of the State is progressing. In some parts of the State, such as in the Metropolitan area and Whyalla, the planning emphasis is on controlling development, whereas in the Flinders Ranges and Kangaroo Island, conservation of the natural resources and beauty of the area is being stressed.

The process of preparing a development plan involves a considerable amount of public participation. Local councils, government departments and interested groups and individuals are consulted during the preparation of the plan, and the general public is given the opportunity to comment on it during a two month public exhibition period. Following the receipt of any representations, the State Planning Authority submits the development plan to the Minister in its original or amended form. The Minister in turn forwards the plan to the Governor with his recommendation for action.

The Governor may decide to authorise the plan, reject it, amend it, on the basis of the representations received or send it back to the Authority for further consideration. Although rather a lengthy process, it does mean that the public has an opportunity to participate in the future development and conservation of the State.

Where existing development plans need to be updated or revised, a similar process is put in motion for the preparation of a supplementary development plan. In Metropolitan Adelaide supplementary development plans have been prepared and authorised for the alignment of a number of major transportation routes (authorised 4 November 1971), the re-development of 5.5 hectares of land of Hackney (14 December 1972), the control of coastal development in the District Council of Willunga (12 July 1973), the Mount Lofty Ranges (26 February 1976), Black Hill (4 November 1976), Port Adelaide Centre (8 September 1977) and Willunga, Noarlunga and Meadows Rural Zone (11 May 1978). Supplementary development plans have also been prepared for Naracoorte (authorised 11 September 1975), Whyalla (5 October 1972), and Clare (26 October 1978).

Development Control

Control of development in accordance with a development plan is by regulation and the State Planning Authority or the appropriate local government body can recommend to the Minister that regulations be made. Such regulations may, for example, deal with land use zoning or reservation of land for acquisition for a particular purpose. The regulations must be exhibited publicly and opportunity given for objections to be lodged before submission to the Minister. Any person aggrieved by a decision given under a regulation may appeal to the Planning Appeal Board with a subsequent right of appeal to the Land and Valuation Court.

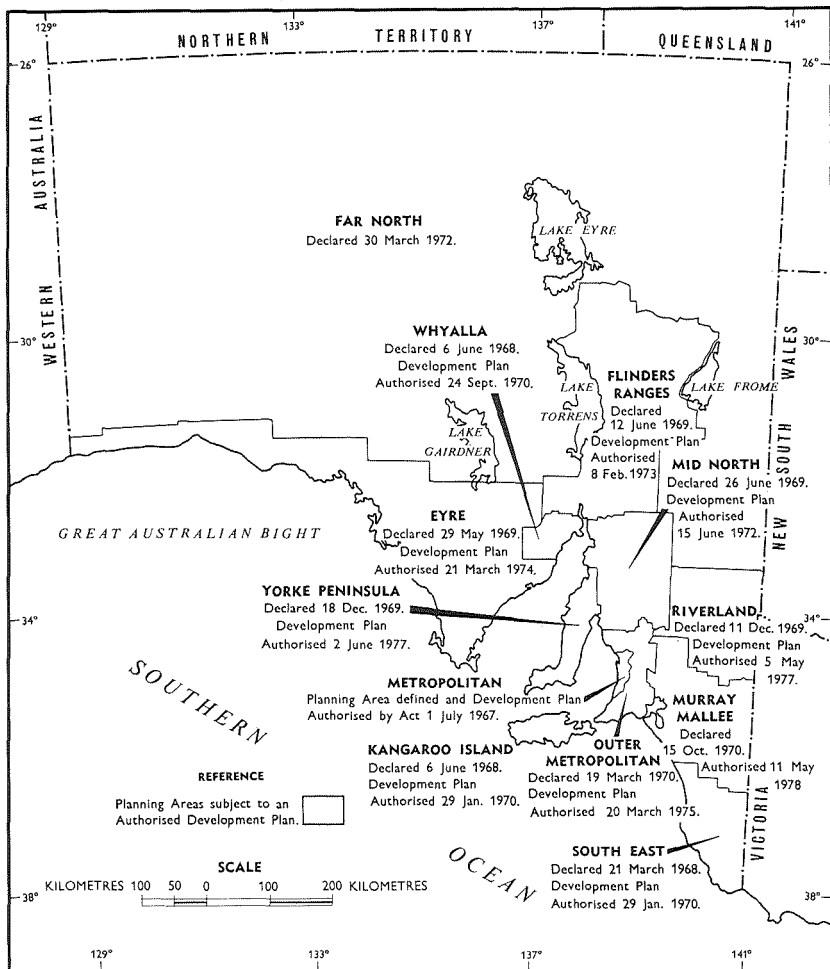
Most local councils in Metropolitan Adelaide have gazetted zoning regulations to control development within their areas. A number of councils in country areas have also taken steps to introduce zoning regulations. Many local authorities operate interim development control powers delegated to them by the State Planning Authority.

The State Planning Authority directly controls development in the Hills Face Zone, comprising the high land overlooking metropolitan Adelaide between Gawler and Sellicks Beach. The intention is to retain the rural character of the area. The State Planning Authority has interim development control over the area between Adelaide and

Monarto, the Flinders Ranges Planning Area, the area around the proposed Redcliff petrochemical works, Kangaroo Island, some small portions of Metropolitan Adelaide and land fronting the River Murray.

The Authority is empowered to buy land, either by agreement or compulsorily, to assist in promoting development in accordance with the development plan, and a Planning and Development Fund is provided to assist the Authority in carrying out this function.

SOUTH AUSTRALIA PLANNING AREAS



The Control of land subdivision throughout the State, with the exception of the City of Adelaide where there is no control, is vested in the Director of Planning and the local government authority in the area in which the land is situated. If permission to subdivide is refused, there is a right of appeal to the Planning Appeal Board.

The Minister for Planning is responsible for the administration of the Planning and Development Act and the Director of Planning heads the State Planning Office.

Regional Open Space

By 31 December 1978, 5 073 hectares of land had been acquired by the State Planning Authority for major open spaces and regional parks in the Adelaide Area at a cost of \$11 999 547.

In other parts of the State a total of 4 029 hectares of land had been acquired by the Authority by the end of 1978 at a cost of \$1 564 054.

The Authority acquired several key properties during 1978, including the 'Gun Emplacement' a site of major geological significance at Anstey Hill, and shared with the Environment Department acquisition of the Pohlner Estate, a unique area of virgin scrub at the head waters of Tanunda Creek.

Work on the development of Regency Park at Islington, north of Adelaide, was virtually completed. At a cost of under \$1.8 million, it comprises a nine-hole golf course, a licensed tavern, boating lake, oval, barbecues and picnic grounds, skateboard rink and playgrounds.

Experimental tree plantings, involving 18 000 trees in eight reserves, were inaugurated and a Concept Plan for public exhibition was prepared for development of the 330 hectare Onkaparinga Estuary Reserve, some 35 kilometres south of Adelaide.

Monarto

A new city, which will eventually accommodate over 100 000 people, is to be established near Murray Bridge, 80 kilometres south-east of Adelaide.

The Monarto Development Commission is responsible for the implementation of the project and has acquired 19 000 hectares of land. Most of the land is still being farmed but extensive areas have been prepared for urban development by planting of trees, encouragement of regeneration of natural vegetation and soil and pasture improvement. The initial development areas have been identified and servicing and subdivisional plans prepared.

Commencement of development has been deferred for five years from 31 December 1977, subject to annual review of the current and projected growth of Adelaide.

Coast Protection

The Coast Protection Act, 1972-1975 provides for the conservation and protection of the State's coastline, including its foreshore and beaches. A Coast Protection Board of six members has been established under the chairmanship of the Director of Planning. Its objectives are broadly to protect and restore the coast, to develop any part of it for enjoyment by the public and to carry out research.

The Board makes grants to local government authorities to assist them with projects and to help carry out work within the boundaries of the appropriate coast protection districts. Work would include the provision of boating facilities, protecting embankments, car park areas and other public amenities. Loss of sand from several metropolitan beaches is a major problem and the Board is devoting technical and financial resources to a sand replenishment program.

Coast protection districts may be established for any part of the coast, after which management plans are to be prepared setting out the measures needed to protect the coast and secure its most appropriate use. Proposed developments that are contrary to the management plan may be refused by the Board subject to right of appeal to the Planning Appeal Board.

Two coast protection districts, Metropolitan and Yorke, were declared in 1973; Fleurieu coast protection district and South East were declared in 1974 and 1976 respectively. The declaration of the remaining three districts, Eyre, Spencer and Kangaroo Island coast protection districts will follow.

A consultant study of the Fleurieu district, which extends from the northern boundary of the hundred of Myponga to the centre of the Murray Mouth, was completed in 1978 and the draft management plans for the district, together with those for the Metropolitan coast protection district, will be on display for public comment in 1979. A management plan for the Yorke district which includes the coastline from Port Gawler to the northern boundary of the District Council of Port Broughton, will be prepared on completion of the in-house study of the district.

In 1977-78 the Coast Protection Board expended \$926 295 on foreshore protection, repairs, improvements and restoration and the purchase of land. Much of this work was undertaken by local government bodies who contributed a further \$218 885 towards the cost of the works and land. At 30 June 1978, a further \$727 270 had been committed to approved but, at that time, uncompleted projects.

Department of Urban and Regional Affairs

The Department of Urban and Regional Affairs was established in 1977 by the amalgamation of the State Planning Office, the Urban Land Price Control Unit, the Office of the Minister of Mines and Energy and Minister of Planning and the Office of the South Australian Land Commission.

The main functions of the Department are:

- (1) to assist the Minister in promoting more efficient and equitable urban and regional development;
- (2) to assist the integration of urban and regional development programs and projects of all State Government agencies;
- (3) to develop a comprehensive housing policy.

The Department also administers the Urban Land (Price Control) Act, 1973-1976 which provides for the control of the price of residential allotments of land within the metropolitan area of Adelaide.

Rundle Mall

A special article on the development of Rundle Mall appeared on pages 114-18 of the *South Australian Year Book 1977*.

PART 4

LAND SETTLEMENT

4.1 LAND TENURE

IDENTIFICATION OF LAND AND REGISTRATION OF TITLE

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties and these in turn have been generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the Colonisation Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. As the administration was having considerable difficulty in regulating the leasing of unsold lands for pasturage it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds, used in some counties in England, was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 100 000 hectares was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the River.

There are currently forty-nine counties covering 23 per cent of the State, the last of these being declared in 1933. The counties have an average size of 463 000 hectares,

varying from County Light, north of Adelaide, with 217 470 hectares to County Jervois on Eyre Peninsula with 959 000 hectares.

Counties are generally subdivided into hundreds, although four northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a completely subdivided county varies from eight in Counties Alfred and Kintore to thirty-four in County Jervois. New hundreds are created from time to time, the present total being 535. Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title, identified by the county, hundred, and section, and, where appropriate, block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

Torrens System of Land Registration

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1975. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the Colony.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

An amendment to the Real Property Act in 1967 provided for the creation of interests in land by a three-dimensional division of the land into strata units by means of strata plans. Under the provisions of the amendment, a strata plan related to a building on land creates individual private interests and public interests in the property depicted in the plan. The enactment of this legislation enabled titles to be issued for home unit developments within a system which provided for the individual rights of the unit owners and for their corporate rights and responsibilities in common property.

The following table shows details of mortgages, transfers and other transactions relating to land under the Real Property Act, 1886-1975 for each of the four years to 1978.

Real Property Act Transactions, South Australia

Item	1975	1976	1977	1978
	\$'000			
Amount lent on mortgages	855 614	1 348 980	1 513 202	1 568 255
Amount discharged	317 438	439 447	504 297	493 147
	Number			
Certificate of title:				
Issues (a)	23 492	24 757	27 246	24 580
Transfers	50 728	54 357	47 533	43 215
Mortgages (b):				
Registrations	52 993	62 168	61 273	56 767
Discharges	49 365	54 023	51 661	51 367

(a) Includes limited titles and some replacement of old documents without change of ownership of land.

(b) Includes mortgages of Crown and other leases.

The Real Property (Registration of Titles) Act, 1945-1975 provides for the small proportion of land remaining under the general law to be converted to the Torrens System and this transition is still in progress in certain areas.

SYSTEMS OF TENURE

CURRENT TENURE

In the table below, occupied land in South Australia is classified according to its present form of tenure. Thus 'Area sold, dedicated, etc.' does not represent the accumulated total of all alienated lands as certain alienated lands repurchased by the Crown are currently held under leases.

At 30 June 1978 land in South Australia was occupied as follows:

	Area Hectares	Proportion Per Cent
Area sold, dedicated, etc.;		
Sold	6 200 480	6.30
Free grants	393 820	0.40
Dedicated (a)	131 917	0.13
Under agreement to purchase	71 989	0.07
Total	6 798 206	6.90
Area under lease and licence (b);		
Perpetual	8 485 944	8.62
Pastoral	50 646 742	51.45
Other	614 440	0.62
Total	59 747 126	60.69
Area in occupation	66 545 332	67.60
Remainder of State;		
Lakes and lagoons	3 198 959	3.25
Open for allotment or selection	28 693 387	29.15
Other vacant land (c)	28 693 387	29.15
Total area of State	98 437 678	100.00

(a) Includes State forest reserves.

(b) Includes areas held under Mining Acts.

(c) Includes surveyed roads, railways and other reserves, 9 304 439 hectares; of which 7 936 542 hectares are set apart as Aboriginal reserves.

In 1901 the area sold, granted and leased, *i.e.* the area occupied, was 37 934 751 hectares, increasing to 57 472 548 in 1924, but falling to 52 370 744 in 1931 because of decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 66 545 332 hectares.

LAND ADMINISTRATION

Approximately 90 per cent of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This Department is charged with the general administration of Crown lands, and with making available under appropriate tenure newly developed lands and such lands as come into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands is required before the transfer, mortgage or sublease of any of the forms of tenure administered by the Department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral lands, by the Pastoral Board, who interview applicants and make allotments on merit. The Boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

METHODS OF ALIENATING LAND

Sales under Agreement to Purchase

There is provision for Crown lands to be alienated through an agreement to purchase. The purchase money is payable over varying terms not exceeding sixty-four years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term as, subject to the Minister's approval, purchase may be completed after six years provided the purchaser has complied with all the necessary conditions. Land allotted under Agreements to Purchase amounted to 42 hectares in 1977-78.

Sales at Auction

Certain Crown lands may be sold at auction for cash. These include town lands, suburban lands exempt from the operations of the Land Board, and Crown lands which have been offered for lease and not taken up within two years. Town lands so sold are subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

Free Grants and Reservations

A free grant of Crown lands may be made for any public purpose. Of the 393 820 hectares thus alienated at 30 June 1978, 310 799 hectares had been granted for the Defence Research Centre. Lands may also be dedicated and reserved for a variety of purposes such as forest reserves, Aboriginal reserves, national parks, conservation parks, recreation parks, parklands and schools.

METHODS OF LEASING AND LICENSING LAND

Leases for Limited Terms

Pastoral lands outside the counties and large areas in the northern counties are held under pastoral leases granted for terms of forty-two years (except in the case of previously unoccupied lands when the term is twenty-one years) or for shorter terms where the land may be required for other purposes. Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the carrying capacity of the land, the distance from markets and the proximity of transport facilities, and in the case of recent leases, is reviewed every seven years. Such lands may be reallocated to the same lessees on expiry of the existing terms.

Persons may be granted a permit to search for water and if successful may take up a lease of 250 square kilometres of land. Such leases are granted for forty-two years at a nominal rental for the first ten years and a low rental thereafter. Conditions of stocking are also modified.

In certain circumstances, for example, where land has not been surveyed or its

potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to twenty-one years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown lands for certain industrial sites, grazing areas, fishermen's residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forests Department was leased for cultivation or grazing purposes for a period not exceeding forty-two years. At 30 June 1978, 223 hectares of forest land were under lease.

Perpetual Leases

Leases in perpetuity may be offered over Crown lands which have been surveyed or delineated on the public maps. The lessee is required to provide boundary fencing and may be required to clear and render available for cultivation a certain proportion of the land within a specified period.

In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated previously, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are required to be made. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments may also be offered at auction for cash or for agreement to purchase. Allotments not sold at auction may be sold by private contract.

During 1977-78, 4 963 hectares in irrigation areas were allotted under perpetual leases.

MINING CLAIMS, LEASES AND LICENCES

Legislation

The granting of leases and licences and the pegging of new claims is governed by the Mining Act, 1971-1978. A total of 279 private mines were current at 30 June 1978. Mineral royalties received by the Department of Mines and Energy during 1977-78 amounted to \$3 647 053.

The following table shows tenements held under the Mining Act, 1971-1976 and the Petroleum Act, 1940-1971 for the last five years.

**Tenements Held Under Mining and Petroleum Acts, South Australia
At 30 June**

Particulars	1974	1975	1976	1977	1978
Mineral claims	415	159	90	68	334
Precious stones claims	1 472	918	993	1 222	1 094
Leases	1 477	1 425	1 361	674	1 530
Exploration licences (a)	60	73	80	120	189
Petroleum licences and permits	21	17	15	5	18

(a) Formerly Special Mining Leases under the repealed Mining Act, 1930-1962.

Minerals Resumed

The mineral rights on private land were resumed by the Crown in July 1972 so that all minerals are the property of the Crown. If minerals (other than extractive minerals) which have been resumed under the Mining Act, 1971-1978 are mined any royalties collected upon the minerals recovered are payable to the person so divested of his property in minerals upon application.

A royalty of 2.5 per cent (5 per cent for extractive minerals) of the value of the minerals, immediately upon recovery from the earth, is payable to the Minister of Mines and Energy on all minerals (except precious stones) recovered and sold or used for commercial purposes. No royalty is payable on precious stones. Royalty for extractive minerals is payable to the Extractive Areas Rehabilitation Fund.

Extractive Minerals

Extractive minerals are defined as sand, gravel, stone, shell, shale or clay but does not include any such minerals that are mined for a prescribed purpose, nor fire-clay, bentonite or kaolin. No person is permitted to peg claims for extractive minerals on freehold land other than the person who, immediately before the operation of the Mining Act, 1971-1978 held the mineral rights or had rights to mine the minerals by holding a claim or lease over the deposit. Normal pegging rights apply to extractive minerals on other than freehold land or exempt land, and also apply to other minerals on freehold land.

The royalties collected from the mining of extractive minerals are paid into the Extractive Areas Rehabilitation Fund to be used in rehabilitating land disturbed by mining operations. The Fund may also be used for research into methods of mining engineering and practice with a view to reducing environmental damage or impairment. Receipts into this Fund during 1977-78 amounted to \$447 495.

General Conditions

A current miners right or, in the case of precious stones, a precious stones prospecting permit must be held by every prospector to authorise the pegging of the appropriate class of claim.

At least three weeks notice of entry for prospecting or mining purposes must be given to the landholder if the land is freehold or held on perpetual lease. Three weeks notice must also be given to any landholder before 'declared equipment' can be used on his land. In either case the landholder may lodge an objection with the Warden's Court.

A claim (other than a precious stones claim) has a maximum term of twelve months, is not transferable and must be converted to a lease before minerals can be removed for sale or used for commercial purposes.

A mining lease may be granted after twenty-eight days notice in the *South Australian Government Gazette* for a term of up to twenty-one years with certain rights of renewal. A mining lease is transferable with the Minister's consent and an annual rent is payable on a mining lease. Nineteen-twentieths of the rent collected on a lease on freehold land is paid to the landholder.

Exploration licences have a maximum term of two years and a maximum area of 2 500 square kilometres and are subject to the terms agreed. Twenty-eight days notice must be given in the *South Australian Government Gazette* before an exploration licence is granted.

Mining leases and exploration licences are granted under conditions which give proper consideration to the protection of the environment.

4.2 LAND SETTLEMENT SCHEMES

CLOSER SETTLEMENT

There is provision in the Crown Lands Act for acquisition of land for subdivision to encourage closer settlement. Such land is divided into blocks and offered under conditional agreements to purchase with payment over thirty-five and sixty-four year periods.

No land has been purchased for closer settlement since 1952-53, by which time 384 298

hectares had been purchased at a cost of \$5 730 400, including 21 008 hectares set apart for returned service personnel from the 1914-18 War, 1 302 hectares for forest and water conservation purposes and 10 758 hectares purchased in connection with the reclamation of River Murray swamp lands.

At 30 June 1978 a total of 45 297 hectares of closer settlement lands were held under agreement to purchase or lease.

MARGINAL AREAS ASSISTANCE

The excessive opening up of the drier marginal lands for wheat growing resulted in many settlers in these being forced to leave their holdings, particularly in the 1930s.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing. The Commonwealth Government established a Marginal Lands Improvement Fund to assist this development. The money was used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity.

The Fund was provided by the Commonwealth Government under the *Wheat Industries Assistance Act 1938*. An amount of \$1 426 000 was allocated to South Australia. By arrangement with the Commonwealth Government the rentals and income from sales of improvements on marginal lands which had been subject to adjustments under the above Fund are retained as an additional fund to be used for assistance to settlers in marginal areas. Receipts for 1977-78 amounted to \$31 616.

During 1967-68 an amount of \$150 000 was transferred from this Fund to the Farmers Assistance Fund. No advances were made from this Fund during 1977-78. The balance of the Fund at 30 June was \$481 729.

CROWN LANDS DEVELOPMENT

The Crown Lands Development Act, 1943-1973, administered by the Department of Lands, provides for the development of Crown lands, or lands which the Department may purchase, and for the allotment of such lands to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

ASSISTANCE FOR RETURNED SERVICE PERSONNEL

1914-18 WAR

Following the 1914-18 War the State Minister for Repatriation was authorised to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown lands could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all, 3 801 ex-servicemen were settled under this Act with 3 008 settling in 'dry lands' and 793 in irrigation areas.

1939-45 WAR AND KOREA-MALAYA OPERATIONS

War Service Land Settlement

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time. Basic structural improvements were provided and it was then offered to eligible settlers on perpetual lease. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and the effecting of further improvements.

During the first year after allotment in the case of 'dry lands' settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on 'dry lands' to convert property to freehold after a period of ten years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The following table shows for recent years the number of farms allotted and total expenditure under the War Service Land Settlement Scheme.

War Service Land Settlement, South Australia
Farms Allotted and Total Expenditure to 30 June

Particulars	1975	1976	1977	1978
Farms allotted:				
Number	1 032	1 032	1 032	1 032
Area ('000 hectares)	285	285	285	285
Expenditure:				
State	9 173	9 638	10 210	10 734
Commonwealth Government;			\$'000	
Acquisition of land	6 846	6 846	6 846	6 846
Development and improvement of land	31 686	31 682	31 658	31 650
Provisions of credit facilities	41 458	42 544	43 512	44 290
Other	15 143	15 875	16 537	17 379
Total expenditure by Common- wealth Government	95 133	96 947	98 553	100 165
Total expenditure	104 307	106 585	108 763	110 899

The Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth Government provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which are met by the South Australian Government.

All large scale development operations under the scheme have now been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.

Loans and Allowances (Agricultural Occupations) Scheme

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling \$2 009 096 had been made to 1 288 ex-servicemen, and allowances totalling \$649 218 had been granted to 2 264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416 476 had been made to 30 June 1978 by the Department of Lands.

SOUTH AUSTRALIAN LAND COMMISSION

The South Australian Land Commission was established in November 1973 under the provisions of the Land Commission Act, 1973. In its first annual report to 30 June 1974 the Commission stated its objectives as being:

- (1) to stabilise the price of urban land by its active participation in the acquisition, management, development and disposal of land for the whole range of urban uses;
- (2) to divert the flow of land value increments resulting from the conversion of land to urban use or the assumption by land of a potentiality for urban use through community development, to the community;
- (3) to achieve comprehensive and orderly urban development which does not occur when development decisions are taken by individual land owners on the basis of their own personal situations.

Financial assistance has been provided by the Commonwealth Government under the *Urban and Regional Development (Financial Assistance) Act 1974*. At 30 June 1978, the Commission has received advances of \$52 730 572 for the acquisition of land for development purposes. Financial assistance (\$3 484 333 as at 30 June 1978) has also been received from the State Government.

Land purchased or acquired by the Commission for urban purposes at 30 June 1978 was 4 956 hectares within localities designated for urban development in the Metropolitan Development Plan, 42 hectares in country towns and 1 747 hectares of land within localities designated for Metropolitan Open Space.

Since first releasing fully serviced housing allotments on to the market on 11 April 1975 at Happy Valley, the Commission has sold, to 30 June 1978, a total of 2 483 allotments from sixteen subdivisions in Salisbury, Meadows, Noarlunga, Marion, Tea Tree Gully, Munno Para and Mount Gambier.

A total of 1 635 fully serviced allotments were completed during 1977-78. A further 672 are under construction and due for completion during 1978-79.

In addition to subdivisional development, the Commission continues to be involved in several other streams of activity such as, suburban scale planning, community and retail centre planning and development.

An important event for the Commission in 1977-78 was the enactment of the Tea Tree Gully (Golden Grove) Development Act, 1978 and the establishment under the Act of a Development Committee comprising State and local government representatives charged with the responsibility of overseeing the planning and development of the Commission's land holdings of approximately 1 300 hectares in Golden Grove.

The Commission's activities are carried out by a staff of 29 and the extensive use of professional and management skills available in the consulting and development industries.

PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project, begun in 1949 by the Australian Mutual Provident Society to develop a large area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The development of this area was made possible by the discovery that the retarded nature of the country was caused by certain soil deficiencies, and that these deficiencies could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the Society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The Society provided finance for the purchase of land, and for stock, plant and working expenses. In all, 38 880 hectares were taken up by employees of the Society.

In addition to the development of land for employees a large area was developed to various stages and sold to the public; sales in this category amounted to 132 435 hectares.

ADVANCES TO THE RURAL SECTOR
GOVERNMENT ADVANCES

Financial Details

The following table gives details of total advances made to the rural sector by government authorities and balances outstanding at 30 June 1978.

Advances to Settlers, South Australia

Particulars	Advances made during 1977-78	Total Advance at 30 June 1978	Principal Outstanding at 30 June 1978	
			Persons	Amount
	\$	\$	Number	\$
Department of Lands:				
Advances to soldier settlers	—	10 143 560	120	103 113
Advances under closer settlements Acts	—	5 461 033	73	81 429
Settlement of returned service personnel (1939-45 War) (a)	767 658	44 273 752	249	5 679 363
Advances under Crown Lands				
Development Act	—	985 623	42	486 233
Advances in drought affected areas	12 778 227	13 865 718	1 146	13 539 534
Advances under Marginal Dairy Farms				
Reconstruction Scheme (a)	51 727	1 195 532	176	817 638
Advances under Rural Industry Assistance				
Scheme (a)	8 875 418	41 261 508	1 008	27 494 593
Advances under Fruitgrowing Reconstruction				
Scheme (a)	93 578	410 888	257	396 355
Advances under Beef Industry Assistance				
Scheme	20 038	734 047	72	478 137
Advances to soldier settlers; Irrigation	—	2 096 348	—	—
State Bank of South Australia:				
Advances to settlers for improvements (b)	22 320	4 645 265	315	1 322 863
Advances under vermin and fencing Acts (c)	—	2 986 994	36	64 963
Advances under loans to producers Acts	4 533 879	42 439 494	280	17 776 553
Total	27 142 845	170 499 762	3 774	68 240 774

(a) Advances made from funds provided by the Commonwealth Government.

(b) Adjustment of cancelled and re-allotted holdings.

(c) Vermin proof fencing and loans for fencing and water piping.

Advances Administered by State Bank.

In addition to advances made under schemes mentioned above, the State bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1972, the Bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1962 empowers the Bank to make advances for certain developmental projects and the purchase of certain capital equipment. The Bank also administers Acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

Marginal Dairy Farms Reconstruction Scheme

The Marginal Dairy Farms (Agreement) Act, 1971 ratified an Agreement between the South Australian and Commonwealth Governments to overcome the problem of low incomes within the dairy industry, particularly in the case of producers relying on the sale of milk or cream for manufacturing purposes. The scheme ceased on 31 December 1978.

The scheme provided for farmers whose farms had insufficient potential to become viable economic units, while based on the sale of milk or cream for manufacturing purposes, to voluntarily sell their land to the State at market value. The State may then dispose of the land on the basis of the most profitable and economic land use, particularly with a view to building other rural properties to economic levels. The scheme also provided for development/diversification loans in respect of an existing dairy, interest free loans for the on-farm purchase and installation of refrigerated bulk milk vats, and loans to dairy factories to facilitate the collection, storage and processing of refrigerated bulk milk.

At 30 June 1978, 359 applications had been received of which 273 were approved and seventy-nine declined and \$1 195 532 had been expended on the purchase of dairy farms and other assistance to approved applicants.

Rural Industry Assistance Scheme

The Rural Industry Assistance (Special Provisions) Act, 1971 and Rural Industry Assistance Act, 1977 gave effect to agreements between the Commonwealth and South Australian Governments for a scheme of assistance which provides for carry-on finance, debt reconstruction, farm build-up, farm improvement, rehabilitation and household support loans.

Carry-on finance and debt reconstruction are designed to assist the farmer who, although having sound prospects on a long-term basis, has used all of his cash and credit resources and cannot meet his financial commitments.

Farm build-up is to assist the process whereby farms which are too small to be profitable can be enlarged to an economic unit.

Farm improvement is intended to assist in restoration of an uneconomic property to economic viability by improving the use of the property without increasing its size.

Rehabilitation and household support measures provide limited assistance to alleviate conditions of personal hardship.

Funds were provided initially by the transfer of the balance of the Primary Producers Debt Adjustment Fund (\$804 636) to the Rural Industry Fund. Other contributions to the Fund are made by the Commonwealth Government and at 30 June 1978, \$29 381 000 had been received. The State is liable for the repayment to the Commonwealth Government of 75 per cent of the moneys made available by the Commonwealth Government under the terms of the Rural Assistance (Special Provisions) Act, 1971 and 85 per cent of the moneys advanced under the terms of the Rural Assistance Act, 1977.

Total advances from the Fund by way of repayable loans to 30 June 1978 amounted to \$41 261 508.

Details of the number of applications received and the expenditure involved are shown in the following table.

**Rural Industry Assistance: South Australia, Applications and Approvals from
Commencement of Operations to 30 June 1978^(a)**

Debt reconstruction:	
Applications received	1 237
Applications declined	759
Applications approved	431
Total assistance approved	\$14 746 379
Average assistance approved	\$34 214
Farm build-up:	
Applications received	1 203
Applications declined	512
Applications approved	619
Total assistance approved	\$26 084 693
Average assistance approved	\$42 140
Farm improvement:	
Applications received	59
Applications declined	26
Applications approved	27
Total assistance approved	\$243 410
Average assistance approved	\$9 015
Rehabilitation:	
Applications received/approved	20
Total assistance approved	\$62 500
Expenditure to 30 June 1977	\$57 807
Household support:	
Applications received	3
Applications declined	—
Applications approved	3
Total assistance approved	\$16 896

(a) Commenced 27 May 1971.

Fruitgrowing Reconstruction Scheme

The Fruitgrowing Industry (Assistance) Act, 1972 effected an agreement between the Commonwealth and South Australian Governments for a scheme of assistance to horticulturists to remove redundant plantings of trees of the varieties used in the production of canning peaches, pears, apricots, and fresh apples and pears. Growers were entitled to maximum levels of assistance of \$202 per hectare for canning fruits and \$142 per hectare for fresh fruits. The scheme ceased at 31 December 1977.

Assistance was provided initially in the form of a secured loan bearing interest at the rate of 6.25 per cent a year. The grower was obliged to enter into an undertaking that for the next five years he will not replant on the property from which the trees have been removed, any trees of the type specified. On compliance with the undertaking, interest would be rebated, securities discharged and the loan converted into a grant.

Funds made available by the Commonwealth to 30 June 1978 were \$410 888.

Beef Industry Assistance Scheme

The Beef Industry Assistance Act, 1975 provides for financial assistance to specialist beef producers for carry-on finance to assist the producer to reach commercial viability.

Funds totalling \$3 million were allocated to the scheme comprising \$1.5 million from State funds and a matching dollar for dollar advance by the Commonwealth Government.

The scheme provides for loans up to a maximum of \$15 000 for servicing essential carry-on requirements and interest at the rate of four per cent a year with repayment over a maximum period of seven years. No repayment of principal would be required during the first year of operation. Interest for the corresponding period would be capitalised.

At 30 June 1978, ninety-three applications for assistance had been approved and repayable advances of \$734 047 had been made to beef producers.

Farmers Assistance Fund

The Primary Producers Emergency Assistance Act, 1967 provides a means of servicing the essential carry-on requirements of primary producers suffering loss as a result of drought, fire, flood, frost, animal or plant disease, insect pest or other natural calamity. Assistance is given to enable such persons to continue in the business of primary production where no other source of financial assistance is available to them and who, by virtue of the assistance, have a reasonable prospect of being able to continue in the business of primary production.

Payments and/or direct grants may also be made towards the cost of fodder or water for starving stock, including the transport of livestock to and from agistment and for any other purpose deemed necessary.

The first \$1.5 million expenditure in any calamity is to be borne from State funds.

Loans bear interest at the rate charged by the State Bank of South Australia in respect of overdraft loans made to primary producers at the time of making the advance.

PRIVATE INSTITUTIONAL ADVANCES

Many financial institutions advance funds for rural development.

At July 1978 the major trading banks had advances outstanding to residents of South Australia employed in agriculture, dairying and grazing, of \$155.5 million. Branches of major pastoral finance companies located in South Australia also make similar advances.

4.3 STATISTICAL DIVISIONS AND SUBDIVISIONS

For the purpose of presenting the statistical series of South Australia, the State is divided into a number of areas which are entitled statistical divisions.

PREVIOUS STATISTICAL DIVISIONS

Statistical series for South Australia have been published at various times under two different sets of statistical divisions—'Primary' Statistical Divisions, the boundaries of which have followed the boundaries of proclaimed counties, and 'Census' statistical Divisions, where boundaries for the most part have followed the boundaries of local government areas.

Before 1889 agricultural statistics were published for counties from at least 1851, and local government areas from 1854. Publication of statistics by 'Primary' Statistical Divisions commenced in 1889 on the basis of five statistical divisions made up of thirty-eight counties. In 1920-21 an additional division was created to limit the number of counties in each division (as the number had by this time increased to forty-eight) and the number of 'Primary' divisions remained at six from that date.

Early population census results were published on the basis of local government areas and counties, but for the 1891 and 1901 Censuses the five 'Primary' Statistical Divisions were used. The Census of 1911, which was the first conducted by the Commonwealth Government reverted to use of counties for published results whereas subsequent censuses, up to and including 1947, were published using local government areas. Details of the 1954 and subsequent population censuses have been published by 'Census' Statistical Divisions.

For the 1966 Census an additional division, the Adelaide Statistical Division, was delineated to embrace the area expected to contain the urban development of Adelaide during a period of at least twenty years.

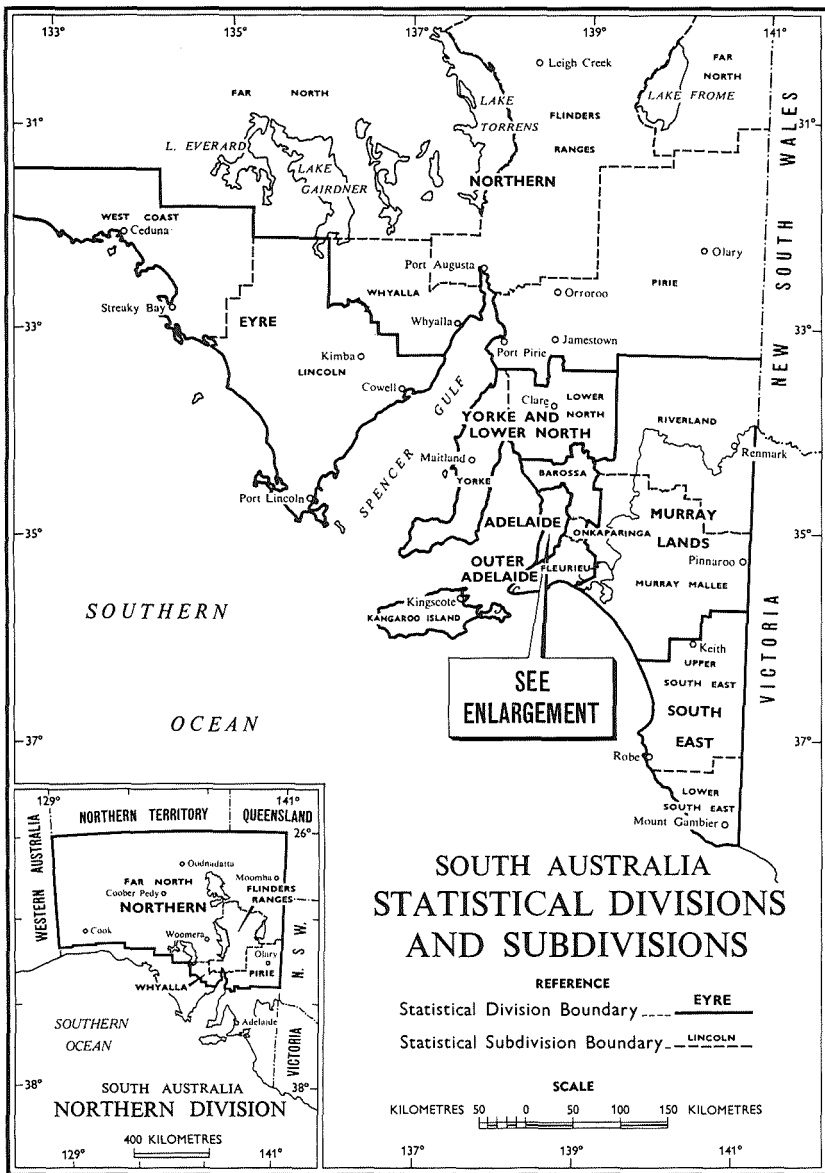
Although, ideally, statistical division boundaries should remain unchanged over time so as to enable comparisons to be made of constant areas, growth in certain statistical divisions, together with the adoption of the Adelaide Statistical Division for the 1966 Population Census, made it desirable to review the boundaries and to select a new group of statistical divisions.

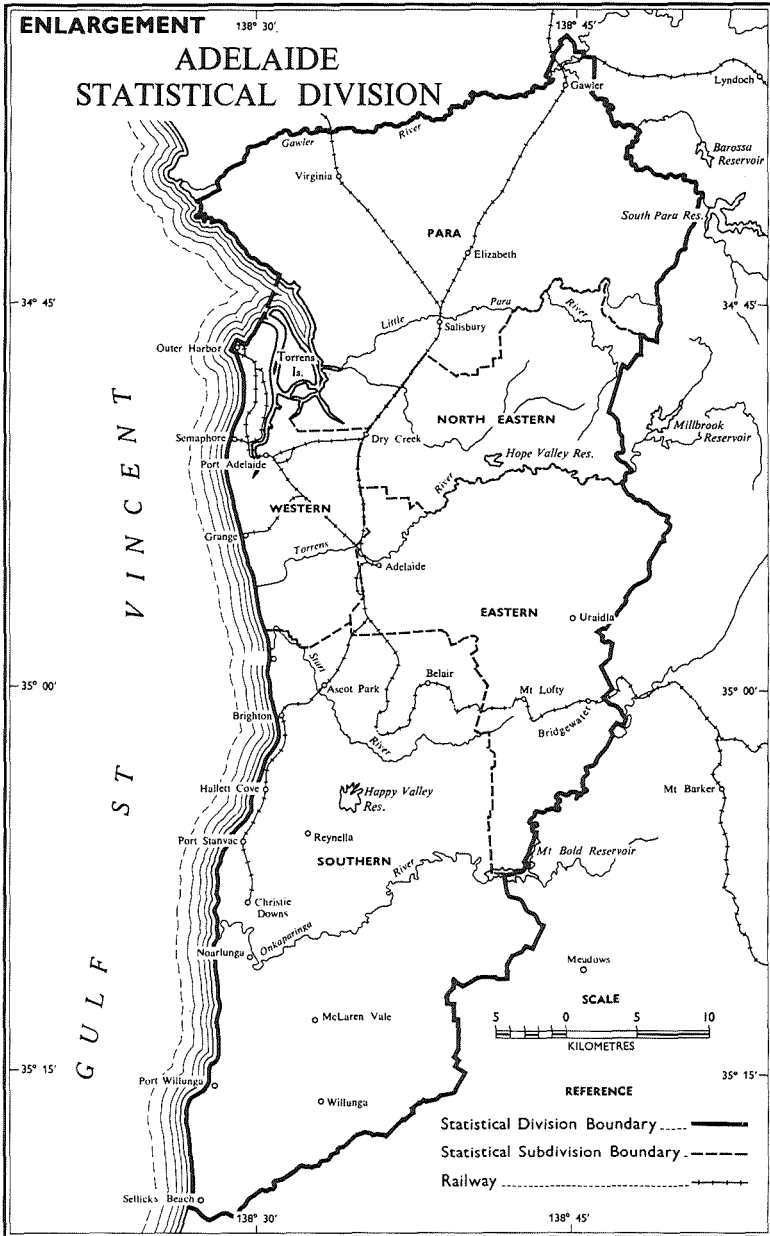
The new statistical divisions were designed to represent closely allied and meaningful areas of production and community interest and where areas smaller than divisions were considered to be important, subdivisions were introduced.

These statistical divisions and subdivisions were adopted for the publication of official statistics from 1 January 1971.

CURRENT DIVISIONS AND SUBDIVISIONS

From 1 July 1976 new statistical divisions and subdivisions were adopted for the publication of official statistics. Maps showing the new statistical divisions and subdivisions are included on pages 112 and 113. A more detailed article together with descriptions of the divisions and subdivisions was included on pages 135-43 of the *South Australian Year Book 1977*.





PART 5

POPULATION

5.1 THE CENSUS

PRE-FEDERATION ACTIVITY

Early 'musters'

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

Development of the Census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Details of the names, ages and civil conditions of the inhabitants were sought. The next census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first recognised census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

CENSUSES OF AUSTRALIA

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth Government functions and with the passing of the empowering legislation, the *Census and Statistics Act 1905*, all censuses of Australia have been taken under the authority of this Act and the regulations made thereunder. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in the years 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976, while the next census is planned for 1981. The Act provides that the census should be taken by means of a householder's schedule delivered to every dwelling and that this schedule should contain particulars of the dwelling and its inmates.

Periodicity and Date of the Census

The *Census and Statistics Act 1905* provided that the Census should be taken 'in the year one thousand nine hundred and eleven and in every tenth year thereafter'. But in 1930 this was amended by the addition of the words 'or at such other time as is prescribed'. Because of the economic depression prevailing in 1931 the third Australian Census was not taken until 1933, and because of war conditions the fourth Australian Census was not taken until 1947. Consideration was then given to the practicability of holding future censuses in the series of years originally envisaged. However, it was considered that the interval of years from 1947 to 1951 was too short; therefore it was decided to take the fifth census in 1954 at the mid-point of the period from 1947 to 1961. The sixth census was held in 1961. Because of the administrative demand for more frequent counts of the population the seventh census was held in 1966, the eighth in 1971 and the ninth in 1976.

The *Census and Statistics Act* provides that 'the Census day shall be a day appointed for that purpose by proclamation', but the actual date is not specified. The census is conducted on a *de facto* basis, i.e. it records the population actually in Australia at the place where located on census day (as distinct from a *de jure* basis, which records the population according to place of usual residence). However, for the 1976 Census there is facility to extract population details on a *de jure* basis from the local government level to the whole State. In the selection of census day every endeavour is made to choose a date when there is a minimum displacement of population. In 1911 and 1921, census day was near the beginning of April, but in 1933 and subsequently, census day has been at the end of June because this time has fulfilled the condition mentioned and is otherwise suitable, being the end of a financial year and of a quarterly period used extensively for statistical purposes.

Scope of the Census

The census covers the population and dwellings of Australia.

Persons excluded from results of Censuses up to 1966 were:

- (i) diplomatic representatives of other Governments and their families and staffs having diplomatic immunity in accordance with international practice;
- (ii) full-blood Aborigines, pursuant to Section 127 of the Constitution which specifically excluded them from the count of the population.

Diplomatic representatives, families and staffs are still excluded but, following the results of a referendum held in 1967, Section 127 of the Constitution was repealed and full-blood Aborigines were included in the Census from 1971. In 1971 Census publications, where 1966 figures are also shown, these figures have been amended to include full-blood Aborigines and thus provide comparability: this can be done for all tables other than those on the labour force.

Broadly the principle is to record at the census babies born at or before midnight of

census day and to exclude persons dying before midnight of census day. Travellers on ships in or between Australian ports at midnight of census day are also included.

For census purposes the Act defines a dwelling as 'a building, erection, or tenement, whether permanent or temporary, which is wholly or partly used for the purpose of human habitation and includes any ship or other vessel in any port of the Commonwealth or in any inland waters thereof, or any ship or vessel on a passage between any two Commonwealth ports'. Section 10 (2) provides that 'where a building is let, sub-let, or held in different apartments and occupied by different persons or families, each part so let, sub-let, or held and used for the purpose of human habitation shall be deemed a dwelling'. Measureable characteristics such as class of dwellings, materials of outer walls, number of inmates in relation to number of rooms, facilities and rentals are recorded.

The census data on occupied dwellings are obtainable from the completed householder's schedules. However, census collectors are responsible for recording, from personal observations or inquiry, particulars also of dwellings which are unoccupied on census day, including those temporarily unoccupied or those used for 'holiday purposes'. Dwellings excluded from census results are those occupied by accredited persons having diplomatic immunity. Dwellings occupied solely by full-blood Aborigines also were excluded at censuses before 1971.

Before the 1976 Census, all householders schedules were fully processed. The 1976 Census processing was undertaken in two stages. In the first stage all schedules were processed, with data on the number of males, females and persons extracted, together with some information on marital status, location, age distribution and birthplace. In the second stage, all schedules from non-private dwellings and 50 per cent of those from private dwellings were processed (except for the Northern Territory). The data extracted in the second stage (except that for the Northern Territory) are thus subject to sampling errors. Further details on the nature and extent of such errors may be obtained from the publication *Making Sense of the Census*, (Catalogue No. 2129.0).

Australian Parliamentary Representation and the Census

The *Representation Act* 1948 obliges the Chief Electoral Officer to ascertain the number of people in Australia and in each of the States from time to time for the purpose of determining the number of Members of the House of Representatives to be chosen from each State, all 'Statistical Officers' being authorised and required to furnish all the information the Chief Electoral Officer needs for this purpose.

After each census the Chief Electoral Officer requests the Australian Statistician to supply the information required for the purposes of the Representation Act. From such information the Chief Electoral Officer prepares the requisite certificate and this is published in the *Australian Government Gazette*.

A more detailed description outlining the history, purposes, legal basis, organisation and publication of the results of the population census in Australia was included on pages 77-86 of the *South Australian Year Book* 1968.

5.2 POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17 366 persons at the first Census on 26 February 1844. In 1861, twenty-five years after the first settlers arrived, the population was 126 830 and this figure had more than doubled by the Census in 1881. By 1921 the population was almost 500 000 persons and it is estimated to have reached 1 000 000 persons in January 1963. The population at 30 June 1976 was estimated as 1 261 600 persons.

South Australia's population as recorded at the 1976 Census has been adjusted for underenumeration utilising results from a post-enumeration survey conducted after the census to measure the degree of census error. Net underenumeration was derived by comparing results from the census and the survey and identifying omissions and duplications in the census. Upward adjustment made was 1.35 per cent for 1976. The 1971 Census figure has been adjusted for underenumeration revealed in a similar survey and further revised following reconciliation of intercensal recordings of natural increase and migration, giving a net upward adjustment of 0.99 per cent.

Population: South Australia, Censuses 1844 to 1976

Census Date	Population (a)			Average Annual Increase	
	Males	Females	Persons	Number	Per Cent
1844 26 February	9 686	7 680	17 366	..	..
1846 26 February	12 670	9 720	22 390	2 512	14.47
1851 1 January	35 302	28 398	63 700	8 262	36.90
1855 31 March	43 720	42 101	85 821	5 530	8.68
1861 8 April	65 048	61 782	126 830	6 835	7.96
1866 26 March	85 334	78 118	163 452	7 324	5.78
1871 2 April	95 236	90 189	185 425	4 395	2.69
1876 26 March	109 841	102 687	212 528	5 421	2.92
1881 3 April	145 113	130 231	275 344	12 563	5.91
1891 5 April	161 920	153 292	315 212	3 987	1.45
1901 31 March	180 485	177 861	358 346	4 313	1.37
1911 3 April	207 358	201 200	408 558	5 021	1.40
1921 4 April	248 267	246 893	495 160	8 660	2.12
1933 30 June	290 962	289 987	580 949	7 149	1.44
1947 30 June	320 031	326 042	646 073	4 652	0.80
1954 30 June	403 903	393 191	797 094	21 574	3.34
1961 30 June	491 406	480 081	971 487	24 913	3.13
1966 30 June	550 196	544 788	1 094 984	24 699	2.54
1971 30 June(b)	586 051	587 656	1 173 707	15 745	1.44
1976 30 June(b)	620 162	624 594	1 244 756	14 210	1.21

(a) Excludes full-blood Aborigines before 1961 Census. (b) 1971 and 1976 Census figures have not been adjusted for underenumeration. Adjusted figures were 1 185 300 and 1 261 600 respectively.

In the following table, increases in the population have been classified as *recorded natural increase* (the excess of recorded births over recorded deaths) and *other increases* (which consists mainly of the excess of arrivals over departures, either from overseas or interstate).

Increases in the Population, South Australia^(a)

Period	Recorded Natural Increase			Other Increase(b)			Total Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Annual Average:							
1881-1890	3 349	3 535	6 884	(-) 1 488	(-) 1 141	(-) 2 629	4 255
1891-1900	2 832	3 024	5 856	(-) 973	(-) 567	(-) 1 540	4 316
1901-1910	2 665	2 745	5 410	(-) 44	(-) 404	(-) 448	4 962
1911-1920	3 508	3 614	7 122	366	926	1 292	8 414
1921-1930	3 131	3 300	6 431	1 201	714	1 915	8 346
1931-1940	(c) 1 787	(c) 1 929	(c) 3 716	(-) 860	(-) 397	(-) 1 257	2 459
1941-1950	(c) 3 977	(c) 4 026	(c) 8 003	2 705	1 671	4 376	12 379
1951-1960	5 631	5 923	11 554	6 279	5 585	11 864	23 418
1961-1970	5 980	6 401	12 381	4 206	4 975	9 181	21 562

Increase in the Population, South Australia^(a) (continued)

Period	Recorded Natural Increase			Other Increase ^(b)			Total Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Year:							
1971	6 487	6 823	13 310	3 204	2 619	5 823	19 133
1972	5 822	6 258	12 080	924	1 113	2 037	14 117
1973	4 973	5 599	10 572	3 942	3 194	7 136	17 708
1974	4 761	5 184	9 945	8 154	8 248	16 402	26 347
1975	4 746	5 293	10 039	(-) 2 456	(-) 3 841	(-) 6 297	3 742
1976	4 376	4 572	8 948	1 106	1 433	2 539	11 487
1977	4 590	4 886	9 476	2 797	2 785	5 582	15 058

(a) Excludes full-blood Aborigines before 1961. (b) Figures post-1970 exclude short-term overseas migration. (c) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase.

As from June 1971, intercensal estimates of overseas migration exclude short-term (less than one year) movements, consistent with the measurement of interstate migration. Annual average increases which are given for each 10-year period since 1861 show some important aspects of the development of the State, namely:

- (i) the net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s;
- (ii) the slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level; and
- (iii) the high rate of migration in the post 1939-45 War period up to 1960.

Rate of Increase of Population, South Australia and Australia^(a)

Period	South Australia			Australia		
	Recorded Natural Increase	Other Increase	Total Increase	Recorded Natural Increase	Other Increase	Total Increase
Annual Average:						
1881-1890	22.67	(-)8.66	14.01	19.96	14.23	34.19
1891-1900	16.90	(-)4.44	12.46	16.91	0.71	17.62
1901-1910	14.70	(-)1.22	13.48	15.29	1.00	16.29
1911-1920	15.99	2.90	18.89	15.77	4.20	19.97
1921-1930	11.87	3.53	15.40	12.97	5.23	18.20
1931-1940	^(b) 6.33	(-)2.14	4.19	^(b) 7.92	0.60	8.52
1941-1950	^(b) 12.50	6.83	19.33	^(b) 12.04	4.34	16.38
1951-1960	13.81	14.18	27.99	13.71	8.73	22.44
1961-1970 ^(c) ...	11.57	8.58	20.15	11.79	5.75	17.53

(a) Rate per 1 000 of mean population. (b) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase. (c) Excludes full-blood Aborigines before 1961.

The State's rate of population increase was slower than the Australian rate in every decade from 1881-90 to 1931-40. In the next two decades the steep rise in the rate of net migration enabled an above-average growth rate to be achieved, and this was maintained until 1966. Since 1966 however, the State's growth rate has generally been below the Australian rate.

Estimates of the population of the State for the last seven years are given in the following table. The total increase for each year and the rate of growth are also shown.

Estimated Population at 31 December, South Australia

Year	Males	Females	Persons	Total Increase for year	Rate of Growth
					Per cent
1971	597 100	598 300	1 195 400	19 100	1.63
1972	603 800	605 700	1 209 500	14 100	1.18
1973	612 800	614 500	1 227 200	17 700	1.46
1974	625 700	627 900	1 253 600	26 300	2.15
1975	628 000	629 300	1 257 300	3 700	0.30
1976	633 400	635 300	1 268 800	11 500	0.91
1977	640 800	643 000	1 283 800	15 100	1.19

Intercensal estimates of population are derived by adding to the population ascertained at the Census the recorded natural increase and the allocation to the State of portion of the net gain to Australia by overseas migration; gains and corresponding losses that result from movement between South Australia and other States are also taken into account, in so far as they are recorded as transfers of residence under family allowance procedures or Commonwealth Government electoral procedures, supplemented by results of any special count or sample survey. The estimates above have been revised according to results of the 1971 and 1976 Censuses adjusted for underenumeration.

The estimated mean population for South Australia is calculated for the years ended 30 June and 31 December. Estimates for the last six years are shown in the next table.

Estimated Mean Population, South Australia^(a)

Year	Year Ended 30 June			Year Ended 31 December		
	Males	Females	Persons	Males	Females	Persons
1972	596 700	598 000	1 194 700	600 400	601 800	1 202 200
1973	604 100	605 700	1 209 900	608 300	610 000	1 218 300
1974	612 600	614 200	1 226 700	617 000	618 600	1 235 600
1975	621 600	623 500	1 245 100	625 400	627 400	1 252 800
1976	627 600	629 000	1 256 500	630 200	631 700	1 261 900
1977	633 500	635 300	1 268 800	637 400	639 300	1 276 700

(a) Figures have been adjusted for underenumeration.

EARLY HISTORY OF SETTLEMENT

A detailed description of early settlement in South Australia together with information on the 1851 Census was included on pages 116-7 of the *South Australian Year Book 1970*.

DISTRIBUTION OF POPULATION

Urban Centres

Commencing with the 1966 Census, a boundary has been drawn at each Census around each population cluster of 1 000 or more persons (or around known holiday resorts of less population if they contain 250 or more dwellings of which at least 100 are occupied). These clusters are named urban centres and the population and dwellings enumerated therein are classified as urban for statistical purposes.

When delimiting urban centres of less than 25 000 population the urban centres are determined subjectively (by inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available). All continuous urban growth is included, together with close but non-contiguous development which could be regarded as part of the centre. For urban centres with 25 000 or more population the basic criterion used is *population density*. The geographic units classified according to the density criterion are collection districts, the smallest units available, which must have a density of at least 200 persons per square kilometre for inclusion in the urban centre. A gap in urban development of less than three kilometres (by the shortest rail or road distance) is ignored while urban areas three or more kilometres apart are treated as separate even if the gap comprises mainly reserved land or a natural barrier. Particular rules apply to contiguous areas with special functions such as airports, sporting areas and industrial areas which do not meet the density criterion.

The boundary of such an urban centre is thus a moving one which reflects the process of urbanisation. The use of objective criteria enables valid comparisons to be made between one urban centre and another, and between the population for an urban centre at one census with the population at succeeding censuses.

Population in Urban Adelaide

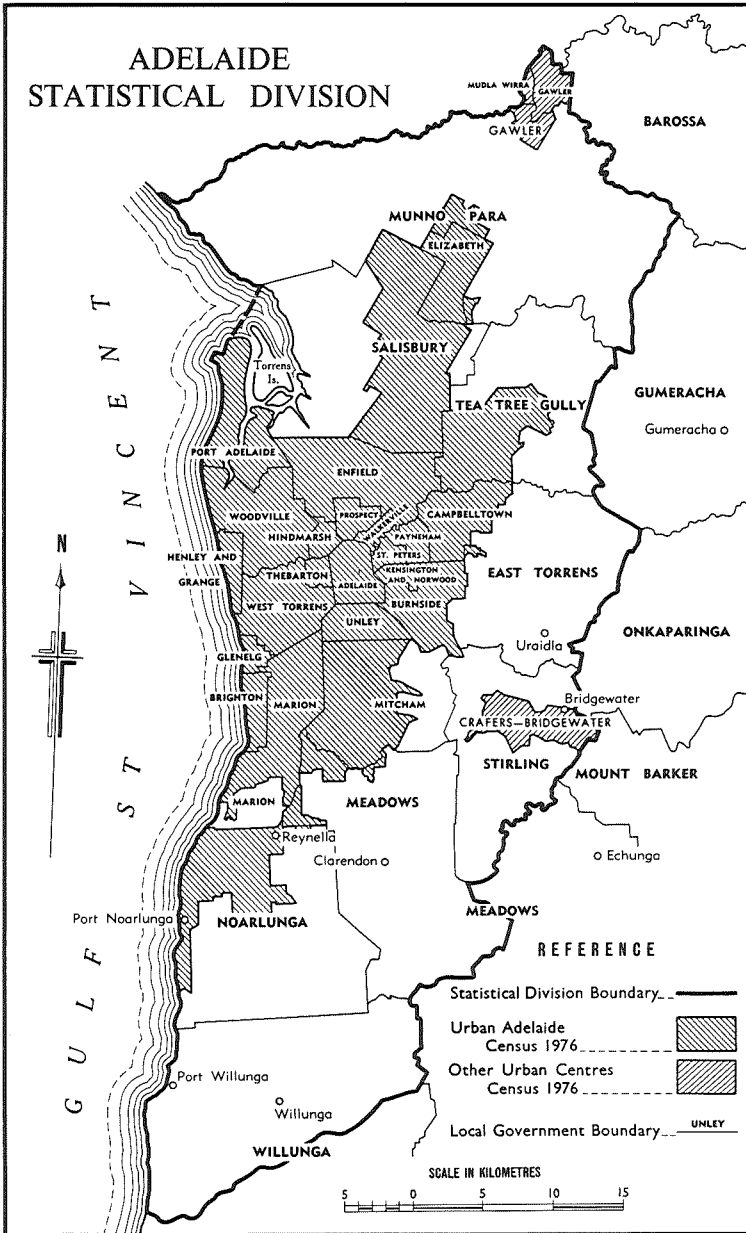
At the 1966 Census, Urban Adelaide contained nearly all the metropolitan area as defined at the 1961 Census, and, in addition, included the City of Elizabeth and large portions of the Cities of Salisbury and Tea Tree Gully, and small parts of Munno Para and East Torrens District Councils. Results of the 1971 Census showed that Urban Adelaide had extended to encompass the whole of the urban area of Reynella-Port Noarlunga as well as fringe development particularly in northern suburbs (see map on page 121).

Urban Adelaide as defined for the 1976 Census comprised 19 complete local government areas and part of each of seven others.

Over the past decade there has been a considerable fall in the population of the City of Adelaide, and lesser falls in all of the older municipalities close to the city, namely Prospect, Hindmarsh, Thebarton, Unley, Kensington and Norwood, and St Peters. The greatest proportionate increases in population have occurred in the local government areas of Munno Para and Salisbury (generally north of the city); Campbelltown and Tea Tree Gully (north-east); Meadows, Mitcham and Noarlunga (south-west). Recently, development at West Lakes has brought about a substantial increase in Woodville's population.

Although figures for Urban Adelaide, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total State population residing in Urban Adelaide until the 1971 Census. At the 1961 Census, the population of Urban Adelaide defined according to the density criteria is estimated to have been 580 449 persons or 59.9 per cent of the total State population and this figure had increased to 728 279 (66 per cent) at the 1966 Census.

In 1971, the amalgamation of Urban Adelaide and Urban Reynella-Port Noarlunga, together with the inclusion of further peripheral development, resulted in an increase to 809 482 persons (69 per cent of the State population). Results from the 1976 Census indicate that there has been very little alteration to the population distribution since 1971.



Urban and Rural Population; South Australia^(a)
Censuses 1921 to 1976

Census	Urban						Total (Including Migratory)
	Adelaide ^(b)		Other ^(c)		Rural		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	
1921	255 375	51.57	41 637	8.41	195 054	39.39	495 160
1933	312 619	53.81	51 436	8.86	214 762	36.97	580 949
1947	382 454	59.20	65 911	10.20	196 007	30.34	646 073
1954	483 598	60.66	110 107	13.82	201 133	25.23	797 094
1961	587 957	60.66	177 380	18.30	200 065	20.64	969 340
1966	^(b) 728 279	66.51	174 964	15.98	190 167	17.37	1 094 984
1971 ^(d)	809 482	68.97	183 187	15.61	179 148	15.26	1 173 707
1976 ^(d)	857 196	68.85	198 777	15.97	187 546	15.07	1 244 756

^(a) Excludes full-blood Aborigines before the 1966 Census.

^(b) See definition of Urban Adelaide.

^(c) 'Other Urban' up to the 1947 Census comprised all municipalities outside Urban Adelaide. For the 1954 and 1961 Censuses non-municipal towns of 1 000 or more persons were also included, but in 1961 municipalities of less than 1 000 persons were excluded. The 1966, 1971 and 1976 figures comprise clusters of 1 000 or more persons and a small number of holiday resorts which are regarded as urban on a dwelling density basis.

^(d) The figures are not adjusted for census underenumeration.

Population in Other Urban Centres

Only a very small proportion (16 per cent) of South Australia's population is located in urban centres outside of the capital city compared with the three eastern States, New South Wales, Victoria and Queensland. Whereas, in each of the eastern States, there are at least four centres outside the capital city with a population in excess of 20 000, Whyalla with a population of 33 426 at the Census of 30 June 1976 is the only such centre in South Australia.

Population of Urban Centres: South Australia, Censuses 1971 and 1976^(a)

Urban Centre	Census at 30 June		Urban Centre	Census at 30 June	
	1971	1976		1971	1976
Adelaide	809 482	857 196	Keith	1 212	1 191
Angaston	1 813	1 734	Kingscote	1 011	1 121
Balaklava	1 114	1 237	Kingston (SE)	1 173	1 250
Barmera	1 687	1 946	Lobethal	1 377	1 422
Berri	2 713	2 890	Loxton	2 663	2 786
Bordertown	1 979	1 983	Maitland	1 020	1 017
Burra	1 276	1 201	Mannum	2 043	2 137
Ceduna	2 070	2 327	Millicent	5 075	5 471
Clare	2 099	2 260	Moonta	1 570	1 751
Coober Pedy	1 394	1 903	Mount Barker	2 475	3 204
Crafers-Bridgewater	5 308	6 600	Mount Gambier	17 934	19 292
Crystal Brook	1 181	1 410	Murray Bridge	7 441	8 740
Gawler	6 959	8 596	Naracoorte	4 429	4 571
Goolwa	681	1 148	Nuriootpa	2 468	2 808
Jamestown	1 331	1 325	Penola	1 293	1 254
Kadina	2 828	2 849	Peterborough	3 023	2 760
Kapunda	1 261	1 362	Port Augusta	12 224	13 092

Population of Urban Centres: South Australia, Censuses 1971 and 1976^(a) (continued)

Urban Centre	Census at 30 June		Urban Centre	Census at 30 June	
	1971	1976		1971	1976
Port Broughton	508	654	Streaky Bay	914	1 008
Port Elliot	566	768	Tailem Bend	1 982	1 999
Port Lincoln	9 158	10 272	Tanunda	1 939	2 254
Port MacDonnell	585	712	Victor Harbor	3 527	4 279
Port Pirie	15 456	15 005	Waikerie	1 252	1 611
Quorn	1 008	1 048	Walleroo	2 097	2 045
Renmark	3 278	3 371	Whyalla	32 109	33 426
Strathalbyn	1 535	1 701	Woomera	(b) 4 082	2 958

(a) See text for definition of 'urban'. Population figures have not been adjusted for census underenumeration.

(b) Included Maralinga in 1971.

Between 1971 and 1976 most urban centres beyond the Adelaide Statistical Division experienced population growth; this was most evident in the River Murray towns, the Lower South East and the West Coast. The 'Iron Triangle' was somewhat of an enigma in that Whyalla and Port Augusta continued to expand, whereas Port Pirie's population declined.

Statistical Divisions

Around Urban Adelaide a further boundary has been defined. This boundary circumscribes the area in close economic and social contact with the urban centre, and which contains the anticipated urban development of the city for a period of at least twenty to thirty years. This boundary defines the Adelaide Statistical Division (see map on page 121). In addition to Urban Adelaide there are two urban centres within the Adelaide Statistical Division, Urban Gawler and Urban Crafers-Bridgewater.

The six further statistical divisions which have been delineated in South Australia are mainly amalgamations of local government areas. They represent closely allied and meaningful areas of production and community interest. Factors taken into account when determining their boundaries were differential living zones, patterns of retail shopping, location and nature of industry, transport routes, provincial newspaper circulation, coverage of provincial radio and television stations, spheres of activity of cultural groups and sporting associations.

The population of the Adelaide Statistical Division at the time of each of the 1961 and 1966 Censuses together with estimates at 30 June 1971 and 1977 is shown in the following table.

Population at 30 June, Adelaide Statistical Division^(a)

Local Government Area	Census		Estimates	
	1961 (b)	1966	1971	1977
Adelaide (C)	23 051	18 619	16 500	13 700
Brighton (C)	20 337	22 638	22 900	21 400
Burnside (C)	36 266	38 776	39 900	38 500
Campbelltown (C)	20 945	32 083	38 100	42 200
East Torrens (DC)	3 664	3 822	4 300	5 000
Elizabeth (C)	(c)	32 956	33 600	33 600
Enfield (C)	72 427	80 336	(d) 78 100	72 400

Population at 30 June, Adelaide Statistical Division^(a) (continued)

Local Government Area	Census		Estimates	
	1961 (b)	1966	1971	1977
Gawler (M)	5 639	5 703	5 600	6 300
Glenelg (C)	14 492	14 763	15 500	14 400
Gumeracha (DC) (part)	(e)	(e)	(e)	800
Henley and Grange (C)	11 680	14 146	16 400	16 700
Hindmarsh (M)	12 914	11 367	10 400	8 500
Kensington and Norwood (C)	13 476	11 943	11 200	9 600
Light (DC) (part) (f)	111	155	200	700
Marion (C)	58 464	66 984	68 600	69 200
Meadows (DC) (part)	2 242	2 824	5 200	14 900
Mitcham (C)	46 793	52 889	58 000	60 000
Munno Para (DC)	3 154	14 279	20 400	23 100
Noarlunga (C)	5 492	14 214	28 700	53 000
Payneham (C)	14 930	16 847	17 800	17 500
Port Adelaide (C)	38 923	39 846	39 300	36 600
Prospect (C)	22 184	21 415	21 100	19 300
Salisbury (C)	35 715	35 766	56 600	82 000
Stirling (DC)	7 075	7 552	8 500	11 800
St Peters (M)	11 727	11 339	10 800	9 200
Tea Tree Gully (C)	5 887	21 315	36 900	(h) 59 800
Thebarton (M)	12 884	12 303	11 900	10 100
Unley (C)	40 280	39 735	40 300	36 500
Walkerville (M)	4 464	4 593	(d) 7 300	7 200
West Torrens (C)	40 681	46 233	50 500	47 400
Willunga (DC) (part)	2 210	2 190	2 700	5 400
Woodville (C)	71 039	73 930	73 400	76 300
Total	659 146	771 561	850 700	922 800

(a) Figures for 1971 and 1977 have been adjusted for Census underenumeration. Hence, figures for 1971 and 1977 are not strictly comparable with those for previous years. (b) Excludes full-blood Aborigines. (c) Elizabeth (C) was constituted out of Salisbury (C) in July 1964. (d) Comparisons with previous censuses is affected by transfer in July 1970 of the suburb of Vale Park (approximately 2 200 persons) from Enfield (C) to Walkerville (M). (e) Part of Tea Tree Gully (C) transferred to Gumeracha in July 1976. (f) Mudfla Wirra (DC) amalgamated with Freeling (DC) to form Light (DC) in March 1977. (C) Municipality with city status (M) Municipality (DC) District Council

The estimated population of statistical divisions and subdivisions at 30 June 1971, 1976 and 1977 are shown in the following table.

Estimated Population of Statistical Divisions and Subdivisions, South Australia

Statistical Division and Subdivision	30 June		
	1971	1976	1977
Adelaide:			
Para	91 000	108 400	113 100
North Eastern	119 900	145 200	147 300
Western	222 500	216 100	213 800
Eastern	215 700	212 300	210 500
Southern	201 600	230 000	238 200
Total Adelaide	850 700	912 100	922 800

Estimated Population of Statistical Divisions and Subdivisions, South Australia ^(a)
(continued)

Statistical Division and Subdivision	30 June		
	1971	1976	1977
Outer Adelaide:			
Barossa	22 650	25 400	26 100
Kangaroo Island	3 200	3 300	3 300
Onkaparinga	11 300	12 950	13 700
Fleurieu	15 500	17 950	18 900
Total Outer Adelaide	52 600	59 600	62 000
Yorke and Lower North:			
Yorke	20 600	20 950	21 450
Lower North	19 200	19 050	19 050
Total Yorke and Lower North	39 750	40 000	40 500
Murray Lands:			
Riverland	29 300	30 500	30 800
Murray Mallee	28 400	29 750	30 100
Total Murray Lands	57 650	60 250	60 900
South East:			
Upper South East	18 750	18 450	18 450
Lower South East	37 750	40 100	40 500
Total South East	56 450	58 550	58 950
Eyre:			
Lincoln	24 700	26 200	26 700
West Coast	6 200	6 700	6 950
Total Eyre	30 900	32 900	33 650
Northern:			
Whyalla	33 850	35 550	35 550
Pirie	33 050	32 250	32 350
Flinders Ranges	18 500	19 800	20 150
Far North	9 900	9 150	8 500
Total Northern	95 300	96 800	96 600
Total State (including migratory)	1 185 300	1 261 600	1 276 800

(a) The figures have been adjusted for census underenumeration.

Statistical Districts

At the 1976 Census, around each urban centre of at least 25 000 persons, a further boundary (the statistical district boundary) was defined to contain the anticipated growth of the urban centre for a period of at least 20 years. This fixed boundary (as distinct from the urban boundary which is continuously moving) delimits an area which for general statistical purposes is free from the practical problems imposed by a moving boundary, but which nevertheless represents the town or city in a wider sense. In selected cases, statistical district boundaries were delineated around urban centres below 25 000 persons

where existing local government area boundaries were clearly inadequate in indicating the extent of urban development.

The estimated population of statistical districts at 30 June 1971, 1976 and 1977 are shown in the following table.

Estimated Population at 30 June, Statistical Districts, South Australia ^(a)

Statistical District	At 30 June		
	1971	1976	1977
Mount Gambier	18 300	19 800	20 250
Murray Bridge	8 550	10 150	10 500
Port Augusta	13 200	14 500	14 800
Port Lincoln	9 500	10 400	10 650
Port Pirie	15 650	15 250	15 250
Whyalla	32 550	34 400	34 450

(a) Population figures have been adjusted for census underenumeration.

Projections of the Population

Details of projections of population for South Australia may be found in the publication *Projections of the Population of South Australia* (Catalogue No. 3203.4).

5.3 BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act 'for registering births, deaths and marriages in the Province of South Australia' was passed. Current legislation is contained in the Births, Deaths and Marriages Registration Act, 1966-1975 which came into operation on 1 January 1968. The administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into twenty-two registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all live births and of all deaths registered in the State and each District Registrar maintains, in a register, duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Up to the end of 1967 separate registers were kept of still births, which were not included in the registration or statistics of either live births or of deaths. Compulsory registration of still births was introduced in South Australia in 1937.

The current legislation does not require the Principal Registrar to maintain a register of still births, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive of at least twenty weeks gestation or four hundred grams weight'. The 'perinatal' certificates are also required from attending medical practitioners for children dying within twenty-eight days of birth.

The birth of each live-born child is required to be registered by a parent within sixty days of the date of birth. Registration of a live birth after the expiration of sixty days following the date of birth requires also the payment of a fee and a declaration in a form prescribed by the Act.

A death is required to be registered within fourteen days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a 'Notice of signing of Medical Certificate of Cause of Death' signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aborigines when registered are incorporated in registers, but to the end of 1965 were excluded from statistics where there was definite indication that they were of full-blood. Statistics of births and deaths for 1966 and subsequent years cover all registrations.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the longer period allowed for registration, such variations generally are more apparent in birth than in death figures.

BIRTHS

The South Australian birth rate per thousand of mean population during 1977 was 15.09 compared with the Australian rate of 16.08 per thousand. This was also the lowest rate recorded by any of the Australian States or Territories for the same period. The lowest ever recorded rate of 14.14 was established in 1935.

Live Births Occurred and Registered, South Australia

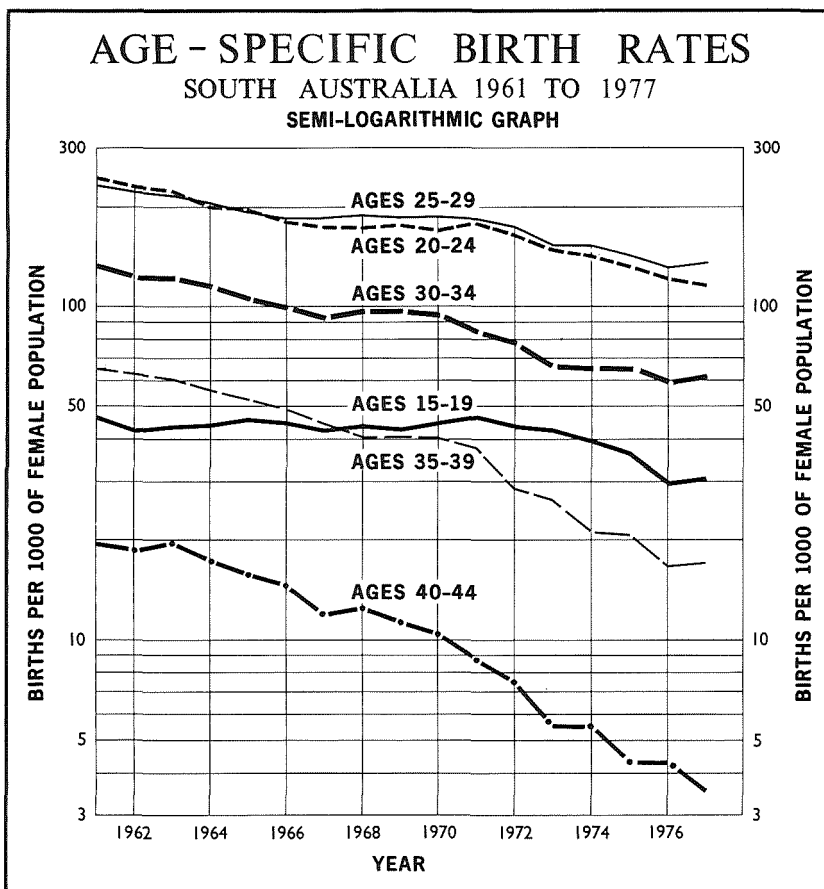
Year	Total Live Births Occurred (a)	Live Births Registered				
		Total	Rate (b)	Males	Females	Masculinity (c)
1973	20 198	20 407	16.75	10 475	9 932	105.47
1974	19 955	20 181	16.33	10 489	9 692	108.22
1975	19 575	19 986	15.95	10 212	9 774	104.48
1976	18 881	18 947	15.02	9 838	9 109	108.00
1977	18 328	19 260	15.09	9 907	9 353	105.92

(a) Figures are subject to the addition of late registrations, particularly to 1977.

(b) Number per 1 000 of mean population. (c) Number of male births per 100 female births.

Age-specific Birth Rates

One significant feature of age-specific birth rates as shown in the following table is that whereas in 1961, females in the 20-24 years age group accounted for the highest number of births, this can now be attributed to those in the 25-29 years age group. Also, a general decline in the fertility of women of all ages is evident, and this is particularly marked in the older age groups. In accordance with this, total fertility has decreased, reflecting the tendency toward smaller families.



Age-specific Birth Rates and Total Fertility, South Australia^(a)

Year	Age Group (Years)							Total Fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
	Annual Rates							
1954 (b)	41.85	212.75	206.60	123.19	65.83	26.76	0.84	3.39
1961 (b)	46.66	246.12	235.33	135.45	65.04	19.54	1.48	3.75
1966 (b)	44.56	178.73	181.58	99.31	49.30	14.62	0.75	2.84
1971 (b)	46.70	179.03	186.66	82.68	37.14	8.69	0.55	2.71
1972	43.89	164.12	174.75	76.28	28.26	7.54	0.52	2.48

Age-specific Birth Rates and Total Fertility, South Australia^(a) (continued)

Year	Age Group (Years)							Total Fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
	Annual Rates							
1973	42.72	147.34	154.14	65.16	26.10	5.46	0.58	2.21
1974	39.78	139.79	150.07	64.16	20.93	5.52	0.22	2.10
1975	36.15	135.54	146.27	63.71	20.14	4.37	0.34	2.03
1976 (b)	30.06	126.50	138.97	59.96	17.25	4.26	0.20	1.89
1977 (c)	30.25	119.79	143.81	61.05	17.73	3.56	0.15	1.88

(a) Number of live births per 1 000 of female population in each age group. Excludes particulars of full-blood Aborigines before 1966. (b) Census year. (c) Rates for 1977 have been calculated using provisional female population figures and are subject to revision.

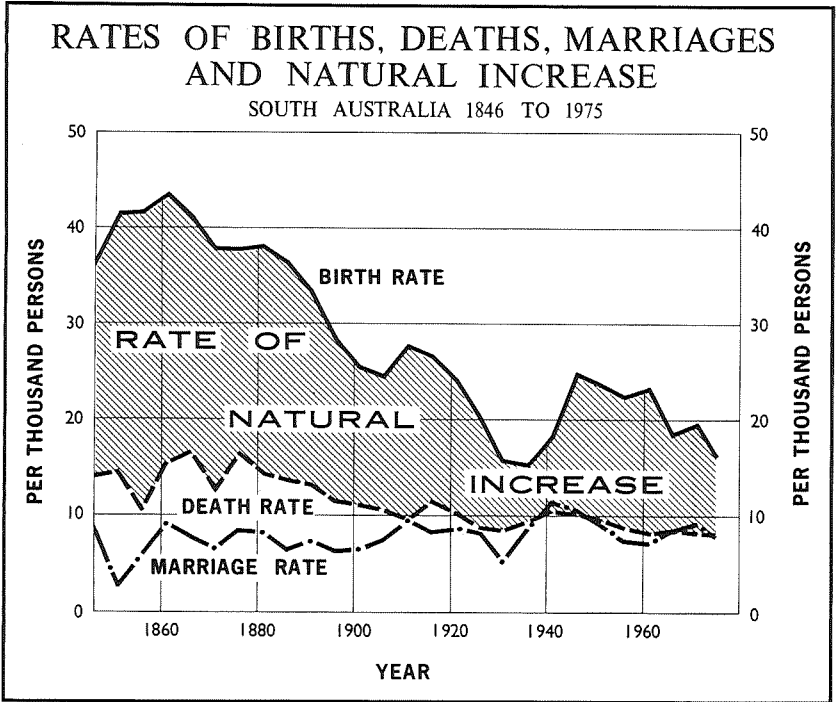
Gross and Net Reproduction Rates

The gross reproduction rate is an indication of the number of live females that can be expected to be born to a woman through her child-bearing period. The net reproduction rate, which is a measure of the degree to which the population can replace itself, is derived from the gross reproduction rate by taking into account the females who fail to survive to the end of their child-bearing period. The following table indicates that the net reproduction rate has been steadily decreasing, reaching a level of 0.888 in 1977. This level is lower than the point at which women produce only one female child to take their place in the reproductive cycle and, excluding the impact of migration, if this trend continues, zero population growth will ultimately be reached. It should be realised, however, that these figures are not a forecast of what can be anticipated but only a hypothetical projection of what will happen if the given conditions upon which they have been based continue to apply.

Gross and Net Reproduction Rates, South Australia^(a)

Year	Gross Reproduction Rate	Net Reproduction Rate	
		Rate	Mortality Experience on which Rate is Based
1961 (b)	1.841	1.781	1960 to 1962
1966 (b)	1.368	1.323	
1967	1.342	1.304	1965 to 1967
1968	1.337	1.296	
1969	1.351	1.310	
1970	1.346	1.305	
1971 (b)	1.318	1.281	1970 to 1972
1972	1.196	1.162	
1973	1.075	1.044	
1974	1.009	0.981	
1975	0.994	0.966	
1976 (b)	0.907	0.881	
1977 (c)	0.914	0.888	

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Census year. (c) Rates for 1977 have been calculated using provisional female population figures and are subject to revision.



Ex-nuptial Births and Legitimations

Since 1960 there has been a marked increase in the number and rate of ex-nuptial births. For the previous forty years, the rate remained relatively steady at about three per hundred live births, but in recent years the rate has increased sharply, reaching a record level of 9.84 per hundred live births in 1977.

The legitimation of an ex-nuptial child upon the subsequent marriage of the parents which was first provided for in South Australia by the Legitimation Act, 1898, the provisions of which were later incorporated in the Births and Deaths Registration Act, was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child.

The *Marriage Act* 1961, which came into operation on 1 September 1963, provides for the legitimation of a child upon the subsequent marriage of the parents whether or not there was a legal impediment to the marriage at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at the time of marriage, and the child is considered legitimate from the date of birth or, in the case of a child born before 1 September 1963, at that date.

Ex-nuptial Live Births and Legitimations, South Australia

Year	Ex-nuptial Births				Legitimations
	Males	Females	Total	Rate per 100 Live Births	
1973	921	879	1 800	8.82	280
1974	988	891	1 879	9.31	305
1975	1 025	918	1 943	9.72	326
1976	906	883	1 789	9.44	350
1977	959	937	1 896	9.84	369

Confinements and Live Births

In the table below confinements in each of the years 1974 to 1977 have been shown in relation to age group of the mother and nuptiality.

Confinements: Age Group of Mother and Nuptiality, South Australia

Age Group	Number of Confinements (a)				Percentage of Total in each Category			
	1974	1975	1976	1977	1974	1975	1976	1977
NUPTIAL CONFINEMENTS								
10-14	—	—	—	—	—	—	—	—
15-19	1 419	1 274	1 038	1 003	7.8	7.1	6.1	5.8
20-24	6 635	6 469	6 062	5 835	36.6	36.2	35.7	33.9
25-29	6 927	6 991	6 885	7 115	38.2	39.1	40.5	41.3
30-34	2 313	2 357	2 313	2 560	12.8	13.2	13.6	14.9
35-39	652	645	572	586	3.6	3.6	3.4	3.4
40-44	167	125	122	104	0.9	0.7	0.7	0.6
45 and over	6	11	6	4	0.0	0.1	0.0	0.0
Not stated	—	—	2	3	—	—	0.0	0.0
Total	18 119	17 872	17 000	17 210	100.0	100.0	100.0	100.0
EX-NUPTIAL CONFINEMENTS								
10-14	14	20	15	12	0.8	1.0	0.8	0.6
15-19	798	777	700	757	42.8	40.4	39.4	40.3
20-24	557	601	587	605	29.9	31.2	33.0	32.2
25-29	300	307	288	292	16.1	15.9	16.2	15.5
30-34	120	144	125	137	6.4	7.5	7.0	7.3
35-39	53	57	48	60	2.8	2.9	2.7	3.2
40-44	16	17	14	14	0.9	0.9	0.8	0.7
45 and over	2	1	1	1	0.1	0.1	0.1	0.1
Not stated	3	1	—	—	0.2	0.1	—	—
Total	1 863	1 925	1 778	1 878	100.0	100.0	100.0	100.0

(a) Includes only those confinements which resulted in one or more live births.

The next table shows the number of confinements and live births for 1976 and 1977 classified separately for single births and multiple births in which at least one issue was live-born. Multiple births registered in South Australia during 1977 comprised 172 cases of twins and 1 case of triplets, representing an average of 9.0 multiple confinements per 1 000 confinements.

Confinements and Live Births: Class of Birth, South Australia

Particulars	1976				1977			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
Nuptial:								
Single births	16 842	8 779	8 063	16 842	17 055	8 793	8 262	17 055
Twins	157	153	160	313	154	154	152	306
Triplets	1	—	3	3	1	1	2	3
Total nuptial	17 000	8 932	8 226	17 158	17 210	8 948	8 416	17 364
Ex-nuptial:								
Single births	1 767	896	871	1 767	1 860	945	915	1 860
Twins	11	10	12	22	18	14	22	36
Triplets	—	—	—	—	—	—	—	—
Total ex-nuptial	1 778	906	883	1 789	1 878	959	937	1 896
Total	18 778	9 838	9 109	18 947	19 088	9 907	9 353	19 260

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1977 in the following table.

Confinements: Relative Ages of Parents, South Australia, 1977 (a)

Age Group of father (Nuptial Births) (Years)	Age Group of Mother (Years)							Total	
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over		Not Stated
Under 20	169	47	1	—	—	—	—	—	217
20-24	646	2 295	320	16	1	—	—	—	3 278
25-29	142	2 868	3 956	310	18	—	—	—	7 294
30-34	35	508	2 337	1 335	96	4	—	—	4 315
35-39	7	88	389	675	238	13	—	—	1 410
40-44	2	15	80	158	168	37	2	—	462
45-49	—	4	22	47	41	36	2	—	152
50 and over	1	4	7	17	24	13	—	—	66
Not stated	1	6	3	2	—	1	—	3	16
Mothers:									
Married	1 003	5 835	7 115	2 560	586	104	4	3	17 210
Unmarried	769	605	292	137	60	14	1	—	1 878
Total	1 772	6 440	7 407	2 697	646	118	5	3	19 088

(a) Includes only those confinements which resulted in one or more live births.

Between 1968 and 1977 the proportion of nuptial first live births rose from 37.7 to 41.7 per cent of total nuptial births registered. Over the same period the number of fourth or subsequent children born into existing marriages declined from 2 937 to 1 084, a fall from 14.95 to 6.24 per cent of total nuptial births registered. These figures reflect the decline in the average number of children born into the family unit.

The table which follows shows the number of confinements classified by duration of marriage and previous issue. Previous issue is the number of live-born children of the existing marriage born before the current confinement.

**Nuptial Confinements: Duration of Marriage and Previous Issue of Mother
South Australia, 1977**

Duration of Marriage	Number of Confinements (a)	Previous Issue of Marriage						
		0	1	2	3	4	5	6 and over
Under 1 year	1 632	1 540	83	8	1	—	—	—
1 year	1 739	1 426	284	25	3	1	—	—
2 years	2 065	1 240	763	56	4	—	—	—
3 years	2 356	1 091	1 129	123	8	3	—	—
4 years	2 233	799	1 159	251	20	4	—	—
5 years	2 016	496	1 098	366	49	6	1	—
6 years	1 455	261	734	389	61	9	1	—
7 years	1 151	170	473	398	88	19	2	1
8 years	771	80	252	314	98	18	6	2
9 years	526	45	142	228	94	14	2	1
10 years	373	32	77	155	76	17	12	3
11 years	255	21	30	102	67	25	7	2
12 years	178	11	34	57	44	18	9	5
13 years	110	9	15	32	27	15	9	3
14 years	96	5	11	31	25	12	7	5
15 years and over	251	7	14	48	69	40	25	46
Not stated	3	2	—	1	—	—	—	—
Total	17 210	7 235	6 298	2 584	734	201	81	68

(a) Includes previous issue not stated.

**Nuptial First Live Births: Duration of Marriage of Parents
South Australia**

Duration of Marriage	Nuptial First Live Births				Percentage of Total			
	1974	1975	1976	1977	1974	1975	1976	1977
Under 5 months	535	500	471	452	7.01	6.57	6.60	6.25
5 months	399	308	212	263	5.23	4.05	2.97	3.64
6 months	317	243	178	179	4.16	3.20	2.50	2.47
7 months	119	98	77	101	1.56	1.29	1.08	1.40
8 months	116	92	91	91	1.52	1.21	1.28	1.26
9 months	161	141	135	155	2.11	1.85	1.89	2.14
10 months	145	160	135	146	1.90	2.10	1.89	2.02
11 months	186	149	128	153	2.44	1.96	1.79	2.11
Total under 1 year	1 978	1 691	1 427	1 540	25.93	22.23	20.00	21.29
1 year	1 679	1 750	1 483	1 426	22.01	23.01	20.79	19.71
2 years	1 467	1 427	1 323	1 240	19.23	18.76	18.55	17.14
3 years	1 061	1 151	1 066	1 091	13.91	15.13	14.94	15.08
4 years	663	683	808	799	8.69	8.98	11.33	11.04
5 years	335	413	463	496	4.39	5.43	6.49	6.86
6 years	169	214	246	261	2.21	2.81	3.45	3.61
7 years	97	122	137	170	1.27	1.60	1.92	2.35
8 years and over	179	154	178	210	2.35	2.02	2.50	2.90
Not stated	1	1	2	2	0.01	0.01	0.03	0.03
Total	7 629	7 606	7 133	7 235	100.00	100.00	100.00	100.00

The previous table illustrates a trend, which has been apparent since 1964, towards a longer period after marriage before the birth of the first child. In particular, there has been a decrease in the percentage of nuptial first live births to women who had been married less than two years, from 61.91 per cent in 1968 to 41.00 per cent in 1977. A corresponding increase is evident in the two to four years duration of marriage groups; from 30.41 per cent to 43.26 per cent.

DEATHS

The 9 784 deaths registered in South Australia during 1977 represented a crude death rate of 7.7 per thousand of mean population, the lowest yet recorded in this State. Although crude death rates in excess of 16.0 were recorded in the 1860s, the rate has not exceeded 9.0 since 1956. Other fluctuations in the number of deaths and the crude death rate over time can be seen in the Statistical Summary, Appendix A.

Deaths: Numbers Registered and Rates, South Australia

Year	Number Registered			Crude Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
1973	5 501	4 334	9 835	9.04	7.11	8.07
1974	5 728	4 508	10 236	9.28	7.29	8.29
1975	5 466	4 481	9 947	8.74	7.14	7.94
1976	5 462	4 537	9 999	8.67	7.18	7.92
1977	5 317	4 467	9 784	8.34	6.99	7.66

(a) Number of deaths per 1 000 of estimated mean population.

Deaths: Numbers Registered in Age Groups, South Australia

Age Group	Males			Females			Persons		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
Under 1 year	129	165	113	93	111	108	222	276	221
1 year	15	13	10	11	5	6	26	18	16
2 years	12	8	5	8	7	4	20	15	9
3 years	13	2	5	4	6	4	17	8	9
4 years	7	4	8	6	1	3	13	5	11
Total under 5 years ...	176	192	141	122	130	125	298	322	266
5-9 years	22	22	18	18	13	27	40	35	45
10-14 years	21	23	21	14	12	10	35	35	31
15-19 years	102	78	93	31	31	36	133	109	129
20-24 years	77	91	86	18	23	29	95	114	115
25-29 years	68	53	81	24	22	19	92	75	100
30-34 years	63	51	48	26	29	29	89	80	77
35-39 years	63	59	68	32	34	32	95	93	100
40-44 years	92	97	77	66	61	54	158	158	131
45-49 years	191	198	187	113	80	97	304	278	284
50-54 years	330	305	273	164	151	158	494	456	431
55-59 years	400	395	429	220	213	177	620	608	606
60-64 years	625	594	583	317	301	282	942	895	865
65-69 years	739	728	700	374	402	390	1 113	1 130	1 090
70-74 years	734	735	743	486	482	528	1 220	1 217	1 271
75-79 years	671	685	714	664	701	664	1 335	1 386	1 378
80-84 years	568	602	528	781	761	735	1 349	1 363	1 263
85-89 years	373	380	372	630	668	658	1 003	1 048	1 030
90-94 years	120	142	126	295	328	324	415	470	450
95 years and over	31	32	29	86	95	93	117	127	122
All ages	5 466	5 462	5 317	4 481	4 537	4 467	9 947	9 999	9 784

A long established trend of increases in the number of deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in the next tables, which show age-specific death rates, *i.e.* deaths in each age group expressed as a rate per 1 000 of the population in that age group. Because age constitution of the population is known accurately only at censuses, the periods shown are those with a census date as their centre.

Age-specific Death Rates: Males, South Australia (a)

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
0-4	19.98	9.90	8.09	6.41	5.82	4.58	4.66	3.19
5-9	2.33	1.18	1.00	0.52	0.50	0.44	0.43	0.36
10-14	1.55	1.08	0.68	0.65	0.46	0.55	0.38	0.36
15-19	2.41	1.69	1.42	1.50	1.08	1.19	1.48	1.52
20-24	3.47	2.35	1.44	1.88	1.37	1.33	1.55	1.57
25-29	3.67	2.51	1.59	1.70	1.59	1.34	1.12	1.29
30-34	3.97	2.51	1.88	1.57	1.62	1.13	1.41	1.24
35-39	5.12	3.23	2.41	2.29	2.08	2.23	2.04	1.73
40-44	6.10	4.73	3.63	3.56	3.43	3.27	3.15	2.62
45-49	8.37	6.82	6.12	5.48	5.44	5.71	5.49	5.09
50-54	11.58	9.82	10.74	10.16	9.24	9.59	9.37	8.27
55-59	18.99	15.11	16.28	15.71	15.75	15.92	16.01	13.35
60-64	26.02	24.98	26.08	24.33	24.39	26.69	25.10	22.57
65-69	41.62	36.14	40.08	39.31	37.84	40.55	41.00	36.55
70-74	62.49	57.07	60.79	62.59	59.47	63.86	64.42	55.42
75-79	105.50	92.60	97.69	94.55	88.56	90.71	96.09	86.26
80-84	158.90	147.86	145.56	141.64	135.85	138.50	142.39	136.02
85 and over	269.50	257.03	248.89	235.84	227.39	228.91	230.02	233.90
All ages	10.75	9.29	10.87	9.80	9.00	9.17	9.31	8.58

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 population at ages shown.

Age-specific Death Rates: Females, South Australia (a)

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
0-4	16.29	8.29	7.12	5.01	3.93	3.47	3.39	2.50
5-9	2.30	1.04	0.54	0.45	0.35	0.33	0.32	0.35
10-14	1.32	0.88	0.38	0.42	0.30	0.29	0.29	0.21
15-19	2.71	1.25	0.75	0.52	0.37	0.44	0.65	0.56
20-24	2.91	2.36	1.04	0.63	0.58	0.46	0.48	0.44
25-29	3.95	2.73	1.65	0.85	0.70	0.53	0.60	0.42
30-34	4.18	2.66	1.91	0.99	0.96	0.87	0.91	0.67
35-39	5.27	3.85	2.03	1.79	1.33	1.14	1.18	0.90
40-44	4.99	4.10	3.48	2.56	1.80	2.13	1.86	1.84
45-49	6.42	5.80	4.59	3.65	3.03	3.29	2.95	2.77
50-54	9.18	8.06	7.09	5.88	5.22	4.99	4.60	4.39
55-59	10.65	11.24	10.33	9.04	7.82	7.59	7.41	6.73
60-64	18.07	17.68	14.97	14.06	12.74	12.82	12.16	10.67
65-69	33.15	27.16	25.22	23.01	21.05	20.39	20.32	16.92
70-74	46.20	42.19	42.17	40.35	35.52	35.36	33.42	29.24
75-79	83.56	75.53	72.07	72.20	58.28	60.81	57.60	52.12
80-84	131.63	121.15	121.57	109.92	108.61	100.52	99.42	86.30
85 and over	232.84	233.59	214.35	215.80	199.38	183.88	186.55	186.61
All ages	9.00	8.23	9.19	8.31	7.38	7.42	7.50	7.10

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 of population at ages shown.

CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on the International Lists of Causes of Deaths (ICD). From time to time revisions to these lists have affected the comparability of the figures. Up to 1949 the effect of these revisions had been negligible but the introduction in 1950 of the Sixth Revision of the ICD introduced major changes which, together with the adoption of more flexible rules for selecting the underlying cause where certificates of cause of death showed more than one cause, affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Australian Statistician in *Demography* 1950, Bulletin No. 68. The Seventh Revision adopted in Australia in 1958 did not affect comparability significantly.

The Eighth Revision, brought into use in Australia in 1968, provided a few changes to the structure of the tabular list, e.g. the transferring of cerebrovascular diseases from the section covering diseases of the nervous system and sense organs to that covering diseases of the circulatory system.

Comparability has not been affected greatly by the changes with the exception of the categories within the section now entitled 'Certain Causes of Perinatal Morbidity and Mortality'—the Seventh Revision title was 'Certain Diseases of Early Infancy'. Seventh Revision classification in this section was related to the condition in the infant whereas the Eighth Revision provides primarily for classification wherever possible to maternal diseases or conditions or to the circumstances of the birth rather than to the resultant condition in the infant. ICD Eighth Revision code numbers have been shown where appropriate in the tables which follow.

In the following table, deaths registered in 1977 are shown classified according to the abbreviated list of the Eighth Revision together with the percentages from each cause and the rate per 10 000 of mean population.

Causes of Death: South Australia, 1977

Abbreviated Classification (a)	ICD Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Population
			Per cent	
4 Enteritis and other diarrhoeal diseases	008-009	19	0.19	0.15
5 Tuberculosis of respiratory system	010-012	2	0.02	0.02
6 Other tuberculosis including late effects	013-019	4	0.04	0.03
11 Meningococcal infection	036	2	0.02	0.02
18 Other infective and parasitic diseases	{ Remainder }	11	0.11	0.09
19 Malignant neoplasms	{ 000-136 }			
20 Benign and unspecified neoplasms	140-209	1 921	19.63	15.05
21 Diabetes mellitus	210-239	18	0.18	0.14
22 Avitaminoses and other nutritional deficiency	250	154	1.57	1.21
23 Anaemias	260-269	4	0.04	0.03
24 Meningitis	280-285	21	0.21	0.16
25 Active rheumatic fever	320	2	0.02	0.02
26 Chronic rheumatic heart disease	390-392	1	0.01	0.01
27 Hypertensive disease	393-398	67	0.68	0.52
28 Ischaemic heart disease	400-404	102	1.04	0.80
29 Other forms of heart disease	410-414	3 047	31.14	23.87
30 Cerebrovascular disease	420-429	455	4.65	3.56
31 Influenza	430-438	1 337	13.67	10.47
32 Pneumonia	470-474	8	0.08	0.06
33 Bronchitis, emphysema and asthma	480-486	196	2.00	1.54
34 Peptic ulcer	490-493	306	3.13	2.40
35 Appendicitis	531-533	60	0.61	0.47
	540-543	1	0.01	0.01

Causes of Death: South Australia, 1977 (continued)

Abbreviated Classification(a)	ICD Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Population
			Per cent	
36 Intestinal obstruction and hernia	550-553,560	31	0-32	0-24
37 Cirrhosis of liver	571	111	1-13	0-87
38 Nephritis and nephrosis	580-584	64	0-65	0-50
39 Hyperplasia of prostate	600	17	0-17	0-13
40,41 Complications of pregnancy, childbirth and puerperium	630-678	1	0-01	0-01
42 Congenital anomalies	740-759	97	0-99	0-76
43 Birth injury, difficult labour and other anoxic and hypoxic conditions	{ 764-768, 772-776, 760-763, 769-771, 773-775, 777-779 }	39	0-40	0-31
44 Other causes of perinatal mortality	{ 780-796, 780-796, 780-796, 780-796, 780-796 }	61	0-62	0-48
45 Symptoms and ill-defined conditions	780-796	98	1-00	0-77
46 All other diseases	Residual	818	8-36	6-41
47 Motor vehicle accidents	E810-E823	335	3-42	2-62
48 All other accidents	{ E800-E807, E825-E949 }	221	2-26	1-73
49 Suicide and intentional self-inflicted injuries	E950-E959	129	1-32	1-01
50 All other external causes	E960-E999	24	0-25	0-19
Total all causes .....	..	9 784	100-00	76-64

(a) No deaths were recorded in 1977 in the following categories: 1 Cholera (000), 2 Typhoid fever (001), 3 Bacillary dysentery and amoebiasis (004, 006), 7 Plague (020), 8 Diphtheria (032), 9 Whooping Cough (033), 10 Streptococcal throat and scarlet fever (034), 12 Acute poliomyelitis (040-043), 13 Smallpox (050), 14 Measles (055), 15 Typhus and other rickettsioses (080-083), 16 Malaria (084), 17 Syphilis and its sequelae (090-097).

The following table shows for 1977 the main causes of deaths in selected age groups.

Main Causes of Death: Age Groups, South Australia, 1977

International Classification Number	Age Group and Cause of Death	Deaths	Proportion of Total Deaths in Age Groups	Proportion of Total Deaths from the Specified Cause
	0-4 Years	No.	%	%
740-759	Congenital anomalies	70	26-3	72.2
760-763, 769-771, 773-775, 777-779	Other perinatal causes, including maternal conditions, prematurity, etc.	61	22-9	100-0
780-796	Symptoms and ill-defined conditions	34	12-8	34-7
764-768, 772, 776	Birth injury, difficult labour, etc.	39	14-7	100-0
E800-E999	Accidents, poisonings, violence	26	9-8	3-7
	Other causes	36	13-5	..
	5-14 Years			
E800-E999	Accidents, poisonings, violence	36	47-4	5-1
140-209	Malignant neoplasms	11	14-5	0-6
740-759	Congenital anomalies	6	7-9	6-2
	Other causes	23	30-2	..
	15-24 Years			
E800-E999	Accidents, poisonings, violence	207	84-8	29-2
140-209	Malignant neoplasms	10	4-1	0-5
480-493	Pneumonia, bronchitis, emphysema, asthma	3	1-2	0-6
	Other causes	24	9-9	..
	25-34 Years			
E800-E999	Accidents, poisonings, violence	96	54-2	13-5
140-209	Malignant neoplasms	26	14-7	1-4
393-398, 410-429	Heart disease	20	11-3	0-6
	Other causes	35	19-8	..

Main Causes of Death: Age Groups, South Australia, 1977 (continued)

International Classification Number	Age Groups and Cause of Death	Deaths		Proportion of Total Deaths from the Specified Cause
		No.	%	
	35-44 Years			
140-209	Malignant neoplasms	55	23.8	2.9
E800-E999	Accidents, poisonings, violence	57	24.7	8.0
393-398, 410-429	Heart disease	48	20.8	1.3
430-438	Cerebrovascular disease	19	8.2	1.4
	Other causes	52	22.5	..
	45-54 Years			
393-398, 410-429	Heart disease	236	33.0	6.6
140-209	Malignant neoplasms	206	28.8	10.7
E800-E999	Accidents, poisonings, violence	82	11.5	11.6
430-438	Cerebrovascular disease	55	7.7	4.1
571	Cirrhosis of liver	33	4.6	29.7
480-493	Pneumonia, bronchitis, emphysema, asthma	24	3.4	4.8
	Other causes	79	11.0	..
	55-64 Years			
393-398, 410-429	Heart disease	602	40.9	16.9
140-209	Malignant neoplasms	434	29.5	22.6
430-438	Cerebrovascular disease	110	7.5	8.2
E800-E999	Accidents, poisonings, violence	51	3.5	7.2
480-493	Pneumonia, bronchitis, emphysema, asthma	56	3.8	11.2
571	Cirrhosis of liver	35	2.4	31.5
	Other causes	183	12.4	..
	65-74 Years			
393-398, 410-429	Heart disease	984	41.7	27.6
140-209	Malignant neoplasms	579	24.5	30.1
430-438	Cerebrovascular disease	287	12.2	21.5
480-493	Pneumonia, bronchitis, emphysema, asthma	120	5.0	23.9
440-448	Diseases of arteries, arterioles and capillaries	65	2.8	20.6
E800-E999	Accidents, poisonings, violence	58	2.5	8.2
250	Diabetes mellitus	54	2.3	35.1
	Other causes	214	9.0	..
	75 Years and Over			
393-398, 410-429	Heart disease	1 671	39.4	46.8
430-438	Cerebrovascular disease	857	20.2	64.1
140-209	Malignant neoplasms	595	14.0	31.0
480-493	Pneumonia, bronchitis, emphysema, asthma	280	6.6	55.8
440-448	Diseases of arteries, arterioles and capillaries	217	5.1	68.7
E800-E999	Accidents, poisonings, violence	96	2.3	13.5
250	Diabetes mellitus	70	1.6	45.5
	Other causes	457	10.8	..

The long-term trends in deaths and death rates from some of the main causes are discussed in the following pages. One of the factors affecting these trends has been the reduction of mortality in early childhood. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

Infectious Diseases

In 1956 a poliomyelitis immunisation program began and since then the incidence of and deaths from this disease have declined (see Part 6.5).

There has been a long-term downward trend in deaths from respiratory tuberculosis. This has been assisted by the introduction in March 1952 of compulsory chest X-ray surveys of the population, enabling early detection and therefore more effective treatment of the disease.

Deaths from certain infectious diseases over the period 1915 to 1977 are shown in the following table.

Deaths from Certain Infectious Diseases, South Australia ^(a)

Period	Respiratory Tuberculosis (010-012)	Typhoid Fever (001)	Scarlet Fever (034-1)	Diphtheria (032)	Whooping Cough (033)	Acute Poliomyelitis (040-043)	Measles (055)
Annual Average:						(b)	
1915-19	339	311	4	94	21		14
1920-24	330	28	9	70	28	9	7
1925-29	313	12	2	25	13	3	12
1930-34	261	7	2	12	13	3	6
1935-39	211	4	1	27	11	6	2
1940-44	190	3	2	30	10	2	9
1945-49	161	1	1	7	8	9	6
1950-54	81	—	—	1	2	23	3
1955-59	43	—	—	1	1	2	3
1960-64	32	—	—	—	1	1	2
1965-69	20	—	—	—	—	—	2
1970-74	8	—	—	—	—	—	—
1975	4	—	—	—	—	—	—
1976	3	—	—	—	—	—	1
1977	2	—	—	—	—	—	—

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Not separately recorded.

Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (generally known as 'cancer') have included those deaths classified to neoplasms of lymphatic and haematopoietic tissues (ICD 200-209). This latter group, which accounted for 205 of the 1 921 deaths attributed to malignant neoplasms in 1977, includes such diseases as lymphosarcoma, Hodgkin's disease, leukaemia and multiple myeloma.

The following table shows deaths from malignant neoplasms according to site of the disease for selected years.

Malignant Neoplasms: Deaths, Site of Disease, South Australia ^(a)

Site of Disease	1960	1965	1970	1975	1977
	Number				
Malignant neoplasm of:					
Buccal cavity and pharynx (140-9)	21	20	35	33	27
Digestive organs and peritoneum (150-9)	425	479	546	583	602
Respiratory system (160-3)	130	201	291	381	384
Skin (172, 173)	28	34	44	48	52
Breast (174)	120	107	146	171	156
Uterus (180-2)	66	61	52	55	50
Other female genital organs (183, 184)	39	47	63	61	55
Male genital organs (185-7)	74	84	110	142	122
Urinary organs (188, 189)	67	88	79	88	85
Brain and nervous system (191, 192)	32	50	43	54	73
Other and unspecified sites (170, 171, 190, 193-9)	48	84	83	107	110
Neoplasms of lymphatic and haematopoietic tissue (200-9)	97	128	160	187	205
Total deaths (140-209)	1 147	1 383	1 652	1 910	1 921

Malignant Neoplasms: Deaths, Site of Disease, South Australia^(a) (continued)

Site of Disease	1960	1965	1970	1975	1977
	Rate (b)				
Malignant neoplasm of:					
Buccal cavity and pharynx (140-9)	0.22	0.19	0.30	0.27	0.21
Digestive organs and peritoneum (150-9)	4.50	4.50	4.72	4.71	4.72
Respiratory system (160-3)	1.38	1.89	2.51	3.08	3.01
Skin (172, 173)	0.30	0.32	0.38	0.39	0.41
Breast (174)	1.27	1.01	1.26	1.38	1.22
Uterus (180-2)	0.70	0.57	0.45	0.44	0.39
Other female genital organs (183, 184)	0.41	0.44	0.54	0.49	0.43
Male genital organs (185-7)	0.78	0.79	0.95	1.15	0.96
Urinary organs (188, 189)	0.71	0.83	0.68	0.71	0.67
Brain and nervous system (191, 192) Other and unspecified sites (170, 171, 190, 193-9)	0.34	0.47	0.37	0.44	0.57
Neoplasms of lymphatic and haematopoietic tissue (200-9)	0.51	0.79	0.72	0.86	0.86
Total rate (140-209)	12.14	13.00	14.26	15.43	15.05

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Per 10 000 of mean population.

The next table indicates a general increase in deaths from malignant neoplasms up to 1977 and the table of age-specific death rates which follows shows how the rate has increased for older age groups. Therefore, it appears that the increase over the period in the all ages rate is attributable in part to the increasing proportion of the population in the higher age groups.

Deaths from Malignant Neoplasms (140-209), South Australia^(a)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1950-54	462	483	945	12.11	12.96	12.53
1955-59	565	519	1 084	12.79	12.06	12.43
1960-64	656	617	1 273	13.16	12.58	12.88
1965-69	820	698	1 518	14.77	12.67	13.72
1970-74	958	784	1 742	15.94	13.06	14.50
Year:						
1973	975	821	1 796	16.03	13.46	14.74
1974	1 055	785	1 840	17.10	12.69	14.89
1975	1 052	858	1 910	16.82	13.68	15.25
1976	994	837	1 831	15.77	13.25	14.51
1977	1 066	855	1 921	16.72	13.37	15.05

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.
(b) Number of deaths per 10 000 of mean population.

Malignant Neoplasms: Age-specific Death Rates, South Australia^(a)

Age Group (Years)	Death Rate (b)					
	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72
MALES						
0-4	—	0.49	1.18	1.02	1.14	1.27
5-14	0.12	0.51	1.05	0.82	0.97	0.79
15-24	0.31	0.07	1.64	0.86	0.90	0.90
25-34	1.05	1.18	1.21	1.33	1.62	1.24
35-44	3.36	2.57	4.63	4.29	3.72	5.36
45-54	8.65	12.35	10.42	11.57	15.09	14.80
55-64	35.41	32.77	33.43	36.52	43.46	43.94
65-74	89.18	82.62	69.54	83.67	87.28	101.64
75 and over	147.57	148.98	149.45	142.29	151.06	175.14
All ages	11.40	13.60	12.54	12.86	14.09	15.69
FEMALES						
0-4	0.30	0.41	1.24	0.79	0.57	0.57
5-14	0.13	0.23	0.34	0.79	0.55	0.38
15-24	0.25	0.40	0.72	0.46	0.82	0.56
25-34	1.49	1.74	1.99	2.16	1.70	2.39
35-44	6.32	4.42	5.95	6.66	5.68	4.88
45-54	16.86	15.39	12.67	16.69	16.14	15.83
55-64	34.61	30.12	32.91	28.19	30.33	30.90
65-74	55.98	57.21	52.26	52.24	49.90	55.38
75 and over	115.15	108.52	98.41	99.76	94.61	102.54
All ages	11.37	13.12	12.64	12.68	12.30	13.13

(a) Deaths of full-blood Aborigines were identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 10 000 of population at ages shown.

Cerebrovascular Disease

The increase in both numbers and rates of deaths from cerebrovascular disease (commonly referred to as 'a stroke') is further evidence of the effect of the increased proportion of the population at higher ages.

Deaths from Cerebrovascular Disease (430-438), South Australia^(a)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1930-34	201	231	432	6.94	8.01	7.47
1935-39	231	294	525	7.84	9.95	8.90
1940-44	271	368	639	8.96	12.03	10.51
1945-49	321	431	752	9.92	13.21	11.57
1950-54	404	553	957	10.62	14.82	12.70
1955-59	481	614	1 095	10.89	14.27	12.55
1960-64	490	645	1 135	9.83	13.16	11.48
1965-69	567	731	1 298	10.21	13.26	11.73
1970-74	582	808	1 390	9.72	13.46	11.59

Deaths from Cerebrovascular Disease (430-438), South Australia^(a) (continued)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Year:						
1973	585	779	1 364	9.62	12.77	11.20
1974	550	817	1 367	8.91	13.21	11.06
1975	570	834	1 404	9.11	13.29	11.21
1976	566	799	1 365	8.98	12.65	10.82
1977	561	776	1 337	8.88	12.12	10.47

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population.

Although the rate generally has fallen since 1954, deaths from this cause still constituted 20.2 per cent of deaths of persons aged seventy-five years and over in 1977. During the period 1930-34 deaths classified to this cause were only 8.6 per cent of all deaths, but during 1970-74 they were 14.0 per cent of all deaths.

Diseases of the Heart

The following table shows the number of deaths attributed to heart disease and rates per 10 000 of the mean population since 1940.

The percentage of total deaths classified to heart disease increased from 25.5 per cent in the period 1940-44 to 36.1 per cent during 1970-74. Over the same period the rate per 10 000 of mean population increased from 26.1 to 30.1. Apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, namely changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore any comparison of numbers, rates and percentages of deaths from this cause over the period should be made only with caution.

Deaths from Diseases of the Heart (393-398, 410-429), South Australia^(a)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1940-44	886	704	1 590	29.29	23.02	26.14
1945-49	1 094	822	1 916	33.84	25.15	29.47
1950-54	1 342	996	2 338	35.22	26.70	31.01
1955-59	1 519	1 111	2 630	34.38	25.81	30.15
1960-64	1 776	1 245	3 021	35.61	25.42	30.56
1965-69	2 036	1 432	3 468	36.69	25.97	31.35
1970-74	2 080	1 503	3 583	34.70	25.02	29.85
Year:						
1973	2 105	1 484	3 589	34.60	24.33	29.46
1974	2 108	1 555	3 663	34.16	25.14	29.65
1975	2 034	1 531	3 565	32.52	24.40	28.46
1976	2 080	1 589	3 669	33.01	25.16	29.08
1977	2 017	1 552	3 569	31.62	24.28	27.96

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population.

External Causes

In the table which follows, deaths from selected categories of external cause (accidents, poisonings and violence) are shown for recent years.

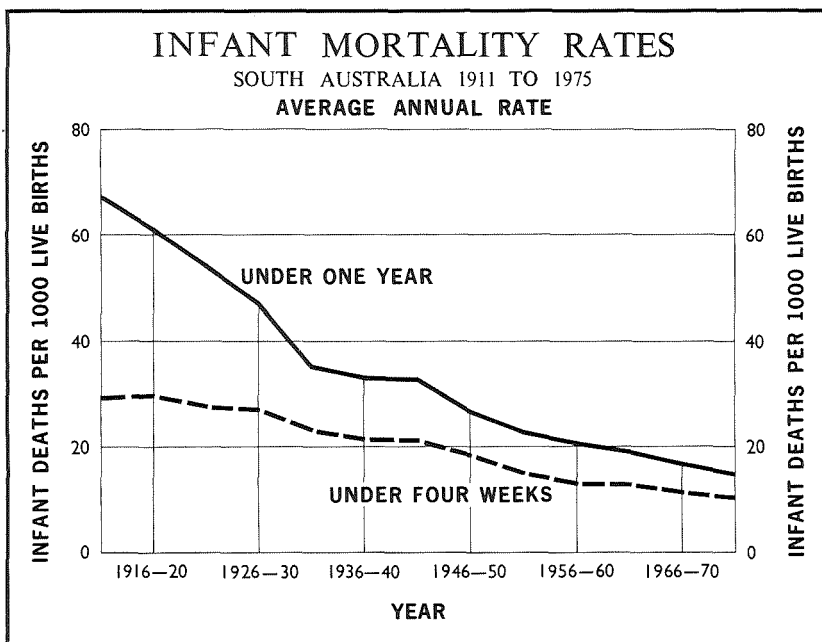
Deaths: External Causes (Accidents, Poisonings and Violence), South Australia

Year	Cause							Total Deaths for Causes (E800-E999)
	Motor Vehicle Traffic Accidents (E810-E819)	Accidental Drownings (E830, E832, E910)	Accidental Poisonings (E850-E877)	Accidental Falls (E880-E887)	Suicide and Intentional Self-inflicted Injury (E950-E959)	Homicide and Injury Purposely Inflicted (E960-E969)	Other External Causes (Balance (E800-E999))	
MALES								
1973	214	36	1	34	79	5	75	444
1974	298	23	4	42	95	9	85	556
1975	249	41	3	48	103	9	77	530
1976	222	28	9	36	105	8	69	477
1977	232	20	4	37	101	16	73	483
FEMALES								
1973	90	11	6	66	42	3	51	269
1974	86	7	2	61	39	14	26	235
1975	82	5	2	59	46	9	34	237
1976	74	13	1	48	41	14	27	218
1977	96	9	2	54	28	8	29	226

Deaths: External Causes (Accidents, Poisonings and Violence), Age Groups
South Australia, 1977

Year	Cause							Total Deaths for Causes (E800-E999)
	Motor Vehicle Traffic Accidents (E810-E819)	Accidental Drownings (E830, E832, E910)	Accidental Poisonings (E850-E877)	Accidental Falls (E880-E887)	Suicide and Intentional Self-inflicted Injury (E950-E959)	Homicide and Injury Purposely Inflicted (E960-E969)	Other External Causes (Balance (E800-E999))	
MALES								
Under 15 years	17	5	1	—	—	3	10	36
15-24 years	108	3	2	2	27	3	18	163
25-34 years	41	3	—	2	20	3	9	78
35-44 years	13	3	1	—	10	5	7	39
45-54 years	17	1	—	2	25	1	16	62
55-64 years	11	1	—	3	11	1	5	32
65-74 years	15	2	—	6	8	—	5	36
75 years and over	10	2	—	22	—	—	3	37
Total	232	20	4	37	101	16	73	483
FEMALES								
Under 15 years	14	4	—	1	—	1	6	26
15-24 years	33	1	—	—	4	3	3	44
25-34 years	7	1	—	—	4	1	5	18
35-44 years	8	—	1	—	7	1	—	18
45-54 years	9	—	1	2	4	2	2	20
55-64 years	7	—	—	2	4	—	6	19
65-74 years	10	2	—	4	4	—	2	22
75 years and over	8	—	—	45	1	—	5	59
Total	96	9	2	54	28	8	29	226

Motor vehicle traffic accident deaths are considerably fewer than deaths caused by either heart disease, cerebrovascular disease or malignant neoplasms. However it ranks with the other major causes when considered in terms of 'life years lost'. In 1977 there were 244 deaths from all causes of persons in the 15-24 years age group and of these 57.8 per cent were caused by motor vehicles accidents.



INFANT MORTALITY

The infant mortality rate, *i.e.* the number of deaths of children under one year to every 1 000 live births, has shown a marked decline from 148.77 in 1875-79 to 15.62 in 1970-74. The 1977 rate of 11.47 is the second lowest rate yet recorded, the lowest of 11.11 occurring in 1975. The number of infant deaths and infant death rates for selected years since 1851 are shown in the Statistical Summary, Appendix A.

The fall in infant mortality is attributable to many factors, but the most important are reflected in the falling neo-natal death rate. This is partly because of better pre-natal care and obstetric management, which have led to safer births, and to the neo-natal intensive care units at major maternity hospitals which have brought about a high survival rate for small and immature infants.

Infant Mortality: Age at Death, South Australia

Year	Under 1 Day	1 Day and under 1 Week	1 Week and under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 12 Months	Total under 12 Months	
							Number	Rate (a)
MALES								
1973	67	40	10	23	22	12	174	16.61
1974	75	57	13	13	19	11	188	17.92
1975	56	26	7	16	15	9	129	12.63
1976	59	35	17	21	20	13	165	16.77
1977	47	22	9	10	14	11	113	11.41
FEMALES								
1973	35	23	9	19	9	7	102	10.27
1974	46	26	11	12	14	15	124	12.79
1975	35	11	13	11	12	11	93	9.52
1976	47	26	8	15	8	7	111	12.19
1977	43	23	15	11	10	6	108	11.55
PERSONS								
1973	102	63	19	42	31	19	276	13.52
1974	121	83	24	25	33	26	312	15.46
1975	91	37	20	27	27	20	222	11.11
1976	106	61	25	36	28	20	276	14.57
1977	90	45	24	21	24	17	221	11.47

(a) Rate per 1 000 live births.

The causes of infant deaths in 1977 classified according to age group are shown in the following table.

Infant Mortality: Causes in Age Groups, South Australia, 1977

Cause of Death	Age Group					Total under 12 Months
	Under 1 Week	1 Week and under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 12 Months	
Infective and parasitic diseases (000-136)	3	5	2	—	2	12
Diseases of nervous system and sense organs (320-389)	—	1	—	1	—	2
Diseases of respiratory system (460-519)	—	—	—	1	2	3
Congenital anomalies (740-759)	31	11	13	3	5	63
Perinatal causes:						
Maternal diseases and conditions (760-763)	11	—	—	—	—	11
Difficult labour (764-768)	7	—	—	—	—	7
Conditions of placenta and cord (770-771)	9	—	—	1	—	10
Haemolytic disease (774-775)	1	—	—	—	—	1
Anoxic and hypoxic conditions n.e.c. (776)	23	3	—	—	—	26
Immaturity, unqualified (777)	9	—	—	—	—	9
Other perinatal causes (769, 772, 773, 778)	35	1	—	—	—	36
Sudden death (cause unknown) (795)	1	3	5	12	7	28
All other diseases	4	—	—	2	—	6
Accidents, poisonings, violence (E800-E999)	1	—	1	4	1	7
Total all causes	135	24	21	24	17	221

Statistics of infant mortality shown in the previous table are inclusive of the neo-natal segment of perinatal deaths which are discussed in the following paragraphs. It should be noted that owing to reconciliation difficulties between the sources of information from which the data is compiled, minor differences may be noted when comparing neo-natal deaths with infant deaths under four weeks shown in this section.

PERINATAL DEATHS

Perinatal deaths comprise:

- (a) *Foetal deaths* : a child born not alive, of at least twenty weeks gestation or 400 grams weight;
 (b) *Neo-natal deaths* : a live-born child dying within twenty-eight days after birth.

Legislation which became effective from the beginning of 1968 requires a Medical Certificate of Cause of Perinatal Death to be filled in by the attending medical practitioner and forwarded to the Principal Registrar. Before 1968 neo-natal deaths were not separated for registration purposes from other deaths. However, from 1937 to 1967 a separate register of all still births (foetal deaths) was maintained by the Principal Registrar; registration of a still birth was compulsory and related to any child which after the twenty-eighth week of gestation did not breathe or show any signs of life at any time after being completely expelled from its mother. Only total numbers of the registered still births were recorded and no detailed statistics were compiled.

Live Births, Foetal Deaths, Neo-natal Deaths and Perinatal Deaths South Australia

Year	Live Births Number	Perinatal Deaths					
		Foetal		Neo-natal		Total Perinatal	
		Number	Rate (a)	Number	Rate (b)	Number	Rate (c)
MALES							
1973	10 475	120	11.33	115	10.98	235	22.18
1974	10 489	119	11.22	144	13.73	263	24.79
1975	10 212	92	8.93	89	8.72	181	17.56
1976	9 838	107	10.76	111	11.28	218	21.92
1977	9 907	89	8.90	78	7.87	167	16.71
FEMALES							
1973	9 932	124	12.33	70	7.05	194	19.29
1974	9 692	117	11.93	84	8.67	201	20.49
1975	9 774	97	9.83	59	6.04	156	15.80
1976	9 109	103	11.18	81	8.89	184	19.97
1977	9 353	89	9.43	81	8.66	170	18.00
PERSONS							
1973	20 407	244	11.82	185	9.07	429	20.77
1974	20 181	236	11.56	228	11.30	464	22.73
1975	19 986	189	9.37	148	7.41	337	16.70
1976	18 947	210	10.96	192	10.13	402	20.98
1977	19 260	178	9.16	159	8.26	337	17.34

(a) Foetal death rate is the number of foetal deaths per 1 000 of the total of live births and foetal deaths.

(b) Neo-natal death rate is the number of neo-natal deaths per 1 000 live births.

(c) Perinatal death rate is the number of perinatal deaths per 1 000 of the total of live births and foetal deaths.

Despite the improvements which have already been achieved infant and perinatal mortality still presents one of the most challenging areas for medical and scientific research. For example, Rh incompatibility is now a declining cause of death as a direct

result of prophylactic immunisation. In Adelaide, research on placental efficiency and foetal anoxia has enabled pre-natal detection of impending danger, so that treatment can prevent damage or death of the foetus. Falling death rates attributable to placental disorders and anoxia is evidence of this.

Perinatal Deaths: Causes of Death, South Australia

Cause of Death	1974	1975	1976	1977
Chronic circulatory and genito-urinary disease in mother	1	2	—	1
Other maternal conditions unrelated to pregnancy	7	10	14	12
Toxaemias of pregnancy	34	19	19	17
Maternal ante- and intrapartum infection	3	1	3	1
Difficult labour with abnormality of bones, organs or tissues of pelvis	1	4	2	—
Difficult labour with disproportion	2	2	1	—
Difficult labour with malposition of foetus	3	4	1	6
Difficult labour with abnormality of forces of labour	4	2	4	1
Difficult labour with other and unspecified complications	1	1	1	—
Other complications of pregnancy and child-birth	67	37	51	56
Conditions of placenta	93	69	76	48
Conditions of umbilical cord	18	19	19	15
Birth injury without mention of cause	1	3	7	13
Haemolytic disease of new-born	2	5	6	3
Anoxic and hypoxic conditions not elsewhere classified	79	42	64	33
Other conditions of foetus and new-born	56	38	50	49
Congenital anomalies	78	67	65	64
Infections of foetus and new-born	1	4	5	8
Other diseases of foetus and new-born	12	8	13	9
External causes of injury to new-born	1	—	1	1
Total	464	337	402	337

EXPECTATION OF LIFE

The expectation of life at age x is defined as the average number of years lived after age x by each group of persons aged exactly x years. Because detailed information of the age structure and mortality experience of the population is required, the calculation of the expectation of life for each age is generally based on a period which spans a population census (the only time at which a sufficiently accurate age distribution is available).

The table which follows shows the expectation of life at specified ages in Australia based on mortality experience in the decade to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954, 1961, 1966 and 1971. Generally, the figures shown in the table indicate that the number of years which people of all ages in Australia can expect to live has increased steadily since the turn of the century.

Expectation of Life, Australia

Age	1901-10	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72
MALES								
0	55.2	59.2	63.5	66.1	67.1	67.9	67.6	67.8
5	57.9	60.4	62.6	63.8	64.3	64.8	64.4	64.5
10	53.5	56.0	58.0	59.0	59.5	59.9	59.5	59.7
15	49.0	51.4	53.4	54.3	54.7	55.1	54.6	54.8
20	44.7	47.0	48.8	49.6	50.1	50.4	50.0	50.2
25	40.6	42.7	44.4	45.0	45.5	45.8	45.4	45.6
30	36.5	38.4	39.9	40.4	40.9	41.1	40.7	40.9
35	32.5	34.2	35.5	35.8	36.3	36.5	36.0	36.2
40	28.6	30.1	31.1	31.2	31.7	31.8	31.4	31.6
45	24.8	26.0	26.9	26.8	27.2	27.4	27.0	27.1
50	21.2	22.2	22.8	22.7	22.9	23.1	22.8	22.9
55	17.7	18.5	19.0	18.8	19.0	19.2	18.8	18.9
60	14.3	15.1	15.6	15.4	15.5	15.6	15.3	15.4
65	11.3	12.0	12.4	12.3	12.3	12.5	12.2	12.2
70	8.7	9.3	9.6	9.6	9.6	9.8	9.5	9.5
75	6.6	6.9	7.2	7.2	7.3	7.5	7.3	7.3
80	5.0	5.0	5.2	5.4	5.5	5.6	5.5	5.5
FEMALES								
0	58.8	63.3	67.1	70.6	72.8	74.2	74.2	74.5
5	60.8	63.6	65.6	67.9	69.6	70.8	70.6	71.0
10	56.4	59.2	61.0	63.1	64.8	65.9	65.8	66.1
15	51.9	54.6	56.3	58.3	59.9	61.0	60.8	61.2
20	47.5	50.0	51.7	53.5	55.1	56.2	56.0	56.4
25	43.4	45.7	47.2	48.7	50.2	51.3	51.2	51.5
30	39.3	41.5	42.8	44.1	45.4	46.5	46.3	46.7
35	35.4	37.3	38.4	39.5	40.7	41.7	41.6	41.9
40	31.5	33.1	34.0	34.9	36.0	37.0	36.9	37.2
45	27.6	29.0	29.7	30.5	31.4	32.3	32.3	32.6
50	23.7	24.9	25.6	26.1	27.0	27.9	27.8	28.1
55	19.9	21.0	21.6	22.0	22.8	23.6	23.6	23.8
60	16.2	17.2	17.7	18.1	18.8	19.5	19.5	19.7
65	12.9	13.6	14.2	14.4	15.0	15.7	15.7	15.9
70	10.10	10.4	11.0	11.1	11.6	12.2	12.2	12.4
75	7.6	7.7	8.2	8.3	8.7	9.2	9.2	9.4
80	5.7	5.6	6.0	6.0	6.3	6.7	6.7	6.9

5.4 MIGRATION

Powers and Legislation of the Commonwealth Government

Under the Constitution, the Commonwealth Parliament is empowered to make laws on immigration, emigration, aliens and the influx of criminals.

Immigration into Australia is regulated by the *Migration Act* 1958, which came into force on 1 June 1959. The *Aliens Act* 1947, provides that a register of aliens shall be maintained for every State or mainland Territory of Australia and that, unless exempted, aliens sixteen years of age and over are required to register with the Department of Immigration and Ethnic Affairs. Under the provisions of the *Australian Citizenship Act* 1948 aliens may, upon application, be granted citizenship; generally, this is after three

years residence but may be earlier under certain circumstances. Legislation and conditions of immigration into Australia and of naturalisation are discussed in detail in the *Official Year Book of Australia*.

Assisted Migration

From early colonial times free or assisted passages were given to large numbers of migrants from Britain, and to lesser numbers from other countries. Responsibility for migrant recruitment and transport was originally with the Colonial Governments, then the States, and in 1920-21 was transferred to the Commonwealth Government.

After the 1939-45 War, Australia and Britain entered into agreements to provide free passages for ex-servicemen and assisted passages for other British migrants. The first agreement ended in 1955, but the assisted passage agreement continued until 1972. Since then Australia has provided unilateral assistance for British migrants.

Large-scale assisted migration from Europe began with Australian participation in the resettlement of Displaced Persons under the auspices of the International Refugee Organisation. Agreement with a number of European countries, either directly or through the agency of the Inter-Governmental Committee for European Migration, resulted in a preponderance of European assisted migration to Australia over the next twenty-five years. During this time Australia developed unilateral arrangements to assist other migrants from Europe, the United States and elsewhere.

Since May 1973, there has been a uniform policy on assisted migration from all countries and assisted passages are now only given to the spouses and minor dependent children of Australian residents, refugees and people whose skills are needed in Australia.

Assisted settler arrivals from January 1947 to December 1976 totalled 2 035 283, of whom 1 125 950 arrived under British schemes. Of the total, 228 801 stated on arrival that their proposed destination was South Australia.

Overseas Arrivals and Departures

Since 1924 the movements of overseas travellers have been classified into two main categories according to declared intention regarding residence short-term and long-term (including permanent). For short-term movements, overseas visitors and Australian residents are identified separately.

The principal categories of travellers according to stated purpose of travel are:

Permanent movement ; consisting of people arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad.

Long-term movement ; consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of Australian residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more.

Short-term movement ; consisting of all other movements, including the movement of Australian troops irrespective of period of stay.

The following table gives details for 1977 of overseas arrivals and departures of people whose State of residence had been or was intended to be South Australia. For departures, State of residence refers to the State in which the traveller regards himself as living or as last having lived. State of intended residence for arrivals is derived from the intended address given by settlers and Australian residents returning after a journey abroad. Particularly in relation to settlers, this information does not necessarily refer to the State in which a traveller will eventually establish a permanent residence.

Overseas Arrivals and Departures: Mode of Transport and Category of Traveller, State of Residence, South Australia, 1977

Category of Traveller	By Sea		By Air		Total
	Males	Females	Males	Females	
	ARRIVALS				
Assisted settlers	209	208	808	685	1 910
Other settlers	164	211	1 395	1 541	3 311
Total permanent	373	419	2 203	2 226	5 221
Long-term residents returning	234	235	1 928	2 042	4 439
Long-term visitors arriving	15	11	719	530	1 275
Total permanent and long-term	622	665	4 850	4 798	10 935
Short-term residents returning	690	756	33 392	34 133	68 971
Short-term visitors arriving	180	195	11 242	9 625	21 242
Total arrivals	1 492	1 616	49 484	48 556	101 148
	DEPARTURES				
Former settlers	157	148	669	693	1 667
Other residents	25	26	320	324	695
Total permanent	182	174	989	1 017	2 362
Long-term residents departing	296	264	2 142	1 976	4 678
Long-term visitors departing	40	25	630	513	1 208
Total permanent and long-term	518	463	3 761	3 506	8 248
Short-term residents departing	979	1 095	31 973	33 026	67 073
Short-term visitors departing	113	144	9 281	8 359	17 897
Total departures	1 610	1 702	45 015	44 891	93 218

Australian Citizenship

The status of 'Australian Citizen' was created under the *Nationality and Citizenship Act 1948* which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act 1948* and under its provisions all migrants, regardless of origin, are required to satisfy uniform requirements for the granting of citizenship.

In the table which follows, numbers of migrants granted citizenship are shown according to previous citizenship. From 1974 citizens of Britain (and colonies) and other Commonwealth nations were included for the first time. Before 1 December 1973 these people were granted citizenship by registration.

Previous Citizenship of Persons Granted Australian Citizenship, South Australia

Nationality	1972	1973	1974	1975	1976	1977
Austrian	31	25	14	41	29	37
Britain and colonies, citizens of ..	..	..	238	5 430	5 011	2 526
Cypriot .....	..	..	4	57	72	30
Czechoslovak	76	104	57	111	29	37
Danish	12	20	7	18	31	11
Dutch	165	187	108	258	187	120
Finnish	12	18	19	31	27	33
French	32	61	35	91	60	75
German	161	279	132	416	275	142
Greek	626	961	671	1 520	964	698
Hungarian	25	23	22	41	37	29
Indian .....	..	..	20	99	78	36
Irish .....	..	..	1	68	60	22
Italian	453	739	435	1 109	1 092	769
Lebanese	27	49	27	95	89	79
Malaysian .....	..	..	19	60	61	45
Maltese .....	..	..	3	117	53	49
New Zealander .....	..	..	1	18	29	22
Polish	120	104	71	109	85	61
Singaporean .....	..	..	19	16	21	17
South African .....	..	..	15	65	56	50
Spanish	7	26	27	68	92	62
Turkish	25	32	16	57	30	19
US American	9	22	25	37	20	14
Yugoslav	244	370	224	673	502	537
Stateless	25	49	34	54	33	44
Other	125	143	131	369	272	426
Total	2 175	3 212	2 375	11 028	9 295	5 990

Entry for Residence

From January 1975, all people living overseas other than New Zealand citizens who wish to come to Australia as settlers have had to obtain visas for entry. Under a reciprocal agreement with New Zealand, citizens of that country may enter Australia without prior authority and if travelling direct from New Zealand are not required to hold passports.

Australian migration policy enables priority to be given to 'family reunion' which involves spouses and dependent children (normally under eighteen years of age) and aged parents of permanent residents of Australia.

Sponsorship is necessary and nominations may also be accepted for parents of working age provided that they are regarded as able to maintain themselves satisfactorily in Australia without becoming a charge on public funds. People whose entry is approved within the scope of 'family reunion' rules are required to meet only health and character requirements.

Nominations in favour of, or applications from, refugees, displaced persons or those whose circumstances warrant special consideration on compassionate grounds may be considered under relaxed eligibility rules and selection standards in the light of their particular circumstances.

Citizens of Britain, Ireland or Canada may be considered for entry on a sponsored or unsponsored basis where close association with a permanent resident of Australia or a former close association with Australia can be shown. The people concerned must be self-supporting with the intention of retiring in Australia, and be able to meet all migrant standards excluding the need to have specific skills or qualifications.

Applications may be lodged overseas by intending migrants seeking entry on the basis of their having specific skills or qualifications which are recognised in Australia and listed as being in demand in this country. Applicants in this class may also be nominated if they have relatives or friends in Australia and they meet all the requirements laid down for migrant entry. The requirements are that they be in sound health and of good character, have the personal qualities to enable them to fit into the Australian community, and will be economically viable in Australia.

Temporary Entry

People seeking to enter Australia for reasons other than settlement may be considered under Commonwealth Government policies on visitors, students, specialised trainees and temporary residents.

Visitors

Visas are issued free of charge overseas with minimal formality and delay to genuine applicants seeking to visit Australia for short periods for purposes such as tourism (sightseeing), business (negotiations, discussions, inspections), seeing relatives or other personal contacts and pre-arranged medical treatment. People granted visit visas are made aware through information notes and a declaration they sign as part of the visa application that they are not entitled to undertake employment or studies and that they are expected to leave Australia at the end of their authorised period of stay.

Students and Specialised Trainees

Young overseas private students may be permitted to enter Australia as bona fide temporary residents to undertake approved tertiary or post-secondary courses not available in their own countries. Entry for senior secondary studies is not normally granted but may be considered where this can be shown to be desirable as a preparation for acceptable post-secondary studies. As well as meeting other entry requirements, including health, private students must have the capacity to undertake their proposed studies and produce evidence of enrolment and assured maintenance in Australia.

Temporary residence may also be granted to people from overseas for specialised training not available in their countries and to upgrade their existing occupational experience or skills. Generally, temporary entry for this purpose is for a period up to twelve months and is arranged under sponsorship by the intended training organisation in Australia.

Temporary Residents

The policy of the Commonwealth Government is that opportunities for employment in Australia are to be available as a first priority to Australian citizens and migrants resident in Australia. Accordingly, temporary entry for employment may be granted only in special circumstances.

Temporary residence visas may be issued to overseas people to enter Australia for limited periods to engage in pre-arranged specialised activities. Those who may receive such visas include senior management personnel for Australian organisations, including branches of overseas enterprises; professional, technical, and other specialist personnel possessing expertise not available locally; academic staff; members of religious organisations; and entertainers and sportsmen, both individuals and groups.

Generally, action to obtain such visas is initiated in Australia by the organisations which seek the temporary entry of the persons concerned. People seeking temporary residence for periods in excess of twelve months are required to satisfy the usual entry requirements, including health.

5.5 CHARACTERISTICS OF THE POPULATION

Statistics relating to characteristics of the population of South Australia are derived from information obtained at each population census. Census technology and coverage have changed over the years, reducing comparability between censuses. Examples are the inclusion of full-blooded Aborigines for the first time in 1966, and the introduction of sample processing in 1976. The latter may result in minor differences between the sum of estimated components and estimated totals, and between totals in different tables.

Age Distribution

Details of the age distribution of the population are of particular importance because, as well as revealing changes which have occurred in the age structure from one census to the next, they supply basic material for the calculation of fertility rates, mortality rates, annuity rates and probabilities of survival.

Age distribution of the population at the two most recent censuses are given in the following table. Large absolute changes in population occurred in the age groups 25-29, which increased by 22 765, and 40-44, which fell by 8 460. The movement in these two age groups is partly because of the post 1939-45 War birth rate increase and the low birth rates of the depression years of the early 1930s respectively. The decrease in the lower age groups can in part be explained by the sharp decline in fertility in recent years.

The median age of the population of South Australia at the 1954 Census was 29.6 years, falling to 28.3 at the 1961 Census and 26.5 at the 1971 Census; this trend had reversed by the 1976 Census when the median age rose to 27.5 years (males 26.8 and females 28.3).

Age Distribution of Population, South Australia
Censuses 1971 and 1976^(a)

Age Last Birthday (Years)	30 June 1971			30 June 1976			Increase Persons
	Males	Females	Persons	Males	Females	Persons	
0-4	55 308	52 641	107 949	52 158	49 158	101 316	(-) 6 633
5-9	58 274	55 179	113 453	57 427	54 511	111 938	(-) 1 515
10-14	60 358	58 090	118 448	59 952	56 416	116 368	(-) 2 080
15-19	54 334	52 532	106 866	59 169	57 765	116 934	10 068
20-24	49 144	49 278	98 422	52 104	51 528	103 632	5 210
25-29	40 647	39 450	80 097	51 609	51 253	102 862	22 765
30-34	34 791	34 330	69 121	41 729	41 122	82 851	13 730
35-39	33 572	32 327	65 899	36 009	35 444	71 453	5 554
40-44	37 937	35 319	73 256	33 108	31 688	64 796	(-) 8 460
45-49	37 673	36 551	74 224	37 201	34 603	71 804	(-) 2 420
50-54	31 686	31 256	62 942	35 773	35 101	70 874	7 932
55-59	28 917	28 507	57 424	29 557	29 891	59 448	2 024
60-64	22 295	23 711	46 006	26 188	27 530	53 718	7 712
65-69	16 408	18 467	34 875	19 307	22 305	41 612	6 737
70-74	11 042	15 540	26 582	13 118	16 777	29 895	3 313
75-79	7 236	12 194	19 430	7 672	12 731	20 403	973
80-84	4 277	7 581	11 858	4 149	8 674	12 823	965
85-89	1 690	3 501	5 191	1 893	4 198	6 091	900
90 and over	462	1 202	1 664	586	1 640	2 226	562
Not Stated	—	—	—	1 481	2 243	3 724	3 724
Total	586 051	587 656	1 173 707	620 190	624 578	1 244 768	71 061

(a) Population as enumerated, not adjusted for underenumeration.

The next table shows that the proportion of the population under 15 years of age fell markedly between 1901 and 1947, rose significantly between 1947 and 1961 but since then has continued to fall. The proportion of the population 15 years and under 65 years showed an upward trend to 1947, maintained a fairly stable level of approximately 61 per cent until recently when the upward trend has again become evident. The proportion of the population 65 years and over continued to rise over the period 1901 to 1954, fell slightly between 1954 and 1971 but again rose by 1976.

**Proportional Age Distribution of Population, South Australia
Censuses 1901 to 1976**

Census	Males			Females			Persons		
	Under 15 Years	15 years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
	Per cent								
1901	36.0	60.0	4.0	35.9	59.8	4.3	35.9	59.9	4.2
1911	31.1	64.4	4.5	31.3	63.8	4.9	31.2	64.1	4.7
1921	32.2	62.8	5.0	31.3	63.5	5.2	31.7	63.2	5.1
1933	26.8	66.6	6.6	26.0	66.6	7.4	26.4	66.6	7.0
1947	25.1	67.0	7.9	23.5	67.0	9.5	24.3	67.0	8.7
1954	29.2	62.9	7.9	28.6	61.3	10.1	28.9	62.1	9.0
1961	31.4	61.2	7.4	30.7	59.1	10.2	31.1	60.1	8.8
1966	30.7	62.4	7.0	29.5	60.5	10.0	30.1	61.4	8.5
1971 (a)	29.7	63.3	7.0	28.2	61.8	10.0	29.0	62.5	8.5
1976 (a)	27.3	65.1	7.6	25.7	63.6	10.7	26.5	64.4	9.1

(a) Population as enumerated, not adjusted for underenumeration.

Sex Distribution

The masculinity of the population of South Australia, *i.e.* the number of males to each 100 females at each census is shown below.

Census Year	Masculinity	Census Year	Masculinity
1844	126.1	1901	101.5
1846	130.4	1911	103.1
1851	124.3	1921	100.6
1855	103.8	1933	100.3
1861	105.3	1947	98.2
1866	109.2	1954	102.7
1871	105.6	1961	102.3
1876	107.0	1966	101.0
1881	111.4	1971	99.7
1891	105.6	1976	99.3

Before the 1971 Census the only census at which masculinity was less than 100 was 1947. The lower rate at the 1947 Census was partly attributable to the loss of male lives in the 1939-45 War, while the subsequent increase was mainly because of the predominantly male migration inflow of the early post-war period. This is shown very clearly in the following table which gives masculinity in five-yearly age groups at the six Censuses 1947 to 1976. The larger number of males in the younger age groups reflects the fact that the masculinity of births is consistently over 100 while the higher male death rate is reflected in the very low masculinity ratios of the older age groups. In recent years the predominance of females in the upper age groups has more than offset the greater number of males in the younger age groups.

**Masculinity of Population According to Age, South Australia
Censuses 1947 to 1976**

Age Last Birthday (Years)	Census					
	1947	1954	1961	1966	1971	1976
0-4	104.30	104.46	103.21	105.73	105.07	106.10
5-9	106.18	104.85	104.98	104.01	105.61	105.35
10-14	104.60	105.38	105.75	105.26	103.90	106.27
15-19	100.43	105.27	105.55	104.70	103.43	102.43
20-24	95.29	113.81	109.21	103.05	99.73	101.12
25-29	96.70	111.99	110.23	104.00	103.03	100.69
30-34	99.26	106.65	110.78	105.49	101.34	101.48
35-39	101.27	105.80	105.31	108.13	103.85	101.59
40-44	107.23	107.05	104.86	104.43	107.41	104.48
45-49	99.93	110.99	107.65	104.45	103.07	107.51
50-54	89.83	104.54	106.49	104.43	101.38	101.91
55-59	96.52	91.53	105.42	101.79	101.44	98.88
60-64	93.65	87.94	88.90	97.59	94.03	95.13
65-69	88.05	87.80	77.48	80.52	88.85	86.56
70-74	83.07	81.72	78.01	68.46	71.06	78.19
75-79	77.76	73.53	71.88	69.06	59.34	60.26
80-84	70.90	66.71	62.44	60.33	56.42	47.38
85-89	65.19	62.38	59.06	52.12	48.27	45.09
90 and over	56.17	53.08	40.60	41.25	38.44	35.73
All ages	98.16	102.72	102.32	100.99	99.73	99.30

Marital Status

The marital status of the population was ascertained at the censuses, when a statement of never married, married, married but permanently separated (legally or otherwise), widowed, or divorced was required in respect of every person enumerated.

**Marital Status of Population, South Australia
Censuses 1971 and 1976^(a)**

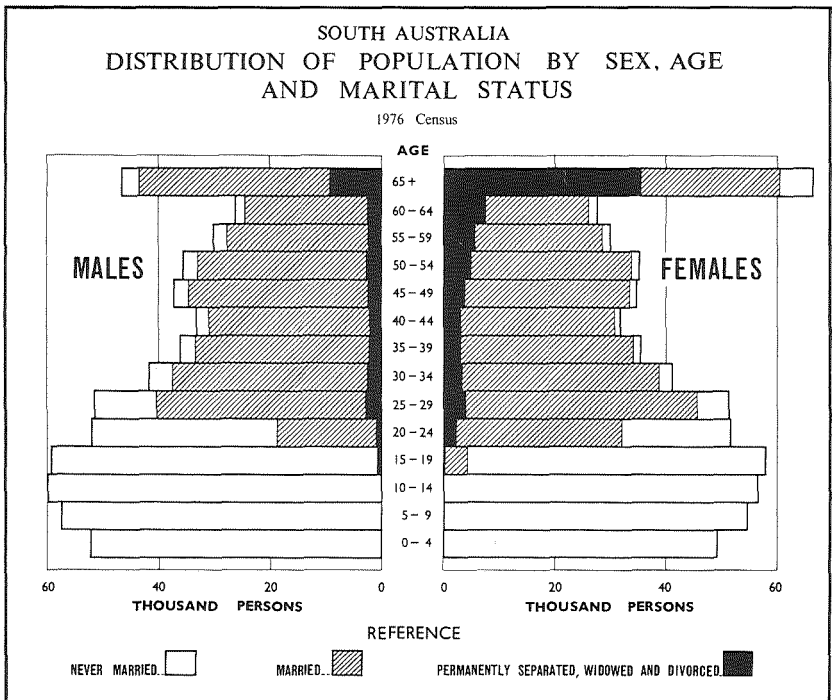
Marital Status	30 June 1971				30 June 1976			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Never married:								
Under 15 years of age	173 940	29.7	165 910	28.2	169 458	27.3	159 979	25.6
15 years of age and over	113 130	19.3	85 163	14.5	124 423	20.1	95 330	15.3
Total never married	287 070	49.0	251 073	42.7	293 881	47.4	255 309	40.9
Married	275 465	47.0	276 232	47.0	295 059	47.6	294 405	47.1
Married but permanently separated	6 565	1.1	7 204	1.2	9 793	1.6	11 714	1.9
Widowed	11 364	1.9	46 617	7.9	11 199	1.8	49 697	7.9
Divorced	5 587	1.0	6 530	1.1	8 795	1.4	11 172	1.8
Not stated	—	—	—	—	1 463	0.2	2 281	0.4
Total	586 051	100.0	587 656	100.0	620 190	100.0	624 578	100.0

(a) Population as enumerated, not adjusted for underenumeration.

In 1976 the number of persons who were stated to have been never married represented 44.1 per cent of the total population, a lower proportion than in 1971. Married persons in 1976 represented 47.4 per cent of the total compared with 47.0 per cent in 1971.

At the 1971 Census 80.4 per cent of widowed persons were female and this proportion had increased to 81.6 per cent in 1976. The disparity between the number of widowed males and widowed females is the result of the greater longevity of females coupled with the usually younger age at marriage.

The following diagram shows details of sex, age and marital status of the population at the 1976 Census.



Country of Birth

The Australian-born content of the population in South Australia was 85.7 per cent in 1911, 88.3 per cent in 1921, 90.3 per cent in 1933, and 93.3 per cent in 1947. Overseas migration had lowered the proportion of Australian-born persons to 86.1 per cent by 1954, while in 1976 the proportion was down to 76.4 per cent. The proportion of the population born in the United Kingdom, including the Republic of Ireland, fell from 11.0 per cent in 1911 to 5.1 per cent in 1947 and rose to 12.7 per cent in 1976.

Country of Birth of Population, South Australia
Censuses 1971 and 1976^(a)

Country of Birth	30 June 1971			30 June 1976			Increase	
	Persons	Males	Females	Persons	Males	Females	Persons	Persons
Australia	893 638	468 111	483 424	951 535	483 424	468 111	57 897	872
New Zealand	3 226	2 113	1 985	4 098	2 113	1 985	872	
Europe:								
United Kingdom and Republic of Ireland	148 020	79 409	78 473	157 882	79 409	78 473	9 862	
Germany	15 410	7 631	7 762	15 393	7 631	7 762	(-) ¹⁷	
Greece	14 717	7 712	6 994	14 706	7 712	6 994	(-) ¹¹	
Italy	32 428	17 275	14 668	31 943	17 275	14 668	(-) ⁴⁸⁵	
Netherlands	11 743	5 717	5 024	10 741	5 717	5 024	(-) ^{1 002}	
Poland	7 058	4 125	2 789	6 914	4 125	2 789	(-) ¹⁴⁴	
Yugoslavia	8 931	5 187	3 816	9 003	5 187	3 816	72	
Other	22 815	12 650	10 032	22 682	12 650	10 032	(-) ¹³³	
Total Europe	261 122	139 706	129 558	269 264	139 706	129 558	8 142	
Other countries	15 721	10 231	9 631	19 862	10 231	9 631	4 141	
Total born outside								
Australia	280 069	152 051	141 173	293 224	152 051	141 173	13 155	
Total	1 173 707	620 162	624 598	1 244 760	620 162	624 598	71 053	

(a) Population as enumerated, not adjusted for underenumeration.

Period of Residence in Australia

The post-war migration flow into Australia is shown by the number of persons who have taken up residence in Australia since the late 1940s.

Period of Residence in Australia of Persons in South Australia
Censuses 1971 and 1976^(a)

Period of Residence in Australia	30 June 1971			30 June 1976			
	Residents			Residents			Visitors
	Males	Females	Persons	Males	Females	Persons	Persons
Under 1 year	7 686	7 460	15 146	1 935	2 024	3 959	} 3 271
1 year and under 2	8 309	8 034	16 343	2 918	3 021	5 939	
2 years and under 3	6 950	6 724	13 674	3 521	3 442	6 962	
3 years and under 4	4 962	4 721	9 683	3 466	3 615	7 082	
4 years and under 5	6 032	6 003	12 035	3 744	3 534	7 278	
5 years and over	103 438	92 166	195 604	83 377	76 039	159 416	
Not stated	6 887	7 005	13 892	51 255	48 059	99 314	
Born outside Australia	144 264	132 113	276 377	150 214	139 736	289 950	3 271
Born in Australia	439 365	454 273	893 638	468 111	483 424	951 535	..
Total	583 629	586 386	1 170 015	618 325	623 160	1 241 485	3 271

(a) Population as enumerated, not adjusted for underenumeration.

At the 1976, and previous censuses, details of period of residence in Australia were sought from overseas born. In 1947 there were 43 552 residents in South Australia (including visitors) who were not born in Australia and only 5 per cent of these had lived in Australia for less than five years. By 1954 the number of such persons had risen to 110 605 of whom 51 per cent had resided in Australia for less than 5 years. By 1976 the number (excluding visitors) had increased to 289 950, but the proportion of those who had lived in Australia for less than five years had fallen to 10.8 per cent although the reliability of the latter figure may be affected by the higher number in the 'Not stated' category.

Religion

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1976 Census respondents representing approximately 10 per cent of the South Australian population chose not to answer.

The Church of England has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8 per cent of answers compared with 22.1 per cent in 1976.

Changes in the pattern of religious affiliation appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (*i.e.* persons described as either Catholics or Roman Catholics) who accounted for only 14.3 per cent of the answers in 1933 compared with 19.9 per cent in 1976.

The proportion of the population claiming no religious affiliations has increased over the years, from 8.2 per cent of the population in 1971 to 11.3 per cent in 1976.

Religious Denomination of Population, South Australia Censuses 1971 and 1976^(a)

Religious Denomination	30 June 1971		30 June 1976	
	Persons	Proportion of Total	Persons	Proportion of Total
Christian:		Per cent		Per cent
Baptist	22 010	1.9	22 004	1.8
Catholic, Roman Catholic ^(b)	242 166	20.6	247 572	19.9
Church of England	286 754	24.4	275 338	22.1
Lutheran	62 641	5.3	62 344	5.0
Methodist	215 328	18.3	195 890	15.7
Presbyterian	39 920	3.4	34 778	2.8
Other Christian	133 057	11.3	136 454	11.0
Total Christian	1 001 876	85.4	974 381	78.3
Non-Christian:				
Hebrew	1 131	0.1	1 072	0.1
Muslim	628	0.1	1 031	0.1
Other Non-Christian	1 424	0.1	2 747	0.2
Total Non-Christian	3 183	0.3	4 849	0.4
Indefinite	3 751	0.3	5 528	0.4
No religion	95 874	8.2	140 070	11.3
Not Stated	69 023	5.9	119 930	9.6
Total	1 173 707	100.0	1 244 758	100.0

(a) Population not adjusted for underenumeration. (b) So described in individual census schedules.

Educational Attainment

Schooling History

At the 1976 Census information was sought on the age at which people aged 15 years and over left school. The following table summarises the details obtained from this question and for children under fifteen years in South Australia.

Schooling History of Population, South Australia
Census 1976^(a)

Age Left School	Males	Females	Persons	Proportion of Total
Not attending school:				Per cent
Age 0-4 years	51 899	49 374	101 272	8.1
Age 5-14 years	2 850	2 427	5 277	0.4
Still attending school	137 279	129 268	266 546	21.4
Age left school:				
12 years or younger	14 050	15 343	29 393	2.4
13 years of age	17 639	18 931	36 570	2.9
14 years of age	101 293	110 715	212 008	17.0
15 years of age	89 255	105 293	194 548	15.6
16 years of age	82 976	88 348	171 324	13.8
17 years of age	52 996	47 772	100 768	8.1
18 years of age	23 170	14 391	37 561	3.0
19 years or older	11 488	5 050	16 537	1.3
Never attended school	3 690	4 352	8 042	0.6
Not stated	31 578	33 333	64 911	5.2
Total	620 162	624 596	1 244 757	100.0

(a) Population as enumerated, not adjusted for underenumeration.

Educational Qualifications

At the 1971 and 1976 Censuses information was sought on the type of educational qualification obtained. The following table shows that of the total population 15 years of age and over in 1971, only 19.5 per cent had obtained any educational qualifications since leaving school, but this proportion had risen to 21.2 per cent in 1976.

Educational Qualifications of Population, South Australia
Censuses 1971 and 1976^(a)

Highest Level of Qualification Obtained	1971		1976	
	Persons	Males	Females	Persons
No qualification	671 026	274 540	355 957	630 498
Trade level	84 283	80 333	11 601	91 934
Technician level	26 770	17 322	20 379	37 701
Tertiary (excluding degrees)	25 090	14 728	15 704	30 431
Bachelor degree, post graduate-diploma or equivalent	12 404	14 413	6 277	20 691
Higher degree level or equivalent	1 779	2 178	474	2 652
Qualification not classified by level	12 449	3 256	7 368	10 623
Inadequately described	56			
Total with qualifications	162 831	132 230	61 803	194 032
Not stated	—	43 920	46 240	90 160
Total population 15 years of age and over	833 857	450 689	464 001	914 690

(a) Population as enumerated, not adjusted for underenumeration.

Family Structures

At the 1976 Census, occupants of private dwellings were asked to identify the household head and to describe the relationship of each person in the household to this person. From the answers provided to this and other questions, the structures of families were determined. The results for South Australia are summarised in the following table.

Family Structure of Population, South Australia
Census 1976^(a)

Family Structure	Male Head	Female Head	Total Families
Head only	31 140	43 768	74 908
Head and children only	2 336	12 208	14 544
Head and spouse only	91 818	2 382	94 200
Head, spouse and children	113 976	1 388	115 364
Head and other adults only	5 344	11 420	16 764
Head, other adults and children	1 154	4 288	5 442
Head, spouse and other adults only	36 230	506	36 736
Head, spouse, other adults and children	39 316	448	39 764
Commune	84	12	96
Total families in private dwellings	321 398	76 420	397 818

(a) Population as enumerated, not adjusted for underenumeration.

Other Characteristics

Some census details of occupation, occupational status and industry are set out in Part 7.1.

PART 6

SOCIAL ENVIRONMENT

6.1 LAW, ORDER AND PUBLIC SAFETY

LAW AND ADMINISTRATION

The law in force in South Australia consists of:

- (i) so much of the common law of England and such English statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc., made thereunder;
- (iii) Acts passed by the Commonwealth Parliament within the scope of its allotted powers, together with regulations, rules, orders, etc., made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of Australia or as a State—subject, since 1931, to the Statute of Westminster (this relates mainly to external affairs or matters of Imperial concern);
- (v) Case law (this consists of judicial decisions of the English, Commonwealth or State Courts, respectively, and represents an important part of the law in force in South Australia).

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth Government powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

LEGAL PROFESSION

Legal practitioners in South Australia are entitled to act as either barristers or solicitors, although some practitioners elect to practice only in one of these capacities. All practitioners have a right of audience in all Courts of South Australia except the Supreme Court, where only principals have this right.

After completing the prescribed academic training, followed by a period of practical training in a legal practice course or in articles, aspirant practitioners apply to the Full Court of the Supreme Court for admission to practice, and are issued with a Practising Certificate which is subject to annual renewal.

Rules of Court regulate the conditions of entry into the legal profession and the Legal Practitioners Act, 1936-1977 provides the basis for control of legal practitioners in such areas as discipline, remuneration, accounting for trust funds and the qualifications of notaries public. The Act also constitutes the Law Society of South Australia and provides for the hearing of charges of unprofessional conduct by a Statutory Committee of that Society, and the referral of such charges to the Supreme Court which may make such order as it thinks fit.

In 1978 there were 843 legal practitioners entitled to practice in South Australia. Of this number, 731 were engaged in private practice.

Members of the legal profession voluntarily provide an advisory service outside normal business hours. Any person may obtain preliminary legal advice through this service for which a nominal charge is made. The service operates at Adelaide, Campbelltown and Christies Beach.

LAW DEPARTMENT

In South Australia the Attorney-General is a Minister of State Parliament. There is a Solicitor-General who, under the Attorney-General, acts as principal legal adviser to the Government.

The Attorney-General is charged with the conduct of business relating to the Supreme Court and inferior Courts as well as statute law revision and consolidation. He also advises Ministers on questions on which his legal opinion is required, initiates and defends proceedings by and against the State and determines whether informations should be laid in cases of indictable offences.

The Attorney-General also administers Acts of Parliament relating to justices, coroners, lands titles, registration of companies and business names, liquor licensing, the Electoral Department and various vocational licences.

The Law Department consists of administrative functions, the Local and District Criminal Courts and Courts of Summary Jurisdiction, the Crown Law Office, the Sheriff's Office, the Coroner's Office, the Government Reporting Division and ancillary legal research services.

SUPREME COURT

The Supreme Court is the superior court of record in and for the State and is constituted by the Chief Justice and the puisne judges appointed under the Supreme Court Act, 1935-1978. The Supreme Court is a court of law and equity and is vested with jurisdiction in civil, criminal, testamentary, land and valuation, admiralty and appellate causes or matters. The Supreme Court Rules made by the Judges under the power contained in the Act regulate the pleading practice and procedure of the Court in any jurisdiction and the manner in which all suitors' funds are to be dealt with. The officers of the Court are appointed by the Governor on the recommendation of the Public Service

Board except that in the case of the masters, the concurrence of the Chief Justice is required.

There are at present eleven judges of the Supreme Court, comprising the Chief Justice, Mr L. J. King, QC, and ten puisne judges. A judge holds office until the age of seventy years at a salary determined by the Governor. The Court sits in Adelaide, but holds circuit sessions three times each year at Port Augusta and Mount Gambier.

Testamentary Causes Jurisdiction

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Except in the case of certain small estates, a grant of representation is generally necessary to obtain title to the property of a deceased person. Pending a grant of probate or administration, all property of a deceased person, in respect of which he died intestate, is vested in the Public Trustee. The Court does not release a grant until succession duty (if any) on the estate has been paid or security accepted for the due payment of duty.

The powers of the Court are exercised by a judge, the Master and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the Registrar may obtain the direction of a Judge. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

Civil and Criminal Jurisdiction

Generally speaking, the Supreme Court has unlimited civil and criminal jurisdiction, except in respect of matters which are reserved for the original jurisdiction of Commonwealth Courts. The Court as a rule determines its own practice.

Following the establishment of District Criminal Courts, jurisdiction to hear many indictable offences was vested in these Courts late in 1970.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury. The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by statute. The original jurisdiction of the Court is usually exercised by a single judge sitting in Court or in Chambers. Although it is still possible to have certain civil issues tried before a jury, this has not been done for many years.

The Court has power to restrain inferior courts from acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court acts as a court of appeal from inferior courts. In proper cases, appeals lie from decisions of the Supreme Court to the High Court of Australia or where not excluded by statute, direct to Her Majesty In Council (*i.e.* the Privy Council).

The following table gives details of persons tried and convicted for the years 1973 to 1977. In the post-war period to the end of 1977, a total of fifty-six persons were sentenced to death in South Australia; forty-one of these sentences were subsequently commuted. The last execution in South Australia occurred in 1964; no female has been executed in the State since 1873. The Statutes Amendment (Capital Punishment Abolition) Act, 1976 assented to on 23 December 1976 abolished capital punishment in South Australia.

Supreme and Circuit Courts: Trials and Convictions, South Australia

Year	Tried		Convicted	
	Males	Females	Males	Females
1973	149	21	125	17
1974	153	10	132	10
1975	188	9	149	6
1976	188	17	143	15
1977	195	16	174	13

Details of trials and convictions for Higher Courts (Supreme and Circuit, and District Criminal) in 1977 are included in the table below.

Higher Courts: Trials and Convictions, South Australia, 1977

Major Offence (Grouped)	Supreme and Circuit Courts				District Criminal Courts			
	Tried		Convicted		Tried		Convicted	
	Males	Females	Males	Females	Males	Females	Males	Females
Homicide	21	5	16	3	13	2	9	1
Assault (including rape)	70	2	63	2	177	11	141	8
Robbery and extortion	39	3	35	3	5	—	5	—
Fraud, forgery and misappropriation	25	5	25	5	63	4	57	4
Theft, breaking and entering	13	—	13	—	492	33	469	32
Property damage	13	—	11	—	7	—	7	—
Driving and related offences	—	—	—	—	3	—	3	—
Other offences	14	1	11	—	143	16	137	14
Total	195	16	174	13	903	66	828	59

LOCAL AND DISTRICT CRIMINAL COURTS

Local and District Criminal Courts are now constituted under the Local and District Criminal Courts Act, 1926-1978. An amendment to the Act in 1969 increased the jurisdiction of Local Courts, established District Criminal Courts and provided for the appointment of a Senior Judge and other judges.

Local Courts

Local Courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction. The Local Courts Act, 1926 effected important alterations in the structure and jurisdiction of Local Courts by abolishing juries in Local Courts and also justices as constituent members of Courts of Full Jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations and orders of local courts in actions involving more than \$60.

Local Courts are divided into three groups—Full Jurisdiction, Limited Jurisdiction and Special Jurisdiction. The courts vested with all three jurisdictions are the Local Courts of Adelaide, Berri, Mount Gambier, Port Lincoln, Port Pirie and Whyalla. These courts may hear and determine actions for amounts up to \$20 000. The equitable jurisdiction provisions have also been extended to all Local Courts of Full Jurisdiction. Local Courts of Limited Jurisdiction may hear and determine claims of up to \$2 500, with special provisions for hearing 'small claims' as defined for a pecuniary sum not exceeding \$500. Courts of Special Jurisdiction may hear and determine any unsatisfied judgment summons whatever the amount of the judgment.

Local Courts: Summary of Transactions, South Australia

Year	Total Claims		Verdicts and Judgments				Service and Execution of Process Act	
	Sum-moneses Issued (a)	Amount Sued For	Verdicts by Trial		Judgment by Default		Sum-moneses for Service out of Jurisdiction	Amount
			Number	Amount	Number	Amount		
		\$'000		\$'000		\$'000		\$'000
1972	101 780	19 128	1 595	1 346	45 082	4 911	1 755	973
1973	95 474	19 660	1 564	1 447	40 657	6 034	752	1 047
1974	93 375	24 615	1 678	1 951	36 853	6 264	1 815	1 117
1975	84 607	26 109	2 356	4 013	34 079	8 133	1 812	1 722
1976	70 443	46 343	3 348	6 321	29 016	8 100	2 102	2 946

(a) Including those withdrawn or settled out of Court.

A Local Court of Full Jurisdiction may be constituted of a Judge of the Supreme Court or a Local Court Judge, and exercise all jurisdictions under the Act. A special magistrate may exercise limited jurisdiction and special jurisdiction, while two justices of the peace sitting together or one special justice sitting alone may exercise special jurisdiction only.

Any Local Court may reserve any question of law arising in any action for the decision of the Supreme Court, and any party who is dissatisfied with any final judgment, determination or order of a Local Court, if the claim exceeds \$500, may appeal to the Supreme Court. Appeals involving claims under \$500 may be made if leave of the Supreme Court is obtained.

Pursuant to Section 28 of the Act the Governor may appoint the Senior Judge or any other judge to make rules of court for carrying into effect the Act or any other Act conferring jurisdiction upon Local Courts.

District Criminal Courts

These courts came into operation on 31 August 1970 and have jurisdiction to hear and determine many of the indictable offences that previously could only be tried by the Supreme Court. The State is divided into three proclaimed districts; Central Criminal Court District, Northern Criminal Court District, and the South Eastern Criminal Court District.

The jurisdiction of a District Criminal Court is exercisable by a District Criminal Court Judge sitting in open court, with or without a jury, or in chambers as the case may require. The Crown is represented in District Criminal Courts by the Attorney-General or by counsel appearing on his behalf. The other party may conduct his own case or may engage counsel on his behalf. A person who is not a practitioner of the Supreme Court entitled to practise cannot appear in a District Criminal Court on behalf of any party.

Appeals against verdicts and sentences of District Criminal Courts are to the Full Court.

Pursuant to Section 321 of the Act the Senior Judge and two other judges may make rules of court for carrying into effect the District Criminal Court provisions of the Act.

COURTS OF SUMMARY JURISDICTION

Courts of Summary Jurisdiction are held in all major towns to hear criminal cases. In offences of dishonesty their jurisdiction is in most instances confined to cases where the

property value is not more than \$400, and the limit of their jurisdiction as to penalty is imprisonment for two years. Their procedure is regulated by the Justices Act, 1921-1976. They are presided over, either by a special magistrate, a special justice or by two justices of the peace, with the more serious causes generally being heard by a special magistrate.

Special magistrates are appointed under the Justices Act and the Local Courts Act, and each appointment must be approved by the Chief Justice. Generally appointees are required to be practitioners of the Supreme Court who have been practising for some years.

Courts of Summary Jurisdiction (Magistrates Courts), Persons Convicted
South Australia^(a)

Offence	1973-74	1974-75	1975-76	1976-77
Against the person	718	888	767	793
Against property:				
Burglary and housebreaking	1	—	13	82
Larceny (various)	1 996	2 223	1 956	2 125
Other	1 254	1 430	1 251	1 256
Against morality	167	146	150	219
Against good order:				
Drug offences	150	274	440	904
Drunkenness	7 973	6 736	5 923	4 634
Unlawfully on premises	258	307	232	214
Vagrancy	206	152	75	95
Other	2 200	2 731	2 608	2 412
Other, relating to:				
Road Traffic and Motor Vehicles Acts	57 518	70 732	76 835	86 478
Licensing Act	250	299	365	344
Community Welfare Act	1 523	565	332	154
Police Offences Act	1 020	1 091	1 024	982
Local Government Act	5 620	6 836	1 452	2 168
Broadcasting and Television Act	2 919	608	—	—
Income Tax Assessment Act	1 591	1 702	9	111
Other	7 673	7 682	2 326	2 253
Total persons convicted:				
Males	81 812	92 296	84 874	91 800
Females	11 225	12 106	10 884	13 424
Total	93 037	104 402	95 758	105 224

(a) Excludes juveniles. Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

Offences under the Road Traffic and Motor Vehicles Acts accounted for 82 per cent of total convictions in 1976-77.

JUVENILE COURTS

Proceedings in juvenile courts are regulated by the Juvenile Courts Act, 1971-1975 which came into force on 1 July 1972. The Senior Judge appointed under this Act exercises administrative control over juvenile courts throughout the State.

Juvenile courts may be presided over by a judge, a special magistrate or, in certain

circumstances, either a special justice or two justices of the peace who have been approved as suitable to exercise this jurisdiction. The courts, if constituted of a judge or a special magistrate may try any offence (except homicide) committed by a juvenile. Limitations are placed on the jurisdiction of special justices or two justices of the peace.

Juvenile offenders appearing before courts are classified into two basic groups according to the age of the child. Children under sixteen years are charged with being in need of care and control as a consequence of an alleged offence. When dealing with children in this group the court may discharge the child, release the child on a bond with or without supervision, or place the child under the care and control of the Minister of Community Welfare with or without an order committing the child to an institution. A child under sixteen cannot be convicted of an offence. Children over sixteen may be charged with an offence and dealt with as above with or without conviction; in addition the Act provides that a fine may be imposed and compensation or restitution may be ordered. Juvenile courts also exercise jurisdiction over truants, neglected children and uncontrolled children.

**Juvenile Offenders: Offences Proved in Juvenile Courts and Aid Panels
South Australia^(a)**

Type of Offence	Juvenile Courts		Juvenile Aid Panels	
	1976-77	1977-78	1976-77	1977-78
Homicide	2	1	—	—
Assault	270	296	82	74
Robbery	21	34	6	4
Rape	16	22	1	2
Other heterosexual offences	75	38	9	15
Breaking and entering	1 156	1 295	592	516
Vehicle theft	804	938	229	226
Other theft	1 429	1 478	2 391	2 050
Wilful damage	361	417	297	256
Receiving	107	124	129	95
Fraud	367	404	103	86
Drug offences	243	342	20	33
Driving and traffic (b)	735	873	792	685
Liquor	464	392	49	44
Unlawfully on premises	145	148	154	113
Indecent behaviour	70	85	25	19
Drunk, disorderly	672	727	126	146
Other	706	725	353	308
Total offences	7 643	8 339	5 358	4 672
Male	6 825	7 453	4 043	3 736
Female	818	886	1 315	936
Individual offenders:				
Male	2 803	2 949	2 476	2 306
Female	493	465	1 027	725

(a) Under 18 years. Excludes truants and children found to be neglected, destitute or uncontrolled.

(b) Excludes most minor traffic offences.

In most cases when a child under sixteen years is alleged to have committed an offence, the matter is referred to a non-judicial body called a juvenile aid panel for consideration. Difficult cases may be referred by the panels to the juvenile courts. For further details see Part 6.6.

THE LICENSING COURT

The licensing of hotels and the issue of liquor licences and permits is governed by the Licensing Act, 1967-1978 under which is constituted a Licensing Court consisting of a Licensing Court Judge, Special Magistrates designated by the Governor as members of the Licensing Court, and Licensing Court Magistrates. The classes of licences that may be granted are:

- | | |
|--|---------------------------------|
| (a) Full publican's licence. | (j) Packet licence. |
| (b) Limited publican's licence. | (k) Railway licence. |
| (c) Wholesale storekeeper's licence. | (l) Restaurant licence. |
| (d) Retail storekeeper's licence. | (m) Limited restaurant licence. |
| (e) Wine licence. | (n) Cabaret licence. |
| (f) Brewer's Australian ale licence. | (o) Theatre licence. |
| (g) Distiller's storekeeper's licence. | (p) Special licence. |
| (h) Vigneron's licence. | (q) Twenty-litre licence. |
| (i) Club licence. | (r) Hotel broker's licence. |

Fees for licences are paid in accordance with the amount of liquor purchased (or in some cases sold) during the preceding twelve months and at present, in the case of the retail licences, is calculated at 8 per cent of the amount of purchases.

The following table shows the number of licences and permits issued during the years ended 30 June 1974 to 1978.

Liquor Licences and Permits, South Australia

Licence or Permit	Year ended 30 June				
	1974	1975	1976	1977	1978
Licence:					
Publican's;					
Full	601	602	603	603	604
Limited	48	55	55	58	59
Storekeeper's (a)	180	183	189	190	190
Vigneron's	61	67	75	86	89
Club	159	177	185	199	216
Restaurant	137	151	171	202	229
Permits:					
Special licensed premises	6 673	5 634	4 548	3 451	2 220
Special unlicensed premises	16 953	17 071	17 654	17 797	19 046
Booth	7 877	7 466	7 903	8 221	9 326
Club	2 097	2 036	2 041	2 092	2 209
Other	914	744	1 225	1 078	1 246

(a) Covers wholesale, retail and distillers.

In December 1976, legislation was enacted to authorise discretionary hotel bar trading hours from 5 a. m. to 12 midnight, Monday to Saturday, and to fix obligatory trading hours, Monday to Saturday from 11 a.m. to 8 p.m.

In the case of a full publican's, limited publican's and restaurant licence, liquor may be sold and disposed of in the dining area at any time on any day with or ancillary to *bona fide* meals.

The Court may upon the granting or renewal of a full publican's licence, having regard to the needs of the public, exempt the holder of the licence from the obligation to supply lodging. In December 1977, legislation was enacted introducing a limited restaurant licence which authorises the consumption of liquor at any time on any day in the premises specified in the licence, with or ancillary to *bona fide* meals, by persons bringing the liquor onto the premises for their own consumption.

Permits may be granted under certain circumstances to extend the trading hours of licensed premises and to allow the sale, supply or consumption of liquor in unlicensed premises. Permits may be granted to clubs, for periods of up to one year, for the sale and supply to members for consumption on club premises—at 30 June 1978, 783 of these permits were current. Clubs whose takings from the sale of liquor exceed \$25 000 in any one year are not eligible for a permit but are required to apply for a club licence.

BANKRUPTCY

Since 1928 bankruptcy has been under Commonwealth Government jurisdiction. Under the *Bankruptcy Act* 1966 South Australia is a bankruptcy 'district' and jurisdiction is exercised through the Court of Insolvency of the State of South Australia exercising Commonwealth jurisdiction in bankruptcy.

A debt of at least \$500 is necessary before a creditor may commence bankruptcy proceedings. Preferential creditors include employees for amounts owing in respect of wages and salaries, worker's compensation, long service leave, annual leave, recreation leave or sick leave, and the Commissioner of Taxation for unpaid tax on one year's income.

A bankrupt who has not previously been discharged is automatically discharged after five years unless an objection is filed with the Registrar in Bankruptcy.

Bankruptcies: Number, Liabilities, Assets, South Australia

Year	Bankruptcies and Orders for Administration of Deceased Debtors' Estates			Compositions, Deeds of Arrangement and Deeds of Assignment			Total Debtors
	Number	Assets	Liabilities	Number	Assets	Liabilities	
		\$	\$		\$	\$	
1973-74	358	1 049 624	2 036 653	15	375 849	433 540	373
1974-75	427	1 580 680	3 304 232	10	718 437	805 578	437
1975-76	341	2 894 881	3 646 832	10	394 858	528 012	351
1976-77	448	3 705 374	5 993 902	8	345 840	365 942	456
1977-78	655	4 973 118	9 492 844	18	551 434	2 327 360	673

JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1976.

Indictable offences are tried before a Judge and twelve jurors sitting in the criminal jurisdiction of either the Supreme Court or District Court, depending on the gravity of the offence. In South Australia, for many years juries have not officiated when civil causes were being tried.

Jury districts for the metropolitan and certain country areas are fixed by proclamation pursuant to the Juries Act and consist of a number of subdivisions of the House of Assembly electoral districts. Legislation passed in 1965 provided for women to serve on juries as well as men, and, with certain exceptions, all persons over the age of twenty-five and under sixty-five who are enrolled as House of Assembly electors within the proclaimed jury districts are qualified and liable to serve as jurors.

Persons who may claim exemption from liability to serve are listed in the third schedule to the Act and include judges, Members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, university professors, police officers, doctors, dentists, pharmacists, opticians, physiotherapists, veterinary surgeons, newspaper editors and school teachers.

A jury list is compiled annually for each jury district. The names of persons included in the list are selected by computer process from the appropriate House of Assembly electoral rolls at the direction of the Sherriff. The jurors summoned to hear and determine an issue are later selected by ballot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons. About 1 500 persons serve on juries each year in South Australia. A jury pool system was instituted in 1974 and juries now may be required to serve in both the Supreme and District Criminal Courts during their month of service.

STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial Code, 1967-77, under which the Industrial Court, Industrial Commission, Conciliation Committees and Commissioners have been established. For details on the composition of these bodies and their functions see Part 7.2.

LEGAL SERVICES COMMISSION

The Legal Services Commission, constituted under the provisions of the Legal Services Commission Act, 1977, is responsible for the provision of all legal assistance in South Australia and provides free legal advice to any person.

The Commission provides legal services going beyond legal advice in any matter, including representation in court proceedings. These services are subject to a flexible means test, and may be provided either by lawyers employed by the Commission or by private practitioners.

The Commission is administered by an independent statutory body which includes representatives from a variety of groups in the community. It is jointly funded by the State and Federal Governments and includes a Research and Education Section which is responsible for issuing pamphlets and other educational activities to advise people of their legal rights and powers.

The South Australian Law Society also conducts some evening legal advisory services, at no cost to pensioners and students, and at a nominal charge to others.

CONSUMER PROTECTION

Consumer protection in South Australia, in common with the other States, is a responsibility divided between the Commonwealth and State Governments. The major arm of Commonwealth responsibility is the Trade Practices Commission; the relevant

State instrumentality is the Department of Public and Consumer Affairs. In practice, the Trade Practices Commission intervenes only in multi-State matters or where exemplary legal action is called for. The State looks into matters involving consumer redress.

The South Australian Department of Public and Consumer Affairs was formed in 1976 from units of several existing departments. A number of branches of the new Department are involved in consumer protection work. The Consumer Services Branch, headed by the Commissioner for Consumer Affairs (formerly known as the Prices Commissioner), deals with the most general consumer complaints, and generally supervises sixteen Acts, including the Consumer Transactions, Manufacturers Warranties, Door to Door Sales, Unfair Advertising, Defective Houses, Second-hand Motor Vehicles, Fair Credit Reports and Prices Acts.

The following table gives details of complaints investigated by the Commissioner for Consumer Affairs and the Consumer Services Branch during 1977.

**South Australian Department of Public and Consumer Affairs, Consumer Services Branch,
Formal Complaints Investigated, 1977**

Particulars	Number of Complaints	Percentage of Total
		Per cent
Faulty goods and services	3 119	37.72
Unfair dealing	1 654	20.00
Excessive charges (non-controlled)	777	9.40
Second-hand Motor Vehicles Act	893	10.80
Consumer Credit Act	532	6.43
Unfair Advertising Act	429	5.19
Prices Act, Section 25	294	3.56
Door to Door Sales Act	208	2.52
Unordered Goods and Services Act	73	0.88
Prices Act, Sections 33a, 33d, 33e	6	0.07
Other Acts	24	0.29
Miscellaneous	260	3.14
Total complaints	8 269	100.00

The Standards Branch, headed by the Commissioner for Standards, specialises in matters relating to weights and measures, packaging and labelling. Included in the Standards Branch's administration are seven Acts, including the Packages, Goods (Trade Descriptions), Flammable Clothing and Trade Measurements Acts.

The Builders' Licensing Board licenses and supervises the conduct of builders offering their services.

The Commercial Tribunals Branch comprises several licensing and disciplinary authorities supervising various industries, including auctioneers, credit providers, land agents and used-car dealers.

Co-operation between the Commonwealth and South Australian authorities on a day-to-day basis ensures that overlapping and duplication of activities is kept to a minimum.

PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is now regulated by the Administration and Probate Act, 1919-1978. It provides a service to the public by preparing wills free of charge and in the administration of estates and the protection of infants and absentee beneficiaries in estates administered by private administrators. A person may appoint the Public Trustee to be the executor and trustee of a will or as trustee of any disposition of property creating a trust.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act, 1940-1975; and receives, invests and distributes for the benefit of widows and minor dependants, amounts awarded under the Workmen's Compensation Act, 1971-1974.

Under the Mental Health Act, 1976-1977 the Public Trustee has control of the estates of some of the patients who have been admitted to Government mental hospitals, and may be appointed to act for the estate of any person found to be of unsound mind.

THE SOUTH AUSTRALIAN POLICE FORCE

The police force was first established in South Australia in 1838 and has been administered by a Commissioner of Police since 1840. Since that time the Force has grown to such an extent that a Deputy Commissioner and three Assistant Commissioners have been introduced. Each Assistant Commissioner has control of one of three major areas of the Force which have been designated 'Crime and Services', 'Operations' and 'Personnel and Training'. The number of police officers rose steadily from 127 in 1851 to a peak of 802 in 1929, fell to 674 in 1943 and has since risen steadily to 2 879 in 1978.

Women police officers were introduced in 1915 giving the Force the distinction of being the first, in the then British Commonwealth, to do so. In that year two female officers were sworn in having equal rights with the male officers. By 1974 the number of women police officers had grown to thirty-six and at 30 June 1978 the total number was 125.

The maintenance of law and order and the reduction of opportunities for criminal activity are the main functions of the uniformed branches. At 30 June 1978 there were thirty-four metropolitan regional and 109 country police stations and offices.

Police Personnel, South Australia^(a)
At 30 June

Personnel	1974	1975	1976	1977	1978
Commissioned officers	81	89	94	101	105
Non-commissioned officers	581	645	677	718	757
Constables	1 629	1 739	1 787	1 899	2 017
Total active police force	2 291	2 473	2 558	2 718	2 879
Persons per active member	540	506	493	473	448

(a) Active police force strength. Excludes trainees and cadets, women police auxiliaries, civil staff, etc.

The Traffic Region has recently completed decentralisation and now each metropolitan region has a complement of traffic police. Their duties include policing the general regulations relating to road use, controlling traffic and improving road safety by ensuring

the safe and efficient flow of traffic. Such services as speed detection, accident investigation and prevention, testing vehicles for road worthiness and lecturing on road courtesy and safety are still maintained by units stationed at the Thebarton Police Barracks. A Traffic Intelligence Centre, using information gained from accident statistics, assists in the correct placement of speed detection units in relation to accident action centres.

The Criminal Investigation Branch in Adelaide comprises a compact specialist unit responsible for the investigation of major crime or crimes involving an unusual expertise. Criminal Investigation Units are also placed in major metropolitan and country stations. To ensure that the activities of these units are co-ordinated, a Crime Intelligence Unit at Police Headquarters studies crime trends, and circulates relevant information. The Crime Director, a senior Commissioned Officer, is responsible for recommending the allocation of additional resources to any units requiring assistance. Auxiliary services provided by the Modus Operandi, Records, Fingerprints, Photographic, Documents, Ballistics, Crime Scene and Laboratory Sections are essential aids to criminal investigations.

In 1959, a Police Emergency Operations Group consisting of Cliff Rescue, Underwater Recovery, Sea Rescue and Emergency Squads, was constituted under the direction of a Superintendent who is now Director of the State Emergency Service. This group will become part of a Special Tasks and Rescue Force (STAR) which will also incorporate the duties of the present Task Force police.

The Commissioner of Police is responsible for the Country Fire Services, operations of which are outlined on page 176-7.

The following table gives details of the revenue and expenditure of the South Australian Police Force in recent years.

South Australian Police Force, Revenue and Expenditure^(a)

Year	Expenditure			Revenue	Net Cost		
	Wages and Salaries	Other	Total		Total	Per Head	
	Dollars						
1973-74	18 131 664	2 840 914	20 972 578	1 638 929	19 333 649	15.76	
1974-75	26 449 889	3 791 410	30 241 299	2 206 690	28 034 609	22.49	
1975-76	34 076 299	5 776 230	39 852 529	2 364 170	37 488 359	29.83	
1976-77	40 763 959	6 981 012	47 744 971	3 076 243	44 668 728	34.98	
1977-78	47 675 182	9 103 157	56 778 339	(b) 3 322 782	53 455 557	41.44	

(a) As reflected in Consolidated Revenue Account only—capital expenditure is met from Loan Fund.

(b) Includes \$2 528 396 recouped from Highways Fund for traffic and road safety purposes which became payable under an amendment to the Highways Act from 1 July 1971.

The changing role of the police in the community, together with continual changes in law and investigational techniques, has resulted in special emphasis being placed upon the training of all personnel within the Force. Applications for cadetship are accepted from the age of sixteen and a half years and training commences at seventeen years of age. Cadets are given a two-year course of academic and practical instruction before graduation to operational duties. Adults are enlisted between the ages of nineteen and twenty-nine years and are given twenty-six weeks instruction; they then serve a probationary period on general duties before being permanently appointed.

All personnel are required to undergo refresher training at selected intervals of service. In addition, courses are regularly conducted for such specialist appointments as prosecutors, detectives, technicians and instructors. At 30 June 1978 there were 435 cadets in training, including seven trade apprentices, cadet bandmen, and 73 adult recruits who had received training during the year. Formal instruction was given to 563 members in refresher or specialist courses during 1978.

In 1971 the use of light aircraft was instituted by the Department for the transport of personnel and prisoners throughout the State. Three aircraft are now in service; two being based in Adelaide and the third at Woomera. The primary role of the Woomera based aircraft is to provide a more frequent police presence on the Aboriginal Reserves in the north-west of the State.

An extensive re-organisation of the general duty police in the metropolitan area was begun early in 1973. This involved the division of metropolitan Adelaide into three territorial regions, each commanded by a Chief Superintendent, the implementation of a sector system within these regions and the restructuring of patrol areas to give emphasis to personal contact between the patrol force and the general public. Portable UHF radio hand sets have been introduced to enable mobile and foot patrols to be in contact with each other and with their patrol base. In certain areas, equipment code named TARTA, has been developed to allow the patrolling officer to both make and receive telephone calls from the police vehicle via the Telecom exchange system. Telex and facsimile machines are also in use at certain main stations and within Police Headquarters. Developments are now being made to integrate the communications facilities with a computerised record retrieval system thereby greatly increasing the effectiveness of the force.

An Operational Planning and Support Unit, directly responsible to the Assistant Commissioner (Operations) and under the command of a Chief Superintendent was established in 1977. Its primary functions are to plan police requirements in providing security and crowd control measures for visits by Royalty and other dignitaries; prepare contingency plans to counter acts of terrorism and hijacking and to review and produce operational methods to assist Regional Commanders. A tactical reserve designated as a 'Task Force' functions under the command of the Assistant Commissioner (Operations). Members of the Task Force receive special training to deal with extraordinary emergencies and provide supplementary assistance at special events. This unit is soon to be incorporated in the previously mentioned STAR Force.

Command Planning Units have been established in major areas of the Department to examine and research new trends in police activities, extended manpower and equipment requirements, training needs, procedures and other police related matters.

A computer systems section is also being used to explore the ever widening field of the computer and its application in police oriented tasks.

The Police Community Affairs and Information Service was formed in 1973 to foster better relations between the police and the general public. An Aboriginal Liaison Officer (a police officer) is attached to this Section and deals directly with police/Aboriginal relations. In July 1975, a new branch known as the Inspectorate was set up primarily to inspect operational units and to investigate complaints against police. A Publications Section also functions within this unit to prepare and co-ordinate material for the updating and maintenance of Department Manuals and other publications.

Early in 1974, a Dog Squad of six handlers and six dogs became operational; its success has been such that it has expanded almost threefold and now comprises sixteen handlers and dogs. As well as carrying out foot and mobile patrol duties, the squad is used in tracking and drug searches.

Since the opening of the Eyre Highway in September 1976, two fully-equipped four-wheel drive vehicles have been used for daily patrols between Ceduna and the West Australian border.

CORRECTIONAL SERVICES

There were eight gaols and prisons and nine police prisons administered by the South Australian Department of Correctional Services during 1977-78. Adelaide Gaol is a holding centre for remand and short-term sentenced prisoners. Yatala Labour Prison, South Australia's largest prison, provides for long-term male prisoners under maximum, medium and minimum security ratings. Adjacent to Yatala is the Northfield Security Hospital which was officially opened in November 1973 to accommodate criminal mental defectives. This modern hospital is staffed by trained medical personnel and provides specialised treatment programs for both males and females. Port Augusta Gaol, Port Lincoln Prison and Mount Gambier Gaol are medium security prisons which accommodate male and female prisoners. Cadell Training Centre on the River Murray is a dual purpose institution which operates as a pre-release centre for long-term prisoners as well as accommodating medium security short-term prisoners. The Women's Rehabilitation Centre at Northfield is a multi-purpose prison for females from all parts of the State. The nine police prisons serve as short-term detention centres for both males and females, and are mainly situated in the more remote country areas.

In common with other States and countries the emphasis in South Australian prisons is on rehabilitation. Industrial and trade training in various fields is available throughout the institutions, enabling prisoners to be prepared for eventual outside employment. A wide range of correspondence courses are available through the colleges of advanced education and the South Australian College of External Studies under the supervision of the prison education officers. Special migrant and remedial classes are also conducted by the Education Division of the Department. An assessment panel ensures that prisoners serving long-term sentences are correctly assessed for education, employment, social and other training purposes. In a wide range of matters affecting the well-being and after-care of prisoners and their families, the prison administration is assisted by chaplains, the Offenders Aid and Rehabilitation Society, the Salvation Army and other voluntary organisations. Community services rendered by prisoners include the provision of emergency fire service units and the production of soft toys for children's homes.

Prisons: Persons under Sentence, 30 June 1976

Major Offence	Males	Females	Persons
Homicide	60	—	60
Assault	80	3	83
Robbery and extortion	34	—	34
Fraud, forgery and misappropriation	27	1	28
Theft, breaking and entering	225	—	225
Property damage	3	3	6
Driving and related offences	64	—	64
Other offences	92	4	96
Total	585	11	596

The Probation and Parole Branch continues to expand, both in staff numbers and in the decentralisation of services. District offices are located at Port Adelaide, Elizabeth, Gilles Plains, Christies Beach, Glenelg and Norwood in the metropolitan area and at Cadell, Gladstone, Whyalla, Port Augusta, Port Lincoln and Mount Gambier in the country. The Branch is responsible for providing supervision and social casework services to probationers and parolees. Social work graduates are providing a more professional social work service, including a wider range of treatment and management alternatives for offenders. Provision of pre-sentence social reports to the courts remains one of the major functions of the Branch.

PUBLIC SAFETY

FIRE SERVICES

The Fire Brigades Board

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first instituted in 1882.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Board maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in country towns. At 30 June 1978 there were thirty-nine fire brigade stations of which nineteen were metropolitan and twenty were country. During the year 1977-78 these brigades received 6 984 calls of which 669 were false and malicious calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30 June 1978, 602 officers and firemen and 126 auxiliary firemen.

In addition to its main function, the Board provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first-aid fire equipment.

The Fire Brigades Act, 1936-1976 provides that the expenses and maintenance of brigades be defrayed in the proportion of one-eighth by the State Treasury, three-quarters by insurance companies and one-eighth by the municipalities and district councils concerned.

Total contributions for 1977-78 were \$10 513 000 made up as follows; insurance companies \$7 885 000; municipalities and district councils \$1 314 000; and State Treasury \$1 314 000.

South Australian Country Fire Services

The South Australian Country Fire Services (CFS) is a voluntary fire fighting organisation affording urban and rural fire protection to an area of 886 000 square kilometres, or approximately 90 per cent of South Australia.

The CFS had its beginning in 1939 as the South Australian Emergency Fire Services, a branch of Civil Defence formed during the 1939-45 War. When Civil Defence was disbanded, the Emergency Fire Services was developed into a volunteer country fire service to protect those areas outside the districts covered under the Fire Brigades Act, 1936-1976.

South Australian Country Fire Services

Particulars	Unit	1976	1977	1978
Strength of service at 30 June:				
Affiliated organisations	No.	454	456	466
Volunteer members	No.	10 000	10 500	11 000
Fires attended in twelve months ended 30 June:				
Number of fires;				
Urban type	No.	327	320	265
Bush	No.	1 333	935	736
Area destroyed in bush fires	Hectares	285 190	202 455	79 965
Financial losses;				
Urban type	Dollars	1 364 783	1 016 726	1 687 196
Bush	Dollars	901 442	186 985	288 698

The South Australian Country Fire Services (CFS) is constituted as a statutory body under the Country Fires Act, 1976. The Act was assented to on 23 December 1976 and proclaimed on 2 June 1977, with the essential administrative sections becoming active and the remaining provisions being suspended until the Board is equipped to administer their functions. The Country Fire Services Board which held its inaugural meeting on 14 June 1977 consists of ten members appointed by the Governor.

The Act provides for the establishment of the 'Country Fire Services Fund' to be applied by the Board in the administration of the Act. The Fund is credited with moneys appropriated by Parliament and contributions by fire insurers. Grants will be paid from the Fund to subsidise expenditure by local government authorities and CFS organisations on the purchase and maintenance of fire fighting equipment.

A modern complex, situated at Keswick, functions as the administrative, fire control co-ordination and training headquarters of the Country Fire Services Board.

LIFE SAVING

The Royal Life Saving Society—Australia

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909 and the formation of clubs at various beaches followed. In 1952 an agreement was made with the Surf Life Saving Association whereby the Surf Life Saving Association undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a Council. The Society gives instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done by honorary instructors and examiners. It also conducts life saving patrols (water and beach) at the West Lakes waterway on weekends and public holidays during the warmer months. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination, and life saving demonstrations are conducted throughout the State. Awards totalling 31 409 were issued to candidates who passed the various examinations in the 1977-78 season.

The honorary work of the Society is financed mainly by grants made by the Commonwealth and State Governments, and by donations.

The Surf Life Saving Association

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Society has nineteen affiliated clubs situated at Aldinga Bay, Brighton, Chiton Rocks, Christies Beach, Glenelg, Grange, Henley, Hallett Cove, Moana, Port Elliot, Port Lincoln, Port Noarlunga, Seacliff, Semaphore, Somerton, Southport, Taperoo Beach, West Beach and Whyalla.

Voluntary members give many hours to patrolling their respective beaches on weekends and public holidays from the beginning of November until the end of March. At 30 June 1978 there were 1 515 members in Association clubs. From 1952 to the end of the 1977-78 season, 2 175 rescues were performed with no loss of life on patrolled South Australian beaches. During this same period many hundreds of persons received first-aid treatment.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies when building their club houses.

'Learn to Swim' Campaign

Vacation swimming classes organised by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and fourteen metropolitan swimming centres were set up and over 7 000 children enrolled for instruction. The January 'Learn to Swim' campaign has been continued in each subsequent year and has grown steadily; in the summer vacation of 1977-78, 139 country and eighty-seven metropolitan swimming centres were used, and the total student enrolment was approximately 38 500. Instruction is provided over a period of ten days by qualified swimming instructors. Instruction in Surf Life Saving was offered for the first time in 1972 at eleven metropolitan and four country beaches, and a limited program continues at selected beaches.

Swimming classes have also been conducted in school time since October 1954; 54 000 and 67 000 children were enrolled in these classes in the first and third terms of 1978 respectively.

Although swimming is still a major part of the program, the Education Department has introduced a number of water safety skills into the 'Learn to Swim' campaign. All instructors are trained to teach water safety, life saving and swimming by the most up-to-date methods available.

Special Aquatic Centres commenced in 1975 with one centre based at Victor Harbor. In 1978, nine centres were established and offered to children such activities as surfing, canoeing, skiing, snorkelling, adventure boating and wind surfing.

INDUSTRIAL ACCIDENT PREVENTION

The post-war growth of industrial activity in this State was accompanied by an increasing toll of injuries and fatalities sustained during the course of employment. Legislation requires certain minimum standards of safety in working conditions to be provided in various industries, and inspections are made to ensure compliance with legislative requirements. However, legislation and inspection are not the only means of minimising industrial accidents and in the late 1950s the South Australian Government

implemented a program of education for management, supervisors and employees in accident prevention measures, with the object of making all sections of industry more 'safety conscious'.

Safety officers employed in the Department of Labour and Industry conduct safety training courses, present lectures, screen films and distribute industrial safety pamphlets produced within the Department.

In addition the Safety Engineering Society of Australasia, the Australian Institute of Management (Adelaide Division), the South Australian Institute of Technology and the Department of Employment and Youth Affairs make valuable contributions within their particular spheres of activities to the promotion of industrial safety.

NATIONAL SAFETY COUNCIL OF AUSTRALIA SA DIVISION

The National Safety Council of Australia SA Division was formed in 1963 as the Industrial Accident Prevention Society of SA Inc., a voluntary non-profit educational body. It is an autonomous branch of the largest organisation in Australia devoting its entire resources to the reduction of accidents in most areas of the community. In South Australia the Council's efforts are devoted to occupational, child and home, and water safety problems; traffic safety being the function of the Road Safety Council of South Australia. The SA Division is also responsible for servicing the requirements of members in the Northern Territory and regular visits are made to that area for safety training and promotional purposes.

The aims of the Council are carried out by the provision of safety consultant services, lectures, training courses and the distribution of safety publications and materials. Finance is derived from membership fees, services, an annual grant from the State Government and assistance from the Commonwealth Government. The Council's activities are controlled by a body representative of all spheres of community interest.

ROAD SAFETY COUNCIL OF SOUTH AUSTRALIA

The Road Safety Council of South Australia was formed in December 1965. The Council appointed by State Cabinet consists of an independent chairman and ten members representing the National Council of Women, the Road Traffic Board, the Police Department, the Royal Automobile Association of South Australia, the Local Government Association (two representatives), the Education Department, the State Transport Authority, the Trades and Labor Council of South Australia, the Australian Medical Association, and the State Government Insurance Commission.

The objectives of the Council are to prevent road accidents involving death, injury or property damage through united action by all sections of the community, and to advise and assist government, semi-government and local authorities as well as private organisations in the adoption of precautionary measures in an attempt to prevent such accidents. In its efforts to achieve its objectives the Council concentrates on the education of road users in correct practices.

The Council is a section of the Department of Transport. Its administrative headquarters are at the Road Safety Instruction Centre at Oaklands Park. The facilities of the Centre include lecture rooms and instructional areas for children and licensed drivers of all classifications and age groups. Appropriate courses in road safety education and driver re-education are conducted.

The Council's operations are financed from part of the driver's licence fees under the Motor Vehicles Act, 1959-1978.

6.2 EDUCATION

Educational services are available to all South Australians in a wide variety of forms, some being provided by Government and others by non-government agencies. Constitutionally education is a State responsibility, but the Commonwealth makes grants for specific purposes. Education in this State can be seen as comprising three levels, namely, pre-school, school and post-school.

Pre-school education is co-ordinated by the Childhood Services Council and consists of a range of services available to young children (under five years of age) and their parents.

In South Australia attendance at school is compulsory for children from six to fifteen years of age. Children who are five years of age by the last day of February may be admitted to government schools on the first school day in February; children who are five years of age on or before 2 July may be admitted on the first Monday after the last Saturday in June of that year. The two-intake system is being progressively replaced by a system which allows continuous admission of five-years-olds as soon as they reach their fifth birthday. Most non-government schools have the two-intake system and those with a pre-school integrated with the school, accept children under five years of age.

Education at the primary and secondary level is available at government schools controlled by the Education Department and at non-government schools, most of which are denominational. Some non-government schools provide boarding facilities. In both government and non-government schools there has been a trend towards co-education in recent years. The term 'year' is used to denote class level in both primary and secondary schools. Primary classes are designated Year 1 through to Year 7, and secondary classes Year 8 to Year 12.

South Australian schools celebrated the centenary of State education in October 1975. The present system of government schools and of compulsory education dates from the Education Act, 1875.

At the tertiary level the University of Adelaide, the Flinders University of South Australia and the colleges of advanced education are independently controlled but are financially dependent on government grants.

Facilities for adult education are provided by the Department of Further Education, the Workers Educational Association, Department of Continuing Education of the University of Adelaide, and Flinders University.

A historical summary of education in South Australia was included on pages 153-4 of the *South Australian Year Book* 1969.

South Australian Council for Educational Planning and Research

The South Australian Council for Educational Planning and Research was created by Act of Parliament to advise the Minister of Education on matters relating to education issues, and to undertake long-term planning. The Council, consisting of twenty-four members, includes representatives of major education authorities and agencies in South Australia. It provides a forum for the interaction of these bodies, such as universities, colleges and schools, thereby assisting the co-ordination of education services. Through the use of various committees, the Council can focus clearly on problems in education, and can stimulate co-operative effort between the bodies concerned. It can also facilitate liaison with authorities such as the Departments of Housing, Urban and Regional Affairs, and Economic Development, to ensure that education provision stays in step with other Government activity.

PRE-SCHOOL EDUCATION

From its founding in 1905 until 1945, the Kindergarten Union of South Australia concentrated its efforts on the care and education of under-privileged children, but since 1945 the emphasis has shifted to the provision of pre-school education for all children.

Although some private organisations continue to run pre-schools the majority of kindergartens in South Australia are under the direction of the Kindergarten Union of South Australia.

In 1978 the Kindergarten Union was supervising 290 subsidised kindergartens and three mobile units, with a total enrolment of 18 300 children. Teaching staff for these numbered 850 out of a total employment figure of 900 persons.

While the supervision covers various aspects of organisation it is largely concerned with the educational program. As well as encouraging the creative, physical and mental development of four to five-year-old children the kindergarten prepares them for the experiences of formal schooling. Sessions are generally of two and a half to three hours duration each day with enrolments limited to thirty children a session; two sessions are held daily at most kindergartens. The work of kindergartens has been expanded to a wider pattern of child care to encompass extended hours care, playgroups and resource facilities for the community. The Kindergarten Union now operates some twenty Resource Centres and nine Mobile Resource Units.

The Kindergarten Union became a statutory authority in 1975 receiving its funding from the Commonwealth and State Governments through the South Australian Childhood Services Council. This revenue covers teachers' salaries, capital building programs and most of the kindergartens' operating costs. Local committees are expected to raise a proportion of the day-to-day operating costs and, to a degree, provide some of the 'extras' needed. Such extra revenue generally comes from fund-raising activities.

The annual recurrent budget of the Kindergarten Union for the financial year to 30 June 1978 was \$9.3 million. Approximately \$1 million was allocated for capital building work, providing for the construction of six new centres and the rebuilding of a number of existing kindergartens.

In 1974 the Education Department established pre-school centres, now known as child/parent centres. These centres are staffed by Education Department teachers and are usually located in the grounds of existing junior primary, primary and area schools.

By mid-1978, there were ninety child/parent centres serving approximately 5 000 children and their families. Of the ninety child/parent centres, eleven cater for Aboriginal children in rural areas, four cater for special education children and ten are integrated services centres which are co-operative ventures with the Department for Community Welfare, the South Australian Health Commission, the Kindergarten Union and local community services. Four of these are child/parent resource centres located at Alberton, Christies East, Elizabeth West and Whyalla. The Port Augusta Primary School is the base for the Remote and Isolated Children's Exercise (RICE) to serve children and their families in the outback.

The Childhood Services Council co-ordinates the development of early childhood services in South Australia. These services include child care; child health centres; the child/parent resource centre; family day care; kindergartens, pre-schools and child/parent centres; parent education; playgroups; and toy libraries.

The following table shows statistics on all known day care centres and pre-school centres in South Australia. These statistics have been obtained from a census conducted by the Australian Bureau of Statistics during the week commencing 31 July 1978.

Day Care Centres and Pre-school Centres, South Australia, 1978^(a)

Particulars	Type of Centre				Total
	Kindergarten Union	Licensed by Department for Community Welfare	Government Schools	Other	
Number of centres	279	90	79	34	482
Capacity (per session)	8 681	3 441	1 970	905	14 997
Attendants:					
Boys	9 833	2 150	2 501	441	14 925
Girls	9 140	1 892	2 301	445	13 778
Total	18 973	4 042	4 802	886	28 703
Paid staff ^(b) :					
Qualified	629	288	151	64	1 132
Unqualified	368	228	88	39	723
Total	997	516	239	103	1 855

(a) Week commencing 31 July 1978

(b) Includes part-time.

GENERAL SCHOOL EDUCATION

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between government and non-government schools. The Education Department functions under the Minister of Education. The permanent head of the Department is the Director-General of Education, assisted by two Deputy Directors-General of Education and Directors of Personnel, Curriculum, Facilities, Research and Planning, and Administration and Finance. The Department is organised into ten Education Regions and schools are administered in many aspects through the local Regional Director. A Director-General of Further Education heads the Department of Further Education which is responsible for a wide range of post-secondary educational activities conducted by community colleges and colleges of further education in all areas of the State.

The work of the schools is materially assisted by the school councils, and also by the mothers clubs, parents and friends associations and welfare clubs. For many years these bodies have been instrumental in raising large sums for the purchase of additional amenities for schools.

In country areas many children are conveyed to government schools by free bus services provided by the Education Department. At the end of 1978 there were 697 bus services carrying an average of 26 000 students daily to 309 schools.

Although non-government primary schools largely follow the government schools in their curricula, the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns relating to compulsory attendance. The similarity between courses in the government and non-government secondary schools is attributable to the influence of the Public Examinations Board of South Australia syllabus and the close liaison of the administration and teachers of both types of school.

The Catholic school system is organised on a State-wide basis under the direction of the South Australian Commission for Catholic Schools. This Commission is comprised of the Archbishop of Adelaide, the Bishop of Port Pirie, priests, primary and secondary school principals, superiors, parents, teachers (lay and religious), members of school boards and regional members together with the Director of Catholic Education and the Co-ordinators of Primary and Secondary Education.

The State Government now pays a grant of \$10 a year for each primary and \$20 for each secondary student liable to pay fees at an approved non-government school. In 1978 additional payments on a needs basis varying from \$145 to \$310.50 per student were made to some schools.

Schools

Details of schools operating in South Australia in 1978 are given in the next table. The average size of government schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. There were 628 government schools in 1978 compared with 1 043 in 1940 and 1 108 in the peak year of 1935. In 1940 there was an average of 73 students to each government school, with this figure increasing to 125 by 1950, 255 by 1960 and 351 by 1970. After peaking at about 379 between 1972 and 1975, the figure declined to 367 in 1978. There has been a similar movement in the average size of non-government schools.

Schools by Size, South Australia
At 1 August 1978

Students on Roll	Government Schools				Total	Non-government Schools
	Primary	Primary-Secondary	Secondary	Special (a)		
Under 21	27	—	—	3	30	6
21 to 35	34	—	—	5	39	5
36 to 100	102	13	—	11	126	32
101 to 200	41	12	5	2	60	38
201 to 300	35	15	7	1	58	22
301 to 400	39	8	6	—	53	13
401 to 600	84	10	19	—	113	13
601 to 800	58	3	18	—	79	7
801 to 1 000	19	1	22	—	42	8
1 001 to 1 200	4	—	19	—	23	6
1 201 to 2 000	—	—	5	—	5	1
Total	443	62	101	22	628	151

(a) Schools for physically and mentally handicapped children, schools at institutions and schools for Aborigines.

Students

Enrolments in recent years, classified by government and non-government schools and by age of the students are given in the following tables.

**Primary and Secondary Students, South Australia
At or about 1 August**

Age	Government Schools			Non-government Schools		
	1976	1977	1978	1976	1977	1978
Under 6	19 975	19 007	17 893	3 182	3 076	3 146
6	20 373	21 137	20 010	2 647	2 850	2 795
7	20 005	20 422	21 081	2 829	2 767	2 856
8	19 743	20 395	20 242	2 747	2 855	3 002
9	18 945	19 678	20 111	2 657	2 895	2 900
10	19 432	19 133	19 653	2 988	2 992	2 984
11	19 735	19 516	18 786	3 185	3 108	2 922
12	20 114	19 597	19 121	3 517	3 426	3 439
13	20 389	20 272	19 381	3 660	3 591	3 537
14	20 257	20 217	19 738	3 545	3 676	3 629
15	17 616	17 187	17 490	3 615	3 420	3 576
16	11 326	11 271	11 579	2 964	3 014	2 954
17	4 516	4 379	4 398	1 463	1 508	1 442
18	944	786	728	257	236	216
19	173	153	172	33	21	43
20 and over	71	60	72	10	11	—
Total	233 614	233 210	230 455	39 299	39 446	39 441

**Primary and Secondary Students, South Australia
At 1 August 1978**

Age	Government Schools			Non-government Schools		
	Primary	Secondary	Total	Primary	Secondary	Total
Under 6	17 893	—	17 893	3 146	—	3 146
6	20 010	—	20 010	2 795	—	2 795
7	21 081	—	21 081	2 856	—	2 856
8	20 242	—	20 242	3 002	—	3 002
9	20 111	—	20 111	2 900	—	2 900
10	19 653	—	19 653	2 984	—	2 984
11	18 750	36	18 786	2 911	11	2 922
12	10 589	8 532	19 121	1 600	1 839	3 439
13	885	18 496	19 381	138	3 399	3 537
14	177	19 561	19 738	12	3 617	3 629
15	151	17 339	17 490	6	3 570	3 576
16	125	11 454	11 579	3	2 951	2 954
17	120	4 278	4 398	—	1 442	1 442
18	95	633	728	—	216	216
19	75	97	172	—	43	43
20 and over	7	65	72	—	—	—
Total	149 964	80 491	230 455	22 353	17 088	39 441

Teachers

The numbers of teachers employed in primary and secondary schools in recent years are shown in the following table.

Teachers, South Australia

At or about 1 August	Government Schools				Non-government Schools			
	Full-time		Part-time (a)		Full-time		Part-time (a)	
	Males	Females	Males	Females	Males	Females	Males	Females
1976	5 541	7 380	39	466	678	1 043	50	218
1977	5 889	7 752	59	425	711	1 086	52	221
1978	6 155	7 756	52	513	756	1 118	51	228
Type of Teacher 1978								
Primary	2 299	5 084	16	225	203	704	11	86
Secondary	3 729	2 457	36	286	552	391	40	139
Special (b)	127	215	—	2	1	23	—	3

(a) Equivalent full-time units of part-time teaching. Total part-time teachers at 1 August 1978, government schools, 112 males and 899 females; non-government schools, 107 males and 465 females.

(b) Includes schools for physically and mentally handicapped children, schools at institutions and schools for Aborigines.

PRIMARY EDUCATION

Children normally begin their schooling at the age of five years when they enrol for primary education at either a government or non-government school. Primary education involves a seven-year course.

GOVERNMENT SCHOOLS

Metropolitan children attend primary schools while country children normally attend a primary, rural, area or special rural school, although those in remote areas may receive lessons by correspondence.

Primary

In the first two years of school the emphasis is on the child's active involvement in learning. The curriculum is designed to extend children's experience of their environment, through social studies, science and mathematics. It provides for the development of language skills, especially fluency in speech and reading, and for creative activities in movement, music, art, drama and writing.

The primary school curricula provide a general framework for the study of English, mathematics, social studies, science, health education, music, art and craft and physical education. A new program in religious education is being tested. An increasing provision is being made for the study of elective subjects, such as foreign languages, ballet, instrumental music and aquatics.

Ancillary services and expert advice are provided for primary schools by the Supervisors of School Libraries, Physical Education, Music and Educational Technology and their staffs. There are also consultants in all the basic subjects who visit the schools and conduct in-service courses.

Area and Special Rural

These schools, situated in country centres, cater for both primary and secondary students. The primary course is similar to that of the primary schools but the secondary courses offered are restricted by the availability of staff.

Correspondence

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of these children live in remote parts of South Australia or are unable to attend school through physical or emotional disability. The service also reaches itinerant families and those travelling overseas. Secondary courses are also offered to children attending a school at which a specific subject is not available.

Port Augusta School of the Air was given autonomy from the Correspondence School, with its own Principal, in 1976. It provides two-way radio contact and various other services to facilitate personal interaction. Written work, previously handled by the Correspondence School, is now being marked by School of the Air staff.

The following table shows the numbers of schools and students in the schools in which primary education is offered in recent years.

Primary Education: Government Schools, South Australia

At or about 1 August	Number of Schools		Primary Students Enrolled				
	Primary (a)	Area (b)	Primary Schools (a)	Area Schools (b)	Corres- pondence School	Other (c)	Total
1974	426	49	141 009	9 010	480	2 402	152 901
1975	430	49	139 912	9 131	493	2 439	151 975
1976	436	50	139 363	9 260	483	2 393	151 499
1977	438	50	139 671	9 460	538	2 410	152 079
1978	443	52	137 519	9 652	524	2 269	149 964

(a) Includes rural schools.

(b) Includes also special rural schools.

(c) Includes schools for Aborigines, schools for handicapped children and schools at institutions.

NON-GOVERNMENT SCHOOLS

At 1 August 1978, 22 353 children were receiving primary education at non-government schools. The majority of these children were attending Catholic schools.

Catholic

Many children receiving primary education in the Catholic school system attend parish schools while the remainder attend colleges conducted by religious orders. Both types of school are supported by fees paid by parents and by State and Commonwealth Government grants. Parish schools are the property of the parishes which are responsible for equipping and maintaining them. The educational program of each school is under the direction of the principal, who may be either a lay person or a member of a religious order, and who is usually assisted by an elected school board.

Other

Several denominational bodies including the Church of England, the Lutheran Church and the Seventh Day Adventist Church conduct primary schools; also there are two non-denominational primary schools. Primary education is provided together with secondary education at primary/secondary schools conducted by denominational bodies including the Church of England and the Uniting Church, and at three non-denominational schools.

EDUCATION OF HANDICAPPED CHILDREN

The Special Education Section of the Education Department provides education for handicapped children in a variety of settings. The general policy is that children should be educated in the most 'ordinary' situation possible and that a range of options should be available. Options provided include special schools, full-time special classes, part-time special classes, support teachers within ordinary schools helping children and teachers in regular classes, and support teachers working outside their home base schools. In addition, a variety of arrangements are entered into in which groups of handicapped children and their teachers are combined with regular groups and their teachers in a single complex. Specific provisions are made for hearing-impaired children (all within centres in regular schools), visually-impaired children (one small special school plus support services), moderately mentally retarded children (mostly in special schools but occasionally in special or regular classrooms), physically handicapped children (in both special and regular schools) and others.

Special schools are conducted for day students and within institutions for children in residence.

SECONDARY EDUCATION

Children who have completed their primary schooling are required by law to attend a secondary school, either government or non-government, until their fifteenth birthday.

GOVERNMENT SCHOOLS

The South Australian Education Department's policy is to provide comprehensive co-educational high schools which, consistent with their size and enrolment, offer the widest range of courses possible in an endeavour to meet the interests of the students.

Students living in urban areas usually attend their local high schools which, apart from four schools, are now comprehensive, co-educational schools. A program to give students a wider choice of schools commenced in 1978 and should be fully operational by 1980. In country areas, secondary education is provided by special rural schools, area schools or high schools depending on the size of the population being served. The curriculum available may be supplemented by the services of the Correspondence School.

All new schools built in recent years, and some existing schools, have been provided with gymnasiums and music and drama areas. The upgrading of schools and the provision of open-plan units in existing schools is continuing.

Secondary Education: Government Schools, South Australia

At or about 1 August	Number of Schools		Secondary Students Enrolled				Total
	High	Area (a)	High Schools	Area Schools (a)	Corres- pondence School	Other (b)	
1974	103	49	74 291	5 013	157	117	79 578
1975	104	49	77 310	5 085	203	139	82 737
1976	104	50	76 436	5 308	204	167	82 115
1977	103	50	75 401	5 271	240	219	81 131
1978	101	52	74 669	5 352	245	225	80 491

(a) Includes also special rural schools.

(b) Students receiving secondary education at primary schools, Aboriginal schools, institutions, senior special schools and speech and hearing centres.

The first three years of secondary schooling provide a broad general education and during this period students are introduced to as wide a range of subjects as possible. Each school is free to develop its own combination of subjects and to determine the amount of time spent on each.

Specialisation increases in Years 11 and 12 when students tend to identify more clearly their vocational goals. Greater choice of subjects is available and the curriculum pattern adopted by schools allows for vocational choices while retaining balance in the curriculum. However, the ability of schools to cater for diverse interests and capacities may be limited by their resources.

Area Schools

Area schools, which are located in some country districts, include a secondary section as well as primary. Because of their size the secondary curriculum offered may not be as varied as that of a large metropolitan high school, but a similar breadth and balance is sought.

Special Rural Schools

These schools were first established in remote country areas in 1966 with the intention of supplying a limited secondary education in areas where it had been shown that there was an obvious need for secondary education but where the establishment of an area school was not warranted. Courses in these schools are restricted to the core subjects, English, social studies, mathematics, science—sometimes craft where facilities are available, and geography and/or history. Instruction usually does not proceed beyond Year 10 level.

Correspondence School

Children who are unable to attend a secondary school may receive secondary education through the Correspondence School. Lessons are forwarded to cover eighteen academic subjects (all to Year 11 standard), and also certain drawing subjects. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school head teacher who may, in the case of remoteness from secondary school facilities, conduct grades beyond Year 7. Courses are also supplied to students in smaller secondary schools who wish to do a specific subject which is not available because of staffing problems.

Students who wish to do matriculation studies (Year 12) are enrolled through the South Australian College of External Studies.

The Curriculum

The aim of all secondary schools is to provide courses of study that best suit the needs of individual students. This has resulted in schools offering as wide a range of subjects and syllabuses as possible.

Secondary school subject curriculum committees, which are comprised of representatives of a wide spectrum of interests associated with education, meet regularly to discuss courses of study and to establish new syllabuses for secondary students. Although syllabuses are distributed to all teachers, they are in no way prescriptive. They are adapted to cater for the needs and abilities of students.

School Libraries in South Australia

During the past decade there has been a rapid improvement in the quality of library service in South Australian schools. This has been caused by a combination of factors

including the provision of trained teacher-librarians in most schools and multiple professional and support staff in the larger schools; the upgrading of education and in-service training courses for teacher-librarians; and the development of support and advisory services in the School Libraries Branch and at the regional level. School libraries have changed in concept from book-oriented libraries to multi-media resource centres containing a large range of print and non-print materials which provide students and staff flexibility in choosing the medium best suited to their needs at a particular time.

Libraries in government schools have the central support services of the School Libraries Branch of the Education Department to assist them. Services offered include central cataloguing, book reviewing and selection, a quarterly professional publication, *Review*, and a central library and bulk loan scheme as well as an advisory service to principals, teachers and librarians. Important among the support services is computer based cataloguing (SAERIS) which commenced late in 1978.

Government Schools: Library Statistics, South Australia

Particulars	Unit	1976	1977	1978
Teacher-librarians	No.	512	521	549
Library aides	No.	185	335	514
Books held	million	2.9	3.2	3.4
Other materials	million	<i>n.a.</i>	1.5	2.1
Amount spent	\$ million	1.12	1.59	2.17

NON-GOVERNMENT SCHOOLS

Secondary education is also provided by non-government schools; these schools, for the most part, are identified with various religious denominations. Non-government secondary schools usually charge fees, however, a limited number of internal scholarships are available. In addition to normal day attendance many non-government schools offer boarding facilities for country students. Non-government schools provide academic courses preparing students for the Public Examinations Board examination at the Year 12 level. Church schools give religious as well as secular education.

Catholic

The Catholic school system provides secondary education at boarding and day colleges in metropolitan and country areas. The schools seek to serve the needs of students by providing (where appropriate) courses in technical education, business and commercial education and general education together with academic courses for those seeking admission to tertiary education after matriculation (Year 12). The majority of Catholic secondary schools are owned and operated by the religious communities who conduct them and are supported by fees charged and government grants.

Other

The Lutheran Church and the Seventh Day Adventist Church conduct secondary schools and there are three non-denominational secondary schools. Secondary education is provided also at primary/secondary schools (see page 183).

Training in typing and shorthand is provided at privately owned business colleges which specialise in this field. A number of these colleges also prepare students in certain Public Examinations Board subjects.

Summary

The following tables give details of all non-government schools and cover both primary and secondary education. Additional information is shown in the tables on pages 184-5.

Non-government Schools, South Australia

Year	Number of Schools	Number of Teachers (a)	Students on Roll at or about 1 August				Total
			Primary (b)		Secondary		
			Males	Females	Males	Females	
1974	157	1 819	10 896	11 227	8 123	8 371	38 617
1975	151	1 900	10 996	11 071	8 118	8 700	38 885
1976	147	1 989	11 055	11 122	8 207	8 915	39 299
1977	145	2 070	11 150	11 211	8 043	9 042	39 446
1978	151	2 152	11 206	11 147	8 041	9 047	39 441

(a) Full-time teachers plus the full-time equivalent of part-time teachers.

(b) Includes students at special schools.

In the next table non-government school students are classified according to the denominational affiliation of the school they attended. The predominant contribution of Catholic schools is clearly evident from the table. In 1978 Catholic schools accounted for 77 per cent of primary students and 59 per cent of secondary students attending non-government schools.

Students at Non-government Schools, South Australia

At or about 1 August

Denomination of School	1974	1975	1976	1977	1978
Primary:					
Catholic (a)	17 686	17 662	17 666	17 594	17 120
Church of England	1 367	1 347	1 375	1 483	1 513
Lutheran	1 299	1 359	1 411	1 504	1 726
Seventh Day Adventist	172	183	187	222	237
Uniting Church (b)	1 027	987	965	1 025	1 083
Other	—	—	—	—	136
Non-denominational (a)	572	529	573	533	538
Total primary	22 123	22 067	22 177	22 361	22 353
Secondary:					
Catholic	9 117	9 584	9 845	9 941	10 143
Church of England	2 271	2 216	2 193	2 121	2 056
Lutheran	971	980	994	951	926
Seventh Day Adventist	116	138	140	152	154
Uniting Church (b)	2 825	2 715	2 592	2 548	2 401
Other	—	—	—	—	14
Non-denominational	1 194	1 185	1 358	1 372	1 394
Total secondary	16 494	16 818	17 122	17 085	17 088

(a) Includes students at special schools.

(b) From 22 June 1977 the Congregational, Presbyterian and Methodist Churches combined to form the Uniting Church in Australia.

EXAMINATIONS AND EDUCATION ASSISTANCE

Examinations

In addition to internal examinations conducted by the schools the Public Examinations Board (PEB) conducts a further examination at the completion of the fifth year of secondary education. Before 1966 this examination had been known as the Leaving Honours examination and while considered a desirable fore-runner to university study had not been compulsory for entrance to the University of Adelaide (matriculation being

based on the Leaving examination). Commencing with 1966 this examination became the Matriculation Examination.

Before 1966 the PEB had given a certificate for a pass in the required number of subjects at either the Intermediate or Leaving examinations and for a pass in one or more subjects in the Leaving Honours examination. From 1966 the Board has issued to each Intermediate and Matriculation examinee a certificate showing the grade achieved in each of the subjects in which examined. The last PEB Intermediate examination was held in 1968 and the last Leaving examination in 1974. The total number of candidates who presented for examination by the Board in one or more subjects at the 1978 Matriculation Examination was 9 372.

**Matriculation Examination: Candidates, Subjects Presented and Grade of Results
South Australia, 1978**

Subject	Candidates	A Grade	B Grade	C and D Grades	E to G Grades
			NUMBER		
Ancient languages (a)	15	9	1	5	—
Art	1 203	77	273	557	296
Asian languages (b)	205	89	52	49	15
Australian History	1 621	180	454	723	264
Biology	5 704	472	1 265	2 705	1 262
Chemistry	2 574	564	925	945	140
Classical Studies	1 504	171	435	646	252
Economics	2 819	232	590	1 367	630
English	6 186	628	1 532	2 827	1 199
Geography	3 606	235	746	1 788	837
Geology	1 613	76	300	783	454
History (c)	833	93	227	376	137
Mathematics 1	2 152	497	872	690	93
Mathematics 2	2 145	505	845	674	121
Mathematics 1S	2 653	139	670	1 310	534
Modern European History	2 458	255	624	1 135	444
Music	318	38	78	150	52
Physics	2 688	578	922	984	204
Other modern languages (d)	930	191	290	394	55

(a) Ancient Greek, Latin.

(b) Chinese, Indonesian, Japanese, Malaysian.

(c) American History, Ancient History, Medieval History, Modern World History.

(d) Dutch, French, German, Hungarian, Italian, Latvian, Lithuanian, Greek, Polish, Russian, Spanish, Ukrainian.

Matriculation Examination: Candidates and Success Rate, South Australia

Particulars	1974	1975	1976	1977	1978
Candidates sitting (a)	7 346	7 899	7 980	7 753	7 537
Candidates successful	3 904	4 758	4 763	4 797	4 866
Success rate (per cent)	53.14	60.24	59.69	61.87	64.56

(a) Number of candidates sitting for a Matriculation group of subjects. Some candidates sit for a lesser number of subjects which, by themselves, would not qualify for Matriculation status.

PRIMARY AND SECONDARY EDUCATION ASSISTANCE

The Commonwealth Government, the State Government and various private benefactors provide assistance to various categories of primary and secondary students.

South Australian Government

Text books are provided to all primary schools for student use. In 1978, the approximate value of books issued to schools was \$9 a student.

A grant of \$40 a student is paid to all government and non-government secondary schools to assist parents with the cost of books and materials. In all government secondary schools and some non-government secondary schools, books and materials bought from the grant become school property and are loaned for school use.

Students who have to travel considerable distances to the nearest school, or school bus, may also receive travelling expenses.

If students are forced to live away from home, an isolated children's allowance is normally payable by the Commonwealth Government. In a few cases where Commonwealth assistance is not available the South Australian Government pays boarding allowances and may award rural scholarships.

Commonwealth Government

The Scheme of Assistance for Isolated Children assists the parents of students who do not have reasonable daily access to an appropriate government school. The main aim of this scheme is to assist student children whose homes are geographically isolated. However, assistance is also available in certain circumstances to handicapped children who must attend special schools or study by correspondence and to students undertaking a special type of course or specialised remedial teaching. Students who must live away from home to undergo diagnostic testing of an educational nature may also be assisted, as may students from itinerant families.

Assistance under this scheme comprises a basic boarding allowance of \$500 a year free of means test, an additional allowance of up to \$500 a year, which is subject to a means test and to boarding costs actually incurred, and a special supplementary allowance of up to \$550 a year payable where there is particular financial hardship. Eligible students studying by correspondence receive a basic allowance of \$200 and may receive an additional payment of up to \$300 a year in respect of approved expenditure incurred.

The Secondary Allowances Scheme aims to provide assistance to families with a limited income so that they may maintain their children at school for the final two years of secondary education. Under this scheme an allowance of up to \$550 a year may be paid subject to a means test.

The Commonwealth Government also provides financial assistance for the education of students of Aboriginal or Torres Strait Island descent who attend approved schools. This assistance is provided under the Aboriginal Secondary Grants Scheme. The grants are open to full-time students under the age of twenty-one who attend an approved secondary school. Grants also may be made available to full-time students who attend an approved primary school provided the student is fourteen years of age but under twenty-one years. Benefits under this scheme comprise textbook and uniform allowances, living allowance, personal allowance and fees. Students who must live away from their normal place of residence in order to attend school are eligible for a boarding allowance in lieu of living allowance, and for up to three return journeys to their home each year.

TERTIARY EDUCATION ASSISTANCE

In 1974 the Commonwealth Government abolished tuition fees at universities, colleges of advanced education, and technical colleges and introduced the Tertiary Education Assistance Scheme.

The Tertiary Education Assistance Scheme is intended to assist students in approved courses at universities, colleges of advanced education, technical colleges and certain other approved tertiary institutions in Australia. Assistance under the scheme may include payment of living allowance, incidentals allowance, allowance for a dependent

spouse and/or child, and fares allowance. All benefits are subject to a means test and a student must be eligible for living allowance in order to receive any of the other benefits. The maximum amount of living allowance payable is \$2 348 a year for independent students. Students eligible to receive living allowance at the away from home rate and students living at home may receive up to \$2 075 or \$1 250 a year respectively.

The Commonwealth Teaching Service Scholarship is being phased out and no further awards will be made.

Aboriginal Study Grants are available for students of Aboriginal and Torres Strait Islands descent who wish to study further after leaving school. Benefits include a living allowance and a textbook and equipment allowance.

Awards are also available for postgraduate study either in research or in course work. Assistance is by means of tax free allowances paid to award holders. The allowances payable consist of a living allowance, an incidentals allowance and under certain circumstances special allowances in respect of dependants, cost of travel, cost in setting up residence, and a contribution to costs associated with the production of a thesis. The living allowance payable to an award holder with no dependents is \$4 200 a year.

OTHER ASSISTANCE

Under the Adult Secondary Education Assistance Scheme the Commonwealth Government provides assistance to adult students undertaking one year full-time matriculation level courses at technical colleges, secondary schools and other approved institutions. This assistance is available subject to a means test and certain conditions of eligibility. Assistance under the scheme may include living allowance, incidentals allowance, allowance for a dependent spouse and/or child, and fares allowance. An applicant must be eligible for living allowance in order to receive any of the other benefits and the provision of living allowance is subject to a means test. The maximum rates of living allowance are the same as the Tertiary Education Assistance Scheme.

Students Receiving Commonwealth Government Student Assistance South Australia, At 30 June

Scheme	1977	1978
Assistance for Isolated Children	601	696
Secondary Allowances	1 371	2 321
Aboriginal Secondary Grants	870	915
Tertiary Education Assistance	8 523	8 397
Commonwealth Teaching Service Scholarships(a)	57	43
Pre-School Teacher Education(a)	332	152
Postgraduate Awards	270	250
Aboriginal Study Grants	77	148
Adult Secondary Education Assistance	320	338

(a) No new awards are being offered under these schemes.

TERTIARY EDUCATION

THE UNIVERSITY OF ADELAIDE

The University of Adelaide was established in 1874 by Act of Parliament passed by the South Australian Parliament. The academic work of the University began in March 1876, with four professors, three part-time lecturers, a registrar-librarian, and eight matricu-

lated and fifty-two non-graduating students attending classes in arts and science subjects. Within a decade, law, music and medicine were added; in 1888 studies in engineering were instituted in collaboration with the South Australian School of Mines and Industries; and at the turn of the century the University broke new ground for Australian universities by founding a conservatorium of music and by instituting studies in commercial subjects. Between the two Wars the Waite Agricultural Research Institute and faculties of dentistry and economics were established; studies in agricultural science and engineering greatly developed; and diploma courses in pharmacy, public administration and physical education instituted.

The original full-time academic staff of four in 1876 had grown by May 1978 to 71 professors, 92 readers, 261 senior lecturers, 131 lecturers, and 118 tutors and demonstrators. Teaching by part-time staff amounted to 60 000 hours in 1978. Part-time staff were mainly engaged in large first-year science classes involving laboratory work and in the faculties of engineering, law, medicine and dentistry.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty-four members elected by a Convocation of Electors, four members elected by the undergraduates and five members appointed by Parliament. The principal advisory committees of the Council are the Education Committee and the Finance Committee each of which is appointed by the Council. There is also the usual university structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

In 1978 the University had 11 faculties: arts (11 departments); economics (2); science (11); agricultural science (7); engineering (4); medicine (8); law; mathematical sciences (5); music; dentistry (4); and architecture and planning. Higher degrees are provided in all faculties and post-graduate diploma courses are provided in applied psychology, business management, computing science, and education.

Intending students are normally required to have passed the Matriculation Examination at a prescribed overall standard. Interstate and overseas students, however, may be accepted on alternative qualifications.

The period of study ranges from three years for certain degree and diploma courses to six years for medicine. As from 1974 all tuition fees and associated charges for degree and diploma courses were abolished. However, fees are still payable in respect of courses in the Continuing Education Department and for studies in the Elder Conservatorium of Music which do not form part of a degree course. All students are still required to pay a Union Fee comprising, for full-time students, an entrance fee of \$20 and an annual fee of \$124; the annual fee for part-time students is proportionately less.

During the last decade significant changes have occurred in the composition of the student body. The proportion of full-time students has steadily risen, and the proportion taking part-time studies has steadily declined. The most significant change, however, has been in the numbers of students proceeding to honours and higher degrees and post-graduate diplomas; here the rate of growth is considerably more than that of undergraduate enrolments.

From its inception until the end of 1978 the University had conferred 31 196 degrees and 9 038 diplomas by examination. There were 1 618 degrees conferred and 342 diplomas awarded in 1978.

Details of student enrolments are given in the next two tables.

The University of Adelaide, Enrolments^(a)

Course	1974	1975	1976	1977	1978
Higher degree candidates ^(b)	1 101	1 170	1 243	1 218	1 164
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural Science	212	217	224	199	208
Applied Science	10	3	—	—	—
Architecture	172	179	176	188	189
Arts	2 816	2 904	2 891	2 692	2 415
Dentistry	301	292	313	309	287
Economics	655	709	752	770	761
Engineering	605	620	617	621	616
Law	566	610	609	639	642
Mathematical sciences	262	326	414	418	457
Medicine	723	745	810	781	741
Music	159	170	162	138	148
Pharmacy (degree)	2	—	—	—	—
Science	1 331	1 255	1 109	1 082	1 004
Technology	29	14	2	—	—
Miscellaneous (SAIT) ^(c)	96	115	123	141	160
Elder Conservatorium ^(d)	210	224	210	210	192
Visiting students ^(e)	51	73	150	149	192
Total	9 301	9 626	9 805	9 555	9 176

- (a) Each student is counted once only, in the category appropriate to his principal course.
- (b) Includes Master's qualifying candidates.
- (c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.
- (d) Students not also enrolled for degree or diploma subjects.
- (e) Students enrolled at another university, who may subsequently qualify for a degree of that other university, but who are undertaking part of their degree work at the University of Adelaide.

The University of Adelaide: Enrolments, 1978^(a)

Course	New Students (b)	All Students				
		Full-time	Part-time	External	Staff	Total
Higher degree candidates	217	590	352	118	101	1 161
Master's qualifying candidates	2	1	2	—	—	3
Undergraduate, diploma and miscellaneous students:						
Agricultural Science	74	178	30	—	—	208
Architecture	50	181	8	—	—	189
Arts	849	1 422	963	30	—	2 415
Dentistry	52	254	33	—	—	287
Economics	200	385	376	—	—	761
Engineering	178	553	63	—	—	616
Law	172	559	83	—	—	642
Mathematical sciences	148	355	102	—	—	457
Medicine	128	720	21	—	—	741
Music	57	136	12	—	—	148
Science	342	813	191	—	—	1 004

The University of Adelaide: Enrolments, 1978^(a) (continued)

Course	New Students (b)	All Students				
		Full-time	Part-time	External	Staff	Total
Misc. (SAIT) (c)	79	—	160	—	—	160
Elder Conservatorium (d)	70	—	192	—	—	192
Visiting students (e)	150	3	189	—	—	192
Total	2 768	6 150	2 777	148	101	9 176

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Figures for undergraduate courses include students who have transferred from another undergraduate course either in this or another university, or who are commencing a second course.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

(e) Students enrolled at another university, who may subsequently qualify for a degree of that other university, but who are undertaking part of their degree work at the University of Adelaide.

Waite Agricultural Research Institute

The Waite Institute was established as a research institute at Urrbrae in 1924, through the generous benefaction of Mr Peter Waite. Upon his death in 1922 Peter Waite endowed the University with the properties of Urrbrae, Claremont and Netherby (about 120 hectares) together with Urrbrae House and ancillary buildings and also a Trust Fund of \$120 000. A further 40 hectares has been added by purchase to the original gift, bringing the total to about 160 hectares at the Waite campus. The Institute also has the Mortlock Experiment Station of 275 hectares near Mintaro, which was established in 1965 through the generosity of the late Mrs J. J. Mortlock, and the Charlick Experiment Station of 112 hectares near Strathalbyn, the purchase of which was made possible by a bequest from the late Mr Claude S. Charlick.

Under the provisions of the Agricultural Education Act of 1927 the functions of a teaching faculty of agricultural science were added to the Institute's research functions. The Institute at present has about 100 undergraduate and 90 postgraduate students. The latter undertake either Master's or Doctor of Philosophy studies, and about one third of their number is from overseas. In recent years, postgraduate students have been drawn from more than thirty countries.

There are seven departments at the Waite Institute, spanning the spectrum of the agricultural sciences. They are agricultural biochemistry, agronomy, animal physiology, entomology, plant pathology, plant physiology and soil science. There is also a biometry section. The Institute has a distinguished research record and a world-wide reputation. Some of its more notable achievements have been in the field of soil trace element deficiencies, specifically of manganese, copper and molybdenum, which led to the development of 52 000 square kilometres of previously unproductive country on the Yorke Peninsula, Ninety Mile Desert and the south west of Western Australia. The work on manganese was the fore-runner of trace element work throughout the world. More recently, a method of controlling the cancerous disease of stone fruits, crown gall, by biological means has been developed. This is expected to result in the elimination of losses which at present amount to about \$150 million throughout the world. The barley variety 'Clipper' which was released by the Institute several years ago is the most widely grown variety in Australia and is grown in several other countries. It is estimated to have added \$40 million per annum to the value of Australia's barley crops.

Amongst the many research programs currently being undertaken at the Institute are breeding programs for wheat, barley and triticale, investigations of mechanisms of drought tolerance in cereals, soil chemistry, biological control of insects, pasture management, beef cattle metabolism, investigations into plant viruses and many other projects of vital importance to agriculture in Australia and overseas.

In addition to the Waite Agricultural Research Institute, the CSIRO Divisions of Soils, Horticulture, and Mathematics and Statistics and also the Australian Wine Research Institute are located on the Waite Institute campus, making it one of the most important centres of research in Australia.

The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, and his son, Tom Elder Barr Smith. During his life Robert Barr Smith provided funds for the purchase of books and members of his family gave the University a substantial donation in 1920 in his memory. Tom Elder Barr Smith provided the first part of the present building in 1930 at a cost of nearly \$70 000.

The central library includes the medical library. In addition there are branch libraries for law, music and the Waite Agricultural Research Institute. Borrowing facilities are available to staff, students and graduates.

Holdings at the end of 1978 were as follows: central library 793 414 volumes; law library 58 512; medical library 88 089; music library 2 603 bound volumes of scores and 14 457 pieces of music in sheets; and the Waite Agricultural Research Institute Library 34 582 volumes, making total holdings equivalent to 991 657 volumes, including the equivalent of 84 435 volumes held in microform.

During 1978 the Library issued 255 943 extramural loans to students, staff and graduates; 29 716 to other libraries in South Australia; and 5 992 to libraries in other states and countries. It received 4 005 loans from other libraries. Accessions totalled 52 802 volumes, including the equivalent of 11 792 volumes in microform, while withdrawals numbered 4 665 volumes. Serial titles regularly received numbered 19 847. Expenditure on staff, books, serials and binding and for other library purposes amounted to \$2 666 000 or 5.8 per cent of total university revenue expenditure.

Elder Conservatorium of Music

Adelaide was the first University in Australia to establish a Chair of Music (1884) and a Conservatorium of Music (1897). In addition to full degree courses in practical studies, musicology and composition, the University School of Music provides instruction in the various branches of musical performance for part-time students.

Concert experience for students is provided through regular informal concerts internal to the Conservatorium and by occasional public concerts. The University Music Society, each year, arranges a series of night concerts, by members of the staff, who also provide a series of Sunday afternoon public concerts and recitals during the winter months.

In 1978 there were 148 students proceeding to the degree of Bachelor of Music and 192 students taking single subject practical studies.

Residential Colleges

The residential colleges are independent bodies affiliated with the University. Three of the four colleges for undergraduates were founded by churches but impose no denominational restrictions on admission; the fourth undergraduate college and the college for postgraduate students have no denominational affiliation. All are situated in North Adelaide within easy walking distance of the University.

Their names, church affiliations, years of founding and residential capacities are:

St Mark's	Church of England	1925	130 students, 12 tutors;
St Ann's	Non-denominational	1947	121 students, 8 tutors;
Aquinas	Catholic	1948	102 students, 12 tutors;
Lincoln	Uniting Church	1952	176 students, 15 tutors;
Kathleen Lumley ...	Non-denominational (postgraduate)	1968	70 students.

St Mark's confines its membership to men; in 1973 St Ann's and Lincoln and in 1974 Aquinas made their facilities available to both men and women. Kathleen Lumley has been co-residential since its foundation.

Other Special Features

Unusual features of the University's work include its extensive research into the linguistics, myths, legends and musicology of the Aborigines; teaching and research in Computing Science ranging from first year undergraduate level to the Doctorate of Philosophy; the Mawson Institute for Antarctic Research (which also takes postgraduate students); upper atmosphere research by balloon and rocket; mineral exploration; arid zone studies; and adult education by the University's Department of Continuing Education.

Finance

Details of income and expenditure for the period 1974 to 1977 are shown in the following table.

The University of Adelaide, Finance^(a)

Particulars	1974	1975	1976	1977
	\$'000			
Income for capital purposes:				
Commonwealth Government	4 726	2 447	1 776	3 917
Income for other purposes:				
Commonwealth Government	23 783	30 286	35 157	38 753
State Government	88	111	214	288
Student fees	175	126	128	143
Other	1 356	2 153	1 915	3 094
Total income	30 128	35 123	39 190	46 195
Expenditure:				
Teaching and research	20 506	25 617	28 396	32 171
Administration	1 604	2 168	2 530	2 711
Libraries	1 603	2 113	2 417	2 666
Buildings, premises, grounds	5 269	3 481	3 273	6 455
Other	1 231	1 768	1 949	2 084
Total expenditure	30 213	35 147	38 565	46 087

(a) Includes Waite Agricultural Research Institute.

THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

During 1958 when the University of Adelaide began to plan two major new buildings on its existing 13 hectare site it became apparent that further expansion would have to take place elsewhere.

Early in 1961 the South Australian Government indicated that it would make available to the University of Adelaide an area at Bedford Park, of some 150 hectares, situated about eleven kilometres from the centre of Adelaide in the foothills of the Mount Lofty Ranges. Consequently the University of Adelaide made a submission for financial support to the Australian Universities Commission in 1962, which gave approval for the planning of Bedford Park. The institution became known as 'The University of Adelaide at Bedford Park'. Towards the end of 1965 the South Australian Government decided to make the University of Adelaide at Bedford Park a fully autonomous university under the name 'The Flinders University of South Australia', after the great explorer and hydrographer, Matthew Flinders. A more detailed history of the Flinders University was included on pages 163-8 of the *South Australian Year Book* 1967.

The Flinders University of South Australia Act came into force on 1 July 1966. The Act places the whole management of the University in the hands of a council with powers to make statutes and regulations subject to the approval of Convocation which comprises the graduates of the University, graduates of other universities who have been awarded a diploma of the University, and full-time members of the staff.

The Council comprises thirty-one members: the Chancellor; the Vice-Chancellor; the President of the Students Association; five members of the Parliament of South Australia; three members appointed by the Governor; eight members of the academic staff elected by the academic staff; one member of the ancillary staff elected by the ancillary staff; four persons elected by Convocation; one postgraduate student elected by the postgraduate students; three undergraduate students elected by the undergraduate students; and not more than three other members co-opted by the Council.

The first academic year of the University began in 1966, with enrolments of 382 first-year undergraduates and thirty-five graduate students.

Details of enrolments are shown in the following two tables.

The Flinders University of South Australia: Enrolments, 1978

Course	Commencing Students	All Students		
		Full-time	Part-time	Total
Arts	575	1 111	597	1 708
Sciences	189	374	70	444
Economics	110	203	94	297
Education	27	72	31	103
Physical Education	32	101	6	107
Medicine	64	287	—	287
Higher degrees	109	156	259	415
Master qualifying	10	2	12	14
Postgraduate diploma	181	139	105	244
Postgraduate bachelor	55	105	43	148
Miscellaneous	104	1	152	153
Total	1 456	2 551	1 369	3 920

The Flinders University of South Australia, Enrolments

Course	1975	1976	1977	1978
Undergraduate bachelor degrees:				
Arts	1 586	1 848	1 795	1 708
Science	498	480	441	444
Economics	254	303	331	297
Education	201	131	119	103
Physical Education	48	68	103	107
Medicine	129	185	231	287
Postgraduate bachelor and diploma:				
Bachelor Social Administration	116	115	107	101
Bachelor Special Education	26	45	61	47
Diploma Education	203	177	152	94
Diploma Education (Primary)	13	12	28	29
Diploma Education Administration (a)	—	5	8	2
Diploma Social Sciences	} 21	} 39	} 66	25
Diploma Applied Psychology				36
Diploma Nutrition and Dietetics (a)	—	10	14	12
Diploma Accounting (b)	—	—	—	46
Higher degrees (including master qualifying) ...	322	366	404	429
Miscellaneous	57	114	185	153
Total	3 474	3 898	4 045	3 920

(a) Commenced in 1976.

(b) Commenced in 1978.

Academic Organisation

The academic organisation of the University is based on 'Schools' instead of faculties or departments. The School is the basic academic and administrative unit and one of the academic staff of each school is appointed to act as the Chairman of the School for a period of three years.

The Flinders University of South Australia
Full-time Staff Establishment, 1 January 1978

Schools:		
Academic (teaching and research)		333
Technical		149
Clerical		90
Library:		
Professional		22
Other		49
Registry:		
Senior administrative		28
Clerical		63
Caretaking, grounds and maintenance		68
Student services:		
Professional		4
Other		7
Total		813

At present there are eight Schools: the Schools of Humanities; Social Sciences; Mathematical Sciences; Physical Sciences; Biological Sciences; Medicine; Earth Sciences; and Education. The School of Biological Sciences is an integrated one; there are no divisions into the traditional disciplines of botany, zoology, micro-biology, etc., the emphasis being on the manner in which the teaching and research are organised, *e.g.* cellular biology, molecular biology. The remaining schools have a total of twenty-six disciplines established within them.

The Library

The acquisition of books for the Library commenced in 1963 when the first Library staff was appointed. By the time teaching began in 1966 a collection of some 60 000 volumes had been assembled. At the end of 1978 the collection totalled 400 000 volumes and approximately 25 000 volumes are being added each year; 7 500 periodicals are currently received. Emphasis is placed on the acquisition of material to support the current teaching and research programs of the University. Loans to staff and students during 1978 totalled more than 120 000. The Medical Library, situated in the Flinders Medical Centre, is a branch of the main Library and holds about 18 000 volumes on medicine and allied subjects for University and Medical Centre users.

Admission to the University

Normally students must have qualified for matriculation by passing the Matriculation Examination of the Public Examinations Board in a prescribed manner, and must be selected by the University. Flinders University, together with the other nine tertiary institutions in South Australia, have established the South Australian Tertiary Admissions Centre to which all students wishing to enrol in any of the institutions must apply for admission. Admission is subject to selection within the quota and is based on academic merit.

Degrees Offered

The University offers the following degrees; Bachelor of Arts, Bachelor of Economics, Bachelor of Education, Bachelor of Medicine and Bachelor of Surgery, Bachelor of Physical Education, Bachelor of Science, Bachelor of Social Administration, Bachelor of Special Education, Master of Arts, Master of Arts (Drama), Master of Economics, Master of Education, Master of Educational Administration, Master of Psychology, Master of Social Administration, Master of Science, Doctor of Philosophy, Doctor of Letters and Doctor of Science. In addition there are postgraduate diplomas in Accounting, Applied Psychology, Social Sciences, Education (Primary and Secondary), and Nutrition and Dietetics.

The Flinders Institute for Atmospheric and Marine Sciences

The Flinders Institute for Atmospheric and Marine Sciences was established by the Council to further the University's interest in physical and environmental aspects of the air and the sea.

Academic staff and postgraduate students of the University who seek to conduct their research within the framework of the Institute's operations may be considered as members. As an association of scientists with related research interests, the Institute is able to undertake a relatively wide range of investigations, the locations of which range from the Antarctica to Lake Eyre.

The Institute ensures that the University's academic and technological capabilities in atmospheric and marine sciences are made known to such government instrumentalities and private sectors of industry as may make use of them to the mutual benefit of both the outside group and the University. As such, in many areas of the environmental and earth sciences, the Institute is able to play an active role in introducing senior undergraduate students and postgraduate research scholars to some of the scientific needs of the community. Tidal and specialised meteorological data libraries, instrumental facilities and field stations on the Coorong and Cape du Couedic as well as a series of publications are maintained.

In recent years, the work of the Institute has been extensively supported by, or associated with, the Australian Research Grants Committee, the Commonwealth Department of Environment, Housing and Community Development, the Bureau of Meteorology, the Antarctic Division of the Department of Science, Department of Defence, the South Australian Housing Trust, the Engineering and Water Supply Department, the US National Centre for Atmospheric Research, the US National Science Foundation, the Swissteco (Radiation Instruments), the Horace Lamb Institute of Oceanography and the University's own research budget.

Flinders University Institute for Energy Studies

An Institute for Energy Studies has been formed at Flinders University with a membership extending through the disciplines of biology, chemistry, physics, geography and meteorology. The aim of the Institute is to explore alternative methods of energy production which are non-polluting. The projects under investigation are concerned with collection, storage and conversion of various forms of solar energy, and aspects of fusion physics. The Institute publishes reports on significant developments by its research associates.

National Institute of Labour Studies

The National Institute of Labour Studies in the School of Social Sciences encourages graduate study, research and publication in the areas of industrial relations, labour economics, industrial psychology and sociology, and labour history. It publishes a quarterly review of labour events, *The Australian Bulletin of Labour*, and a working paper series. Current research projects include studies of worker participation in industry, interaction between work and social activity, unemployment and wage relativity problems.

The Institute is administered by a management committee comprising a director, research associates and persons outside the University. The Research associates include members of staff of the School of Social Sciences who are active in labour studies and members of staff of some other tertiary institutions in Australia.

The Centre for Research in the New Literatures in English (CRNLE)

In April 1977, Flinders University established, within the School of Humanities, the Centre for Research in the New Literatures in English (CRNLE).

The primary aim of the CRNLE is promotion of research in its field by providing a specialist library collection; developing and supervising postgraduate research programs; facilitating more effective teaching of undergraduate courses; and sponsoring research investigations that involve cultural and social questions and are based on cross-cultural, comparative and inter-disciplinary approaches to the study of the literatures and societies concerned.

Membership of CRNLE is open to academic staff, research assistants, graduate students, visiting scholars who are working in conjunction with the Centre, writers and other qualified persons.

The Centre for Applied Social and Survey Research (CASSR)

The Centre for Applied Social and Survey Research (CASSR) was established by the University Council in 1977 to promote applied social and survey research, disseminate the findings of research through the publication of technical research papers and monographs and the holding of seminars, workshops and summer schools.

In addition to conducting its own research activities and providing a survey research facility for staff and students within the University, CASSR can provide consulting advice to government and private enterprise in a wide range of applied social research fields and conduct sample survey research and data analysis in accordance with the University's outside research-contract policy.

CASSR's activities are controlled by a management committee which comprises a director, academic staff of the University, and a number of experts in social research from outside organisations.

Institute for Atomic Studies

The Institute for Atomic Studies was formed in 1976 to act as a focus for the interaction of scientists and graduate students and for the dissemination of reports of research involving the structure and interaction of microscopic quantum systems. Present members, within the disciplines of physics and chemistry, are pursuing fundamental research in the fields of experimental and theoretical atomic collision physics, low and intermediate energy nuclear theory, quantum field theory, statistical physics, electron transport phenomena and quantum and surface chemistry.

Institute for Australasian Geodynamics

In June 1976, the Council of the University approved the formation of the Institute for Australasian Geodynamics. The Institute grew out of the research work undertaken by the geology and geophysics staff members of the School of Earth Sciences since 1972 in various aspects of geodynamics.

The Institute was formed to provide a focus for geodynamic research within the School of Earth Sciences, but has the broader aim of:

- (a) fostering co-operative studies between Australian and Asian scientists on the geodynamic evolution of Australasia.
- (b) facilitating the training of Asian and Australian research scholars in geodynamic aspects peculiar to the region.
- (c) encouraging and co-ordinating specific research projects and the publication of reports.
- (d) setting up and maintaining a data bank of regional geological and geophysical information.

Centre for Neuroscience

The Centre for Neuroscience was established by the Council of the Flinders University of South Australia in October 1977 to foster the interests in the neurosciences that exist within the Schools of Medicine, Biological Sciences and Social Sciences and in the Flinders Medical Centre.

Membership is open to staff of the University and Flinders Medical Centre and postgraduate students are eligible to join as Associate Members. Members of the

University of Adelaide and its associated teaching hospitals will be eligible to join. At present the membership comprises 40 members of academic staff and 20 postgraduates. In keeping with its policy of developing in stages by informal methods, the Centre for Neuroscience has a minimum formal structure consistent with its aims. Its affairs are conducted by a Co-ordinating Secretary elected annually from the membership who reports regularly to the Neurobiology Seminar that is held weekly throughout the year. *Ad hoc* Committees will be elected from time to time to fulfil particular needs as they arise.

University Hall

University Hall, the University's first hall of residence was completed early in 1971. During the academic year it provides accommodation for nearly 200 students, mostly in single furnished study bedrooms. In addition some double study bedrooms are provided together with flat accommodation. During University vacations the Hall is also available for accommodation and conferences organised by outside bodies.

Finance

Details of income and expenditure for the period 1974 to 1977 are shown in the following table.

The Flinders University of South Australia, Finance

Particulars	1974	1975	1976	1977
	\$'000			
Income for capital purposes:				
Commonwealth Government	4 482	3 086	1 153	2 601
State Government	—	—	—	—
Income for other purposes:				
Commonwealth Government	10 209	13 882	15 943	18 113
State Government	53	104	84	249
Student fees	—	—	—	—
Other	309	466	832	784
Total income	15 053	17 538	18 012	21 747
Expenditure:				
Teaching and research	6 686	9 409	11 603	13 193
Administration	1 254	1 867	2 065	2 344
Libraries	875	1 213	1 200	1 447
Buildings, premises, grounds	5 386	4 496	1 837	3 674
Other	338	1 029	640	763
Total expenditure	14 539	18 014	17 345	21 421

ADVANCED EDUCATION

The South Australian Board of Advanced Education was established under the South Australian Board of Advanced Education Act, 1972 to function as a co-ordinating body for colleges of advanced education in South Australia.

The Board is responsible for the development of a balanced system of tertiary education (outside the universities) to meet the needs of South Australia for persons qualified in a wide range of vocations. The Board is the State accrediting authority for

awards in advanced education; it exercises financial supervision over the capital and recurrent budgets of the colleges; and it is responsible for forward planning in advanced education in South Australia.

The Board is empowered to negotiate and co-operate with the Tertiary Education Commission, the Australian Council On Awards In Advanced Education and other national bodies concerned with tertiary education.

There were eight colleges of advanced education in South Australia offering vocational courses in a wide range of fields. The colleges were the Adelaide College of Advanced Education, Kingston College of Advanced Education, Murray Park College of Advanced Education, Roseworthy Agricultural College, Salisbury College of Advanced Education, South Australian Institute of Technology, Sturt College of Advanced Education and Torrens College of Advanced Education. In 1979 the Adelaide College of Advanced Education and Torrens College of Advanced Education amalgamated to form the Adelaide College of the Arts and Education. In addition Murray Park College of Advanced Education and Kingston College of Advanced Education have amalgamated to form the Hartley College of Advanced Education, thus reducing the number of colleges from eight to six.

Further details of college activities are listed below.

ADELAIDE COLLEGE OF THE ARTS AND EDUCATION

In 1979 the Adelaide and Torrens Colleges of Advanced Education amalgamated to form the Adelaide College of the Arts and Education. The college is the oldest institution in Australia with an unbroken history devoted to the training of teachers, the Adelaide Teacher's College (parent to both Colleges of Advanced Education) having first opened on 1 June 1876. The former Adelaide College of Advanced Education is situated in Kintore Ave, Adelaide, a site which was first occupied in 1927.

The Kintore Avenue Campus' present activities are related principally to the training of secondary teachers. Undergraduate courses to fourth year degree level are offered in general secondary arts and science, also in specialist areas of drama, school librarianship, secretarial studies, commerce, physical education, religion studies and community languages.

Postgraduate courses are offered in the professional area of teaching for university graduates, in educational administration, in curriculum development and in religious education. An Associate Diploma in Interpreting/Translating began in 1977. Postgraduate courses in community languages (notably Greek and Italian), applied arts, areas of teaching, secretarial studies and business studies are planned for introduction in the near future.

Most programs are available to full-time, part-time and external students. The College is the centre in the State for external studies at the advanced education level.

HARTLEY COLLEGE OF ADVANCED EDUCATION

Hartley College of Advanced Education has been formed by the amalgamation of Murray Park and Kingston Colleges of Advanced Education.

The college offers undergraduate and postgraduate courses in the fields of primary and early childhood education; undergraduate courses in journalism and liberal studies and postgraduate courses in music, program evaluation and parent education and counselling. In 1979 it has operated on a divided campus at Magill and North Adelaide.

ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College is a college of advanced education located fifty kilometres north of Adelaide. Established in 1883, it is the oldest of Australia's agricultural colleges.

The College provides advanced education and training, and conducts research in the theory, management and practice of primary production, in methods of agricultural marketing and in the industrial processes involved in the agricultural processing industries. In addition to normal classroom facilities the 1 200 hectare campus includes a dairy, modern winery, vineyards and orchard. About 500 hectares are cropped annually as part of the educational program for students. Residential accommodation is provided for students.

Livestock units include cattle (Jersey and Poll Shorthorn), sheep (Merino and Poll Dorset), pigs, horses and goats. The College is involved in applied research and development work in the production of a pure seed of wheat. A major wheat breeding program is conducted and the variety 'Lance' was released in 1978. Several grants from the Australian Research Grants Committee have been received by College officers for research in viticulture, animal nutrition, entomology and for a study of the adoption of the new variety, 'Lance', by wheatgrowers.

The College currently offers the following courses: Bachelor of Applied Science in Oenology, Diploma of Applied Science in Agriculture, Diploma of Applied Science in Natural Resources, Associate Diploma in Wine Marketing, Associate Diploma in Agriculture (including Farm Management and Horse Husbandry Options) and Graduate Diplomas in Agriculture, International Agriculture and Natural Resources. The Graduate Diploma in Agriculture (International) was established in 1976, and is financed by the Food and Agricultural Organization of the United Nations and by the Australian Development Assistance Bureau. Students from the Near East and North Africa have attended the course which presents the principles and practices of ley-farming systems suited to the Mediterranean type climate areas of South Australia.

To be eligible for admission to the undergraduate courses, applicants normally must have completed full secondary schooling. Selection is based on performance in examinations at Year 12 level of secondary education in South Australia, or equivalent, and on the assessed capacity of the applicant to complete the course. Provision is made for the admission of mature age students. Applicants for the graduate diploma courses must have completed an appropriate three-year tertiary course of study.

At 30 April 1978 there were 331 students enrolled at the College.

SALISBURY COLLEGE OF ADVANCED EDUCATION

The College, which is located on a 28 hectare site approximately 20 kilometres north of Adelaide, was established in 1968 as the Salisbury Teachers College. The College was granted autonomy and renamed Salisbury College of Advanced Education on 1 January 1973.

The College offers the following courses: a Diploma of Teaching, a three-year course for junior primary, primary and secondary teachers; a Bachelor of Education degree course, a one-year full-time course undertaken on the completion of a Diploma of Teaching; Graduate Diploma in Teaching (one-year); Graduate Diploma in Outdoor Education (one-year); Graduate Diploma in Curriculum (one-year), Graduate Diploma in Educational Technology (one-year) and the Graduate Diploma in Reading Education (two years part-time). The College also offers a one-year Graduate Diploma in Recreation, and two-year Associate Diploma courses in Recreation and in Parks and Wildlife Management.

SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which adopted its present name in 1960, was established in 1889 as the South Australian School of Mines and Industries.

After its inception there was co-operation between the University of Adelaide and the School, and in 1903 joint engineering courses were established. An important development in the history of technical education came in 1957 with an agreement between these institutions whereby certain courses of study at the School would lead to the degree of Bachelor of Technology at the University. Other degree courses were subsequently introduced.

Consequent upon government policy aimed at the independent development of colleges of advanced education the last degree students under the joint arrangement with the University of Adelaide graduated in 1976. The South Australian Institute of Technology Act, revised in 1972, empowered the Institute to grant its own degrees. The first of these awards was made at the 1973 graduation ceremony.

The Institute maintains a close relationship with the Education Department and the Department of Further Education, and since 1959 there has been a progressive transfer of control of certain activities. Classes up to and including Matriculation level and all trade classes were transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963.

A number of technician courses have progressively been transferred from the Institute to the Department of Further Education and this has enabled the Institute to expand its work in the professional and more advanced semi-professional fields. However, some courses, not approved for awards in advanced education by the Australian Commission on Advanced Education but which lead to a certificate awarded by the South Australian Technician Certificate Board, will continue to be offered.

In addition to its campuses at North Terrace, City, and The Levels (approximately thirteen kilometres north of the city), the Institute operates a campus at Whyalla teaching at both professional and semi-professional level. In 1978 the Institute taught over 780 subjects.

The Institute is administered by a Council which has complete authority within the limits of the finance placed at its disposal and for which it is responsible annually to Parliament. The autonomy provided by this feature of control for many years made the Institute unique among Australian technical institutes, but in recent years, the other colleges of advanced education have been granted autonomous government.

A wide range of courses and subjects to various levels is offered. Of the professional courses presented by the Institute, twenty-five have been accredited by the Australian Council On Awards In Advanced Education, for the award of Institute degrees and one course which at present leads to a Diploma in Technology award, will be submitted through the national accrediting machinery for acceptance as a degree course. The Institute offers in addition to a Masters' degree in Applied Science (Pharmacy), a Masters' degree (Research) which is available in several areas. There are also seventeen graduate diploma courses, eight of which have already been accredited.

For a number of years the Institute has offered courses which lead by various periods of part-time study to a level of qualification below that of the full professional. These courses provide for those employed in the broad area between the tradesman and the professional. In addition to eight Technician Certificate courses, the Institute also offers twelve Associate Diploma courses which may be entered after completion of a Technician Certificate or twelve years of schooling. Degree, diploma and certificate courses applicable to local needs are conducted at the Institute's Whyalla campus.

Details of income and expenditure for the period 1974 to 1977 are shown in the following table.

South Australian Institute of Technology, Revenue and Expenditure					
Particulars	1974	1975	1976	1977	
					\$'000
Income for capital purposes:					
Commonwealth Government	4 512	5 163	1 530		763
Income for other purposes:					
Commonwealth Government (a)	8 094	11 477	12 126		14 156
Other	126	206	166		216
Total income	12 732	16 846	13 822		15 135
Expenditure:					
Capital (land, buildings, plant, furniture and equipment)	4 746	4 844	1 755		898
Revenue	8 225	11 327	12 619		14 324
Total expenditure	12 971	16 171	14 374		15 222

(a) Includes amounts transferred to Capital Account for equipment and furnishings purchased: 1974, \$34,000; 1975, \$57,000; 1976, Nil; 1977, Nil.

The Library is situated at each of the three campuses of the Institute. The total holding at the end of 1978 was 155 000 volumes with some 2 000 periodical titles being received during the year. Loans to staff and students exceeded 110 000 in 1978.

Emphasis is placed on the acquisition of material in the applied sciences, technology and social sciences to support the Institute's teaching program. Collections of audio-visual materials including films, microforms, maps, prints, records and slides are being developed.

The following table shows the details of students and staff for the period 1974 to 1978.

South Australian Institute of Technology, Students and Staff					
Particulars	1974	1975	1976	1977	1978
Students:					
Individual enrolments	5 558	5 724	5 682	5 715	6 016
Subject enrolments	18 262	20 175	19 875	22 606	24 361
Full-time teaching staff	301	332	348	335	340
Part-time teaching staff	693	625	676	608	568

STURT COLLEGE OF ADVANCED EDUCATION

Sturt College of Advanced Education was formerly Bedford Park Teachers College established in 1966 at the same time as the Flinders University of South Australia. The College was granted autonomy and renamed on 1 January 1973. The College occupied its present buildings in 1967. The site, of about 9 hectares, is located approximately 11 kilometres south of Adelaide and is adjacent to Flinders University.

At present the College offers programs within the School of Teacher Education and the School of Health Professions. Within the School of Teacher Education, the Diploma of Teaching is offered in the areas of junior primary, primary and secondary teaching. Students successfully completing the fourth year of study, usually all secondary and a selected number of primary student teachers, receive the award of Bachelor of Education. From 1977, a one-year full-time equivalent Graduate Diploma course in Community and School Relations has been offered.

From 1975 the School of Health Professions has offered three-year full-time courses in nursing and speech pathology and, in 1977, a one-year full-time diploma course in community health nursing and two-year diploma courses in radiography and nurse education are being offered. A bridging course is available for hospital-trained nurses who wish to study for the Diploma of Applied Science (Nursing) award. Most of the programs offered in the School of Health Professions utilise the facilities, and to a lesser extent, the staff of the Flinders Medical Centre which is situated a few hundred metres from the College.

The following table shows for all Colleges of Advanced Education in South Australia, the number of students in various course levels and fields of study for the period 1976 to 1978.

**Colleges of Advanced Education, Students by Course Level and Field of Study,
South Australia**

Course	1976	1977	1978
Master Degree:			
Applied Science	—	3	8
Building, Surveying and Architecture	—	—	1
Engineering and Technology	—	2	5
Paramedical	6	13	13
Total	6	18	27
Graduate Diploma:			
Agriculture	22	18	14
Applied Science	39	62	97
Building, Surveying and Architecture	32	55	47
Commerce and Business	226	280	377
Engineering and Technology	3	2	17
Liberal Studies	33	114	188
Music	8	22	17
Paramedical	8	17	17
Teacher Education	999	737	621
Total	1 370	1 307	1 395
Bachelor Degree:			
Agriculture	—	—	61
Applied Science	321	348	345
Art and Design	—	56	193
Building, Surveying and Architecture	340	330	309
Commerce and Business	1 080	1 040	1 089
Engineering and Technology	663	635	586
Liberal Studies	424	531	585

**Colleges of Advanced Education, Students by Course Level and Field of Study,
South Australia (continued)**

Course	1976	1977	1978
Bachelor Degree (continued):			
Music	—	26	43
Paramedical	493	521	559
Teacher Education	—	653	1 737
Total	3 321	4 140	5 507
Diploma:			
Agriculture	139	212	172
Art and Design	300	281	166
Liberal Studies	51	66	66
Paramedical	190	322	354
Teacher Education	7 712	7 193	6 286
Total	8 392	8 074	7 044
Associate Diploma:			
Agriculture	33	37	63
Applied Science	33	32	51
Art and Design	135	162	189
Building, Surveying and Architecture	187	184	189
Commerce and Business Studies	319	419	450
Engineering and Technology	209	135	207
Liberal Studies	375	441	613
Paramedical	180	219	219
Teacher Education	—	—	42
Total	1 471	1 629	2 023
Total:			
Agriculture	194	267	310
Applied Science	393	445	505
Art and Design	435	499	548
Building, Surveying and Architecture	559	569	546
Commerce and Business Studies	1 625	1 739	1 916
Engineering and Technology	875	774	815
Liberal Studies	883	1 152	1 448
Music	8	48	60
Paramedical	877	1 092	1 162
Teacher Education	8 711	8 583	8 686
Total	14 560	15 168	15 996

FURTHER EDUCATION

The Department of Further Education, established in 1972, is responsible for a wide range of post-secondary educational activities conducted by community colleges and colleges of further education in all areas of the State.

Much of the educational development is directed towards an improvement in vocational education. This includes the provision of courses for the employment sectors of industry, commerce and government. These courses are provided at many levels from

basic trade (apprentice) to post-trade certificate and diploma level. Also associated with this vocational orientation are preparatory or general education courses.

The Department also caters for continuing education for people of all ages by providing a wide variety of general, academic, craft, art, cultural and general interest courses. The Department gives more than 1 800 educational programs involving about 2 000 subjects for over 100 000 students throughout South Australia.

The following table shows the range of educational activities conducted by the Department of Further Education during 1976 and 1977, and student hours involved.

Further Education: Distribution of Educational Activities, South Australia

Courses	Student Hours			
	1976		1977	
	No.	Percentage of Total	No.	Percentage of Total
Degree and diploma	114 859	0.9	104 902	0.8
Technician, certificate and post-trade ...	3 260 106	26.6	3 829 298	28.1
Basic trade or apprenticeship	2 397 352	19.5	2 650 378	19.5
Other skilled trade and vocational	1 546 543	12.6	1 759 533	12.9
Preparatory or general education	2 208 636	18.0	2 578 005	19.0
General interest, enrichment and improve- ment	2 749 515	22.4	2 681 628	19.7
Total	12 277 011	100.0	13 603 744	100.0

The following table shows the number of subjects and individual student enrolments in the years 1975, 1976 and 1977.

Further Education: Enrolments, South Australia

Course	1975	1976	1977
	SUBJECT ENROLMENTS		
Degree and diploma	585	3 766	2 727
Technician, certificate and post-trade	36 085	44 711	55 543
Basic trade or apprenticeship	24 372	24 487	25 359
All other skilled trade and vocational	17 408	27 634	29 448
Preparatory and general education	14 811	21 467	30 689
General interest, enrichment and improvement	36 728	47 529	51 145
Total	129 989	169 594	194 911
	INDIVIDUAL ENROLMENTS		
Degree and diploma	557	2 374	2 557
Technician, certificate and post-trade	19 888	25 196	30 153
Basic trade or apprenticeship	9 317	9 651	10 065
All other skilled trade and vocational	15 994	25 302	25 409
Preparatory and general education	9 953	16 466	24 542
General interest, enrichment and improvement	35 712	45 316	46 925
Total	91 421	124 305	139 651

The following table shows the numbers of staff employed in community and further education colleges.

Further Education: Staffing, South Australia

Staff	1975	1976	1977
Full-time teaching	987	1 115	1 274
Part-time teaching(a)	2 635	3 320	3 627
Total	3 622	4 435	4 901
Non-teaching (ancillary)	562	578	678
Total	4 184	5 013	5 579

(a) The large number of part-time teachers in each year reflects the Department's policy to have teaching staff who are currently involved in activities in commerce, industry and government, and to provide courses for groups, particularly in country centres, where full-time staff are not warranted.

Teaching Methods

The Department has continued in its efforts to improve public accessibility to courses by providing for the option of full-time, part-time or correspondence studies in a large number of courses. Special arrangements for country apprentices have continued to operate with success. Correspondence students have also been able to attend community and further education colleges for supervised study.

The integrated training approach to vocational education continues to develop in many colleges. The more traditional divisions of technical courses into theory, drawing and practical plus on the job experience, have been broken down. Integration of course work on a project basis has resulted in a more meaningful learning experience for the students.

During 1977 there was a continuing involvement by teachers in the production and utilisation of different kinds of multi-media materials. Many colleges now produce and use a wide range of learning materials to meet this need. These materials which include slide and overhead transparencies, video tapes, and audio tapes as well as multi-media packages have become increasingly available for internal and external students.

The Multi-Media Centre, located as a school of the Kilkenny Branch of Regency Park Community College, provides a State-wide service in the production of learning materials and their usage. Part of this service has been to produce a number of video programs for general distribution and educational television service for a number of teachers.

During 1977 there has been a continuing expansion in the facilities of college library/resource centres. Books, periodical collections, sound and video tapes, slides and transparencies have all been increased. The appointment of lecturer-librarians to many colleges has been a major factor in developing the concept of the resource centre as an important part in the learning process.

Administration

Community colleges, colleges of further education and schools of the Adelaide College of Further Education function along autonomous lines. This autonomy encompasses enrolments, staffing at the lecturer and teacher levels and budgeting within the State allocations.

The Operations Division is responsible for translating established policies into operational programs particularly in the areas of curriculum, staff training and development.

The Resources Division services all areas of the Department with emphasis upon research, building, educational resources, administration, finance and clerical services.

Current and Future Developments

The major areas of change and emphasis include the following inter-related developments:

- the continuing development of the community college, both conceptually and physically;
- the further development of general studies in colleges which were predominantly technical by tradition, with the emphasis on preparatory, remedial and bridging courses;
- the adoption of the 'open university' approach to education so as to reach a broader sample of the South Australian population at the post-secondary level;
- the multi-media emphasis in the teaching-learning situation in conjunction with the planned development of library/resource centres;
- the further development of teaching staff with the appointment of staff-development officers;
- extended provision for student welfare by the development of College Counselling Services and associated staffing; and
- co-operation and co-ordination in curriculum matters with other post-secondary institutions, and increased community involvement in educational planning.

Block Release Training

A new form of technical education known as Block Release Training was introduced in 1973 for country apprentices in some trades in which apprentices previously were required to study by correspondence. It involves first and second year apprentices, who live outside a technical school district, attending a metropolitan college for a total period of eight weeks each year. In some cases it is four blocks of two weeks and in other cases two blocks of four weeks. These apprentices receive the same training as those employed in the metropolitan area and in country school districts and are not required to undertake any correspondence course training. The Apprenticeship Commission arranges accommodation in the government hostel at Pennington, or private accommodation may be arranged, with a subsidy being payable in both cases.

Workers Educational Association of South Australia

The Workers Educational Association of South Australia Incorporated (WEA) was established in 1913. Originally patterned on the English WEA, it is a voluntary adult education organisation which works in close co-operation with other adult education organisations, and the trade union movement.

Activities it organises include a comprehensive day and evening class program, postal courses for trade unionists throughout Australia, and provides pre-retirement, trade union, credit union and industrial democracy training in South Australia. It possesses an adult education centre in the City. Courses are offered at the University of Adelaide, The Flinders University of South Australia, the Institute of Technology, many colleges of Advanced Education, high schools and other public institutions.

In 1978 there were 680 classes with a total enrolment of 16 200 students organised by the WEA and a further 16 postal courses with an enrolment of 1 800. Since 1973 a program of trade union education has been developed with the aid of a State Government grant. Courses have been provided on industrial democracy concepts and skills for union officials and for employees of several government departments. The WEA's union education office also provides training and education programs for the credit union

movement in SA. During 1978, the union education office conducted courses for some 700 students in the three fields of trade unionism, industrial democracy and credit unions.

Pre-Retirement Association of South Australia

The Pre-Retirement Association of South Australia Incorporated (PRA) was established in 1978 as a voluntary organisation to meet the needs of people who are about to retire or who have recently retired. It offers courses for industry, commerce and organisations in pre-retirement education; it also assists in promoting courses for the general public and a range of seminars while stimulating research and publication. It works closely with the WEA of South Australia and other interested educational and service organisations.

University of Adelaide: Department of Continuing Education

The University initiated adult education classes in 1917 under a Department of Tutorial Classes. A Department of Adult Education was established in 1957 and was renamed the Department of Continuing Education in 1977.

The Department provides courses and schools in a range of subjects for members of the general public and arranges seminars on issues of social and political concern. It has a publications program based on proceedings of the schools and seminars including *Alitji In The Dreamtime*, the Pitjantjatjara version of *Alice In Wonderland*, and *Five Creeks of the River Torrens*, one of the many studies in social and natural history. The Department also arranges courses for the continuing education of professional people.

In June 1972 the University opened an educational radio station, on 1 630 Hz, under the call sign VL5UV. Established by private donation of \$100 000 the station is administered by the Department of Continuing Education and costs are met by the University and by listeners' donations and subscriptions. Since its opening the station has provided structured courses for professional people and the general public.

Since 1975 the station has operated on the MV band under a new experimental broadcasting licence with the call sign 5UV. Under the new arrangements hours of broadcasting were doubled to approximately 100 hours per week and its range of programs included music for the first time. In addition it offered access programs for student and community groups and approximately 28 ethnic communities broadcast regularly. In October 1978 the University was offered and accepted a full AM licence by the newly established Australian Broadcasting Tribunal.

Total enrolments for all departmental activities during 1978 exceeded 5 000 and an estimated 150 000 listened to 5UV programs.

TRADE EDUCATION

Legislation governing apprenticeships in South Australia is contained in the Apprentices Act, 1950-1978 which is administered by an Apprenticeship Commission consisting of a full-time chairman and five part-time members representing employer organisations, trade unions and the Minister of Education.

An employer must receive the approval of the Commission before he can employ an apprentice. In addition, the employment of all adult apprentices must be approved by the Apprenticeship Commission. The Commission has the general power to investigate and deal with apprenticeship matters, among which is to determine the term of indenture in any particular trade and to transfer, assign, suspend or cancel indentures as circumstances require.

Number of New Apprenticeships Commenced: Trade Groups, South Australia

Trade	1973	1974	1975	1976	1977
Metal	1 191	1 535	1 285	1 281	1 431
Electrical	403	421	403	389	366
Building	535	529	551	610	626
Furniture	221	234	208	214	168
Printing	92	115	59	67	70
Vehicle industry	142	180	167	175	155
Ship and boat-building	10	18	11	6	6
Bootmaking	18	7	17	10	7
Clothing	1	—	1	1	1
Coopering	2	6	2	1	1
Food	228	215	257	249	201
Hairdressing	402	348	289	321	282
Leather and canvas goods	4	3	1	5	—
Miscellaneous	20	20	15	32	21
Total all trades	3 269	3 631	3 266	3 361	3 335

The following table shows the number of new apprenticeships commenced, indentures completed, indentures cancelled, and apprentices employed at 31 December for the years 1973 to 1977.

Apprenticeships, South Australia

Particulars	1973	1974	1975	1976	1977
New apprenticeships commenced	3 269	3 631	3 266	3 361	3 335
Number of indentures completed	2 229	2 477	3 463	2 318	2 788
Number of indentures cancelled	386	439	484	497	486
Number of apprentices employed	11 186	11 948	11 184	11 559	11 856

The provision of technical education for apprentices is the responsibility of the Minister of Education. However the Commission has the authority to make recommendations to the Minister on matters affecting technical education and to approve courses of training and instruction for apprentices.

Apprentices generally are required to attend colleges of further education during working hours for eight hours a week or an eight week course in the first and second year and for eight hours a fortnight or a four week course in their third year—a total of 800 hours in their indenture term. Exceptions occur for certain trades. A small number have different arrangements for attendance, some of which are for a lesser number of total hours, and for a few trades there is no required college course.

Although almost all apprentices are required to attend a college of further education to complete a basic training course (during their first three years), facilities are provided for those who are able to attend voluntarily to do so during the fourth and final year of their indenture term. During this year, many apprentices commence studies of an advanced nature most of which are components of various Post-Trade Certificate courses which the apprentices are encouraged to complete after the end of their apprenticeship. These advanced subjects, and others designed to meet special demands for training in new processes and techniques, are also available to adult tradesmen and others employed in industry.

Effective Apprentice Enrolment in Colleges of Further Education, South Australia

Colleges	1973	1974	1975	1976	1977
Metropolitan colleges of further education	7 903	7 385	7 594	7 737	8 891
Country colleges of further education	1 280	1 156	1 102	1 247	1 169
College of External Studies (a)	837	516	202	177	5
Total	10 020	9 057	8 898	9 161	10 065

(a) Includes Northern Territory apprentices.

Since 1960 the Commonwealth Development Bank has awarded Post-Apprenticeship Scholarships annually to financially assist young tradesmen and outstanding apprentices to further their education and technical qualifications. The scholarship scheme is administered on behalf of the Bank by the Commonwealth and State Apprenticeship Committee. Twelve scholarships were awarded to South Australians in 1977, the same number as in 1976.

Commonwealth Rebate for Apprentice Full-time Training System

On 15 January 1977 the Commonwealth Rebate for Apprentice Full-time Training System (CRAFT) was introduced to replace the National Apprenticeship Assistance Scheme. CRAFT is designed to encourage employers to engage more apprentices and to provide improved training in basic practical skills during the early years of apprenticeship.

A tax-exempt rebate is payable to all employers who release their apprentices to attend a basic trade course in technical education. The rebate is \$12 or \$16 for each day of release depending on the stage of schooling.

In addition to these basic payments, tax-exempt rebates are payable to employers to encourage them to allow their apprentices to engage in full-time off-the-job training in basic practical skills. Where an employer provides full-time training to approved standards, or releases apprentices for full-time training in appropriate courses at technical education institutions or in other approved training centres, a rebate of \$6 per day for each eligible apprentice is payable for the duration of the approved course. This rebate is available for periods of full-time off-the-job training during the first three years of the apprenticeship from a minimum of twenty full working days up to a maximum of 260 full working days, provided that not more than 130 days of the training are taken during the second and third years of the apprenticeship. Employers who make available their own training facilities for use by other employers are eligible for a further subsidy which is determined by the Department of Employment and Industrial Relations and related to the recurrent costs of training provided.

A group training scheme exists whereby apprentices, sponsored by employers in the private sector and engaged as additional apprentices to the employers' normal annual requirements, receive full-time off-the-job training in a Commonwealth or State Government Training Centre during the first year of their apprenticeship. Wages and costs relating to this year of training are paid by the Commonwealth Government. Small firms who form co-operative groups to provide training in approved additional skills for their apprentices, are eligible for financial assistance under CRAFT.

A living-away-from-home allowance is payable to both country and metropolitan apprentices required to live away from home in order to obtain or remain in an apprenticeship. This allowance, which offsets some of the extra costs associated with living away from home, is paid at the rate of \$19.80 per week for first year apprentices

and \$7-60 per week for second year apprentices. Income tax instalments are deducted from each living-away-from-home allowance payment.

The employer rebates shown were effective from 1 January 1978 and are subject to indexation adjustment to allow for award wage movements.

OTHER TRAINING

Trainer Training and Training Development Services

As part of its responsibility in implementing an effective national manpower policy, the Department of Employment and Industrial Relations has established Training Development and Trainer Training services to improve the extent and quality of training practices throughout industry and commerce. In addition, an advisory service is provided to assist companies to start or extend training in a systematic way.

Training Development provides an advisory service aimed at the promotion of additional and better training in, and for, industry and commerce. Activities include assisting Industry Training Advisory Committees to examine specific manpower problems and the distribution of *Training Talkback*, the journal of the National Training Council. In addition to publicising the training services of the Department, the Service acts to create an awareness of all training resources available in South Australia. Another responsibility is the administration of the Manpower Development Officer Subsidy Scheme and the Training Assistance Program, under which training incentives are offered to firms and associations.

The general aims of the Trainer Training Service are to promote training as a concept in industry and commerce, and to improve training standards. The Service is directed at those with responsibilities for training others, including manpower training—instructional specialists and line personnel with duties for administering or implementing training. The Service is divided into several trainer training areas: Training Officer Service, Instructor Service and a Supervisor Trainer Service.

The Training Officer Service is provided to train Training Officers and Manpower Development Officers. This is achieved by an eighteen-week Training Officer Course which is conducted in Adelaide, Melbourne and Sydney. The course covers the following broad topics at Supervisor and Operator level: Assessment of Training Needs; Development of a Course; Conduct of a Course; Evaluation of Results; and Administration of a Course. The eighteen weeks include eight weeks in a training centre and two, five-week practical assignments in a host company or organisation.

The Instructor Service aims to provide basic instructional techniques for those who instruct groups of employees and those who provide individual instruction on the job. The Service offers Group Instructor, Operator-Instructor and Clerk-Instructor courses.

The Supervisor Training Service aims to provide resources to trainers to meet some basic needs of supervisors. Trainers in this Service may be engaged in full-time or part-time training duties. The courses covered include Instruction-Communication, Interpersonal Relations, Accident Prevention and Method Improvement.

National Employment and Training System

The National Employment and Training System (NEAT) provides a comprehensive system of labour training able to remedy labour imbalances in industrial sectors and geographical regions. NEAT forms a basis for the Commonwealth Government's manpower policy, and is designed for operation by the Commonwealth Employment Service with the following broad objectives:

to alleviate unemployment wherever it may occur and to overcome shortages of skilled labour;

to assist in the long-term restructuring of the workforce, promote regional development, and improve the general level of available skills;

to serve the social and economic needs of the community by means of special assistance, guidance, remedial training, and other measures designed to improve employment opportunities.

The NEAT System supersedes other employment training schemes such as those for women, widow pensioners, war widows, persons displaced by redundancy or technological change, Aborigines, general retraining for employment and rural reconstruction. NEAT assistance is available to persons genuinely needing help to find suitable employment. Individuals assisted under NEAT must have specific employment objectives, which should be realistic for the individual and compatible with the requirements of the labour market. The system has special provisions to assist Aborigines to enter the workforce.

Approved training can be undertaken full-time or part-time at training institutions, within industry or commerce, or by correspondence course. Persons undertaking full-time formal studies through NEAT are paid a weekly allowance which is means-tested. Companies providing on-the-job training for NEAT trainees receive a percentage of the average adult male award wage as a subsidy.

The Special Youth Employment Training Program (SYETP) has been introduced as an extension of the NEAT system to provide young people (who have had difficulty finding employment) with marketable skills and work experience by subsidising employers willing to provide training.

Further information is available at all offices of the Commonwealth Employment Service.

Former Regular Servicemen's Vocational Training Scheme

The objective of the Former Regular Servicemen's Vocational Training Scheme (FRSVTS) is to assist former regular service personnel who have long service, or who have retired on medical grounds, to re-establish themselves in the civilian workforce.

Assistance under FRSVTS is available to former regular service persons who have either been honourably discharged after completing at least fifteen years effective full-time service or who have been discharged on grounds of invalidity and are entitled to an A or B class pension under the Defence Forces Retirement Benefits and Defence Force Retirement and Death Benefits legislation. To qualify for assistance under FRSVTS it is not necessary for the applicant to be seeking training for an occupation in demand in the labour market as is the case with the National Employment and Training System (NEAT).

Approved training is normally undertaken full-time or part-time in established public educational training institutions. Courses considered as non-vocational will not be approved. Approved trainees are paid NEAT allowances subject to the same income qualifications as NEAT.

There is no provision under FRSVTS for on-the-job training, and therefore consideration may be given to training of this type under NEAT. The fact that a person has completed training under FRSVTS does not exclude him or her from consideration for on-the-job NEAT training.

STATE EXPENDITURE ON EDUCATION

The following table shows details of outlay by the South Australian Government on education for the past four years.

Consolidated Revenue Account: Outlay on Education^(a)
South Australia

Purpose	1974-75	1975-76	1976-77	1977-78
		\$'000		
General administration, regulation and research	7 028	8 608	11 742	14 366
Transportation of students	3 650	4 940	5 861	6 846
Primary and secondary education	167 168	213 319	259 125	285 656
Vocational training	12 337	15 574	19 150	24 387
University education ^(b)	149	-16	-32	-28
Other higher education	10 781	11 462	10 402	7 727
Other education programs:				
Handicapped children	2 314	2 944	3 382	6 915
Adult education	3 210	4 952	6 310	5 209
Pre-school and childcare	5 835	10 234	11 868	12 340
Other	327	436	1 739	2 164
Total	212 799	272 453	329 547	365 582

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Includes expenditure on general research.

6.3 SCIENTIFIC AND RESEARCH ORGANISATIONS

AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

The Australian Mineral Development Laboratories (AMDEL) is a contract research and technical consulting organisation serving the mineral industry in Australia and overseas. AMDEL is controlled by a Council with representation from the State and Commonwealth Governments and the Australian Mineral Industries Research Association Ltd. These organisations each provide a guaranteed amount of work. A wide range of services is offered including chemical analysis, mineralogy, petrology, computer techniques, ore reserves calculations, mine planning, mineral engineering, chemical metallurgy, process control, materials science, plant evaluation, process design and commissioning, and environmental studies.

AMDEL employs approximately 180 people, including about sixty with professional degrees. It maintains extensive laboratories and pilot plant equipment in Adelaide, and has a small laboratory in Perth.

Contract research earnings are approximately \$4 million annually.

AUSTRALIAN MINERAL FOUNDATION

The Australian Mineral Foundation has been established by the industries, institutions and departments concerned with minerals and petroleum. It is administered by a council representative of these groups.

The mining and petroleum industries are confronted with a rapid development in technology and a continual requirement for transmitting new information both to operating staff and to postgraduate students. The Foundation fills this communication need in several ways:

- by providing short-term concentrated training courses for professional and other specialised staff;
- through the medium of symposia, conferences and distinguished lecturers;
- through a specialised resource centre including a geoscience library and information service;
- by selective film showings.

In addition an auditorium, seminar rooms, offices and extensive catering facilities are made available for conventions.

AUSTRALIAN WINE RESEARCH INSTITUTE

The Australian Wine Research Institute situated at Urrbrae promotes research and other scientific work for the Australian wine industry; it was established in 1955, having grown from a small research unit formed in 1934 within the University of Adelaide.

The Institute is administered by a nine-member council consisting of representatives from the Australian wine industry, the Commonwealth Government, the Commonwealth Scientific and Industrial Research Organization, the University of Adelaide, and scientific advisers.

Comprising laboratories and an experimental winery, the Institute conducts research into wines, brandies, and winemaking and specialises in the microbiology and chemistry of wines and brandies. A technical advisory service assists commercial winemakers with technical problems. Tested yeast cultures for wine fermentation are made available to the wine industry.

The John Fornachon Memorial Library maintained by the Institute is a specialised library of technical literature on wine.

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is the largest scientific research organisation in Australia. It has a total staff of approximately 7 000 people located in more than 100 laboratories and field stations throughout Australia and about one-third of the staff are scientists.

CSIRO is a statutory body established by the *Science and Industry Research Act* of 1949. Under the Act CSIRO replaced, but had continuity with, the former Council for Scientific and Industrial Research (CSIR) which was established in 1926. The *Science and Industry Research Act, 1949* as amended by the *Science and Industry Research Amendment Act, 1978* provides that the functions of CSIRO are:

- (a) to carry out scientific research for any of the following purposes:
 - (i) assisting Australian industry;
 - (ii) furthering the interests of the Australian community;
 - (iii) contributing to the achievement of Australian national objectives or the performance of the national and international responsibilities of the Commonwealth;
 - (iv) any other purpose determined by the Minister;
- (b) to encourage or facilitate the application or utilisation of the results of such research;
- (c) to act as a means of liaison between Australia and other countries in matters connected with scientific research;
- (d) to train, and to assist in the training of, research workers in the field of science and to co-operate with tertiary-education institutions in relation to education in that field;
- (e) to establish and award fellowships and studentships for research, and to make grants in aid of research;
- (f) to recognise associations of persons engaged in industry for the purpose of carrying out industrial scientific research and to co-operate with, and make grants to, such associations;
- (g) to establish, develop and maintain standards of measurement of physical quantities and, in relation to those standards:
 - (i) to promote their use;
 - (ii) to promote, and participate in, the development of calibration with respect to them; and
 - (iii) to take any other action with respect to them that the Executive thinks fit;

- (h) to collect, interpret and disseminate information relating to scientific and technical matters; and
- (j) to publish scientific and technical reports, periodicals and papers.

The Act provides for CSIRO to be governed by an Executive comprising a full-time Chairman, two other full-time Members and between three and five part-time Members. It also provides for a statutory Advisory Council and State Committees as independent sources of advice to the Executive.

CSIRO's research is carried out in 37 Divisions and five smaller units, three of which have their headquarters in South Australia: these are the Divisions of Horticultural Research; Human Nutrition; and Soils.

Division of Horticultural Research

This Division is concerned with research on perennial fruit crops. It has its headquarters and a laboratory in Adelaide, and a laboratory and field plantings at Merbein, near Mildura, Victoria.

At the Adelaide laboratory, research is concerned with physiology and biochemistry of horticultural plants. Under study are selected aspects of vegetative and reproductive growth and the factors which control them; the anatomy of fruits and seeds; fruit biochemistry; and the effects of salinity on plant performance. Other work deals with research on plant parasitic nematodes and on the domestication of Australian native plants. A small program of controlled breeding of avocados is in progress.

At Merbein, the Division is concerned with more applied research on grapevines and a wide range of tree crops. Viticultural research is concerned with the development of new grapevine varieties better adapted to the hot inland irrigated regions of Australia and of new systems of vine management suited to Australian economic conditions. Associated with this work is the detection and, where possible, the elimination of harmful vine viruses.

Tree research is aimed at developing new or alternate crops for Australian conditions. The two main areas of research are firstly the development of alternate crops for the temperate inland irrigation areas of Australia and secondly the introduction and evaluation of new horticultural crops for the tropical north and central regions of the continent. Trial plantings have been established at a number of representative localities in Northern Australia under the supervision of an officer of the Division stationed at Darwin.

Division of Human Nutrition

The Division of Human Nutrition is accommodated in laboratories in the grounds of the University of Adelaide and at the Glenthorne laboratories, O'Halloran Hill. The interests of the Division include:

- (1) studies in epidemiology with reference to nutrition in adolescents and young adults, and in Aboriginal infants;
- (2) biochemical and physiological studies of the effects of deficiencies and imbalances of certain micronutrients on developmental and metabolic processes in man.
- (3) investigations concerned with the metabolism of carbohydrates, proteins and lipids in normal and abnormal nutritional states.

Division of Soils

The Division of Soils is one of three Divisions comprising the Land Resources Laboratories along with the Division of Land Use Research (centred in Canberra) and the Division of Land Resources Management (centred in Perth). The research program of this Division is concerned with the use of soils in agriculture and forestry, and the role

of soils and soil materials in hydrology, plant growth and as habitats for flora and fauna. The work is organised into several programs, each of which comprise a number of projects. Because soil is a complex mixture of organic and inorganic materials, with a micro-flora and micro-fauna that vary with the material from which it was formed, the climate in which it occurs, and the plants and animals that occupy its surface, very few problems in soils are capable of an interdisciplinary solution.

Scientists in the Division are loosely grouped together to tackle problems in four major areas namely (1) to provide an inventory of Australia's soil and water resources; (2) to maintain and improve plant production through modifying the chemical, physical and biological properties of soils; (3) to understand the principles of erosion with a view to its control; and (4) to identify and correct soil problems arising from natural and man-made alteration of the environment. Within each area understanding of the fundamental processes occurring in soils is sought along with practical solutions to problems arising from the use of soils.

The headquarters laboratory is in Adelaide, with smaller groups in regional laboratories in Brisbane, Canberra, Hobart, and Townsville. About half the staff are in the Adelaide laboratories.

Division of Materials Science, Production Technology Laboratory

The former South Australian Branch of the Materials Research Laboratories (MRL) at Woodville North was transferred from Department of Defence to CSIRO on 1 September 1977.

The greater part of the branch has been incorporated into the Division of Materials Science which also has laboratories at Parkville, Fishermens Bend and Fitzroy in Victoria. The former Standards Section of MRL, however, has been attached to the CSIRO National Measurement Laboratory of Sydney and has become the National Measurement Laboratory (Adelaide Branch).

The research program of the Division of Materials Science falls into three major program streams; Catalysis and Surface Science, Production Technology, Engineering Ceramics and Refractories.

The Division's Adelaide Laboratory is concerned with industrial production technology. New facilities are being set up at the present time for the undertaking of research on an industrial scale in welding, ferrous casting, forging and in aspects of surface casting. Research and development in electrography as previously carried out by MRL will also be continued.

Production technology research is carried out in the Division's Adelaide and Fitzroy laboratories for the purpose of providing new and improved methods and products for use in Australian manufacturing industry. The work of the Production Technology Laboratory, Adelaide will in future be devoted entirely to this purpose.

National Measurement Laboratory

National Measurement Laboratory (NML), Sydney is responsible for the establishment and maintenance of the Commonwealth legal standards for the measurement of physical quantities. The laboratory has a number of research programs including studies in solid-state physics, the physics of fluids, optics, magnetic and dielectric properties of materials, acoustics and vibration.

An Adelaide Branch of NML was formed at Woodville North in September 1977 incorporating staff and facilities from part of the former South Australian Branch of Materials Research Laboratories, Department of Defence. The role of the laboratory includes the establishment of a close liaison with industry and Government departments to assist in solving problems associated with precise measurements using staff expertise

from both the Sydney and Adelaide laboratories. The branch also provides a calibration service in certain fields particularly in temperature, electrical and physical (mass, volume, density) metrology.

The laboratory is involved with measurement of the thermal characteristics of heat insulating materials and an extension of existing facilities, into higher temperature areas, is being planned.

INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established in 1937, under the Institute of Medical and Veterinary Science Act, 1937-1978, to incorporate the functions of the former Adelaide Hospital Laboratory. The Director of the Institute is the chief executive officer of the council which is responsible to the Minister of Health.

The Institute provides diagnostic facilities in all branches of laboratory medicine for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It also undertakes work in all branches of veterinary pathology for the Department of Agriculture and Fisheries and for veterinary practitioners and stockowners. Research is conducted into selected problems connected with disease in man, and in animals. The staff of the Institute takes part in the teaching of the medical sciences to graduates, students and technicians.

The Institute is financed partly by an annual grant from the State Government, and by its earnings from private practice in laboratory medicine. Its research and development projects are assisted by the National Health and Medical Research Council of Australia, the Australian Wool Corporation, the Australian Meat and Livestock Corporation, the Australian Research Grants Commission, certain private firms and by private benefactors.

At the Royal Adelaide Hospital the Institute operates a Blood Transfusion laboratory, a Division of Nuclear Medicine and undertakes all required autopsies. Institute medical staff also take an active part in patient care by providing the clinical requirements of certain wards of the Royal Adelaide Hospital. To meet the growing need for blood transfusion and laboratory services in rural areas, regional laboratories, staffed and administered by the Institute, have been established in nine towns.

The Institute of Medical and Veterinary Science

Particulars	1974-75	1975-76	1976-77	1977-78
Staff at end of year:				
Graduate	176	190	215	224
Other	510	559	612	636
Tests performed	2 878 886	3 499 097	3 786 042	<i>n. a.</i>
Revenue:		Dollars		
State Government grant	5 377 441	1 000 000	1 110 000	2 295 000
Fees for laboratory tests	1 508 577	7 569 329	9 454 380	10 683 873
Other	292 088	352 798	497 846	857 345
Total	7 178 106	8 922 127	11 062 226	13 836 218
Expenditure:				
Salaries and wages	5 474 257	6 916 506	8 221 136	9 939 972
Other	1 404 025	2 149 419	3 239 343	3 552 322
Total	6 878 282	9 065 925	11 460 479	13 492 294

A computerised system of laboratory reporting, accounting and data storage for rapid retrieval has been introduced and has run successfully for some years. There are three remote terminals linked to the central computer, one at Modbury Hospital, one at the Lyell McEwin Hospital and one in the Casualty Section of the Royal Adelaide Hospital; further units will be provided in the intensive care wards. Telex links are operating to Port Lincoln, Port Augusta, Whyalla, Mount Gambier, Naracoorte, Keith, Murray Bridge, Coober Pedy and Berri.

The Division of Tissue Pathology is now closely linked with the University of Adelaide by the joint appointment of a Professor of Tissue Pathology, University of Adelaide and Head of the Division of Tissue Pathology, Institute of Medical and Veterinary Science. A further advancement is the joint appointment of a Professor of Microbiology, University of Adelaide and Head of the Division of Virology, Institute of Medical and Veterinary Science.

WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924. The research projects conducted at the Institute cover a wide range of topics, of which the following are a few examples: relationship of stocking rates to pasture composition and fertiliser practices; the protein chemistry of the wheat grain; the genetics and breeding of cereals and pasture plants; flower and fruit development in horticultural plants; studies on soil-borne and virus diseases of plants; biological control of insect pests; the biochemistry of nitrogen fixation; and the studies of soil structure and mechanics.

Further details relating to the Waite Institute may be found in Part 6.2 Education.

DEFENCE RESEARCH CENTRE

The Defence Research Centre Salisbury (DRCS), formerly the Weapons Research Establishment, is the largest research and development complex within the Defence Science and Technology Organisation of the Commonwealth Department of Defence. The Centre occupies an area of 1 170 hectares at Salisbury and its staff numbered 2 780 at 20 October 1978. It provides facilities within the area for branches of firms which have contracts in the defence field.

The Centre comprises four separate Laboratories and a supporting Administration Branch. The Electronics Research Laboratory undertakes research and development in radio, electronics, radar, infra-red applications, optics, electro-optics, electronic warfare, surveillance and navigation. The Weapons Systems Research Laboratory undertakes research and development related principally to guided weapon systems, aeroballistics, oceanography, undersea warfare and ordnance research. The Advanced Engineering Laboratory undertakes engineering feasibility studies, development, design and manufacture of prototype systems and equipment associated with Services and Defence Science and Technology Laboratories tasks and defence projects in mechanical, electronic, and communications engineering fields. It also provides advanced manufacturing techniques and processes, quality engineering, environmental testing, engineering services and facilities, drafting, library, documentation and publishing services for the other Laboratories. The Trials Resources Laboratory is responsible for activities relating to the Woomera Range, undertaken under the Joint United Kingdom-Australia Agreement (the Joint Project), and to Australian Services exercises and trials at, and away from, Woomera. This includes the planning and conduct of trials and exercises and the processing and analysis of data obtained.

Each Laboratory at DRCS provides a consulting service to the Armed Forces, the

remainder of the Australian Defence Scientific Service and, where appropriate, to industry.

Edinburgh Airfield which adjoins Defence Research Centre at Salisbury is the headquarters of the Royal Australian Air Force (RAAF) in South Australia and is a fully operational RAAF base. When necessary, aircraft associated with joint project or other trials are operated from this base.

A special article on the Defence Research Centre together with maps and diagrams was included on pages 184-92 of the *South Australian Year Book* 1969.

Woomera

Situated approximately 500 kilometres north-west of Adelaide, Woomera comprises a number of testing ranges and support facilities (the responsibility of the Trials Resources Laboratory) and a township. The township, which has modern amenities including a hospital, school, kindergarten, community store, swimming pool and numerous sporting facilities, was built to accommodate the range staff and allied service personnel and their families. Woomera has a total population of about 2 500 which includes working staff, their dependants and other supporting and business personnel.

As a result of an agreement between the Australian and United States Governments a Defence Space Communication facility has been constructed near Woomera.

6.4 CULTURE AND RECREATION

LIBRARIES

The State Library

The State Library of South Australia has its origin in a collection of books assembled in London in 1834, two years before the province of South Australia was founded. The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia.

The oldest section of the Library is the Reference Library, which is the central basic collection. Since 1946, except for rare irreplaceable volumes and reference works, most of the books have been available for loan. Over 4 400 periodicals are received annually, and the Newspaper Reading Room files nearly 300 overseas and Australian newspapers; in 1977-78, 50 400 periodicals were lent. In the same year the Map collection answered 10 600 inquiries for its 68 000 maps. Legislation since 1878 provides for the deposit in the Library of copies of all items published in South Australia.

The Reference Library has a representative basic collection of nineteenth and twentieth century material in all subjects except medicine and law. It has considerable strength in a number of subjects including librarianship, wine, jazz, Australian Aborigines, River Murray shipping, sailing ships, and nineteenth century illustrated works on natural history. In addition there is a collection of tape recordings of Australian authors, folk songs and Aboriginal music. The Library is an official depository for the publications of the Australian Government, and receives selected publications from the British and United States Governments and the United Nations.

In 1977-78 the Reference Services Branch answered 192 000 inquiries. This Branch supplies lists of references and arranges for the borrowing of books, periodicals and photocopies from libraries in other States and overseas. *Pinpointer*, a bi-monthly index to popular periodicals and the quarterly *Index to Australian Book Reviews*, are published.

In 1919 the Archives Branch was established for the collection of original South

Australian historical material. In 1925 legislation was passed requiring reference to the Libraries Board before destroying or disposing of public documents. At the end of June 1978 there were 14 100 metres of occupied shelf space in the Archives. In 1977-78, 8 860 inquiries were dealt with involving 31 000 issues of documents, views, maps or printed sources. A journal, *South Australiana*, is published twice a year.

The Young People's Services Branch includes the Children's Services and the Youth Lending Service. The Children's Services, formerly the Children's Library, was established in 1915 and is believed to be the oldest in Australia. The carefully selected stock includes some 30 400 books in the Children's Literature Research Collection, a special collection assembled to assist in the study of children's books. School classes visit the Library, and talks and stories are addressed to groups of children, both inside the Library and at outside venues, and to groups of parents and various societies. There are 25 000 registered borrowers in the metropolitan area and books are sent to 4 200 country children living in areas that do not have a public library.

To cater for the needs of young people between the ages of thirteen and eighteen the Youth Lending Service was established in 1957. Over 22 400 young people from the metropolitan area and country places are enrolled as members in the Service. The collection includes, besides general literature, publications of special interest to young people dealing with hobbies and careers. Cassettes, posters and paperbacks are also available for loan.

State Library of South Australia

Year	Refer- ence Library	Children's Services	Adult Lending Services	Central Pool for Local Public Libraries	Youth Lending Service	Total
At 30 June:				VOLUMES HELD		
1974	320 000	63 000	93 000	175 000	24 000	675 000
1975	339 000	65 000	85 000	155 000	22 000	666 000
1976	355 000	64 000	67 000	180 000	25 000	691 000
1977	371 000	64 000	80 000	180 000	23 000	718 000
1978	386 000	74 000	113 000	265 000	27 000	865 000
To 30 June:				VOLUMES LENT		
1974	109 000	247 000	521 000	—	111 000	988 000
1975	113 000	263 000	609 000	—	118 000	1 103 000
1976	94 000	244 000	656 000	—	126 000	1 120 000
1977	96 000	262 000	861 000	—	133 000	1 352 000
1978	92 000	266 000	896 000	—	127 000	1 381 000

In 1938 a Country Lending Service was established to provide books for residents in the country districts of the State, none of which had a free local public library at the time. The service continues today, but is restricted to residents of local government districts which have not been provided with their own public library service, and to people in the unincorporated districts of the State. In 1946 the Adelaide Lending Service was founded so that residents of the metropolitan area might enjoy direct borrowing privileges. In 1972 these two services were amalgamated to form the Adult Lending Services Branch, and at the same time the children's and young people's collections previously functioning as part of the Country Lending Service were taken over by the Children's Services and Youth Lending Service respectively.

Since 1972, the Adult Lending Services Branch has enlarged its collection to include large print and foreign language books and periodicals, paperbacks, prints, posters, and cassettes, including music, spoken word and 'learn the language'. There are in excess of 17 000 cassettes in the collection and, despite a limit of three per borrower, loans exceeded 126 000 in 1977-78. Car manuals, musical scores and drama sets are also available. The Branch supplies bulk loans to several hospitals and institutions, and to a number of prisons in South Australia. Extension services also cater for housebound residents and invalids. Non-technical inquiries and requests for information are dealt with at the Readers Adviser Desk. The total number of adult borrowers in the metropolitan area is in excess of 86 900, and there are more than 5 300 adults in the country registered as borrowers from the Adult Lending Services.

Photographic and electrostatic copying facilities are available to the public. In 1962 the Libraries Board began an extensive program of publishing facsimile editions and other works of Australian interest. Over 170 works have now been published, including the first edition ever of *The Journal of Post Captain Nicolas Baudin*. Other publications include several series of *Occasional Papers* in various subject fields.

Local Public Libraries

In June 1978, twenty-seven local authorities, representing over half the State's population, were operating a total of thirty-nine public libraries, under the provisions of the Libraries (Subsidies) Act, 1955-1977. This Act, which gives the initiative for the establishment of free public libraries to local government, provides for the payment of subsidies (\$1 for \$1 based on all aspects of local government library expenditure except the cost of land) conditional upon a report on the matter by the Libraries Board to the State Treasurer. In 1977-78, subsidies amounted to \$1 178 086. The provision of book-stocks and other materials to public libraries operating under this Act is centred in the State Library, through its Public Libraries Branch, which also provides a Request and Reference Service to member libraries as a free service, as well as professional assistance to librarians and local authorities. This service includes advice on citing, and on internal planning of library buildings.

In the year ending 30 June 1978 the annual new book provision amounted to 78 000 volumes in addition to 39 000 paperbacks and 15 000 sound recordings. About 6 000 volumes were sent to libraries in answer to requests, from a central pool of 265 000 volumes maintained in the Public Libraries Branch.

Local Public Libraries, South Australia

Year	Libraries at End of Year	Registered Readers	Books Lent	Stocks at End of Year
1973-74	32	157 000	2 867 000	389 000
1974-75	35	162 000	3 228 000	442 000
1975-76	37	187 000	3 882 000	564 000
1976-77	37	211 000	4 667 000	613 000
1977-78	39	244 000	5 215 000	662 000

Institute Libraries

Several country and suburban centres had formed institutes in the early 1850s. The first legislation on libraries was passed in the 1855-56 session of Parliament and resulted in the establishment of the South Australian Institute. In 1861, a new building was erected in the corner of North Terrace and Kintore Avenue for the Institute, which in

1884 was divided into two organisations, the Public Library and the Adelaide Circulating Library.

Institute libraries, which are situated in metropolitan and country areas throughout the State, are largely dependent on members subscriptions and in some cases on income from the institute hall, but they also receive a government subsidy and about two-thirds of them receive support in varying degrees from local councils.

The Institutes Association of South Australia Inc. acts as a co-ordinating authority and as a purchasing agency for affiliated institutes, these, however, retain complete autonomy, being governed by a committee elected by members. The conduct of institutes is regulated by the Libraries and Institutes Act, 1939-1977.

The borrowing facilities of institutes are available to subscribers and the general public has access to, and the use of reading facilities in the library. Many institute libraries allow children to borrow books from the library without charge.

The number of institutes is continuing to decline with the expansion of Public Library services and institute libraries will be eventually phased out. This policy is being pursued with the co-operation of the Institutes Association of South Australia.

**Institute Libraries, South Australia
At 31 December**

Particulars	1975	1976	1977	1978
Number of institutes	171	167	163	155
Subscribers	46 330	45 308	42 415	35 224
Number of volumes	737 054	731 354	718 283	664 284
Volumes circulated during year	1 654 818	1 384 509	1 308 001	1 126 302

Other Libraries

Particulars relating to the Barr Smith Library at the University of Adelaide (992 000 volumes, including 84 400 microforms, at the end of 1978), the Flinders University Library (400 000 volumes at the end of 1978) and the South Australian Institute of Technology Library (155 000 volumes at the end of 1978) are given in Part 6.2. Other libraries include those of the Royal Society of South Australia (approximately 29 000 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (approximately 16 000 volumes) and the Parliamentary Library (about 60 000 volumes).

MUSEUMS

The South Australian Museum

Founded in 1856 as part of the South Australian Institute, the South Australian Museum became a separate institution with its own board in 1940 under the provisions of the Museum Act, 1939, which was administered by the Minister of Education. In 1972 it became a Division of the Department of the Environment. A new South Australian Museum Act was proclaimed on 11 March 1976, in which the present-day functions of the Museum were defined. In October 1977 the Museum was made a Division of the Education Department, and in October 1978 responsibility for the administration of the South Australian Museum Act 1976 was vested in the newly created Ministry of Community Development.

The aim of the Museum is to increase man's understanding of himself and his environment. Similar to other major museums in Australia and overseas, it makes and preserves collections, carries out research and acts as an education and information

centre for primary, secondary and tertiary students, and for the public. Its main areas of interest are archaeology, history, ethnology, natural history and geology.

The Museum's first permanent building was opened in 1884. It was the West (Jervois) Wing, located on North Terrace. The North (now the Museum's West) Wing was completed in 1895 and the East Wing was added in 1915. Since then the Museum has expanded to occupy the historically and architecturally significant buildings of the Old Police Barracks, three floors of Goldsbrough House further along North Terrace, an office/warehouse complex in Kent Town and a number of other annexes in the metropolitan area. These function mainly as work areas and collection stores. The exhibition galleries are all located in the original buildings.

The South Australian Museum has a staff of seventy-one with sixteen professional research workers responsible for the care of the collections and for carrying out research. Several of the collections of specimens and data are outstanding. The collection of Australian ethnological material is of world renown while those of minerals, meteorites and tektites, insects, Southern Australian animals and New Guinea ethnological objects are excellent.

The research of the scientific staff is primarily systematic, involving the naming, identification and classification of animals, minerals and artefacts, but considerable emphasis is placed also on their distribution in space and time, and interrelationships with the environment. With the current interest in, and need for knowledge concerning conservation and environmental deterioration, this work is of increasing importance. Results of the research work of staff members are published in the *Records of the South Australian Museum* and in scientific journals and books throughout the world. The Museum's Scientific Library houses more than 33 000 books and bound periodicals.

An important recent development was the appointment of a Curator of Conservation in February 1978 with overall responsibility for the proper storage environment, protection and restoration of the collections; particularly perishable ethnographic items. Research into aspects related to improving museum conservation practices is also carried out.

Advice, based on their research results and on their specialised knowledge, is given by the scientific staff to many other research institutions and government departments.

The Museum has a general Information Service dealing with about 10 000 inquiries annually and approximately 35 000 school children pass through the Education Centre each year. With the appointment of more teachers and the development of a Travelling Education Service (TES), educational programs were extended to country areas in 1976. During 1977-78 over 7 000 country school children took part in TES programs.

Public entertainment and education involves the presentation of temporary and long term displays in galleries covering nearly 4 000 square metres. Exhibits deal with such diverse topics as mammals, birds, fish, amphibians, reptiles, insects, minerals, meteorites, Egyptology, fossils and Australian and Pacific ethnology. The Aboriginal display in the Stirling Gallery is currently being redesigned. Education booklets on a variety of subjects, mostly written by Museum staff and published by the Museum, are on sale at a nominal price. Postcards and note paper are also published and are sold throughout Australia. The Museum also sells posters and model replicas of extinct animals. Free information leaflets are available to inquirers.

A Museums Extension Service began operation in 1976. The purpose of this is to provide professional museological advice to rural museums to improve their ability to preserve, document and display folk cultural material and thereby encourage greater community interest in local history and provide an additional resource for local educational needs. Greatly increased and improved liaison between rural museums is a further aim of the Museums Extension Service.

The scientific work of the Museum is supported by the general public, by the many field naturalists and other societies which meet at the Museum and by a number of distinguished scientists who are appointed as Honorary Associates. In particular, the Friends of the South Australian Museum have given considerable support since their foundation in 1964, including the purchase of many notable additions to the collections.

Current plans are for the construction of a new museum on the site presently occupied by the State Transport Authority near Botanic Park at Hackney. With the Botanic Garden and Zoological Gardens in close proximity, the new Museum will form part of a fine natural science complex of great educational, scientific and cultural value to the State.

Other Museums

A number of historic residences serve as museums. In 1961 the 'Old Government House' at Belair was refurbished with relics of the colonial era and opened for public inspection. At 'Whalers Haven', Victor Harbor, a pioneer cottage has been restored and features many relics of early settlement with particular emphasis on the whaling industry. The home of the poet Adam Lindsay Gordon, 'Dingley Dell' at Port MacDonnell, is maintained as a historic house and Captain Charles Sturt's original home at Grange is open to the public. Items of historical interest are exhibited in old buildings in many of the early established country towns.

A railway museum has been established and maintained by a voluntary organisation, the Mile End Railway Museum. Locomotives and rollingstock are from the State Transport Authority, Australian National Railways, Silverton Tramway, BHP, BHAS and other private lines which have operated in South Australia. Included in the display are nineteen steam locomotives built between 1886 and 1954, two railcars, two diesels, one petrol locomotive and ten units of passenger and goods rollingstock dating from 1877, as well as a large selection of associated railway equipment. The Museum, at Railway Terrace, Mile End, is open to the public on the first and third Sundays of each month.

A pioneer art and motor museum is situated at Birdwood. Exhibits include vintage motor vehicles, pioneer domestic appliances and early agricultural machinery.

Various items of maritime association including pictures, models and fittings from early ships are displayed at the Nautical Museum at Port Adelaide.

A number of special museums are maintained at the University of Adelaide for the use of the staff and students and a Museum of Economic Botany is associated with the Botanic Garden.

The National Trust of South Australia

The National Trust of South Australia was established by Act of Parliament in 1955. It encourages the preservation and restoration of buildings of architectural, historic or scientific interest, the protection of scenic beauty and the conservation of land, flora and fauna.

The Trust, which is administered by a council, has forty-nine branches spread throughout the State. Finance is provided by means of gifts, legacies, fund raising functions, subscriptions and a government grant.

Buildings of particular significance in South Australia are assessed on their architectural or historic merit and are categorised in accordance with the criterion adhered to by the Australian Council of National Trusts as either:

Classified, *i.e.* buildings having great historic significance or high architectural qualities, the preservation of which is essential to the heritage of the State; or

Recorded, *i.e.* buildings which contribute to the heritage of Australia and which should be recorded and their preservation encouraged.

Examples of the natural areas cared for are 'Wilabalangaloo' at Berri, 'Watiparinga' at Eden Hills, 'Roachdale' at Kersbrook and 'Engelbrook' at Bridgewater. The many beautiful or historic Trust properties include 'Collingrove' in the Barossa Valley, Beaumont House and the Marble Hill ruins and reserve. Marble Hill was officially opened on 15 February 1975 and magnificent views of the Adelaide Hills and Plains can be obtained from the many vantage points in the thirty-one hectares of park-like setting in which the building stands. Original plans of the building are on view, together with photographs of both the exterior and interior before the building was destroyed by fire on 2 January 1955. The original stables have been restored and converted for use as a cafe.

The Trust also owns the G. S. Sandison Reserve at Hallett Cove, an area of international scientific interest because of its glacial pavements.

In 1963 the paddle steamer *Marion* was purchased and refitted and now floats in the old graving dock at Mannum; while the Willunga Court House and Police Station, both built in the mid-nineteenth century, were restored in 1969. In the following year the Trust fully restored the Customs House at Robe and in 1971 played a prominent part in persuading the State Government to save from demolition the architecturally classic and beautiful ANZ Bank Building in King William Street which had been classified by the Trust. This building has been renamed Edmund Wright House and is now occupied by the South Australian Registrar of Births, Deaths and Marriages, and many marriage ceremonies are held there.

At December 1978, the National Trust of South Australia controlled forty-nine reserves totalling 1 184 hectares and some ninety-three restored buildings and other structures, forty-two of which are used as folk museums in various country centres.

The headquarters of the National Trust in South Australia is in the historic and beautiful residence of Ayers House, once the home of the seven times Premier of South Australia, Sir Henry Ayers.

Aboriginal and Historic Relics

The protection of Aboriginal relics and of traces of the early settlement of the State is governed by the Aboriginal and Historic Relics Preservation Act, 1965. The administration of this Act is the responsibility of the Minister for the Environment.

Remnants of Aboriginal culture such as prehistoric camp-sites, ceremonial grounds, cave paintings, rock engravings and canoe trees are to be found in various parts of the State. Although many such relics have been destroyed in the period of European settlement, several remain which are of great interest to scholars and tourists. In addition there are some areas of the State where such sites are of real significance to present-day Aboriginal communities. These relics are protected under the provisions of the Act.

Similarly there are many relics and sites associated with early European settlement which are protected by the Act. These include settlement sites; industrial sites, particularly those associated with the pastoral and mining industries; overland telegraph stations; military installations, marine sites, and historic shipwrecks.

A particular relic or series of relics may be protected by the Governor declaring the area in which it is found either a Prohibited Area or an Historic Reserve. Inspectors and Wardens are appointed to safeguard such areas and the Protector of Relics maintains a complete register of all prohibited areas and reserves, and also of unproclaimed known occurrences of Aboriginal and historic (including technological) relics.

A special article on Aboriginal relics together with a list of declared areas at 30 June 1969 was included on pages 201-8 of the *South Australian Year Book* 1969 and areas

declared between 1 July 1969 and 31 October 1976 have been included in subsequent issues of the *South Australian Year Book*.

During the period 1 November 1976 to 31 December 1977, two Historic Reserves were declared, bringing the total of declared Historic Reserves to sixty-five while the number of Prohibited Areas remains at ten. The two areas declared were:

Loch Vennachar Historic Reserve

Site of the wreck of the historic vessel *Loch Vennachar* lost near West Bay, Kangaroo Island, 1901.

Historic Reserve

Twelve Springs Historic Reserve

Important Aboriginal archeological site.

Historic Reserve

ART GALLERIES

The Art Gallery of South Australia

The National Gallery of South Australia was founded in 1881 as a part of the South Australian Institute which in 1884 became the Public Library, Museum and Art Gallery of South Australia. This institution was dissolved by Act of Parliament in 1940, and the Gallery became a government department under the Art Gallery Board. The name was changed to the Art Gallery of South Australia in 1968. The first portion of the present building, the Elder Wing, was completed in 1900, the Melrose Wing on the western side and the facade were added in 1936, and in 1962 a three-storey air-conditioned wing was built at the northern end.

The collections are broad in scope and include a representative selection of Australian and European paintings and sculpture. There are large collections of prints, drawings, silver, glass and ceramics (including an important section devoted to South-East Asia), as well as furniture, arms and armour, and coins and medals. The South Australian historical collection includes relics and pictorial material of the discovery, exploration and settlement of the colony.

In addition to the permanent collections, the Gallery has a full program of visiting international and interstate exhibitions.

The Gallery has received many bequests, the Elder, Morgan Thomas, David Murray, Ragless, Boxall, Mortlock and Kolhagen bequests together totalling over \$252 000. In addition the State Government makes an annual grant for the purchase of works of art.

The staff of professional and technical officers undertake the research and development, care and conservation of the collections and the preparation of exhibits for public education and enjoyment. Free guided tours of the collections are provided by education officers and volunteer gallery guides.

A regular program of film evenings, lectures and demonstrations is given and the Travelling Art Exhibition, a fully equipped van with illuminated portable screens, accompanied by a driver and a lecturer, tours country centres during school term. In 1978, eighty centres were visited and the exhibition was viewed by 37 009 adults and children. Another innovation is the introduction of 'Outlook', an art appreciation program taking original works of art into metropolitan schools and public places.

A society, The Friends of The Art Gallery of South Australia, was founded in 1969 for people interested in the fine arts and to create a body of people who would be informed about the activities of the Gallery. Membership stands at 2 627 and falls into five categories—Sustaining, Institutional, Family, Ordinary and Junior.

Other Galleries

South Australia's first regional gallery was opened at Naracoorte in 1968. South Australia's two leading art societies, the Royal SA Society of Arts (Australia's oldest art

society which was founded in 1856) and the SA branch of the Contemporary Art Society of Australia Incorporated (founded in 1942) conduct exhibitions in their galleries. An exhibition area, known as 'The Gallery', has been provided by the Adelaide Festival Centre Trust. Its inaugural exhibition was staged to coincide with the official opening of the Playhouse on 26 October 1974. A continuous, changing exhibition is mounted on its own premises by the Adelaide Potters' Club, South Australia's longest established craft society.

The Jam Factory Workshops Incorporated, formerly the SA Craft Authority, was set up by the State Government in 1974 with administrative offices at St Peters in a large building known as the Jam Factory. The functions of the Workshops are generally to promote and encourage the development of craft industries in South Australia; to make grants or loans to craftsmen and associated industries; to provide workshops and workshop advisory services and to market the products of craft industries and to improve and extend the retail and wholesale markets. Groups already operating there include the Crafts Association of SA and the Experimental Art Foundation Incorporated (SA).

Outdoor exhibitions have been popular among amateur clubs, beginning with the Citizen's Art Group (now the Adelaide Art Society) in 1954. The Advertiser's annual open-air exhibition is supported by professionals and amateurs alike. The 1978 exhibition contained 750 painting and 109 sculpture entries resulting in sales totalling \$39 895.

MUSIC AND DRAMA

MUSIC

Regular concerts are given by the Adelaide Symphony Orchestra, Adelaide String Quartet and University of Adelaide Wind Quintet, as well as by visiting artists and ensembles promoted by the Australian Broadcasting Commission and Musica Viva. Choral music is presented by three large choirs—Adelaide Choral Society, Adelaide Philharmonic and Harmony Choir, and by such chamber choruses as the Corinthian Singers. The State Government's subsidised regional opera company, The State Opera of South Australia, stages regular productions throughout the year in Adelaide and South Australian country centres. School performances aimed at promoting interest in opera are a regular feature of the Company's activities. Outside Adelaide, concerts are given in a number of country and outer-suburban areas, including an annual series of autumn concerts at Crafers in the Adelaide Hills.

The Festival Centre provides formal and informal venues for a wide variety of performances, from rock concerts to grand opera, and the Rundle Mall is also being used for open-air community arts activities.

Australian Broadcasting Commission

In the metropolitan area the Adelaide Symphony Orchestra each year gives twenty-three orchestral subscription concerts and six youth orchestral subscription concerts, usually featuring overseas conductors and/or soloists. The Australian Broadcasting Commission (ABC) also presents a recital series of six performances by overseas artists. In addition there are at least six free orchestral concerts, a series of three Prom concerts, four family concerts and a number of non-subscription concerts each year.

During 1978 the ABC gave twenty free concerts for schoolchildren in the metropolitan area. Broken Hill had its own ABC subscription series of four concerts; one by the Adelaide Symphony Orchestra and three by international recital artists. In addition the Symphony Orchestra toured the country areas and during 1978 gave free concerts for schoolchildren in each centre in addition to a public concert. As part of its commitment

to the 1978 Adelaide Festival of Arts, the ABC staged three concerts by the Adelaide Symphony Orchestra and four by the visiting Israel Philharmonic Orchestra. The Adelaide Symphony Orchestra also took part in a season of four performances by The State Opera of South Australia.

Elder Conservatorium of Music

The Elder Conservatorium of Music at the University of Adelaide provides a comprehensive course of training for students in courses leading to the degree of Bachelor of Music, and also caters for part-time students by providing instruction in the various branches of music as single studies.

The Elder Hall is the concert hall of the Conservatorium. It was built in 1900 and for many years was a general purpose hall. Since the 1950's it has been used mainly for musical purposes, including public performances. Free lunch hour concerts, open to the public, are given frequently during term time by staff and students of the Conservatorium.

During 1977 the Elder Hall was completely renovated internally at a cost of \$1m, this cost being met from money contributed to the University's Centenary Appeal Fund. The Hall is now a first-class concert hall seating 712 people, with a stage capable of accommodating an orchestra of 75 performers and a choir of 75 people. It is fully air-conditioned, and of excellent acoustical quality. A new organ, built by Casavant Freres of Canada, was commissioned in June 1979.

Particulars relating to the Elder Conservatorium at the University of Adelaide are given in Part 6.2.

DRAMA

The State Theatre Company of South Australia has its permanent home at the Playhouse in the Adelaide Festival Centre.

The Company presents two major seasons of plays each year, principally comprising the classics and new Australian work.

The Company also has Australia's largest Theatre-In-Education team, 'Maggie', which provides schools (in both metropolitan and country areas) with a team of actor/teachers educating through entertaining students on a participatory level. Additionally, the Theatre-In-Education team presents plays designed to attract families and young people to the theatre at varying times throughout the year.

The main Company also presents rehearsed readings of new plays under the banner of its 'Roadshow' program which mounts productions that are easily transportable and on offer to community groups at no charge.

The Adelaide Festival Centre Trust administers the Festival Theatre, Playhouse, Space, Amphitheatre and Opera Theatre (formerly Her Majesty's Theatre) and is the State's largest entrepreneur of outside productions for these venues. The Festival Theatre attracts productions and performers to South Australia which otherwise might never be seen in South Australia.

The Association of Community Theatres was established in 1975 to provide a system of liaison and communication amongst its member groups. This organisation, which includes amateur and semi-professional groups, and colleges of advanced education, takes special interest in the promotion of South Australian playwrights.

The Adelaide Festival Centre

The Adelaide Festival Centre is a \$21 million performing arts complex on a 2.5 hectare site located on the banks of the River Torrens near the centre of the city of Adelaide. The Centre comprises a multi-purpose concert hall and lyric theatre, two drama theatres and

an open-air amphitheatre. Stage three of the Centre's building project, completed in 1977, comprises a two-level underground car park and 0.75 hectares of open plaza, featuring an overall sculptural design.

The Festival Theatre

The \$7.96 million Adelaide Festival Theatre was the first completed auditorium of the Centre and was officially opened on 2 June 1973. Seating nearly 2 000 people on three levels and in a series of tiered boxes, the Theatre has been designed for a kaleidoscopic range of theatre activities, including orchestral concerts and recitals, large-scale opera, ballet and drama, films, musical comedy, variety and jazz concerts, conventions and conferences. The seats extend across the Theatre in continental style with access from large foyers along the sides of the auditorium.

Catering facilities in the Theatre include a restaurant seating 120 diners, a bistro, a licensed bar-lounge and an outdoor cafe on the northern terrace overlooking Elder Park.

The Festival Centre Trustees have a policy of commissioning and purchasing works of art for the Centre which now has a collection valued at more than \$426 000.

The Drama Complex

In October 1974 work was completed on the \$7.42 million drama complex alongside the Festival Theatre. The largest auditorium in this complex is The Playhouse, a 600-seat, two-level theatre which is designed for both proscenium and thrust-stage productions.

The Playhouse is the home of the State Theatre Company of South Australia and is served by a production workshop consisting of design studio, carpentry and paint shops, assembly areas, wardrobe, millinery and wigmaking sections and a photographic darkroom.

Alongside the Playhouse and beneath plaza level is The Space, a 320-seat experimental theatre. A completely flexible auditorium, The Space can be arranged in almost any variation of seating and acting areas, and incorporates electronic music facilities. It has been designed as an ideal venue for experimental performances and teaching workshops.

Where the Festival Theatre and Playhouse meet on the Elder Park side of the Festival Centre site, there is an open-air Amphitheatre which is formed by the natural slope of the site where the plaza steps down to Elder Park.

The Centre's Activities

Australian national touring companies, The Australian Opera and The Australian Ballet, give annual seasons in the Festival Theatre and the resident Adelaide Symphony Orchestra uses the Theatre for its annual orchestral and youth concert series as well as for special celebrity concerts by international artists and orchestras. The Adelaide Festival Centre Trust and principal Australian commercial entrepreneurs use the Centre for a wide variety of other presentations.

The Adelaide Festival of Arts

In 1958, a small group of Adelaide citizens developed plans for the first Adelaide Festival of Arts, which was held in 1960. Further festivals have been held in March in years of even number from 1962.

The Adelaide Festival has achieved many artistic triumphs in its eighteen-year history and has been instrumental in bringing to Australia for the first time many notable overseas companies, performers and artists. It has seen the first performances of scores of major Australian productions and an increasing number of world premieres commissioned specially by or for the Festival. Notable world premieres have included Peter Maxwell Davies' music theatre piece for *The Fires of London*, *Miss Donnithorne's*

Maggot (1974), South Australian composer Richard Meale's oboe concerto *Evocations* performed by Heinz Holliger and Collegium Musicum of Zurich (1974), Sir Robert Helpman's ballets, *The Display* (1964) and *Perisynthyon* (1974), Alex Buzo's *Coralie Lansdowne Says No* performed by Sydney's Nimrod Street Theatre (1974), Jack Hibberd's *A Toast to Melba* performed by the Australian Performing Group (1976), and the Patrick White play *Night on Bald Mountain* (1966). First Australian performances have included the Janacek opera *The Excursions of Mr Broucek* (1974), Sir William Walton's *Troilus and Cressida* (1964), Benjamin Britten's *War Requiem* (1964) and his church parable *The Burning Fiery Furnace* (1970), and Sir Michael Tippett's opera *The Midsummer Marriage* (1978).

World famous writers who have been guests at Festival Writers Week include Yevgeny Yevtushenko, Edna O'Brien, Anthony Burgess, Allen Ginsberg, John Updike, Alan Moorhead, Angus Wilson and Nadine Gordimer.

The completion of the \$21 million Adelaide Festival Centre has caused a shift in the emphasis of the Festival of Arts. The regular appearances of leading overseas performers and companies at the Centre throughout the year has enabled the Festival to engage in activities considered more appropriate to arts festivals. These include the commissioning of new works, the encouragement of local companies and artists and the provision of a variety of programs to attract greater public interest and appreciation.

'Come Out'

In May 1975, the Festival administration, with \$30 000 in special grants from the State and Commonwealth Governments and a commercial sponsor (The Savings Bank of South Australia), staged 'Come Out', the first in a series of biennial festivals of performing, creative and visual arts for young people. These are now staged in years of odd numbers, between the main Festivals of Arts.

The first 'Come Out' festival was held in the final week of the first school term and the first week of the May holidays (2 to 17 May 1975) and offered a total of fifty-one different arts performances, workshops, exhibitions and allied activities which were attended by a total of 56 000 children and students and 16 000 adults.

Further 'Come Out' festivals have been successfully staged in 1977 and 1979.

BROADCASTING

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act 1942*, is one of the responsibilities of the Minister for Post and Telecommunications. Commonwealth bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission, and the Special Broadcasting Service.

Basically the Australian broadcasting and television system is comprised of the following types of stations:

- (1) national broadcasting and television stations funded by the Commonwealth Government;
- (2) commercial broadcasting and television stations operated by companies under licence;
- (3) public broadcasting and television stations operated by corporations under licence on a non-profit basis; and
- (4) stations operated under the aegis of the Special Broadcasting Service.

The responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs, rests with the Minister for Post and Telecommunications.

The Australian Broadcasting Tribunal came into being on 1 January 1977, and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervision of the operation (other than technical aspects) of all stations except national stations and special broadcasting stations. The Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister; the renewal of licences; the setting of standards of broadcasting practices; alleged breaches of licence conditions; and such other matters as the Minister may direct. Subject to the conduct of such inquiries, the Tribunal is empowered to grant, renew, suspend or revoke licences and to determine program and advertising standards applicable to licensed stations.

RADIO

There are at present twenty medium frequency radio stations operating in South Australia. In the metropolitan area there are two national, four commercial and one public station, while there are eight national and five commercial stations in country areas. The country or regional stations relay programs from their respective parent metropolitan stations in addition to providing programs to cater for local interests.

Commercial broadcasting stations are operated by companies under licences granted by the Australian Broadcasting Tribunal with technical operating conditions determined by the Minister for Post and Telecommunications. The stations obtain income from the broadcasting of advertisements.

The fee for a licence for a commercial broadcasting station is \$200 plus an amount based on the gross earnings from advertising during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5 m to 4.5 per cent on amounts exceeding \$3.5 m.

Radio Stations

The call signs and locations of stations are given in the following table: all call signs in South Australia are prefixed by the number '5'.

Radio Stations: Medium Frequency, 31 December 1977

South Australia

National Stations		Commercial Stations		Public Stations	
Call Sign	Location	Call Sign	Location	Call Sign	Location
5AN	Adelaide	5AA	Adelaide	5UV	Adelaide
5CL	Adelaide	5AD	Adelaide		
5CK	Port Pirie	5DN	Adelaide		
5LC	Leigh Creek	5KA	Adelaide		
5LN	Port Lincoln	5AU	Port Augusta		
5MG	Mount Gambier	5MU	Murray Bridge		
5MV	Renmark	5PI	Crystal Brook		
5PA	Naracoorte	5RM	Renmark		
5SY	Streaky Bay	5SE	Mount Gambier		
5WM	Woomera				

Radio Programs

The distribution of types of program matter is set out in the following table.

Composition of Radio Programs, 1977
All Stations, Adelaide^(a)

Category	Commercial	National	Public
	Per cent		
Entertainment:			
Light and contemporary music	58.6	23.4	26.4
Incidental matter	5.0	4.6	5.0
Foreign language	—	—	21.8
Variety	2.4	2.3	1.5
Drama	—	2.3	0.3
Classical music and the arts	—	39.5	20.5
Information and services:			
News	8.2	8.7	—
Sport	5.1	3.6	—
Information	1.4	4.8	12.5
Religious	0.4	0.6	—
Social and political	2.5	7.8	6.8
Family	1.6	0.8	0.2
Children's	—	0.7	—
Education	—	0.6	5.0
Publicity	0.4	—	0.1
Advertisements	14.4	—	—
Total	100.0	100.0	100.0

(a) Percentage of transmission time (6 a.m. to 10.30 p.m.) in each category.

TELEVISION**television Stations**

At 30 June 1977 there were six commercial television stations, six national stations and two commercial television translator stations in operation in South Australia. A television translator station is a station of low power designed to receive signals of another station and re-transmit them on a different frequency. A translator station does not originate programs.

The following table shows the stations in service and the dates on which they commenced operations.

Television Stations, 30 June 1977
South Australia

Call Sign and Channel	Location	Date Service Commenced
NATIONAL STATIONS		
ABS—2	Adelaide	March 1960
ABNS—1	Port Pirie	April 1965
ABGS—1	Mount Gambier	December 1965
ABRS—3	Loxton	January 1971
ABCS—7	Ceduna	July 1973
ABWS—7	Woomera	November 1973
ABLC—5	Leigh Creek	April 1977

Television Stations, 30 June 1977, South Australia (continued)

Call Sign and Channel	Location	Date Service Commenced
COMMERCIAL STATIONS		
NWS—9	Adelaide	September 1959
ADS—7	Adelaide	October 1959
SAS—10	Adelaide	July 1965
SES—8	Mount Gambier	March 1966
GTS—4	Port Pirie	March 1968
RTS—5A	Renmark-Loxton	November 1976

Commercial television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal with technical operating conditions determined by the Minister for Post and Telecommunications. The stations obtain income from the televising of advertisements. The fee for a licence for a commercial television station is \$200 plus an amount based on the gross earnings from advertising receipts during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5m to 4.5 per cent on amounts exceeding \$3.5m.

Colour Television

From 19 October 1974 to 28 February 1975 a restricted number of hours per week of colour television were transmitted for test purposes and on 1 March 1975 colour television was introduced in South Australia and is now used for most programs.

Television programs

On commercial channels there is a considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Commission devotes more time to programs of an informative and educational nature. Statistics of Adelaide television programs are shown in the following table.

Composition of Television Programs, All Adelaide Stations, 1977^(a)

Category	Commercial National	
	Per cent	
Television drama	28.8	13.6
Cinema movies	17.8	2.9
Cartoons	6.9	0.7
Light entertainment	10.6	9.3
Sport	7.4	14.9
News	3.3	6.9
Children's	7.0	19.1
Family	2.4	1.6
Information and documentary	2.1	8.7
Current affairs	0.9	7.7
Politics	—	—
Religion	1.3	1.7
The arts	—	1.5
Education	—	11.4
Advertisements	11.4	—
Total	100.0	100.0

(a) Percentage of transmission time (6 a.m. to 12 midnight) in each category.

SPECIAL BROADCASTING SERVICE

The *Broadcasting and Television Amendment Act 1977*, which was passed by Federal Parliament on 9 November 1977, makes provision for the establishment of the Special Broadcasting Service (SBS). The role of the new authority will be to produce special broadcasting programs which would not be appropriate for the Australian Broadcasting Commission or other established broadcasters to undertake. Initially the SBS will be responsible for the ethnic broadcasting service through stations 2EA Sydney and 3EA Melbourne. It is envisaged that the SBS may, at a later stage, assume responsibility for other special broadcasting and television services in Australia. New services by the SBS, however, may only be undertaken after Parliamentary approval is given and the necessary regulations promulgated. The SBS will be empowered to fund its operations by the broadcasting of sponsored programs, by charging for the provision of services and facilities, and by the sale of programs and rights or interests in programs. These avenues of funding are in addition to moneys appropriated annually from the Parliament to the SBS. The SBS will not, however, derive revenue by means of normal commercial advertising.

PUBLIC BROADCASTING

The Broadcasting and Television Act makes provision for the grant of licences for the operation of a broadcasting or a television station for special purposes. However, fifteen stations have been licensed on an experimental basis under the provisions of the Wireless Telegraphy Act, and, of these, two are operated by music broadcasting societies in Sydney and Melbourne, while the remainder are associated with various tertiary educational institutions throughout Australia. Future licences of this type will be granted under the new provisions of the Broadcasting and Television Act which came into force on 1 January 1978.

The ABC's television service in South Australia includes ABS Channel 2, and five country stations. Program material for the South Australian country national television stations is prepared at ABS Channel 2, Adelaide, and transmitted to the country centres by a series of broad-band radio-telephone relay systems.

FILMS

South Australian Film Corporation

The South Australian Film Corporation is constituted under the South Australian Film Corporation Act, 1972-1978. The Corporation has the sole right to produce, or arrange for the production of, films for or on behalf of the State Government.

The Corporation also may undertake film production on its own behalf or for other organisations. It produces its own feature films for cinema and television release and also enters into co-production and investment arrangements with other producers. Its productions so far include *Sunday Too Far Away*, *Picnic at Hanging Rock*, *Storm Boy*, *The Last Wave* and *Blue Fin*, which have received Australian and overseas acclaim from audiences and critics, and achieved outstanding financial success.

The Corporation also produces many short films for commercial sponsors, in addition to a wide range of films for State Government departments and instrumentalities. Prints of these films are sold extensively throughout Australia and abroad. Several have won Australian and international awards for excellence.

Other functions of the Corporation include the distribution and exhibition of films, the provision of library and other services relating to films and research into the effectiveness of films generally.

The Corporation encourages feature film and television production by providing studio

and sound mixing facilities for rental. Liaison services for producers based outside South Australia are also available.

THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonisation. The second issue of this paper, which served both as the official government publication and as an unofficial reporter of the news, was produced in Adelaide twelve months later. *The South Australian Gazette* (renamed *The South Australian Government Gazette* in 1840) emerged as a separate organ in 1839 and the newspaper continued as *The Register*. In 1850 *The Register* became the first continuous daily paper.

In the next twenty years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, since the mid-1920s the present system of three major newspapers—one morning daily, one evening daily and one weekend publication—has emerged.

The Advertiser, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser* and absorbed *The Register* in 1931. It is distributed throughout the State, with about 30 per cent of its circulation in country districts.

The News, published each evening from Monday to Friday, was introduced in 1923 replacing two evening newspapers, *The Express & Telegraph* and *The Journal*, which traced back their origins to the 1860s. Almost 80 per cent of sales of *The News* are in Adelaide and suburbs.

The Sunday Mail, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912, and the *Sunday Advertiser*, which was introduced in 1953. About 25 per cent of sales of the *Sunday Mail* are in country districts.

The Stock Journal, previously the *Adelaide Stock and Station Journal*, was established in 1904. It is published weekly and provides up-to-date information on stock and wool markets and the technical aspects of farming and property management.

In addition to these major State-wide newspapers, a strong provincial press has been built up. There are at present thirty country newspapers operating in the State with a combined circulation of over 106 000. Most of these are published weekly, although two appear bi-weekly and three tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were first to appear. Earlier publications are, however recorded; *The Port Lincoln Herald*, for example, was printed in the early 1840s. There are also district papers containing items of local interest circulated in a number of suburbs of Adelaide.

PARKS AND GARDENS

Botanic Gardens

The Adelaide Botanic Garden, occupying about 20 hectares east of the Royal Adelaide Hospital, was established in 1855 and was opened to the public in 1857. Botanic Park, an area of about 30 hectares north of the Garden was acquired in 1874 and has now been developed as an arboretum.

Since 1860 powers of management have been vested in the Board of the Botanic Gardens of eight members who serve for a period of four years but who may be re-elected for further terms.

The Garden contains an extensive collection of about 6 000 species of plants. Important features are the collections of native plants from dryland regions, cacti and succulents, the class ground, glass house displays and the Wisteria arbor. The Museum

of Economic Botany, opened in 1879, houses a comprehensive carpological collection, displays of plant products and educational displays.

In 1954 the State Herbarium was re-established within the Botanic Garden and a new herbarium building was completed and occupied in 1965. At present it contains about 250 000 specimens.

State-wide advisory services are available on all matters relating to ornamental horticulture.

Experimental tree plantations have been established at Giles Corner, Kulpara, Lame-roo, Stansbury and Meningie to test hardiness of ornamental woody plants under natural rainfall.

In the mid-1960s the Wittunga Garden at Blackwood was donated by the Ashby Family to the Botanic Garden. This comprises approximately 15 hectares and has Australian and South African plants and was opened officially in mid-September 1975.

Mount Lofty Botanic Garden of approximately 80 hectares was established in 1952 and was opened to the public on 5 November 1977.

Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately 8 hectares of Botanic Park were granted to the Society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Garden to be transferred to the Zoological Gardens.

The Zoological Gardens contains an excellent collection of mammals, birds and reptiles. Particular emphasis is given to Australian fauna and especially to native Australian birds. During 1977-78, 136 species and varieties of mammals, including a large collection of marsupials, and more than 265 different species of Australian and foreign birds were exhibited.

The many mammals, reptiles and birds are attractively displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view. Two walk-through aviaries, a Children's Zoo, where the animals can be handled and fed, and a nocturnal house for the display of animals which are more active during the night than the day, are features of the Gardens.

The revenue necessary for maintaining and developing the Gardens is obtained through an annual State Government grant, from gate receipts and sundry sources.

During 1977-78 about 385 000 persons visited the Zoological Gardens.

National Parks and Wildlife Service

The National Parks and Wildlife Act, 1972-1978, repealed several Acts and amalgamated the previous functions of, and areas controlled by, the National Parks Commission, National Pleasure Resorts, the Fauna and Flora Board and the fauna section of the Fisheries and Fauna Conservation Department to form the National Parks and Wildlife Service. The Service is a division of the Department for the Environment and its purpose is to establish and manage reserves for public benefit and enjoyment, and to conserve wildlife.

The Act also provides for the protection of native fauna and some species of native flora. The reserves are classified into the following types:

1. National Parks (parks of national significance);
2. Conservation Parks (primarily for conservation);
3. Recreation Parks (to allow for recreation without undue danger to natural areas);
4. Game Reserves (to enable management of wildlife).

At 30 June 1978 the reserves comprised 195 areas throughout the State and consisted of eight National Parks, 164 Conservation Parks, fifteen Recreation Parks and eight Game Reserves. The total area was over 3.9 million hectares, or 3.9 per cent of the State. Areas under Service control ranged from 0.4 hectares (Lipson Island Conservation Park) to 2 132 600 hectares (an unnamed conservation park in the north-west of the State).

The National Parks and Wildlife Service issues permits to keep and sell protected animals and is responsible for the issue of hunting permits in South Australia.

A description of some of the parks, recreation reserves and places of historical or scenic interest was included on page 217 of the *South Australian Year Book 1972*. Flora and fauna are discussed in Part 1.4 Natural Environment.

Municipal Parks and Gardens

The City of Adelaide is surrounded by 688 hectares of parklands, considerable areas of which are devoted to gardens (136 hectares), golf courses (100 hectares) and other recreational areas. The form of development and flexibility of areas permits varied usage by the public including equestrian activities, swimming, boating, ball games, picnicking, fetes, Christmas parties, art displays and pop concerts. Planting during the year 1977-78 included 1 656 trees and 1 648 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their areas.

RECREATION AND SPORT

Division of Recreation and Sport

The Division of Recreation and Sport is part of the Department of Transport.

On 28 June 1976 the functions of the National Fitness Council of SA were amalgamated with those of the Division of Recreation and Sport.

The Recreation and Sport Division is involved in:

- capital assistance program for community recreation facilities;
- equipment grants for recreational and sporting equipment;
- advisory services for planning of recreation facilities;
- sports coaching scheme, providing grants for coaching and training;
- financial assistance towards travel to National sporting events;
- grants for innovative programs involving adults;
- implementation of the 'Life Be In It' Campaign;
- administration of residential recreation centres at Mylor and Parnanga and a Conference Centre at 'Graham's Castle', Goolwa;
- club administration courses, vacation recreation programs;
- recreation for special groups, including women, the handicapped and the elderly;
- maintenance and administration of walking tracks.

The Administrative Division is involved in:

- administering the Regulations under the Lottery and Gaming Act, 1936-1978, pertaining to the licensing of small lotteries in the State;
- administering the provisions of the Racing Act, 1976-1978, and Regulations thereto.

Sports Administration Centre

In May 1978 the State Government established a Sports Administration Centre at Wayville. The Centre provides individual/shared office accommodation for sporting associations, general office services, printing and duplication service and telephone facilities. The cost of such accommodation is defrayed by a rental contribution from organisations wishing to use the accommodation.

The Centre has been designed to help alleviate the problems and expenses involved with the administration of sporting organisations. It is intended to function as a house of business and is geared to encourage associations to conduct their management in a more proficient and informative manner. As a collective central point, it allows a more effective communication level to be established with Government authorities and private business groups interested in the promotion of sport.

A restriction of 5 days per week per sport has been imposed and therefore priority for accommodation is given to the recognised State Associations. If the controlling body does not require the services of the Centre, then affiliated groups, with the approval of the State body, may avail themselves of the services.

SPORTING FACILITIES

In terms of attendance the most popular spectator sport is Australian Rules football; during the 1978 season the average attendance at the 110 minor round matches was 7 740 while the average at the six final matches was 32 900.

In addition, there were twenty-one matches in the National Football League 'Wills' Cup Series; six of the matches were held in South Australia. Total attendance was 39 929, an average of 2 661 a match.

From 1974 the South Australian National Football League Inc. has used its headquarters ground, Football Park at West Lakes, for major games with the Adelaide Oval as a support oval for matches when Football Park is unavailable or when other matches have been programmed there. There was a record attendance of 66 897 at the Grand Final on 25 September 1976.

Adelaide Oval, occupying approximately 6 hectares of the north parklands, has been used for major cricket and Australian Rules football matches. The record attendances have been 62 543 on 2 October 1965 for Australian Rules football and 50 962 for Test cricket on 14 January 1933. In addition there are first-class suburban ovals at which major sports are played.

The Olympic Sports Field which features a synthetic 'tartan' track is the headquarters of the South Australian Amateur Athletic Association which is affiliated with the Amateur Athletic Union of Australia. Each Saturday from October to March inter-club contests are held at this arena with an approximate annual attendance of 100 000 competitors and spectators. The Olympic Sports Field is also used by the South Australian Women's Amateur Athletic Association which conducts competitions on Saturday afternoons.

The Apollo Stadium at Richmond is a multi-purpose air-conditioned building with seating for 4 390 spectators at which a weekly basketball competition is conducted. It is situated on a 2-hectare site and is the headquarters of the South Australian Amateur Basketball Association Inc. The stadium is also used by visiting entertainers. Other basketball stadiums are at Forestville, Bowden, Marion, Hillcrest, Colonel Light Gardens and Morphett Vale. Many school gymnasiums have basketball facilities and this sport is played in the open at various centres.

A number of indoor multi-purpose centres exist at Angle Park (The Parks centre), Blackwood, Campbelltown, Elizabeth, Ingle Farm, Marion, Noarlunga, Woodville and

Salisbury and in country areas at the following locations: Kadina, Loxton, Mannum, Naracoorte, Peterborough, Renmark and Tanunda. Others are currently under development at Clare, Mount Barker and Waikerie.

The parklands of the City of Adelaide are used extensively for sporting purposes and during 1977-78, 402 sports permits were issued catering for eighteen different sports.

Sports grounds are distributed throughout suburban Adelaide, at approximately two to three kilometre intervals, and throughout country areas. In addition sports areas are available at most government and non-government schools.

Race Courses

There are four registered metropolitan courses; Morphettville, Cheltenham, Victoria Park (occupying approximately 23 hectares of the east parklands) and Oakbank. In addition there were, at 30 June 1978, thirty-five registered racing clubs and twenty-eight registered country courses. Picnic race meetings are held at a number of outlying centres.

Trotting Tracks

Metropolitan trotting in South Australia is conducted at Globe Derby Park, Bolivar, a modern and well-appointed track. There are twelve other courses in use in the State and seven of these (Gawler, Kadina, Kapunda, Mount Gambier, Murray Bridge, Port Augusta and Port Pirie) have facilities for the conduct of night trotting.

Dog Racing

Greyhound racing (with betting) was introduced into South Australia in May 1971 with meetings at Whyalla and Strathalbyn. Other tracks have been established at Angle Park, Barmera, Gawler and Port Pirie since that date. Meetings are held three to four times a week. Average attendance at Angle Park, the city track, is approximately 3 000. At present about 5 000 people own or train greyhounds in South Australia. The estimated greyhound population is 8 000 dogs.

Golf Courses

At 30 June 1978 there were eight suburban public courses, four 18-hole courses including one at National Park, Belair, and four par-3 links. There were also fourteen private courses operating within suburban Adelaide. In addition there are courses at many country centres. Five new nine-hole golf courses have been built or are under construction, including Regency Park and Marino.

Motor Racing

Adelaide International Raceway at Virginia was opened on 2 January 1972. It occupies an area of 65 hectares and contains two racing circuits of 2 and 3 kilometres respectively, and a drag racing strip. There is provision for 20 000 spectators and approximately fifty meetings are held each year.

A rallycross track was commissioned at Tailem Bend Raceway on 17 April 1977. The track has been leased by the Tailem Bend Racing Club to the South Australian Motor Racing Club which conducts rallycross meetings on an average of once every six weeks. The 1.2 kilometre track, which is a combination of bitumen and loose dirt, was laid in 1976 by the District Council of Meningie.

Tennis Courts

The South Australian Lawn Tennis Club's courts (thirty-three grass and eight hard) at Memorial Drive, North Adelaide occupy approximately 4 hectares of the north parklands. The centre court was the venue for Davis Cup matches in 1952, 1956, 1963, 1968,

1975 and 1978. At 31 December 1978 the parklands also contained approximately 210 other tennis courts. Courts associated with schools, churches and private clubs exist throughout the State.

Lawn Bowling Clubs

At 30 June 1978 there were 240 bowling clubs registered with the Royal South Australian Bowling Association—sixty-seven in and near Adelaide and 173 in country areas, including four at Broken Hill, New South Wales. The size of clubs varied from thirty-five rinks at Bordertown to as few as three rinks, with the two largest suburban clubs being Holdfast Bay and Lockleys, each with thirty-two rinks. There are also 234 bowling clubs registered with the South Australian Women's Bowling Association, sixty-three in the metropolitan area (including seven clubs exclusively for women) and 171 in the country.

Swimming Facilities

At 31 December 1978 there were eighty-one public swimming pools in South Australia, of which fifty-seven were in country centres. Of these only eight country and two metropolitan pools had been in use before 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the eighty-one pools, seventy-four had treated water, the remainder were in lakes, dams, rivers or the sea, or utilised sea water. While mainly used for recreational and instructional purposes, the facilities provide a base for fifty-four swimming clubs providing instruction and competition in swimming, diving and water polo. These clubs have a total membership of 6 200.

Swimming pools are provided at sixty-eight government schools, twenty-eight of these being in country areas. Swimming facilities are also available at a number of non-government schools. The Education Department encourages school committees to build swimming pools by granting subsidies for their construction.

The Adelaide Swimming Centre in the north parklands, opened on 20 December 1969, is a complex of four pools, including a 50-metre eight-lane pool, a diving/water polo pool, both of which comply fully with international competition requirements, a 20 metre by 20 metre learner's pool and a toddler's pool. The Centre is contained in a 2-hectare grassed area with spectator accommodation for 2 000 people forming an amphitheatre arrangement surrounding the competitive pools.

A new swimming complex was opened at Marion on 24 January 1976. The complex comprises 50-metre, learner's and wader's pools with associated facilities and was constructed at a cost of approximately \$900 000 by the Marion City Council, with financial assistance from the Commonwealth and State Governments.

An indoor 25-metre heated public swimming pool is under construction for the Parks Community Centre, the third in the State; the other two being at Mount Gambier and Whyalla.

The nature of Adelaide's foreshore and that of many country beaches, combined with the prevailing climate, provides ideal conditions for open sea summer bathing.

LOTTERIES AND BETTING

LOTTERIES

The State Lotteries Act, 1966-1978 provides for the promotion and control of lotteries by the Government of the State. In November 1966 a Lotteries Commission, consisting of a chairman and two other members, was appointed to administer the Act which came into operation on 8 December 1966 and the first draw was made in May 1967.

In accordance with Section 16 of the Act all moneys received by the Commission are paid into a Lotteries Fund from which moneys are made available to meet the expenses of the Commission and to pay prizes. The balance of the Lotteries Fund, which represents the surplus of income over expenditure and prize money not claimed for over six months, is transferred to the Hospitals Fund.

Up to 31 December 1978, \$131 748 672 was received from the sale of tickets, including X Lotto, and Instant Money Game, of which \$80 453 218 was distributed in prize money, and approximately \$39.8 million had been transferred to the Hospitals Fund.

Originally only one lottery, a 50 cent series, was conducted but in July 1967 a Jackpot series with tickets at \$1 each, was introduced. In addition special lotteries have been conducted with tickets sold at \$2, \$3, \$4, \$5, \$10 or \$20 each. The last of the 50 cent lotteries was drawn on 2 July 1974 and on 3 July 1974 a 60 cent lottery was introduced. However, its popularity gradually declined and the 60 cent lottery was discontinued on 6 August 1976.

In April 1973, a new type of lottery called 'X Lotto' (Cross Lotto) was introduced. This scheme originated in Germany after the 1939-45 War, and is very similar to Football Pools except the subscriber selects numbers instead of teams.

Initially the popularity of X Lotto was not great but its popularity increased towards the end of 1974. In October, 1975, the percentage of prize money was increased from 60 per cent to 61 per cent. For the year ending 31 December 1978, \$14 643 043 was invested.

On the 4 December 1978 the Commission introduced yet another type of lottery called 'Instant Money Game'. As its name indicates, the subscriber knows immediately whether he has won a prize or not. This lottery originated in America in 1974 and has spread to England, Europe, Africa. The instant prizes in this lottery range from \$2 to \$10 000, amounts of \$2 and \$5 are paid immediately at the point of sale; higher prizes are paid by cheque from Head Office immediately after verification on presentation of the ticket. Tickets are in Lots of 500 000 with a face value of \$1 each, 60 per cent of which is allocated to prize money. Sales to 31 December 1978 were \$2 500 000.

The Commission operates an account service by accepting deposits from persons wishing to invest in each lottery without the need to purchase tickets themselves. At 31 December 1978, 2 260 subscribers availed themselves of this service.

At 31 December 1978 there were 201 Lotteries Commission Agents appointed in South Australia. Of these, 138 were in the Adelaide and suburban areas; fifty-two in country areas and eleven were subscriber (non-ticket selling) agents.

BETTING

Legalised betting in South Australia is restricted to horse racing, trotting, dog racing and coursing. It is governed by the provisions of the Racing Act, 1976-1978, which came into operation on 1 January 1977. Before 1 January 1977 legalised betting was governed by the provisions of the Lottery and Gaming Act, 1936-1978.

The Act makes provision for betting with the totalisator and with bookmakers at horse race, trotting and dog race meetings. The totalisator cannot be used at coursing meetings but bookmakers may operate at these meetings.

Details of on-course betting and betting in registered premises are given in the following table for the years 1975-76 to 1977-78.

Betting: Amounts Invested with Bookmakers and On-Course Totalisators and Distribution of Commissions, Taxes and Fractions, South Australia

Particulars	1975-76	1976-77	1977-78
Amount invested:		\$'000	
Totalisator;			
Horse racing	11 105	12 793	13 956
Trotting	3 354	3 513	3 712
Dogs	2 570	3 128	3 057
Total	17 029	19 434	20 725
Bookmakers;			
Horse racing	98 681	115 767	124 447
Trotting	31 972	32 360	33 919
Dog racing and coursing	22 053	26 264	26 197
Total	152 706	174 391	184 563
Total amount invested	169 735	193 824	205 288
Distribution of commissions, taxes and fractions derived from betting transactions:		\$'000	
State Government;			
Bookmakers:			
Commission on bets	1 678	1 925	2033
Duty on betting tickets	147	146	147
Unclaimed bets	128	151	172
Totalisator:			
Tax and licences	866	(b) 963	(b) 1 022
Unclaimed dividends	76	(a) 80	(a) 1
Total paid to Consolidated Revenue	2 895	3 265	3 375
Clubs;			
Bookmakers:			
Commission on bets	1 641	1 874	1 979
Totalisator:			
Commission on takings	1 570	1 883	2 071
Fractions	118	9	127
Total payable to clubs	3 329	3 766	4 177
Racecourses Development Board:			
Commission on Totalisator takings	28	39	44
Totalisator Fractions	48	170	60
Total	76	209	104
Hospitals Fund;			
Totalisator unclaimed dividends	—	(a) 17	(a) 95
Total distribution	6 300	7 257	7 751

(a) Payable into Hospitals Fund from 1 January 1977.

(b) No licence fees payable from 1 January 1977.

Before December 1933 legalised betting was restricted to totalisator betting at registered race meetings. From 1933 to 1967 it was limited to 'on-course' totalisator and to betting with bookmakers who were licensed to bet on courses where meetings were held, and also (from January 1934 to February 1942) with bookmakers who were licensed to bet 'off-course' in specially registered premises.

As a war-time measure racing and betting in South Australia were banned from March 1942 until October 1943. Off-course betting facilities were not re-established until 1946, when they were restricted to country areas. Port Pirie is the only town where bookmakers now operate in registered premises.

In October 1966 provision was made for the setting up of the Totalizator Agency system of 'off-course' betting, and agencies have since been established in the metropolitan area and at numerous country towns. A Board consisting of a Chairman and seven other members representative of racing and trotting interests was appointed to administer the new system and the Totalizator Agency Board (TAB) Headquarters was established in Adelaide during December 1966. The Board was enlarged during 1970-71 to include a representative of the greyhound racing interests. The Board was changed in 1976 to comprise an independent Government appointed Chairman and Deputy Chairman plus a representative from the controlling body of each of the three codes of galloping, trotting and greyhounds. The TAB first operated on 29 March 1967 on a country race meeting while it operated for the first time on a metropolitan meeting on 1 April 1967.

Thirteen agencies were open on the first day of TAB operations. At 30 June 1978, 168 agencies were operating of which fifty-seven were sub-agencies operated in conjunction with other businesses. Further premises in the city, suburbs and country towns are being established progressively to provide a complete coverage of the whole State. In addition, a system of telephone betting is available to persons who have established accounts with the TAB. At 30 June 1978 the Board employed 198 permanent officers and 940 part-time staff.

For the year ended 30 June 1978 off-course investments totalled \$97 259 575 of which approximately 82 per cent was payable as dividends. The following amounts became payable to the South Australian Government (to be paid into the Hospitals Fund at the State Treasury) from the operations of the Board during that year:

	\$
Stamp duty	4 862 975
Fractions	772 050
Unclaimed dividends	412 792
Commission on NSW (Broken Hill) investments	3 920
	<hr/>
	\$6 051 737

In addition, for the year ended 30 June 1978, an amount of \$2 309 923 became available for distribution to racing, trotting and greyhound clubs under a scheme of distribution prepared by the Controlling Bodies Board and approved by the Chief Secretary. Since commencing operations in 1967 the Board has distributed a total of \$16 947 937 to participating clubs while in the same period, the South Australian Government has received \$37 033 787.

Racecourses Development Board

The Racecourses Development Board, established under the Lottery and Gaming Act, 1936-1978 and continued under the Racing Act, 1976, administers the Horse Racing

Grounds Development Fund, the Trotting Grounds Development Fund and the Dog Racing Grounds Development Fund. These funds are financed by a proportion of investments on totalisators conducted by racing clubs or the Totalizator Agency Board and are to be applied by way of grants or loans to racing clubs for providing, erecting, improving or repairing public facilities. The Board is empowered also to borrow funds for these purposes.

6.5 HEALTH

HISTORICAL

The first hospital in South Australia was built in 1837. It was a small thatched hut situated on North Terrace and measured 6 metres by 4 metres. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was demolished in 1938, contained two 12-beds wards and four smaller rooms. The first buildings of the present Royal Adelaide Hospital were erected in 1856-57. Hospitals in the country were established at Mount Gambier in 1869, Wallaroo and Port Lincoln in 1870, Port Augusta in 1875, and Port Pirie in 1890. The Port Adelaide Casualty Hospital was erected in 1882.

The State's first mental hospital, now demolished, was situated in Botanic Park. The Parkside Psychiatric Hospital (now Glenside Hospital) commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (now Hillcrest Hospital) were established in 1922 and 1929 respectively.

The first Health Act in South Australia was passed in 1873. This Act, which was modelled on earlier English legislation, established a Central Board of Health, and a number of town councils were constituted as local boards. The present Health Act dates from 1935. Administration continued under the authority of the Central Board of Health until 1949 when a Department of Public Health was formed to co-ordinate the work of the board and other health activities.

The South Australian Health Commission was established on 1 July 1978 to ensure better rationalisation and co-ordination of health services in this State. A further step in this direction was made in January 1978 when the Department of Public Health amalgamated with the Hospitals Department and the South Australian Health Commission assumed the functions previously undertaken by the Department of Public Health.

ADMINISTRATION

The major State Government authorities responsible for health services in South Australia have been traditionally the Hospitals Department and the Department of Public Health. Each Department, administered separately, had a permanent head who reported to the Minister of Health.

The Hospitals Department was, and at this stage still is, responsible for the management and co-ordination of Government Hospitals in South Australia, both general and psychiatric. These include the Royal Adelaide Hospital, the Queen Elizabeth Hospital, Flinders Medical Centre and Modbury Hospital, as well as six of the larger base hospitals in country areas. Services for the mentally ill and intellectually handicapped are also largely the responsibility of the Hospitals Department; the management of community outreach services, the Community Health program, domiciliary care services, rehabilitation services and nursing home facilities have been assumed also by the Hospitals Department in recent years.

The Health Commission embraces the activities of the Central Board of Health, the Occupational Health Branch, the School Health Branch (including the Deafness Guidance Clinic), the Dental Health Branch, the Epidemiology Branch, the Food and Drugs Advisory Committee, the Radiological Advisory Committee, the Geriatrician, the Clean Air Committee, and also the public health aspects of the control of tuberculosis, including the Chest Clinic and the State X-ray health surveys. The Commission is responsible also for health education, including the drug education program sponsored by the Commonwealth Government, and for Aboriginal health in South Australia.

The Central Board of Health administers the Health, Food and Drugs, Narcotic and Psychotropic, Noxious Trades and Bakehouses Registration Acts. The Board also has responsibilities under the Local Government Act and the Cremation Act.

The Health Act and the Food and Drugs Act constitute every municipal or district council a local board of health or local authority for its area, except that in the metropolitan area, the Metropolitan County Board (representing twenty metropolitan corporations) is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 131 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction with local boards. Outside the boundaries of local boards the Central Board is the administering authority.

The Hospitals Department administers government hospitals (general and mental), together with community health services, and deficit finances the operations of non-government recognised hospitals in South Australia.

The Commonwealth Government through the Departments of Health and Social Security is responsible for the administration of national health services in co-operation with State Health authorities and voluntary organisations. Under the *Quarantine Act 1908* the Department of Health is responsible for the various aspects of human, animal and plant quarantine.

The South Australian Branch of the Department of Veterans' Affairs administers the medical services provided for ex-service personnel whose disabilities are accepted as being attributable to war service.

GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the Hospitals Department, the Department of Veterans' Affairs, religious and charitable organisations, local community committees and private owners.

RECOGNISED HOSPITALS

Recognised hospitals (formerly public hospitals) are those which have been approved under the Hospital Agreement between the State Government and the Commonwealth. This Agreement was subsequently renegotiated, with some amendments, effective from 1 October 1976. They are deficit financed by the State Government; the Commonwealth has agreed to meet up to 50 per cent of net operating costs in accordance with an agreed budget.

The South Australian Health Commission administers four recognised teaching hospitals in the metropolitan area, Royal Adelaide Hospital, Queen Elizabeth Hospital, Modbury Hospital and Flinders Medical Centre which opened early in 1976. The

Department fully administers also the recognised hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta, Wallaroo and Whyalla.

In addition there are sixty-five recognised hospitals in country areas and six (including Adelaide Children's Hospital and Queen Victoria Hospital) in the metropolitan area, conducted by local boards of management, which are deficit financed by the State Government and come under the general supervision of the Hospitals Department.

Recognised Hospitals, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Hospitals	70	71	73	81	81
Staff (at end of year):					
Medical:					
Salaried	516	568	664	686	775
Sessional (a)	639	607	415	389	152
Nursing	7 041	7 600	7 780	8 316	8 235
Other	6 315	6 505	7 298	7 530	7 176
Total	14 511	15 280	16 157	16 921	16 338
Patients:					
Admitted and re-admitted	164 797	168 832	179 733	190 806	202 802
Average daily number resident	4 106	4 221	4 207	4 291	4 364
			\$'000		
Operating receipts:					
State Government aid	53 893	82 194	70 730	87 294	102 450
Commonwealth Government (b)	5 330	6 208	70 730	87 294	102 450
Fees	25 357	35 724	15 588	27 376	40 351
Other	675	804	1 230	4 096	2 608
Total	85 255	124 930	158 278	206 060	247 859
Operating payments:					
Salaries and wages	58 701	90 263	112 039	148 208	180 863
Other	24 825	33 467	46 239	57 852	66 996
Total	83 526	123 730	158 278	206 060	247 859
Capital payments:					
Buildings, equipment etc.:					
Government	13 864	19 741	25 696	30 639	14 349
Other	3 940	5 439	5 433	12 337	6 476
Total	17 804	25 180	31 129	42 976	20 825

(a) Includes visiting specialists paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

(b) Before 1 July 1975, mainly hospital, pharmaceutical and tuberculosis benefits. After that date, 50 per cent of net operating costs.

Recognised Hospitals: South Australia, 1977-78

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Children's Hospital	Other Recognised Hospitals	Total
Staff (at end of year):					
Medical:					
Salaried	266	180	82	247	775
Sessional (a)	63	28	24	37	152
Nursing	1 982	1 218	634	4401	8 235
Others	1 875	1 219	758	3 324	7 176
In-patients:					
Admitted and re-admitted	33 115	29 344	16 617	123 726	202 802
Average daily number resident	876	513	217	2 758	4 364

(a) Includes visiting specialists paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

Royal Adelaide Hospital

The Royal Adelaide Hospital is a general teaching hospital controlled by a board of three members, with the Director-General of Medical Services as Chairman. The Hospital, which incorporates a department of dentistry, is a school of medical and dental clinical teaching, in conjunction with the University of Adelaide.

In addition to the main hospital there are wards at Northfield, a section of which is used to accommodate patients with infectious conditions, and a section of the Morris Hospital, Northfield is occupied by the Spinal Injuries Unit.

At 30 June 1978 there were 1 156 beds at the Hospital, excluding 134 at Northfield classified as nursing home beds.

Queen Elizabeth Hospital

The Queen Elizabeth Hospital at Woodville is a general, casualty and maternity hospital controlled by a board of management of three members. It is a teaching hospital affiliated with the University of Adelaide for the clinical teaching of undergraduate medical students. Opened in 1954 as a temporary 55-bed maternity hospital, it has been developed progressively to a major teaching hospital which, at 30 June 1978, had 754 beds available, including ten rehabilitation beds at the Mareeba Rehabilitation Centre, Woodville, which also incorporates a day treatment centre and an extensive domiciliary care service.

Modbury Hospital

The Modbury Hospital is a general teaching hospital comprising medical, surgical, maternity and children's wards, and casualty and out-patient services. It is controlled by a board of management of six members.

The hospital complex was designed to provide facilities for 224 beds initially but is planned to extend to 450 beds by 1981. The hospital was officially opened on 16 February 1973, with 134 staffed beds. Since that time additional beds have become available progressively and at 30 June 1978, 214 beds were in use.

Queen Victoria Hospital

The Queen Victoria Hospital, founded by public subscription, was opened in 1902. It primarily provides facilities for midwifery, neo-natal paediatrics and gynaecology. It is a university teaching hospital and is controlled by a board of management. Accommodation at 30 June 1978 was 174 beds.

Adelaide Children's Hospital

The Adelaide Children's Hospital was founded by public subscription in 1876 and the first buildings were completed in 1879. In 1955, Estcourt House at Grange was added and is an integral part of the hospital although located some thirteen kilometres from the main hospital site. A continuing development program was commenced during 1975 to provide additional facilities and modern wards.

The hospital is a general paediatric teaching hospital for children fourteen years and under and is a training school for nurses; the Department of Paediatrics of the University of Adelaide is situated at the hospital. It is controlled by a board of management and is a recognised hospital. Accommodation at 30 June 1978 was 356 beds.

Flinders Medical Centre

Opened in 1976, the Flinders Medical Centre represents a new concept of a general teaching hospital integrated with a university (Flinders University) for the clinical teaching of undergraduate medical students and for research.

At 30 June 1978, 340 beds were in use; the continuing commissioning of new facilities will increase the total available beds to 550. The Centre is controlled by a board of management of eleven members.

COMMUNITY HEALTH AND DOMICILIARY CARE

Commencing in late 1971, the Domiciliary Care Program, which is funded jointly by the State and Commonwealth Governments, provides health orientated support services at home so that the recipient is able to continue to live in a domiciliary situation, where frequently, the only previous alternative was institutional care. This concept was greatly expanded in 1973-74 by the addition of the Community Health Program, which provided for a wider range of community health services, not necessarily of a domiciliary nature.

With the introduction of the Hospital Program from 1 July 1975, there has been a rationalisation of community health services, so that existing hospital facilities may be used, where appropriate, in lieu of the provision of separate facilities or projects.

The whole concept of community health care is one of continuing development as a viable alternative, in appropriate circumstances, to institutional health care.

REPATRIATION HOSPITALS

The Department of Veterans' Affairs maintains the Repatriation General Hospital at Daw Park. Originally known as Repatriation General Hospital, Springbank, it was built as a military hospital during the 1939-45 War, and came under the control of the Department in 1947. Medical, surgical and psychiatric in-patient and out-patient treatment is provided for eligible ex-service personnel, eligible dependants, serving members of the forces, and under certain conditions, for non-eligible ex-service personnel and civilians.

In 1974 the Daw Park Private Hospital adjacent to the Repatriation General Hospital, Daw Park was acquired and developed as a Rehabilitation Centre and Day Hospital. Within the Hospital's grounds is the Repatriation Artificial Limb and Appliance Centre which manufactures and supplies artificial limbs and other aids free of charge to all citizens who require them, regardless of whether they have a Repatriation entitlement or not. The average daily number of patients in the Repatriation General Hospital, Daw Park during 1977-78 was 227. At June 1978 there were 725 staff and 331 beds.

PRIVATE HOSPITALS AND NURSING HOMES

Details of all private institutions approved for payment of Commonwealth Government hospital or nursing home benefits are given in the following table.

Private Hospitals and Nursing Homes, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Number of hospitals	51	48	47	43	39
Number of nursing homes	127	124	124	126	127
Number of beds at end of year:					
Hospitals	2 026	2 068	2 041	2 435	2 413
Nursing homes	3 809	3 915	4 117	4 318	4 663

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St Andrew's Presbyterian Hospital, all of which are run by denominational bodies. Another large institution is the Home for Incurables at Fullarton which provides accommodation and nursing attention for persons suffering from chronic disease.

MENTAL HEALTH SERVICES

The Director of Mental Health Services is responsible for the management of public psychiatric services operating under the Mental Health Act, 1976-1977. A division of the Hospitals Department, this Service controls four major institutions—Glenside Hospital, Enfield Hospital, Hillcrest Hospital and the Strathmont Centre—and in addition three hostels for accommodating discharged patients, two child guidance clinics, two community mental health centres and the St Corantyn Psychiatric Day Hospital.

In addition to the Enfield Hospital, there are separate 'short-term' receiving units at Glenside and Hillcrest Hospitals where treatment is directed towards early discharge. In general the duration of stay in these units is a few months terminating in either transfer as a 'long-term' patient or in discharge. A summary of the number of persons receiving Mental Health Services treatment in the years 1971-72 to 1975-76 follows.

Government Psychiatric Institutions, South Australia

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
In-patients;					
Admitted and re-admitted	3 602	3 225	3 309	3 410	3 665
Discharged	3 486	3 023	3 230	3 204	3 801
Deaths during year	150	153	159	158	143
Remaining at end of year;					
Males	1 142	1 148	1 109	1 099	969
Females	1 017	1 060	1 014	975	800
Total	2 159	2 208	2 123	2 074	1 769
Out and day-patients:					
Treated during year;					
Males	2 109	2 245	2 534	2 590	2 891
Females	2 281	2 174	2 697	2 623	2 976
Persons	4 390	4 419	5 231	5 213	5 867

The following table shows the number of patients treated in 1975-76 classified by the diagnosis and number of attendances.

**Out-patients and Day-patients Treated in Government Psychiatric Institutions
Diagnosis and Number of Attendances, South Australia, 1975-76**

Diagnosis	Number of Patients who Attended					Total Patients Treated
	1-4 Times	5-9 Times	10-15 Times	16-22 Times	23 or more Times	
MALES						
Senile and pre-senile dementia	14	4	—	—	2	21
Alcoholic psychosis	7	—	1	—	3	10
Other organic psychoses	17	2	—	3	6	29
Schizophrenia and paranoid states	236	119	55	34	58	502
Depressive psychosis	66	31	8	1	15	121
Other functional psychoses	56	29	18	5	9	117
Depressive neurosis	128	46	23	10	26	233
Other neuroses and psychosomatic disorders	205	85	34	12	21	357
Alcoholism	80	19	8	2	11	120
Drug addiction	26	7	—	—	19	52
Other personality disorders	259	77	36	16	15	403
Transient situational disturbances and behaviour disorders of childhood	259	104	49	12	5	429
Non-psychotic mental disorders associated with physical condition	25	10	3	2	4	44
Mental retardation	263	11	1	2	5	282
Non-psychiatric diagnosis	136	17	9	2	7	171
Total	1 777	561	246	101	206	2 891
FEMALES						
Senile and pre-senile dementia	24	9	2	2	17	54
Alcoholic psychosis	4	1	—	—	1	6
Other organic psychoses	14	8	2	—	2	26
Schizophrenia and paranoid states	197	120	61	33	53	464
Depressive psychoses	93	75	23	14	30	235
Other functional psychoses	61	55	27	7	12	162
Depressive neurosis	276	111	53	24	75	539
Other neuroses and psychosomatic disorders	236	106	43	30	42	457
Alcoholism	15	5	3	2	4	29
Drug addiction	17	5	3	1	11	37
Other personality disorders	171	65	28	15	28	307
Transient situational disturbances and behaviour disorders of childhood	149	60	30	11	21	271
Non-psychotic mental disorders associated with physical condition	4	3	3	—	2	12
Mental retardation	212	7	—	—	1	220
Non-psychiatric diagnosis	129	17	8	1	5	160
Total	1 602	647	286	140	304	2 979

The next table shows that for both males and females admitted or re-admitted as in-patients during 1975-76 the most common diagnosis was 'schizophrenia and paranoid states'. Females out-numbered males by more than two to one in the diagnosis categories 'depressive psychosis' and 'depressive neurosis'.

**In-patients Admitted and Re-admitted to Government Psychiatric Institutions
South Australia**

Diagnosis	1973-74		1974-75		1975-76	
	Males	Females	Males	Females	Males	Females
Senile and pre-senile dementia	56	96	60	96	63	110
Alcoholic psychosis	63	9	55	10	68	13
Other organic psychoses	32	34	23	22	38	35
Schizophrenia and paranoid states	479	345	455	389	505	425

**In-patients Admitted and Re-admitted to Government Psychiatric Institutions
South Australia (continued)**

Diagnosis	1973-74		1974-75		1975-76	
	Males	Females	Males	Females	Males	Females
Depressive psychosis	72	190	54	118	83	171
Other functional psychoses	92	144	139	210	188	289
Depressive neurosis	124	262	100	182	116	248
Other neuroses and psychosomatic disorders	50	50	58	111	47	61
Alcoholism	335	62	371	90	303	66
Drug addiction	31	27	43	32	35	27
Other personality disorders	178	183	185	142	174	143
Transient situational disturbances and behaviour disorders of childhood	27	20	33	34	35	40
Non-psychotic mental disorders associated with physical condition	29	16	28	8	18	17
Mental retardation	175	101	184	146	161	149
Non-psychiatric diagnosis	15	12	18	14	23	14
Total	1 758	1 551	1 806	1 604	1 857	1 808

In-patients discharged during 1975-76 are shown in the following table in relation to the period hospitalised and the condition treated.

**In-patients Discharged from Government Psychiatric Institutions
Diagnosis and Period Resident, South Australia, 1975-76**

Diagnosis	Period Resident					Total Discharges
	Under 2 weeks	2 weeks and under 1 month	1 month and under 2 months	2 months and under 6 months	6 months and over	
	MALES					
Senile and pre-senile dementia	11	13	10	19	16	69
Alcoholic psychosis	17	14	11	5	16	63
Other organic psychoses	5	11	7	8	5	36
Schizophrenia and paranoid states	121	125	106	112	78	542
Depressive psychosis	19	20	24	10	10	83
Other functional psychoses	40	63	53	26	18	200
Depressive neurosis	53	31	21	12	11	128
Other neuroses and psychosomatic disorders	22	15	9	4	1	51
Alcoholism	100	60	63	84	22	329
Drug addiction	17	9	7	5	1	39
Other personality disorders	79	33	29	27	17	185
Transient situational disturbances and behavi- our disorders of childhood	22	2	5	4	5	38
Non-psychotic mental disorders associated with physical condition	4	3	4	5	7	23
Mental retardation	78	57	11	5	20	171
Non-psychiatric diagnosis	12	4	2	2	2	22
Total	600	460	362	328	229	1 979
	FEMALES					
Senile and pre-senile dementia	17	20	22	23	51	133
Alcoholic psychosis	3	4	2	—	7	16
Other organic psychoses	6	9	9	7	5	36
Schizophrenic and paranoid states	84	112	103	99	66	464
Depressive psychosis	36	34	55	40	13	178
Other functional psychoses	55	92	78	59	18	302
Depressive neurosis	77	68	57	53	21	276
Other neuroses and psychosomatic disorders	22	16	17	14	7	76
Alcoholism	15	14	12	26	8	75
Drug addiction	7	7	6	7	4	31
Other personality disorders	51	42	26	21	17	157

**In-patients Discharged from Government Psychiatric Institutions
Diagnosis and Period Resident, South Australia, 1975-1976 (continued)**

Diagnosis	Period Resident					Total Discharges
	Under 2 weeks	2 weeks and under 1 month	1 month and under 2 months	2 months and under 6 months	6 months and over	
FEMALES						
Transient situational disturbances and behaviour disorders of childhood	24	9	6	5	—	44
Non-psychotic mental disorders associated with physical condition	4	3	3	4	2	16
Mental retardation	51	64	12	8	13	148
Non-psychiatric diagnosis	8	1	3	1	—	13
Total	460	495	411	367	232	1965

ALCOHOL AND DRUG ADDICTS (TREATMENT) BOARD

The treatment of those addicted to alcohol and other drugs in South Australia is the responsibility of the Alcohol and Drug Addicts (Treatment) Board under the provisions of the Alcohol and Drug Addicts (Treatment) Act, 1961-1976.

The Board controls the following facilities for the treatment of alcoholism and other addictions:

- Administrative Headquarters and Information Centre—Parkside;
- Elura Clinic, North Adelaide—assessment clinic and out-patients centre;
- St Anthony's Hospital, Joslin—a specialised hospital;
- St Christopher's, Joslin—a walk-in centre for drug addicts;
- Osmond Terrace Regional Referral Clinic, Norwood—a detoxification and observation unit.

An alcoholism treatment service is also provided by the Board to patients at the Flinders Medical Centre and to clinics at Whyalla and Port Pirie.

The efforts and operations of various church and voluntary organisations are co-ordinated by the Board with its own services. These organisations are assisted financially by the South Australian Government.

In addition to the facilities controlled by the Alcohol and Drug Addicts (Treatment) Board, the Hospitals Department provides beds in some psychiatric and general hospitals for the treatment of addicted patients. Education on the various aspects of drug dependence is organised by the South Australian Health Commission with other bodies participating as required.

MATERNAL AND CHILD WELFARE

MOTHERS AND BABIES HEALTH ASSOCIATION

The Mothers and Babies Health Association, a voluntary body supported by government subsidy and public subscriptions, was established in 1909 and conducts maternal and infant welfare work throughout the State. At 320 centres, triple certificated sisters teach management skills to parents of babies and young children, and centres conduct group or individual sessions by appointment for the management of problems in the older child up to the age of five years. The Association also conducts a twenty-four hour telephone advisory service and a correspondence service for remote and isolated

families. Physiotherapeutic and family management ante-natal classes are conducted, and many eight-session parentcraft courses are conducted centrally and regionally throughout each year. There is an extensive school-lecturing service on parentcraft, and advice on playgroups is provided by staff playgroup advisers.

The Association, through its Torrens House mothercraft hospital, provides the only training for mothercraft nurses and infant welfare sisters in South Australia. Torrens House has forty beds and admits mothers with new-born babies for assistance in management and also treats babies and children up to the age of five years for various behavioural disorders. A day hospital and a model child-care centre are further facilities for placement and training.

Babies awaiting adoption and a social work service for single mothers, multi-problem families, and families-at-risk for child maltreatment, are further services provided.

Pamphlets and books on a wide range of topics of interest to parents are provided through the Association.

SCHOOL HEALTH AND DENTAL SERVICES

The medical inspection of school children was first introduced into schools in 1913 and since 1951, these inspections have been the responsibility of a branch of the Department of Public Health. In January 1978, the staff and functions of the Department of Public Health, including the School Health Branch, were transferred to the South Australian Health Commission.

The medical assessment program aims to detect health impediments which are likely to affect the progress of children at school and to provide advice on appropriate management. No treatment is carried out by the Branch. All government and non-government schools are visited, usually annually. Students in Year 1 in primary schools are medically assessed by a doctor and a sister. In addition, vision and hearing are tested by a school nurse in Years 4, 6 and 8. The activities of the Branch are being progressively extended in an endeavour to meet the total health needs of school children, including physiological and social needs. The role of the School Health Nurse has been extended into the community and the staff work in close collaboration with other health and welfare workers, teaching staff and parents.

School Health nursing staff have been appointed to Priority Project Schools, Child-Parent Resource Centres and Community Health Centres. These nurses are responsible to the School Health Branch, but are seconded to the respective establishments as staff members.

With the establishment of a pre-school system by the Education Department, the School Health Branch has established a service to pre-schools, under the direction of a medical officer experienced in developmental paediatrics.

During 1978, 87 780 children were examined by medical officers or screened by nurses in 605 metropolitan and country schools.

There were 3 972 children examined at the Deafness Guidance Clinic, including 2 118 examined for the first time in 1978; 1 308 of those examined in 1978 were referred to doctors or hospitals for treatment.

An assessment clinic, under the direction of a paediatrician, began in 1971 for children with learning and behavioural problems.

The total of ninety staff of the School Health Branch at the end of 1978 included twenty-one medical officers, fifty-four school nurses, four audiometrists and one social worker.

Dentists using mobile vans and dentists and therapists working in 84 static clinics and the School of Dental Therapy provided dental care to 82 313 children.

The field staff of the Branch at the end of 1978 included 55 dental officers and 178 dental therapists.

COMMUNICABLE DISEASES

Under the Health Act, 1935-1978, certain diseases have been designated as 'infectious' and others as 'notifiable'. It is required that cases of infectious and notifiable diseases be reported to the local board of health, which in turn advises the Central Board of Health, and that cases of tuberculosis, gonorrhoea and syphilis be notified directly to the Central Board. It should be noted that the figures in the following table refer to cases notified and this may not reflect the actual number of occurrences of the diseases in the population.

Communicable Diseases: Cases Notified, South Australia

Diseases	1974	1975	1976	1977	1978
Encephalitis	8	1	—	8	4
Gonorrhoea	2 091	2 114	1 855	1 921	1 444
Hepatitis A	193	203	235	262	165
Hepatitis B	—	—	—	107	108
Malaria	17	24	22	16	9
Meningococcal infection	5	4	10	5	3
Paratyphoid	3	1	—	—	—
Rubella	40	73	23	17	18
Salmonella infection	159	243	234	230	252
Scarlet fever	15	16	24	—	43
Shigella	31	37	85	76	41
Syphilis	257	305	484	360	241
Tuberculosis	113	101	96	105	102
Typhoid fever	1	2	2	—	1
Other diseases	30	69	122	18	32

The Health Commission maintains a venereal diseases investigation clinic at 275 North Terrace, Adelaide.

Anti-tuberculosis Campaign

Compulsory X-ray surveys, introduced in 1952, and the tuberculin tests given to children in Year 9 at most government and non-government schools are designed to detect active cases of disease.

With improved living standards in post-war years and aided by the tuberculosis campaign, the incidence of the disease has been reduced to a very low level of 8.22 per 100 000 of mean population.

Prevention of Poliomyelitis

In the 1950s South Australia was affected by an intense poliomyelitis epidemic which began in 1949 and continued for several years, reaching a peak in 1951 when 1 491 cases with 62 deaths were registered. From 1956, when mass immunisation against poliomyelitis with Salk vaccine was begun, the incidence of the disease declined. The last indigenous case of poliomyelitis in South Australia was recorded in 1963. Since then, one

case, originating in the Northern Territory and treated in Adelaide was reported in 1970 and towards the end of 1974 a child with suspected poliomyelitis was investigated at the Adelaide Children's Hospital.

The oral (Sabin) poliomyelitis vaccine was first introduced in July 1967, and is now the only vaccine used against poliomyelitis in this State. It is distributed by the South Australian Health Commission to Local Boards of Health and private medical practitioners. The Health Commission also organises poliomyelitis immunization in areas without local government and conducts a clinic at the State Immunization Centre, Norwood.

Poliomyelitis, South Australia

Period	Cases Notified	Deaths
1950-54	3 747	117
1955-59	331	11
1960-64	82	5
1965-69	—	—
1970-74	2	—
1975-78	—	—

ABORTION

Until December 1969 the law relating to abortions was included in Sections 81 and 82 of the Criminal Law Consolidation Act, 1935-1966. These Sections prohibited abortions under any circumstances. However, it was possible for legally qualified medical practitioners to perform abortions in a limited number of cases, at their discretion, under Common Law provisions. No separate statistics of such operations were recorded.

In December 1969 this Act was amended by the Criminal Law Consolidation Act Amendment Act, 1969 which was assented to on 8 January 1970. The amendment inserted a new section (Section 82a) which provided for certain exceptions to the prohibitions in Sections 81 and 82. These exceptions allow for termination of the pregnancy where:

- (1) it is necessary to save life, or prevent grave injury to the woman's physical or mental health; or
- (2) the continued pregnancy would involve greater risk to the mental or physical health of the woman, or there was a substantial risk that the child would suffer from such physical or mental abnormalities as to be seriously handicapped.

To qualify under these grounds, a woman must have resided in South Australia for a period of at least two months before the termination of her pregnancy.

Under the amended Act (the Criminal Law Consolidation Act, 1935-1978), a legally qualified medical practitioner may perform an operation to terminate a pregnancy, provided that he and another legally qualified medical practitioner are both of the opinion that one of the above grounds is met. There is provision for one legally qualified medical practitioner to terminate the pregnancy without recourse to a second opinion where it is immediately necessary to save the life, or to prevent grave injury to the physical or mental health of the pregnant woman. All operations must be performed in hospitals prescribed under regulations to the Act.

The following tables give details of abortions notified in recent years. The incidence of abortions notified per 1 000 live births registered was 141.3 in 1974, 145.9 in 1975, 169.9 in 1976 and 195.9 in 1977.

Abortions Notified: Grounds on Which Granted, South Australia

Grounds	1976		1977	
	Number	Per Cent	Number	Per Cent
Assault	4	0.1	1	—
Potential damage to foetus	54	1.7	72	2.0
Specified medical disorders	47	1.5	49	1.4
Specified psychiatric disorders	3 114	96.7	3 468	96.6
Total	3 219	100.0	3 590	100.0

Abortions Notified: Marital Status, South Australia

Marital Status	1976		1977	
	Number	Per Cent	Number	Per Cent
Single	1 665	51.7	1 929	53.7
Married	1 204	37.4	1 208	33.7
Widowed	17	0.5	20	0.5
Divorced/separated	314	9.8	384	10.7
Not stated	19	0.6	49	1.4
Total	3 219	100.0	3 590	100.0

Abortions Notified: Age Distribution, South Australia

Age Group	1973	1974	1975	1976	1977
	Number				
Under 16	125	89	91	144	142
16-19	743	717	709	880	1019
20-24	686	744	768	841	959
25-29	483	490	526	605	678
30-34	348	353	334	348	375
35-39	255	260	291	221	244
40-44	145	151	136	123	117
45 and over	17	18	23	13	9
Not stated	31	30	38	44	47
Total	2 833	2 852	2 916	3 219	3 590

Abortions Notified: Type of Termination, South Australia

Type of Termination	1973	1974	1975	1976	1977
	Number				
Vacuum aspiration	1 744	2 214	2 432	2 478	2 876
Dilation and curettage	923	501	339	583	450
Hysterectomy	19	15	16	12	11
Hysterotomy—abdominal	90	40	43	32	28
Hysterotomy—vaginal	—	2	3	1	1
Other	56	78	77	112	200
Not stated	1	2	6	1	24
Total	2 833	2 852	2 916	3 219	3 590

OTHER HEALTH SERVICES

Blood Transfusion Service

The Red Cross Blood Transfusion Service collects and processes blood for the routine and emergency needs of all hospitals in South Australia. Blood donations are given at the Service's centre in Adelaide, at a mobile unit visiting metropolitan and country centres, and at regional centres. In 1978 over 98 000 individual donations were received.

The Service maintains blood banks at the Royal Adelaide Hospital, Queen Elizabeth Hospital and the Flinders Medical Centre, and a reference laboratory which, in addition to performing the necessary tests on donor blood, carries out investigations for hospitals and medical practitioners. There are subsidiary blood banks at the Repatriation General Hospital, Modbury Hospital and the Lyell McEwin Hospital, Elizabeth, and regional blood transfusion centres have been established at Mount Gambier, Whyalla, Berri, Port Lincoln, Port Augusta and Wallaroo.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60 per cent), the Commonwealth Government (35 per cent) and the Red Cross Society (5 per cent).

Home Nursing

The Royal District Nursing Society of South Australia Incorporated, through its fifty-one branches in metropolitan and country districts, provides registered nurses to attend the sick in their own homes, giving physical, psychological and supportive care.

Relatives are educated to assist in the care of patients and in helping patients to help themselves. Fees are not fixed but patients are expected to contribute according to their means. During 1977-78 a total of 477 647 visits were made by 194 full-time nurses. The Society also maintains an emergency hospital at Marree and a medical centre at Iron Knob.

Funding is provided by the South Australian Government (40.7 per cent), the Commonwealth Government (40.7 per cent), contributions, local government and fund raising (18.6 per cent).

Aerial Medical Services

The Royal Flying Doctor Service (RFDS) of Australia is a non-profit organisation and provides medical, dental, ophthalmic, School of the Air and telegram services in remote areas of Australia. The Royal Flying Doctor Service of Australia (SA and NT Section) Inc. of the RFDS operates over an area of approximately 2 124 000 square kilometres in South Australia and the Northern Territory; it administers control stations at Port

Augusta, and Alice Springs in the Northern Territory, two aircraft being based at Port Augusta and two at Alice Springs. For the year ended 30 June 1978 these aircraft flew a total of 559 514 kilometres in transporting 755 patients to hospital and treating 2 823 patients at outback clinics. A further 1 212 patients received dental treatment from Adelaide dentists on regular monthly visits. Doctors gave 1 892 radio consultations to outback residents and 46 339 telegrams were transmitted from 592 licensed, fixed and portable outstations.

No flying charges are made to patients and the Service relies on donations, bequests and similar sources for approximately 30 per cent of the finance required and 70 per cent from Commonwealth and State Government grants.

Ambulance Services

The St John Council for South Australia Inc. provides a full-time ambulance service in the metropolitan area manned by regular and volunteer officers. The Council also has administrative oversight over ambulance operations in country areas and in most cases the vehicles are manned by volunteer members of the St John Ambulance Brigade. In the metropolitan area during 1977 St John ambulances travelled 2 280 657 kilometres and carried 191 837 patients. Country ambulances travelled 2 081 121 kilometres and transported 39 037 patients. Three aerial ambulances, based at Whyalla and at Adelaide, flew 2 354 hours and carried 1 338 patients in 1977. These aircraft are fitted out on the same basis as road ambulances and most of the equipment throughout the State is interchangeable. A mobile radio communication system operates throughout the State on standard frequencies.

Common training programs are based on a Manual of Casualty Care and Transport published by the St John organisation in Adelaide. The establishment of a branch of Medic Alert International, a United States organisation, has facilitated the identification of people suffering from diseases and allergies which are not readily apparent. This knowledge is of assistance to both ambulance and hospital staffs in handling and treating patients.

Voluntary Agencies

There are many other voluntary bodies operating in South Australia and doing health work of a special nature. Their activities cover such fields as care of the handicapped, hospital services, care of mother and baby, care of the aged and the provision of convalescent facilities.

CREMATORIUMS AND CEMETERIES

The first crematorium in South Australia, the Adelaide Crematorium, was erected by the Cremation Society of South Australia, presented to the State Government in 1903 and subsequently was closed in November 1959. Cremations are currently conducted at two cemeteries in the State. The Centennial Park Crematorium was erected in 1956 and is operated by the Centennial Park Cemetery Trust. A second crematorium, constructed by the Enfield General Cemetery Trust, commenced operations in December 1969. There were 4 060 cremations in South Australia during 1978.

Cemeteries in South Australia are divided into three main groups: those under the control of the State Government or local government authorities, those under church control and those under the control of trusts. In each of the above groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, Chiropodists, and Nurses Boards of South Australia, and with the Board of Optical Registration.

Professional Medical Personnel, South Australia
Number Registered at 31 December

Profession	1973	1974	1975	1976	1977
Medical practitioners (a)	3 154	3 348	3 767	4 531	4 574
Dentists	477	521	564	598	635
Pharmaceutical chemists	1 017	969	904	973	893
Opticians	96	95	95	101	107
General nurses (b)	11 923	12 717	13 863	14 976	16 384
Enrolled nurses	3 406	3 641	4 419	5 884	7 036
Midwives	4 470	4 787	5 196	5 653	6 085
Psychiatric nurses	865	955	1 067	1 197	1 349
Mental deficiency nurses	483	519	578	619	680
Infant welfare nurses	657	690	699	747	786
Mothercraft nurses	198	220	257	292	332
Infectious diseases nurses	33	34	36	37	37
Dental nurses	156	169	200	224	254
Physiotherapists	524	565	601	631	657
Chiropodists (c)	150	144	149	140	132

(a) Includes personnel not practising in South Australia. Date of registration is 31 January in the following year.

(b) General nurses may also be registered and included as midwives, psychiatric nurses, mental deficiency nurses, etc.

(c) Date of registration is 1 July.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered. Since the 1939-45 War there has been a considerable re-organisation of general practice in medicine with a movement away from single practices to partnership and group practice arrangements.

MEDICAL RESEARCH

The Institute of Medical and Veterinary Science

Details of this organisation are given in Part 6.3 Scientific and Research Organisations.

The Anti-Cancer Foundation

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment and the Committee concentrated its activities on cancer research. In 1962 the Committee was re-organised and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Foundation has subsidised cancer research projects within the Institute of Medical and Veterinary Science, the Flinders University of South Australia, the University of Adelaide, the Queen Elizabeth Hospital and the Royal Adelaide Hospital.

An education program is being conducted to encourage the public to seek early

medical advice and prompt treatment. Social workers assist with problems associated with cancer patients being cared for at home by relatives. The Foundation has established 'James A. Martin House' a well-equipped hostel to accommodate country patients receiving treatment at the Royal Adelaide Hospital.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The Foundation has formed standing committees in the country districts of South Australia and the Northern Territory to assist in the expansion of its anti-cancer activities.

The National Heart Foundation

The National Heart Foundation of Australia and its South Australian Division was established in 1959. Its aims are research into the causes of heart and arterial diseases, the rehabilitation of patients suffering from heart and arterial diseases, and the education of doctors and the general public in all aspects of cardio-vascular problems with particular emphasis on prevention and risk factors. The National Heart Campaign of 1961 raised \$5 124 000 for the work of the Foundation, of which \$662 000 was contributed in South Australia. An appeal for further funds which was made during 1969 raised \$268 000 in South Australia. Since then, the Heart Fund Continuing Support Program has been established with the aim of providing regular annual donations to support the three-part program. In 1978, the total amount raised by the Heart Fund Program was \$343 990.

The campaign funds are being spent on research (66 per cent), education (20 per cent) and rehabilitation (14 per cent). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, at Flinders University, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Children's Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

The National Heart Foundation Centre, Adelaide was established by the South Australian Division in 1963. The South Australian Division is involved in professional education of medical practitioners and paramedical staff, and an increasing emphasis is placed on community education in order to make the public aware of the symptoms of heart attack and what to do if one occurs, and to stress the risk factors which increase the chances of having a heart attack.

A Heart Risk Assessment Clinic was opened at the Heart Centre in February 1978. The aim of the clinic, which is staffed by a registered nurse and assistant, is to detect abnormalities in blood pressure and blood fat levels. A complete assessment of risk factors is carried out, covering height and weight measurements, smoking and exercise, in addition to the taking of a blood specimen and blood pressure measurement.

STATE GOVERNMENT EXPENDITURE ON PUBLIC HEALTH

The following table shows the net expenditure by the State Government from Consolidated Revenue Account on various aspects of health which is defined as excluding sewerage, drainage and water supply. The figures include both the cost of maintaining State Government activities and subsidies paid to other organisations active in this field. For further details see Part 11.3 State Government Finance.

Consolidated Revenue Account: Outlay on Health, South Australia

Purpose	1974-75	1975-76	1976-77	1977-78 ^(a)
				\$'000
General administration, regulation and research	7 746	9 548	12 724	7 644
Hospital and clinical services:				
Mental health	17 647	22 937	27 805	3 068
Other hospital and clinical services	68 510	126 951	174 113	153 201
Other health services:				
Preventive services	1 061	1 189	1 302	636
Maternal and infant health	1 485	1 951	2 473	—
Domiciliary care	999	1 682	2 215	10
Health of school children	1 795	2 437	3 672	—
Community health facilities	846	2 419	4 196	643
Ambulance services	895	779	979	—
Other	7 439	3 678	4 710	768
Total	108 423	173 571	234 189	165 970

(a) Net cost to the State only. During 1977-78 the activities of the Health Commission and the Hospitals Department were controlled through a Deposit Account at Treasury.

6.6 SOCIAL WELFARE

The Commonwealth and State Governments and a large number of voluntary agencies provide social welfare services for the population. The Commonwealth Government is concerned largely with providing fixed monetary pensions and benefits and repatriation services. It also provides, either directly or through State and local government authorities and voluntary agencies, for a wide range of welfare services for people with special needs. State agencies operate in the field of child welfare and distribute emergency relief in circumstances where Commonwealth Government assistance is not available. The voluntary agencies, many of which receive government aid, provide a wide range of services in various fields of social welfare.

COMMONWEALTH GOVERNMENT PENSIONS AND BENEFITS

EXPENDITURE

The following table sets out Commonwealth Government expenditure in South Australia on social welfare, which includes expenditure under the Social Services Act, other Acts, National Health Service and disability and service pensions. The figures shown do not include administration costs.

Commonwealth Government Expenditure on Social Welfare, Selected Items
South Australia^(a)

Type of Benefit	1973-74	1974-75	1975-76	1976-77	1977-78
					\$'000
Social Services Act:					
Age and invalid pensions	131 771	184 218	234 266	273 814	333 579
Widows pensions	18 403	23 873	30 143	32 339	38 613
Family allowances ^(b)	20 098	20 237	22 896	87 491	90 483
Maternity allowance	618	627	597	522	639
Unemployment benefits	6 143	20 475	36 002	48 097	82 264
Sickness benefits	3 633	4 855	6 971	8 574	9 331
Supporting parent's benefits	4 838	9 293	15 210	18 591	20 457
Other	1 952	3 196	5 270	6 465	7 915

**Commonwealth Government Expenditure on Social Welfare, Selected Items
South Australia^(a) (continued)**

Type of Benefit	1973-74	1974-1975	1975-76	1976-77	1977-78
			\$'000		
Delivered Meals Subsidy Act	166	172	203	276	260
Aged or Disabled Persons Homes Act (c)	4 221	6 733	4 838	4 170	4 467
Aged Persons Hostels Act (d)	865	753	591	1 274	2 189
States Grants (Home Care) Act	226	942	1 388	1 147	1 820
States Grants (Deserted Wives) Act	1 534	1 045	1 509	1 879	3 203
National Health Service (e)	66 005	82 399	223 151	177 894	204 412
Disability pensions (f)	21 010	26 641	27 971	31 042	34 784
Service pensions (f)	10 340	15 133	21 406	28 667	37 234

(a) Where applicable the amounts shown include payments for supplementary assistance, allowances and additional pensions for children.

(b) From 15 June 1976 child endowment superseded by family allowance. Until 1976 payments were made to claimants' bank accounts every twelve weeks. Since then payments were four-weekly and from 15 May 1979 payments were changed to monthly intervals.

(c) Includes Personal Care Subsidy (\$1 684 200 in 1977-78).

(d) Commenced September 1972.

(e) Includes Northern Territory for some items.

(f) Includes Northern Territory.

COMMONWEALTH SOCIAL SECURITY

Brief details of Commonwealth Government pensions and benefits are given in this section; however, in discussing the eligibility of persons for the various payments, all the necessary qualifications and exceptions to the general rule have not been delineated.

Age and Invalid Pensions

Age pensions are payable to men aged sixty-five and over and women aged sixty and over, who have lived in Australia continuously for a period of ten years.

Invalid pensions are payable to persons aged sixteen years and over who are permanently incapacitated for work to an extent of at least 85 per cent, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, ten years continuous residence is necessary.

If a person subject to the ten year qualification for either pension has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten years, he may be eligible. Residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) may be treated as residence in Australia. Absences from Australia may, in certain circumstances, be treated as residence.

Age, Invalid and Wife Pensions, South Australia Number of Pensioners

At 30 June	Age Pensioners			Invalid Pensioners			Wife Pensioners
	Males	Females	Total	Males	Females	Total	Total
1974	31 510	69 792	101 302	8 425	6 390	14 815	4 529
1975	33 875	73 404	107 279	9 703	6 645	16 348	4 972
1976	36 027	76 890	112 917	10 667	6 645	17 312	5 646
1977	37 709	80 187	117 896	11 835	6 742	18 577	6 417
1978	40 161	82 907	123 068	12 345	6 528	18 873	7 287

From November 1978, for both age and invalid pensions, the maximum rate for an unmarried pensioner, or for a married pensioner whose husband or wife was not receiving an age or invalid pension, a tuberculosis allowance or a service pension, was \$53.20 a week. Where married pensioner couples are living apart for an indefinite period because of the illness or infirmity of either or both, each receives a pension at the single rate. The maximum married rate for a couple both being pensioners was \$44.35 a week each. A wife's pension is payable, subject to an income test, at the married rate to an age or invalid pensioner's wife who does not qualify for an age, invalid or repatriation service pension in her own right.

An additional pension up to \$7.50 a week is payable for all children under sixteen years or who are full-time students and under twenty-five years. An unmarried age or invalid pensioner having the custody, care and control of a child under sixteen years or who is a full-time student and under twenty-five years is paid a guardian's allowance of \$4 a week in addition to the pension. The guardian's allowance is increased to \$6 a week if there is a child under six years, or if there is an invalid child under sixteen years requiring full-time care and attention.

Up to \$5 a week extra may be paid to a single pensioner or to a married couple (\$2.50 each) who pay rent or lodging. For single and married persons the maximum rate of supplementary assistance is reduced by the amount by which the pensioners' income exceeds \$1 a week.

Age, invalid and wife's pensions, unless the pensioner is seventy years of age or over, or permanently blind, are subject to an income test. From November 1978, age pensions payable free of the income test will remain at \$51.45 a week (single) and \$42.90 a week (married), but pensioners may qualify for increases subject to the income test. Additional allowances are generally subject to an income test regardless of age. Under the income test, a full pension is paid if the annual income does not exceed \$1 040 (for a single pensioner) or \$1 794 (for a pensioner couple). If the income exceeds \$1 040 (or \$1 794), the annual rate of pension is reduced by half the excess.

Certain types of income are exempted. The main exemptions are: gifts or allowances from children, parents, brothers or sisters; benefits from friendly societies; family allowances or other payments for children; Commonwealth Government health benefits and amounts received from registered benefit organisations.

Widows Pensions

Widows pensions are paid to widows and other women who satisfy certain conditions; there is a test on income.

There are three classes of pensions:

Class A, a widow with at least one dependent child who is a child of the widow or a child who entered her care before she became a widow;

Class B, a widow of at least fifty years of age who has no child or, if she has a child, the child does not qualify her for a Class A pension and a widow of at least forty-five years of age whose Class A pension ceases because she no longer has a qualifying child;

Class C, a widow under fifty years of age who has no child and is in necessitous circumstances within twenty-six weeks of her husband's death.

For Classes A and B the term 'widow' includes a deserted wife who has been deserted at least six months, a divorcee, a woman whose husband has been in prison at least six months and a woman whose husband is in a mental hospital.

For all classes the term 'widow' may also include a woman who was the common law wife of a man for at least three years immediately before his death. 'Child' includes a full-time student between the age of sixteen and twenty-five.

A residential qualification is not required if a couple were permanent residents when the husband died or if an event occurs—such as divorce—which qualifies a woman as a 'widow'. In other circumstances five years continuous residence immediately preceding a lodgement of claim or ten years residence at any time is required. Certain absences are not considered as breaking continuity of residence, and residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) counts as residence in Australia. The income test operates similarly to that for age pensions.

Widows Pensions, South Australia
Number of Pensioners At 30 June

Class	1974	1975	1976	1977	1978
A	6 297	6 154	5 956	6 220	6 757
B	5 448	5 662	5 978	6 390	6 852
C	8	6	10	8	3
Total	11 753	11 822	11 944	12 618	13 612

From November 1978, the maximum rates of pension were: Class A widows, \$53.20 a week, plus a mother's allowance of \$4 a week (\$6 if there is an invalid child or a child under six years), plus \$7.50 a week for each child under sixteen years or a full-time dependent student; for Class B widows, \$53.20 a week; for Class C widows, \$53.20 a week.

An additional payment of up to \$5 a week may be paid to a widow pensioner who pays for rent or lodging, and whose income is under \$6 a week. In the case of a Class A widow the income limit may be increased by up to \$6 a week for each child.

Supporting Parent's Benefit

In November 1977, supporting parent's benefit was introduced making payment available to men bringing up children on their own on the same basis as it was available for women in similar situations. A man may qualify for the benefit if he is a widower, divorcee, separated husband or *de facto* husband, a man whose wife or *de facto* wife is in prison or a mental hospital or an unmarried father including a man whose *de facto* wife has died. There is a six month qualifying period for this benefit as there was for supporting mother's benefit. The benefit continues to be payable to an unmarried mother, a mother who is a deserted *de facto* wife, a *de facto* wife of a prisoner or a separated wife, from a date six months after the event which gives rise to eligibility (*e.g.* the birth of a child or separation). The rates, income test and other conditions are the same as for a Class A widows pension.

Portability

Social Services pensions once granted in Australia, continue to be paid if the pensioner goes abroad. There are some exceptions which affect only a small proportion of pensioners.

Persons Living Overseas

Pensions may be granted to persons living outside Australia subject to the following conditions:

- (1) in the case of the age pension, the claimant had lived thirty years in Australia and was of age-pension age or within five years of that age at the time of departure from Australia; in the case of invalid or widow's pensions, the claimant

became permanently incapacitated for work (or permanently blind) or widowed in Australia;

(2) the claimant left Australia before 8 May 1973;

(3) the claimant is in special need of financial assistance.

In addition, the claimant is required to satisfy the ordinary conditions for grant of pension in Australia, except that of living in Australia.

Family Allowances

Persons resident in Australia who have the custody, care and control of one or more children under the age of sixteen are eligible for family allowance (formerly known as child endowment); approved institutions of which children are inmates are similarly eligible. Family allowance is also paid for full-time students between the ages of sixteen and twenty-five years. There is no income test on family allowances, but one year's residence in Australia is required if the mother and child were not born in Australia; this requirement is waived if the Department of Social Security is satisfied that they are likely to remain in Australia permanently.

At 31 December 1978 family allowance was paid at the rate of \$3.50 a week for the first eligible child; \$5 for the second; \$6 for the third; \$6 for the fourth; \$7 for the fifth and each subsequent child. Family allowance of \$5 a week is paid for each child in an institution.

Family Allowances, South Australia

At 30 June	Families		Institutions		Total Number of Children		
	Number of Families (a)	Number of Children		Approved Insti- tutions		Number of Children	
		Under 16	Students (b)			Under 16	Students (b)
1974	174 976	361 853	23 361	67	1 745	116	387 075
1975	178 978	364 047	25 625	68	1 045	150	390 867
1976	179 187	358 746	28 100	70	1 072	102	388 020
1977	188 229	379 275		54	831		380 106
1978	189 193	376 816		54	818		377 634

(a) Before 1977 excludes those families with student children aged 16 and over only.

(b) Until June 1976 student endowment was payable for student children aged 16 to 21 years. With the introduction of the family allowance scheme the age range for student children was extended to 25 years.

Handicapped Child's Allowance

A handicapped child's allowance was introduced in December 1974. The allowance is payable at the rate of \$15 a week to the parent or guardian of a child under sixteen years of age who is severely or substantially handicapped physically or mentally and requires constant care and attention in the family home. In November 1978 this allowance was extended to cover handicapped children under twenty-five years of age who are full time students but who do not receive an invalid pension.

Double Orphans Pension

A pension of \$11 a week is payable to the guardian of a child under sixteen years or a full-time student between the ages of sixteen and twenty-five years who has both parents dead or one dead and the other missing. The benefit is also payable in respect of either an adopted child or a child whose sole surviving parent is a long-term inmate of a prison or mental hospital.

If an orphan child is being cared for by an approved charitable or religious institution the pension may be paid to the institution.

Unemployment and Sickness Benefits

Unemployment and sickness benefits are paid to persons who suffer temporary loss of regular earnings because of unemployment, sickness or accident. There is a means test on income but not on property. Persons eligible must be between sixteen and sixty-four years of age (fifty-nine for women) with either twelve months residence or the intention to reside permanently in Australia. A person receiving an alternative social security pension is ineligible for unemployment and sickness benefits.

To qualify for unemployment benefit a person must (a) be unemployed and be able to show that unemployment was not because of his being a direct participant in a strike, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work, including registration with the Commonwealth Employment Service.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is \$6 a week for an adult or married person under twenty-one, and \$3 a week for a single person under twenty-one with at least one parent residing in Australia. The benefit is reduced by any amount in excess of these figures. For unemployment and sickness benefit, the income of the claimant's husband or wife is taken into account. Special conditions apply where the wife receives an age, invalid or service pension.

From November 1978, the weekly rates of sickness benefit are \$53.20 for a single person aged 18 years or more, \$88.70 for a married couple and \$36.00 for a person over sixteen, but under eighteen years. The weekly rates of unemployment benefit are \$53.20 for a single person aged 18 years or more with dependants, \$51.45 for a single person aged 18 years or more without dependants, \$88.70 for a married couple and \$36.00 for a person over sixteen but under eighteen years. An additional \$7.50 a week is payable in all cases for each child.

There is a waiting period of seven days during which unemployment or sickness benefit is not payable, but this waiting period is not required more than once in any period of thirteen weeks. However, for unemployment benefit where the applicant has been taking reasonable steps to obtain work since becoming unemployed, the date of commencement of unemployment benefit may be brought forward for up to seven days. Where a person has been unemployed for more than seven days and satisfies these conditions, payment begins from the date of claim.

Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)
1973-74	19 926	3 244	8 639	1 571	988	313
1974-75	61 944	10 557	9 311	1 978	1 125	373
1975-76	80 535	15 010	13 273	2 224	2 458	469
1976-77	72 008	16 147	14 101	2 256	2 383	534
1977-78	86 905	25 949	13 233	2 474	2 787	554

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average number at the end of each week.

Supplementary Assistance Allowance

Supplementary assistance is payable, subject to an income test, to an age, invalid, wife or widow pensioner, or a woman receiving a supporting mother's benefit if he or she pays rent or lodging and has little or no income apart from the pension or benefit. A similar

payment, known as supplementary allowance, of up to \$5 a week may be made to a sickness beneficiary who has received benefit for a continuous period of six weeks.

Special Benefits

A special benefit may be granted to a person not normally qualified for unemployment or sickness benefit or any other social service pension or allowance, or a service pension, if he is unable to earn a sufficient livelihood for himself and his dependants. The maximum rate of payment is the same as for unemployment or sickness benefit, whichever is appropriate.

Rehabilitation

The Commonwealth Rehabilitation Service assists people who are unable to work because of long-term disability or who have had to give up their employment because of sickness or injury. It aims at helping disabled people to reach their maximum physical, mental and social usefulness and to prepare them for suitable employment.

In recognising the need for rehabilitation assistance of a social/vocational nature to be made more freely available, amendments to Part III of the Social Services Act came into operation with effect from 10 November 1977.

The effect of the changes has been to widen the categories of persons who may be provided with Commonwealth Rehabilitation Service treatment and training free of charge. There has been no alteration to the traditional categories of persons which the service has been able to accept *i.e.* pensioners, beneficiaries, etc. However, it is now possible for the Service to accept, without charge, handicapped persons from within the broad working age group who are neither pensioners nor beneficiaries but who would, in spite of residual handicaps, have reasonable prospects, with rehabilitation assistance, of either returning to gainful or sheltered employment or increasing their capacity to lead an independent life at home.

The Commonwealth Rehabilitation Service provides direct services through its centres and regional units. The facilities are designed and staffed to meet the diverse needs of disabled people.

In centres, skilled case work teams, including occupational and speech therapists, physiotherapists, nursing sisters, social workers, psychologists and vocational counsellors are working under medical supervision and using modern methods and equipment to help the disabled in achieving maximum recovery.

Rehabilitation, South Australia

Year	Number Accepted for Rehabilitation	Number Placed in Employment	Expenditure (a)
1973-74	258	203	\$ 709 355
1974-75	319	171	982 168
1975-76	323	133	1 296 422
1976-77	266	147	1 418 289
1977-78	371	164	1 541 343

(a) Excludes capital expenditure on sites and buildings, and administrative cost of the Rehabilitation Service.

Funeral Benefits

A funeral benefit of up to \$20 is payable to any person liable for the funeral costs of a deceased age or invalid pensioner. A higher benefit of up to \$40 is payable to an age, invalid, wife or widow pensioner, or a person in receipt of supporting parent's benefit, liable for the funeral cost of a deceased spouse, child or another such pensioner or beneficiary. For these benefits 'pensioner' means a person who satisfies the Commonwealth Government pensioner 'fringe' benefits income test. 'Deceased pensioner' also refers to a person who satisfied those conditions before his death.

During 1977-78, 4 718 claims for funeral benefits were granted in South Australia.

Homes for the Aged

The *Aged or Disabled Persons Homes Act 1954* provides that grants may be made to certain organisations towards the capital cost of erecting or purchasing approved homes for aged or disabled people. Religious, charitable, ex-servicemen's organisations and local government bodies as well as any other approved organisation are eligible. Grants are made on the basis of \$2 for each \$1 (excluding government assistance and borrowed money, except that borrowed by local government bodies) raised by an organisation. The maximum subsidy limits under the Act are \$11 130 for a single unit and \$12 910 for a double unit, plus a maximum of \$1 920 a unit for land.

At 30 June 1978, 655 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$48 844 046, was associated with the accommodation of 11 068 persons. Since October 1969, a personal care subsidy has been provided in terms of this Act, to eligible organisations providing personal care services in hostel-type accommodation for persons of eighty years of age and over. In 1974, the subsidy was increased to \$15 per week, and the cover extended to persons who, though not yet eighty years of age, required personal care services.

In 1977-78 expenditure under this Act in South Australia totalled \$4 467 362; of this amount \$2 783 162 was for capital grants and \$1 684 200 for personal care subsidies.

The *Aged Persons Hostel Act 1972* is designed to encourage the provision of hostel accommodation for the aged. Subject to certain conditions, the Commonwealth meets the cost of providing additional hostel accommodation by eligible organisations up to a maximum of \$16 700 a person. The Commonwealth also pays an additional grant of up to \$2 400 a person for the purchase of land; a further \$250 a person is available for furnishings.

The *States Grants (Home Care) Act 1969*, which is administered by the Department of Social Security, provides for financial assistance to the States to assist them in developing senior citizens' centres and a range of home care services providing housekeeping or other domestic assistance for aged persons in their homes. Payments to South Australia for the year ended 30 June 1978 amounted to \$1 342 331 for senior citizens' centres, \$66 450 towards the salaries of welfare officers employed in connection with senior citizens' centres and \$1 410 965 for home care services.

Delivered Meals Service

Under the *Delivered Meals Subsidy Act 1970*, financial assistance is provided to organisations to establish, maintain, expand and improve 'meals on wheels' services. These organisations must be non-profit, charitable, benevolent or welfare bodies not

controlled by the Commonwealth or State Governments. The basic rate of subsidy is 30 cents for each meal with which an approved vitamin C supplement is provided and 25 cents for all other eligible meals.

At 30 June 1978, approvals had been given to twenty metropolitan and fifty-five country meals services in South Australia which had served a total of 5 857 611 meals since the scheme's inception. The total amount of subsidy paid was \$1 283 466.

Homeless Persons' Assistance

The *Homeless Persons' Assistance Act 1974* provides for assistance to non-profit organisations and local government bodies which provide accommodation, food and social welfare services for homeless men and women.

The Act enables grants to be made to eligible organisations to meet the cost of purchasing, constructing, altering or renting buildings to be used as homeless persons assistance centres, as well as to meet the cost of purchasing and installing furniture and equipment for such centres. Grants also meet half the salary of a social welfare worker employed at a centre, and help to meet the cost of providing food and accommodation for homeless persons at an approved centre, or of meals provided at such centres for non-residents. The rate of the food and accommodation subsidy has been prescribed at 75 cents per day and the rate of meals subsidy at 25 cents per meal.

Up to 30 June 1978 funds totalling \$253 147 had been made to eligible organisations in South Australia.

Handicapped Persons Assistance

Under the *Handicapped Persons Assistance Act 1974*, financial assistance is provided by the Commonwealth Government to eligible organisations conducting sheltered workshops, training centres, activity therapy centres and residential accommodation for handicapped persons. Subsidy is also available towards the cost of rehabilitation facilities (including holiday homes) which are ancillary to or provided together with an approved program of training, activity therapy, sheltered employment or residential accommodation. All capital and equipment subsidies are paid at a rate of \$4 for every \$1 raised from non-government sources. A subsidy covering 50 per cent of actual salaries may be paid toward the cost of salaries of most staff. A higher rate of 100 per cent may be paid during an initial period in the case of some new enterprises. Since October 1970, a training fee of \$500 has been paid to sheltered workshop organisations for each handicapped person who remains in normal employment for twelve months following at least six months training by the organisation.

During the year ended 30 June 1978, expenditure totalling \$6 314 376 was approved under the Act to be paid to eligible organisations in South Australia.

Handicapped Children's Benefit

A benefit is payable by the Commonwealth Government for each physically or mentally handicapped child who is under sixteen years of age and resides in an approved home conducted by a charitable organisation. From November 1976, the rate of benefit has been \$5 per day. In 1977-78, expenditure by the Commonwealth Government on handicapped children's benefits in South Australia was \$242 615. At 30 June 1978, 182 eligible handicapped children were accommodated in seven approved homes in South Australia.

Reciprocal Agreements

New Zealand. An agreement exists between the Governments of Australia and New Zealand for reciprocity in social services. The arrangements cover age, invalid, wives and widows pensions, family allowances, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up permanent residence in another country may qualify for any of the specified benefits of the new country under the same conditions as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.

Britain. A reciprocal agreement on social services exists between Britain and Australia. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to Britain for permanent residence are treated in Britain as if national insurance contributions had been paid while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

Deserted Wives Assistance

The *State Grants (Deserted Wives) Act 1968* provides for assistance to be given by the Commonwealth Government to the States in respect of aid for needy mothers with children, where there is no breadwinner and the mothers are not eligible for benefits under the Social Services Act. Broadly these include deserted wives and deserted *de facto* wives during the first six months of desertion; wives and *de facto* wives of prisoners during the first six months of the husband's imprisonment; and other separated wives and unmarried mothers during the first six months after the birth of a child or separation.

Telephone Rental Concessions

The Department of Social Security with the Australian Telecommunications Commission provides telephone rental concessions to qualified pensioners in the form of a one-third reduction in annual rental charges.

The Telephone Interpreter Service

A Telephone Interpreter Service is operating through the Department of Social Security as an adjunct to migrant welfare services. It acts as a multi-lingual information service both to migrants, especially those with queries regarding government services, and to professional people experiencing language problems with a patient or client.

NATIONAL HEALTH SERVICES

Expenditure

The following table shows Commonwealth Government expenditure in South Australia from the National Welfare Fund, the Health Insurance Fund and under the *States Grants (Hospital Operating Costs) Act 1976*, on the various aspects of the national health services. The amounts shown are the direct costs of these benefits and services and do not include the administrative costs.

National Health Services Expenditure, South Australia

Type of Benefit	Year First Paid	1974-75	1975-76	1976-77	1977-78
\$'000					
National Welfare Fund:					
Hospital and nursing home benefits (a) (b)	1946	31 126	(c) 21 344	(c) 16 089	(c) 16 463
Medical benefits (b)	1953	20 370	(d) 6 942	(d) 65	(d) 33
Pensioner medical service	1951	5 109	(d) 539	—	—
Deficit financing of nursing homes (e)	1975	—	9 513	13 191	12 554
Domiciliary nursing care (f) (g)	1973	770	852	912	869
Pharmaceutical benefits (g)	1948	16 082	13 106	9 949	10 417
Pensioner pharmaceutical benefits (g)	1951	7 400	9 884	10 086	10 924
Anti-tuberculosis campaign	1947	1 106	655	559	110
Milk for school children	1951	—	—	—	—
Other	—	436	769	1 348	1 428
Health Insurance Fund:					
Medical benefits (g) (h)	1975	—	57 380	46 507	28 545
Hospital benefits (i)	1975	—	74 600	73 616	(g) 122 757
Health program grants	1975	—	1 998	1 771	312
States Grants (Hospital Operating Costs) Act (j)	1976	—	25 569	3 803	—
Total		82 399	223 151	177 894	204 412

(a) Includes Northern Territory for nursing home benefits and payments.

(b) Includes benefits and payments for Northern Territory residents insured with South Australian hospital and medical organisations. There are no organisations registered in the Northern Territory.

(c) Includes benefit payments for hospitalisation before 1 April 1976.

(d) Payments for medical services rendered before 1 July 1975.

(e) Commenced 1 January 1975.

(f) Commenced March 1973.

(g) Includes Northern Territory.

(h) Includes advances to cash payment centres.

(i) Excludes payments in respect of recognised hospitals made between 26 May 1976 and 1 October 1976.

(j) Includes payments made to recognised hospitals for the period between 26 May 1976 and 1 October 1976.

National Health Benefits

In May 1978, the Minister for Health announced that coverage for the whole Medical Benefits Schedule was to be changed to 75 per cent with a maximum patient payment of \$10 when the Schedule fee was charged, except for pensioners with Pensioner Health Benefit entitlement and their dependants, which would remain at 85 per cent or the Schedule fee less \$5 whichever is the greater.

This change came into effect on 1 July 1978 and was applicable to both Standard Medibank and privately insured persons.

The Treasurer announced in the 1978-79 Budget speech new health insurance arrangements, which were introduced on 1 November 1978. These arrangements are designed to provide all residents with a basic level of coverage against the costs of medical and hospital treatment. Individuals are free to choose additional coverage from private insurers.

Medical

From 1 November 1978 all Australian residents are eligible to receive a new Commonwealth medical benefit to cover 40 per cent of Schedule medical fees with a

maximum patient contribution of \$20 for any one service where the Schedule fee is charged.

For pensioners with Pensioner Health Benefit cards, and their dependants, there has been no change to the level of medical benefits. Doctors are able to bulk-bill the Department of Health for these patients and receive 85 per cent of the Schedule fee or the Schedule fee less \$5 whichever is the greater.

Eligible pensioners are still entitled, under the Pharmaceutical Benefits Scheme, to receive a wide range of medicines free of cost.

A new concept of bulk-billing was introduced whereby the doctors receive from the Government 75 per cent of the Schedule fee as payment in full for the service rendered to a person identified by the doctor as disadvantaged (provided the patient is not privately insured). Bulk billing is not available for other persons.

Medical Benefit Exclusions

Medical benefit is not payable in respect of a professional service that is a medical examination for the purposes of life insurance, superannuation or provident account schemes, or admission to membership of a friendly society.

Unless the Minister for Health otherwise directs, medical benefit is not payable in respect of a professional service where:

- (1) the service has been rendered by or on behalf of or under an arrangement with the Commonwealth, a State or a local governing body, or an authority established by a law of the Commonwealth, a State or an internal Territory;
- (2) the medical expenses were incurred by the employer of the person to whom the service was rendered; or
- (3) the person to whom that service was rendered was employed in an industrial undertaking and that service was rendered to him for purposes connected with the operation of that undertaking.

Medical benefit is not payable where the service was rendered in the course of carrying out a mass immunisation or for certain health screening services.

The following table gives details of Commonwealth Government hospital benefit payments from 1974-75 to 1977-78.

Hospital Benefits, South Australia

Type of Benefit	1974-75	1975-76	1976-77	1977-78
AMOUNT PAID (\$'000)				
National Welfare Fund:				
Hospitals;				
Insured patients (a)	2 800	(b) 2 018	(b) 25	(b) 5
Uninsured patients	39	(c) 3	—	(c) 1
Special Account Advance and Deficit payments (a) (d)	9 248	6 453	(e) 2 733	(e) 60
Subsidised Health Benefits Plan payments (a)	2 222	(f) 712	30	(f) 17
Patients treated without charge	15	(c) 2	—	—
Pensioner patients	1 879	(f) 194	—	(f) 1

Hospital Benefits, South Australia (continued)

Type of Benefit	1974-75	1975-76	1976-77	1977-78
AMOUNT PAID (\$'000)				
Nursing home patients (g)	14 699	11 769	13 179	16 386
Other nursing home payments (h)	224	193	122	2
Total National Welfare Fund	31 126	21 344	16 089	16 463
Health Insurance Fund:				
Hospitals;				
\$16 per day payments to private hospitals	—	7 730	7 789	7 187
Payments to recognised hospitals (i)	—	66 798	65 591	114 859
Section 34 payments to private hospitals	—	72	236	711
Total Health Insurance Fund	—	74 600	73 616	122 757

(a) Includes benefits and payments for Northern Territory residents insured with South Australian organisations.

(b) Hospitalisation before 1 April 1976.

(c) Hospitalisation in all hospitals before 1 July 1975 and in private hospitals for uninsured patients and patients treated without charge between 1 July 1975 and 1 April 1976.

(d) Reimbursements to registered hospital benefits organisations for losses incurred on chronic or pre-existing ailments and long-term illness.

(e) Hospitalisation before 1 October 1976.

(f) Hospitalisation before 1 July 1975.

(g) Includes Northern Territory.

(h) Includes payments for Northern Territory residents insured with South Australian organisations and covers Subsidised Health Benefits Plan fund benefit reimbursements and Special Advance and Deficit payments payable from 1 January 1973.

(i) Includes benefits paid to Australian citizens whose hospital care was undertaken overseas.

(j) Excludes payments under the *States Grants (Hospital Operating Costs) Act 1976*.

Hospital

The system of standard hospital coverage, by which everyone without private insurance for hospital benefits is entitled to free standard ward accommodation in recognised hospitals with treatment by doctors engaged by the hospital, continued without alteration.

Private Insurance

Registered medical benefits organisations including Medibank Private are required as a condition of their registration, to offer a basic medical benefits table which, when added to the Commonwealth medical benefit, provides coverage for 75 per cent of the Schedule fee with a maximum patient contribution of \$10 for any one service where the Schedule fee is charged.

Persons who elect to insure for the 75 per cent level, which comprises both the Commonwealth and fund benefit, are eligible for refunds from their organisations.

Those who elect not to insure for fund benefits need to register with a registered medical benefits organisation that has agreed to pay the new Commonwealth medical benefit to uninsured persons on behalf of the Commonwealth.

Registered medical benefits organisations claim reimbursement of the Commonwealth medical benefits paid for both insured and uninsured people from the Department of Health.

In addition to providing a basic medical benefits table, registered medical benefits organisations are able to offer a variety of medical benefits packages up to a maximum of the Schedule fee level.

Registered hospital benefits organisations are also obliged to continue providing a basic table covering the hospital charges raised for shared ward accommodation in recognised hospitals, currently \$40 a day, for patients who choose to be treated by the private doctor of their choice. Organisations may also provide optional tables which can include deductibles if they so choose. The basic and optional tables provide contributors with nursing home benefits. Since 1 October 1977, all payments by registered hospital benefits organisations in respect of nursing home patients have been made under the Reinsurance arrangements.

Registered hospital benefits organisations are also able to continue offering supplementary benefits covering charges raised for single bed wards in recognised hospitals and benefits to wholly or substantially cover private hospital charges. In addition these organisations are free to devise attractive and competitive tables of ancillary benefits.

Financing

The health insurance levy has been abolished and the Commonwealth Government pays the new universal medical benefit from consolidated revenue.

The compulsion on every Australian to pay for one type of health insurance or another has been removed, and the subsidies for 'hospital only' insurance have been discontinued.

The subsidy of \$16 per occupied bed day paid to private hospitals, supplementary Commonwealth benefit payments to non-profit private hospitals under Section 34 of the Health Insurance Act, the reinsurance arrangements, health program grant payments and Commonwealth payments under the hospital cost sharing agreements remain.

Administration

With the ending of the Standard Medibank benefits system the Health Insurance Commission's activities are confined to the operation of Medibank Private.

The Department of Health is responsible for administering the Commonwealth medical benefit payments to the registered medical benefits organisations, bulk-billing arrangements, hospital payments and subsidies, nursing home benefits for persons without hospital insurance and health program grants.

Nursing Home Benefits

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the *National Health Act* 1953. These benefits are as follows:

(i) Basic Nursing Home Benefit.

Basic nursing home benefit is payable in respect of all qualified nursing home patients other than those patients who are eligible to receive benefits from a registered hospital benefits organisation or from some other source such as compensation, third party insurance etc. The amount of basic benefit payable varies between States on the basis of an amount which, when combined with the minimum patient contribution (as explained below) will fully cover the costs of seventy per cent of patients in non-Government nursing homes in each State. The benefit is reviewed and adjusted annually on this basis, the last such adjustment taking effect on 9 November 1978.

At 9 November 1978 the maximum amount of basic nursing home benefit payable per day in South Australia was \$18.90.

(ii) Commonwealth Extensive Care Benefit.

The Commonwealth extensive care benefit is payable at the rate of \$6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. As in the case of the Commonwealth basic benefit, the extensive care benefit is payable in respect only of qualified patients who are not entitled to receive such benefits from a registered hospital benefits organisation, workers' compensation or third party insurance.

Patients who are insured with a registered hospital benefits organisation receive all of their benefit entitlement, whether at the basic benefit or extensive care benefit levels, from that organisation and not from the Commonwealth. In all circumstances the amount of benefit payable by a hospital benefits organisation will be equivalent to the amount otherwise payable by the Commonwealth in respect of uninsured patients in nursing homes.

Generally, all nursing home patients are required to make a minimum contribution towards the approved nursing home fee charged.

At 9 November 1978, the minimum patient contribution payable by patients accommodated in nursing homes approved under the National Health Act was \$7.25 a day.

Where the fees charged by a nursing home are in excess of the combined total of nursing home benefits plus the minimum patient contribution, the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the basic benefit (whether private health insurance benefit or Government benefit) is reduced by that amount.

Deficit Financing Arrangements

As an alternative to the provision of patient benefits under the National Health Act (as outlined above), the *Nursing Homes Assistance Act 1974* provides for an arrangement whereby the Commonwealth Government may meet the net operating deficits of religious and charitable nursing homes.

All organisations wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Commonwealth Government for that purpose.

Commonwealth nursing home benefits as provided under the National Health Act are not payable to a nursing home during any period in respect of which that nursing home participates under the deficit financing arrangements and uninsured patients are charged only a prescribed fee equivalent to the minimum patient contribution. However, the usual arrangements, as for nursing homes approved under the National Health Act apply to insured patients and registered hospital benefits organisations pay the full normal benefit rate.

Domiciliary Nursing Care Benefit

A domiciliary nursing care benefit is payable at the rate of \$14 a week (\$2 daily) to persons who are willing and able to care, in their own homes, for aged parents or immediate relatives who would otherwise qualify for nursing home benefits. The basic criteria for the payment of the benefit are that the patient must be aged 65 years or over and be in need of continuing nursing care and receiving regular visits by a registered nurse. This benefit is not subject to a means test and is payable, under the National Health Act, in addition to any entitlements that persons may have under the *Social Services Act 1947* or the *Repatriation Act 1920* for pensions or other supplementary allowances.

Health Program Grants

Health Program Grants are paid under Part IV of the Health Insurance Act to approved organisations for (a) Health Services Development Projects or (b) from 1 November 1978, the cost of Scheduled medical services provided to patients in respect of whom a doctor in private practice would bulk-bill i.e. pensioners with Pensioner Health Benefits cards and their dependants, and those patients classified by the doctor as disadvantaged who are not insured.

The total amount paid to approved organisations in South Australia during the 1977-78 financial year was \$437 000.

Health Costs Incurred by Overseas Visitors to Australia

Where the period of stay in Australia exceeds 6 months' duration, a person may be deemed to be an Australian resident for the purposes of Commonwealth medical and hospital benefits/cover, where that person qualifies in accordance with the definition of 'Australian resident'.

Where a period of stay is less than 6 months' duration, the Commonwealth benefits are generally not paid because the person involved is not deemed to be an Australian resident.

Where persons do not qualify for Commonwealth medical benefits it is difficult to arrange adequate insurance cover. This is because the medical benefits tables have been constructed on the basis that Commonwealth medical benefits will also be payable. The maximum amounts of insurance medical benefits by themselves are not adequate to cover cost of medical services. Having regard to the effect of the non-payment of Commonwealth medical benefit, it would be prudent for these visitors to Australia to make some other arrangement for health cover for their visit, such as taking out 'travellers insurance'.

It is possible to arrange adequate hospital benefits cover where the visitor would not qualify for free hospital care under the Australian Health Scheme. The cover can be arranged by insuring in the normal hospital benefits tables operated by hospital benefits organisations. However, these organisations do impose a waiting period of two months (as do medical benefits organisations) before new members become entitled to benefits. In the case of obstetric patients seeking cover for benefits above the basic level, a waiting period of up to nine months may be imposed. To obtain immediate benefit cover on arrival in Australia, it would be necessary to write to an Australian health insurance organisation and arrange for insurance to commence at least two months before the date of arrival in Australia.

Pharmaceutical Benefits

Under the Pharmaceutical Benefits Scheme certain medicines, when prescribed by a doctor, are made available to the general public upon the payment of \$2.75. Eligible pensioners are supplied free of cost. The drugs and medicinal preparations available as pharmaceutical benefits are determined on the advice of the Pharmaceutical Benefits Advisory Committee which also recommends the maximum quantities that can be prescribed. Pharmaceutical benefits are normally obtained through registered pharmacists.

Pharmaceutical Benefits, South Australia ^(a)

Year	Number of Benefit Prescriptions	Cost of Benefit Prescriptions			Additional Cost to Common- wealth Government (<i>b</i>)
		Total Cost	Patients Contributions	Net Cost Common- wealth Government	
	'000		\$'000		
1972-73	4 378	11 977	4 328	7 649	3 018
1973-74	5 254	14 572	5 207	9 365	3 684
1974-75	5 992	17 302	5 941	11 361	4 630
1975-76	5 854	21 286	8 297	12 988	1 709
1976-77	7 542	27 850	9 185	18 665	7 686

(a) Excludes pensioner benefits. Includes Northern Territory.

(b) Payments to hospitals and miscellaneous services.

Anti-tuberculosis Campaign

The national campaign to eradicate tuberculosis operated from 1948 to 1976. Under the terms of the arrangements, the Commonwealth Government paid for all capital expenditure on tuberculosis projects and equipment, and reimbursed the State the proportion of maintenance expenditure incurred in the diagnosis, treatment and control of tuberculosis in excess of that amount borne by the State in 1947-48.

The Commonwealth Government pays allowances to people suffering from tuberculosis to encourage them to give up work and undergo treatment. The allowances paid to persons suffering from tuberculosis are subject to an income test.

At 31 December 1978 the maximum income permitted before allowances were affected was \$20 per week for a single person and \$17.25 for each married person.

Anti-tuberculosis Campaign, South Australia

Commonwealth Government Expenditure	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Allowances paid to sufferers	48	38	54	53	60
Maintenance expenditure (<i>a</i>)	988	1 114	685	(<i>b</i>) 498	39
Capital expenditure	395	31	30	—	—
Total	1 430	1 183	769	551	99

(a) Includes administrative expenses not paid from National Welfare Fund.

(b) Half-year only.

At 31 December 1978, the allowance payable to a married person and his spouse was \$46.10 a week each. In addition, an amount of \$7.50 a week was paid for each dependent child who was under sixteen years of age or undergoing full-time education, and under twenty five years of age. This amount was apportioned evenly between the sufferer and the spouse. A single person without dependents, if not hospitalised, received \$56.45 a week or, if receiving hospital treatment free of charge, \$53.20 a week. Widows or widowers with dependent children either under sixteen years of age or undergoing full-time education and under twenty five years of age received \$57.20 a week, plus \$7.50 a week for each dependent child plus a mothers or guardians allowance of \$4 a week. An additional mothers or guardians allowances of \$2 a week was also paid where there was

a dependent child under six years of age or a dependent invalid child requiring full-time care.

REPATRIATION BENEFITS

Disability Pensions

Disability pensions are paid by way of compensation to ex-servicemen and women who suffer incapacity because of war service, to their eligible dependants, and to the dependants of those whose death is related to service. There are four main classes of disability pensions.

The special (TPI) rate (\$94.40 a week from 3 November 1977) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$65.00 a week from 3 November 1977) is payable to an ex-serviceman who, because of the severity of his service related incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered service related disabilities but still retained some earning capacity. The pension payable depends on the degree of incapacity, the maximum from 2 November 1978 being \$38.45 a week. Pensions are also payable for a wife and each child under sixteen years of age under both special and general pensions. Student children also qualify.

The widows rate is payable to widows of ex-servicemen who died as a result of war service, and to any children under sixteen years of age. An additional domestic allowance is payable to certain classes of widows. From 2 November 1978 the widows rate was \$53.20 a week and a domestic allowance \$12.

Disability Pensions, South Australia^(a)

Year	Pensions in Force at End of Year			Total	Expenditure
	Incapacitated Ex-Servicemen	Dependants of Incapacitated Ex-Servicemen	Dependants of Deceased Ex-Servicemen		
		Number			\$'000
1973-74	19 138	24 413	4 986	48 537	21 010
1974-75	18 726	23 545	4 866	47 137	26 583
1975-76	18 246	22 406	4 762	45 414	27 971
1976-77	17 910	21 340	4 676	43 926	31 042
1977-78	17 452	20 409	4 651	42 512	34 784

(a) Includes Northern Territory.

Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of sixty years (fifty-five for women) or who are permanently unemployable. Before 2 November 1978, incapacity from pulmonary tuberculosis was also a basis of eligibility. The service pension is equivalent in amount to the social services age and invalid pensions and is subject to the same income test. It also confers eligibility for a full range of medical and dental treatment, provided the separate income limit for fringe benefits is not exceeded. The dependants of service pensioners may continue to receive their appropriate allowance upon the death of the pensioner. All service pensioners aged seventy years and over have received the pension free of the income test from 8 May 1975.

Service Pensions, South Australia^(a)

Year	Pensions in Force at End of Year				Expenditure
	Ex-Servicemen	Dependants of Pensioner Ex-Servicemen	Dependants of Deceased Pensioners	Total	
		Number			\$'000
1973-74	7 753	2 849	383	10 985	10 340
1974-75	8 241	3 384	368	11 993	15 133
1975-76	9 373	4 404	345	14 122	21 406
1976-77	10 674	5 568	324	16 566	28 667
1977-78	12 044	6 770	316	19 130	37 234

(a) Includes Northern Territory.

Medical Services

The Department of Veterans' Affairs provides hospital treatment, general practitioner services, specialist facilities, pharmaceutical benefits, dental treatment, and nursing home benefits for eligible persons. A comprehensive rehabilitation and social worker service is also available. Medical treatment is provided for all service-related disabilities, pulmonary tuberculosis, and all forms of malignant cancers. Treatment for all non-service-related disabilities is made available to veterans receiving a disability pension at or above the 100 per cent general rate, veterans of the Boer and 1914-18 Wars; veterans who are ex-prisoners of war, veterans in receipt of service pensions (subject to income being within the limits governing the provision of free medical treatment and other fringe benefits), widows, and certain dependants of deceased male veterans whose deaths have been accepted as related to service.

In-patient and out-patient treatment is provided at the Repatriation General Hospital, Daw Park. Facilities at the Out-patient Department include radiological, pathological, physiotherapy, and chiropody services in addition to medical specialist examinations.

The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other government departments and provides artificial limbs free of charge to all disabled members of the community.

Department of Veterans' Affairs: Medical Services, South Australia^(a)

Year	In-patients: Total Treated		Out-patients: Number of Visits		Pharmaceutical Benefits
	Daw Park	Other Hospitals	Daw Park	Visits to or by Medical Officer	
			Number		\$
1973-74	5 839	882	74 999	180 257	1 571 946
1974-75	6 107	935	76 849	189 087	1 699 990
1975-76	5 794	897	76 197	187 901	2 300 005
1976-77	5 738	270	76 847	174 023	2 344 959
1977-78	5 543	334	76 224	172 627	2 462 517

(a) Includes Northern Territory.

Education and Training

Assistance in education and training is provided, through the Department of Veterans' Affairs for children of ex-servicemen whose death, blindness or total and permanent incapacity is accepted as service-related. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance.

Other Services

Other assistance, through the Department of Veterans' Affairs, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen and business re-establishment loans. Funeral grants of up to \$100 are paid on the death of certain ex-servicemen and dependants.

ABORIGINAL ADVANCEMENT

By agreement with the South Australian Government on 1 December 1973 the Commonwealth Government assumed responsibility in relation to Aboriginal affairs policy, planning, financial administration, information and co-ordination. These functions are administered in South Australia by officers of the Department of Aboriginal Affairs in Adelaide and Port Augusta. The Commonwealth Government assists those Aborigines who wish to integrate into white society. At the same time, the Government encourages self-management and preservation of the Aboriginal cultural heritage.

The policy of the Commonwealth Government is that, wherever possible, Aboriginal people should avail themselves of the normal facilities provided for the total community, for example, welfare, health and education, and the State or Commonwealth Government departments responsible for these functions will continue to provide such services. Where special additional programs are needed for Aboriginal people the Commonwealth Government will provide the finance to enable these to be carried out through the appropriate Government or voluntary agency, with the co-ordination of arrangements being handled by the Regional Director of the Department of Aboriginal Affairs. Funds in 1977-78 were also made available direct to seventy-four Aboriginal organisations and communities within South Australia for 114 programs designed to develop Aboriginal self-management and achievement. More than sixty Aborigines were employed on twenty-two Special Work Projects with an expenditure of about \$400 000. In addition, about 120 Aborigines were employed on Community Development Employment Projects at Ernabella and Fregon with an expenditure of about \$500 000.

The following table shows funding by the Department of Aboriginal Affairs on various aspects of Aboriginal advancement.

Department of Aboriginal Affairs: Funding, South Australia

Particulars	1976-77	1977-78
Direct Funds:	\$	\$
Housing	962 287	890 300
Health	255 174	473 185
Education	637 000	752 500
Welfare	224 215	304 670
Community councils	1 752 201	1 942 767
Recreation	29 000	29 800
Legal aid	410 000	440 000
Employment	305 927	906 220
Enterprises	206 517	483 320
Total	4 782 321	6 222 762

Department of Aboriginal Affairs: Funding, South Australia (continued)

Particulars	1976-77	1977-78
State Grants:		
Department for Community Welfare	446 140	439 500
Education Department	1 172 000	1 096 420
South Australian Housing Trust	2 800 000	1 600 000
Department of Further Education	284 860	331 000
Department of Public Health	1 151 000	1 204 500
South Australian Public Service Board	—	5 500
Total	5 854 000	4 676 920

Specific needs in education were met with the establishment, in 1973, of both the Aboriginal Community College, as part of Torrens College of Advanced Education (now part of the Adelaide College of the Arts and Education), and the Aboriginal Task Force at the South Australian Institute of Technology. The College provides remedial work-orientated training and self-development courses for Aborigines who have had difficulty in maintaining work continuity. The Task Force is a community development training program which provides trained staff for Government departments handling aspects of Aboriginal Affairs and for Aboriginal communities themselves.

Aboriginal people decided in 1975 to set up the South Australian Woma Committee to deal with prevention of alcohol abuse and rehabilitation. Since then, eight sub-committees have been set up in various parts of South Australia and all follow programs based on medical input and using therapy programs to change behaviour patterns.

The Commonwealth Government makes available funds for income-producing Aboriginal enterprises, such as tourist ventures, arts and crafts projects, and farming operations. Funds for enterprises were more than doubled in 1977-78 over the previous year.

The Aboriginal Housing Board is a predominantly Aboriginal body which makes policy and gives direction to the South Australian Housing Trust in relation to houses for Aboriginal tenants. The Trust acts as agent for the Board in purchasing, maintenance and rent collection.

The State Government, in 1974, set up the South Australian Aboriginal Advancement Committee to co-ordinate and overview all activities of State Departments providing a service to Aborigines. The Committee meets regularly, both in the city and in country towns or communities. It has a full-time chairman, and a staff of two.

STATE WELFARE SERVICES

EXPENDITURE

The following table shows outlay by the State Government from Consolidated Revenue Account on various aspects of social security and welfare. For further details of the classifications in the table see Part 11.3 State Government Finance.

Consolidated Revenue Account: Outlay on Social Security and Welfare, South Australia ^(a)

Purpose	1974-75	1975-76	1976-77	1977-78
			\$'000	
General administration, regulation and research	5 762	8 080	8 242	10 186
Care of and assistance to:				
Aged persons	7 266	8 336	9 090	9 782
Incapacitated and handicapped persons ..	1 094	686	774	135

Consolidated Revenue Account: Outlay on Social Security and Welfare, South Australia ^(a)
(continued)

Purpose	1974-75	1975-76	1976-77	1977-78
		\$'000		
Unemployed and sick persons	459	15 458	7 166	24 480
Ex-servicemen	228	156	155	154
Widowed and deserted spouses	2 460	3 377	4 255	5 837
Families and children (b)	2 673	3 338	4 494	5 340
Other social security and welfare services:				
Services to Aborigines n.e.c. (c)	1 116	825	673	655
Other	268	537	522	1 042
Total	21 326	40 793	35 371	57 611

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Excludes reformative institutions.

(c) Includes only programs designed to meet specific needs of persons of Aboriginal descent.

COMMUNITY WELFARE

The Department for Community Welfare promotes the general well-being of the community, encourages the welfare of the family as the basis of community welfare, promotes co-ordination of services and collaboration among various agencies and promotes research, education and training in community welfare.

The Community Welfare Act provides for the establishment of community welfare centres or district offices at selected locations throughout the State and the full range of the Department's services is available from these centres. District offices have been established at Adelaide, Amata, Berri, Brighton, Campbelltown, Ceduna, Christies Beach, Coober Pedy, Elizabeth, Enfield, Glenelg, Indulkana, Kadina, Leigh Creek, Mitcham, Modbury, Mount Gambier, Murray Bridge, Norwood, Nuriootpa, Port Adelaide, Port Augusta, Port Lincoln, Port Pirie, Salisbury, 'The Parks' area, Woodville and Whyalla, and branch offices at Clare, Gawler, Henley Beach, Hillcrest, Hindmarsh, Ingle Farm, Kangaroo Island, Maitland, Marion, Millicent, Morphett Vale, Naracoorte, Oodnadatta, Peterborough, Plympton, Renmark, Stirling, Taperoo, Thebarton, Unley, Waikerie, Woodside and Victor Harbor.

The decentralisation program has led to a new sense of involvement in the community and its many welfare needs. There is greater flexibility and opportunity to support local efforts to provide new services for youth, the aged, single parents and others in need.

Community Councils for Social Development involve local people in providing better welfare services for their own communities. The Councils have been established under the Community Welfare Act and supported by the Department through District Office staff and the Community Development Branch at Central Office. The sections of the Community Welfare Act relating to Community Councils were delegated to the new Ministry of Community Development from 1 January 1979 and the Community Development Branch was transferred to the Department for Community Development from that date. District Office staff of the Community Welfare Department will continue to provide support to Community Councils at the local level.

The Department for Community Welfare's library has one of the most comprehensive collections in Australia on social welfare and related topics, and is used by staff, tertiary students, and other people in contact with the Department.

The Department has developed and extended its ties with Commonwealth and other State Government departments and with local government and voluntary bodies. A Community Welfare Grants Advisory Committee, established in 1972, recommends

grants to assist voluntary community welfare organisations with both capital and operating costs. During 1977-78 \$950 000 was provided in grants to over 500 organisations.

Neighbourhood Youth Workers help local people learn the skills and develop the resources to establish a wide variety of activities for young people. The Duke of Edinburgh's Award scheme in South Australia provides a wide range of activities for the personal development of young people.

A special 24-hour emergency service in the Adelaide metropolitan area helps in personal and family crises. This service works in close co-operation with the Police Department. Crisis Care workers especially trained to help people under stress, provide on-the-spot assistance to individuals and families, and cars fitted with two-way radios and radio telephones ensure prompt attention, where necessary.

A Budget Advice service operates from twenty-one district offices to help people manage their budgets, re-arrange debts and plan their spending.

Care and Supervision of Children

Under the Children's Protection and Young Offenders Act, 1979 the emphasis is on the welfare and rehabilitation of young offenders, together with the adequate protection of the community.

Any child up to the age of eighteen may be dealt with as neglected or uncontrolled and those up to the school leaving age may be charged with truancy. Offenders dealt with are between the ages of ten and eighteen years. The Juvenile Court may place the child under the care and control of the Minister of Community Welfare or on a bond. He may be placed under the supervision of a departmental officer or may be obliged to attend at a youth project centre as a condition of the bond. Either of these court orders results in departmental help for the child for the period set by the Court.

Some children under the care and control of the Minister are placed in departmental homes or centres for care, treatment and training. Many are placed with their parents or with foster parents, or in other substitute care under the supervision of a community welfare worker.

The Youth Project Centre, Magill, provides intensive non-residential treatment facilities for young offenders. The Norwood Project Centre helps children who are referred with learning and behavioural difficulties. The Northern Suburbs Project Team provides a similar service to schools and departmental district offices in the north-western metropolitan areas.

The Intensive Neighbourhood Care scheme which is being implemented in 1979 will provide personal care for young offenders who do not need secure care; they will live with specially selected and trained families.

Juvenile Aid Panels provide a non-judicial setting in which to deal with children who are alleged to have committed an offence or to be truants. Each panel is constituted of a Police Officer and a departmental Social Worker. Panels sit at all district office locations of the Department.

Juvenile Court Services

Officers from the Department for Community Welfare appear in all major Juvenile Courts to present reports and help Courts to reach a decision in the best interests of the child.

Juvenile Courts officers also represent the Department in the prosecution of neglected and uncontrolled charges when necessary. They protect the interests of children under the guardianship of the Minister when these children appear in court.

Residential Care

At 30 June 1978 the Department was operating twenty-three residential care homes and centres. The large number of family homes, cottage homes, hostels and training centres allows a wide range of choice in selecting the environment most appropriate to the needs of each individual.

Details of the number of children committed to the care and control of the Minister of Community Welfare are given in the following table.

Children Placed under Care and Control for the First Time Year Ended 30 June 1978

Particulars	Males	Females	Total	Percentage
				of Total
	Number			Per cent
From the Juvenile Courts:				
Offenders	135	21	156	49.4
Neglected	18	13	31	9.8
Uncontrolled	3	6	9	2.8
Habitually absent from school	—	3	3	1.0
In default of fine	54	1	55	17.4
Admitted under Community Welfare Act (Child is in danger of becoming):				
Neglected	22	13	35	11.1
Uncontrolled	1	—	1	0.3
Transfer of control (Interstate)	14	12	26	8.2
Total	247	69	316	100.0

NOTE: In addition to the above, there were 304 children (162 boys and 142 girls) admitted to the temporary care and control of the Minister of Community Welfare. During the year 305 children in short term care (158 boys and 147 girls) were released, when the short-term need for assistance had ceased.

At 30 June 1978, there were 1 690 children under the care and control of the Minister of Community Welfare of whom 188 were in departmental homes and centres and 1 502 were not in institutions.

The centres under the control of the Department include McNally Training Centre for older youths, who have been committed for residential training or assessment by a Juvenile Court following an offence, and the South Australian Youth Remand and Assessment Centre (in the former Vaughan House building) which provides for girls, generally from twelve to eighteen years, and (since 1 September 1978) for boys from ten to fifteen years. Until 1 September 1978, Brookway Park provided residential training or assessment for boys between ten and fifteen years.

Lochiel Park is a training centre for boys, generally between the ages of fourteen and eighteen years, who are slightly mentally retarded and under care and control of the Minister. In addition, cottage and family homes provide a family-like atmosphere for small groups of boys and girls.

In addition, there were 948 children placed on bonds requiring supervision by Departmental officers during 1977-78 and the total number of such children at 30 June 1978 was 820 (712 boys and 108 girls).

The importance of keeping a child in his own home whenever possible cannot be over-emphasised and children are placed out of departmental homes and centres as soon as possible. Review boards consider the social background of each child under care and

control and make recommendations regarding action to be taken for the child's benefit and welfare.

When a child is returned to his own home from an alternative placement, support is continued to the whole family through counselling, motivation of self-help programs, and through the full utilisation of appropriate resources throughout the Department and the community. The same services of a community welfare worker are available to all children under care and control or on bonds with supervision as well as to other families in the community seeking help.

Other responsibilities of the Department's welfare workers include the investigation of allegations that children are neglected, ill-treated or uncontrolled, and the counselling of youths and children voluntarily referred to departmental officers. Departmental welfare workers are also appointed as attendance officers under the Education Act to assist in the prevention of school truancy. Medical and other specialists including psychologists are employed within the Department.

Licensing of Foster Parents and Children's Homes

Under the Community Welfare Act, 1972-1976 every foster parent caring for a child under the age of fifteen years must be approved by the Director-General of Community Welfare, who is responsible for each child's welfare. Departmental officers visit such homes regularly.

Consultant and licensing services are also provided for child care, family day care and baby-sitting agencies. Family Day Care Co-ordinators are working in thirteen districts.

The Department is responsible for licensing non-statutory children's homes in which more than 5 children under the age of eighteen are cared for apart from their parents or near relatives. Recommendations concerning approval, residential care practice, standards and funding of children's homes are made by the Residential Child Care Advisory Committee comprising four Government and four non-statutory agency members appointed by the Minister.

Joint Departmental Projects for Early Childhood Services

At Mansfield Park and Ferryden Park there are joint Department for Community Welfare and Education Department projects combining family day care with pre-school and child-parent programs; at Campbelltown, Brompton, Nangwarry and Thebarton both Departments in co-operation with local groups provide Child Care, Resource Centre and Pre-School facilities.

Together with the Health Commission, both Departments operate integrated resource services in Elizabeth West, Alberton and Christies East. Mobile toy libraries operate in three areas as a joint venture with the Kindergarten Union.

In 1976 the Community Welfare Act was amended to require additional classes of persons to report suspected cases of non-accidental physical injury to children. Five regional panels have been set up in South Australia which aim to minimise both the number of cases occurring, and their severity.

Adoptions

South Australia has had an Adoption of Children Act since 1925, the current legislation being the Adoption of Children Act, 1966-1978. Under this Act the interests of the children are considered paramount. The right to place children for adoption is restricted to the Director-General of Community Welfare or to private adoption agencies which the Director-General has approved. The adoptive parents, who must be approved by the Director-General, become the legal parents after the adoption order is made by an Adoption Court (usually about six months after placement).

Adoptions made in other Australian States are recognised in South Australia; similarly South Australian adoptions are recognised in the other States. A more detailed account of the South Australian legislation was included on pages 221-4 of the *South Australian Year Book* 1968.

There are two types of adoptions:

- (1) adoptions where a child surrendered by its natural parent(s) is placed with approved adoptive parents and the identity of either party is kept secret.
- (2) adoptions where the identity of one or both parties is disclosed, mainly the adoption of children by step-parents but also including adoptions by relatives, foster parents and children from other countries (inter-country adoptions).

On 10 August 1978 new regulations came into effect which provide criteria for the selection of people wishing to adopt Australian children: these criteria are based on recommendations of the Community Welfare Advisory Committee on adoption matters.

The following table refers to all types of adoption where the Court order has been finalised during the financial years shown.

Number of Adoptions, South Australia

Age of Child (a)	1973-74	1974-75	1975-76	1976-77	1977-78
Under one year	352	271	227	195	141
One year and under two	37	47	73	42	71
Two years and under six	68	112	96	216	132
Six years and under thirteen	59	92	100	160	123
Thirteen years and under sixteen	10	11	15	24	15
Sixteen years and over	32	18	38	21	24
Total	558	551	549	658	506

(a) At date of adoption order.

The next table gives, for the two types of adoption, the number of adoption orders granted, the number of applications and the number of children placed during the financial year. The number of children placed does not include children adopted by step-parents or relatives *i.e.* those situations where an agency has not actively arranged the placement of the child.

Adoptions, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Number of adoptions granted:					
Identity not disclosed	394	323	305	222	164
Particular person—identity known	164	228	239	285	219
Inter-country	—	—	5	151	123
Total	558	551	549	658	506

Adoptions, South Australia (continued)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Number of applications received:					
Identity not disclosed	755	639	476	326	300
Particular person—identity known	239	291	305	340	373
Inter-country	53	366	220	161	135
Total	1 047	1 296	1 001	827	808
Number of children placed (a):					
Australian born	396	275	239	189	153
Inter-country	33	138	60	60	50
Total	429	413	299	249	203

(a) The average waiting time for a child to be placed varies from year to year depending on the number of applicants and the number of children surrendered.

Inter-Country Child Care Branch

The Department for Community Welfare established the Inter-Country Child Care Branch in 1977 with the following functions:

- (a) to provide information and publicity on how people of South Australia can give support to deprived children in other countries and how they can give financial and other help through existing sponsorship schemes;
- (b) to facilitate inter-country adoptions and advise on the issues involved; and
- (c) to arrange temporary care for children needing medical treatment or other care not readily available in their own country.

The Department is prepared to endorse suitable aid programs for deprived children in other countries and to refer requests of potential donors to those agencies which are known to the Department to function effectively and efficiently.

International Year of the Child

The United Nations has declared 1979 to be the International Year of the Child (IYC). The main objectives of the IYC are to provide an occasion for Government and private organisations and adults in general to advocate the rights and welfare of children. In South Australia, the Minister of Community Welfare is the co-ordinating Minister for the IYC. An Executive Office has been established in the Department for Community Welfare.

Legal Services

Prosecutions for neglected, ill-treated and uncontrolled children are carried out by officers of the Department for Community Welfare who may also appear in Court where State children are involved. The Department assists by providing reports on the social background of children whose cases are considered by the Courts.

The Department provides a free legal service to deserted wives and other persons with maintenance, matrimonial and domestic problems. Officers interview and advise wives and husbands and negotiate with other parties and solicitors for settlements.

When necessary the officers institute legal proceedings and appear in Court on behalf of those seeking assistance to obtain Orders for separation, custody of children, access

and maintenance. The Department does not take action for divorce. Some 2 300 maintenance payments are collected and paid weekly to deserted wives by the Department. Assistance is given to unmarried mothers in affiliation cases.

Financial Assistance

The Director-General for Community Welfare may, subject to any directions of the Minister, provide assistance to families or individuals in need. The assistance may be provided in the form of money or commodities or the provision of other services which will promote the welfare of the family or individual.

During 1977-78 financial assistance was issued to 16 685 applicants, representing 39 834 persons. The gross cost of assistance issued was \$8 555 498.

The Department provides residential care in a home at Magill for aged people in special need, most of whom are pensioners. The daily average occupancy of the Magill home was 114 during 1977-78.

Rates Remission Scheme

A remission of rates and taxes scheme for pensioners and others able to demonstrate exceptional circumstances of hardship is operated by the State Government. The scheme provides for a remission of up to 60 per cent of the cost of water and sewerage rates, land tax and council rates charged on dwellings, including flats and units owned and occupied by eligible applicants. Pensioners receive a direct remission from the rating authority on application. Applications from non-pensioners are processed by the Department and in 1977-78, 1 443 claims totalling \$48 006 were approved. The total cost of remissions by all authorities was met by the Department and totalled \$7 161 445 for 1977-78 in the following categories:

	\$
Land tax	456 041
Water, sewerage	3 247 358
Local government	3 410 040
Remissions to non-pensioners	48 006

Aboriginal Lands Trust

The Aboriginal Lands Trust was established by the South Australian Government in 1966 to hold the permanent freehold titles of existing Aboriginal Reserves, together with the titles to other land which would be purchased in future years for the use of Aboriginal people.

The Trust carries out its work on behalf of all Aboriginal people in South Australia and is completely independent of the Government.

Currently, policy of the Trust is to act essentially as a land title holding body only and to lease its land and assets to Aboriginal communities, organisations and individuals without interference in the running or use of those properties.

Communities incorporated under the Association Incorporation Act have an elected council. Advisory and/or managerial staff are appointed according to the degree of control and management responsibility accepted by the community.

The South Australian Government established the Pitjantjatjara Land Rights Working Party in April 1977, to consider the feasibility of granting freehold titles for land in the North West Reserve and adjacent areas to Aboriginals.

PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organisations working within South Australia. A large proportion of these derive revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants. The Collections for Charitable Purposes Act, 1939-1947, requires the registration of charitable organisations before they may actively solicit funds.

Organisations which have a wide range of activities include the Australian Red Cross Society, Marriage Guidance Council, Service to Youth Council, the welfare bureaux and missions of the various churches, and organisations catering for ex-servicemen and their dependants. Most of these agencies maintain full-time staff and generally employ professional social workers. Other organisations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organisations depend largely or entirely on voluntary aid.

For details of the numerous bodies concerned with social welfare, reference should be made to the *Directory of Social Resources* published jointly by the South Australian Council of Social Services and the South Australian Health Commission. For those in need, the Citizens Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various voluntary organisations.

REGISTERED MEDICAL AND HOSPITAL BENEFIT ORGANISATIONS

In 1953 Australia introduced a system of voluntary health insurance supervised and financially supported by the Commonwealth Government. Medical benefits and full hospital benefits are payable to members of a registered organisation. In most cases both medical and hospital benefits were provided by the one organisation.

The contributions (premiums) payable to hospital benefits organisations depend on the scale of fund benefits required. Contribution rates to medical and hospital organisations may vary slightly between funds, and single and family rates are available.

Registered Medical Organisations, South Australia

Particulars	Unit	Year Ended
		30 June 1978 (a)
Basic benefits table:		
Registered organisations (b) (c)	No.	6
Membership (c)	'000	313
Estimated persons covered (c)	'000	827
Number of scheduled services (d)	'000	5 043
Cost of schedule services (d)	\$'000	68 662
Fund benefit paid	\$'000	58 721
Gap insurance benefit paid	\$'000	6 701
Ancillary fund benefit paid	\$'000	14 604

(a) Benefit payments by registered medical benefit organisations for medical services received after the introduction of the modified health insurance arrangements on 1 October 1976.

(b) Medical benefit organisations whose State of registration under the *National Health Act* is South Australia.

(c) At 30 June 1978.

(d) Schedule services are services performed by registered medical practitioners, participating optometrists and approved dentists, which are included in the medical benefits schedule, i.e., Schedule I of the *Health Insurance Act*.

Registered Hospital Organisations, South Australia^(a)

Particulars	Unit	Year Ended
		30 June 1978 (b)
Registered organisations (c) (d)	No.	9
Membership (d)	'000	370
Estimated persons covered (d)	'000	937
Basic benefits table:		
Hospital benefit days (e)	'000	824
Nursing home benefit days	'000	47
Professional service days (f)	'000	121
Outpatient services (g)	'000	207
Hospital benefit paid (e)	\$'000	32 693
Nursing home benefit paid	'000	517
Professional service benefit paid (f)	\$'000	2 415
Outpatient benefit paid (g)	'000	1 035
Supplementary fund benefit paid	\$'000	9 225
Ancillary fund benefit paid	\$'000	547

(a) Excluding payments made under the Reinsurance Arrangements.

(b) Benefit payments by registered hospital benefit organisations for hospital and nursing home services received after the introduction of the modified health insurance arrangements on 1 October 1976.

(c) Hospital benefit organisations whose State of registration under the *National Health Act* is South Australia.

(d) At 30 June 1978.

(e) Hospital benefits are paid under basic benefits tables at the rate of \$40 per day, or the daily fee charged, whichever is the lesser, for hospitalisation in approved hospitals.

(f) Where a privately insured person in a South Australian recognised hospital receives medical services exclusively from medical practitioners employed by, or under arrangements made by, the hospital, a professional service charge of \$20 per day is raised. This charge is met by professional service benefit, and is additional to the daily bed charges raised.

(g) Outpatient benefit is payable in respect of charges raised for outpatient services by approved hospitals, and is equal to the fee actually charged, or the fee charged by recognised hospitals in the State of service, whichever is the lesser. South Australian recognised hospitals started to raise charges for outpatient services from 1 July 1977.

Registered Hospital Organisations, South Australia^(a)

Particulars	Unit	Year Ended
		30 June 1978
Basic benefits table:		
Membership	'000	2
Hospital benefit days	'000	299
Nursing home benefit days	'000	328
Professional service days	'000	24
Outpatient services	'000	5
Hospital benefit paid	\$'000	11 834
Nursing home benefit paid	'000	6 682
Professional service benefit paid	\$'000	479
Outpatient benefit paid	\$'000	27

(a) Payments under the Reinsurance Arrangements which cover those people whose periods of hospitalisation exceed 35 days in one year.

FRIENDLY SOCIETIES

Friendly Societies are mutual organisations paying medical, hospital and other benefits to members and dependants in time of need. These societies are required to register under the Friendly Societies Act, 1919-1975. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance

with the law. A number of Friendly Societies are registered to pay Commonwealth Government medical and hospital benefits (see previous section), while others re-insure such benefits through a society created for this purpose.

Other benefits offered by some of the societies include sickness, funeral, dental, optical, pharmaceutical and physiotherapy benefits. Small loans and endowment assurance is also available. The Friendly Societies Act requires that separate funds be maintained for each of these benefits and members may contribute for all or for only a selection of benefits. However, a person is considered to be a full benefit member only if he contributes for sick pay and funeral benefits regardless of contributions for other benefits.

The level of benefits paid varies between societies, with sickness benefits generally on a declining scale as the period of illness lengthens. The Friendly Societies Act limits to \$4 000 any payment for endowment or funeral benefits and to \$21 any weekly payment to members for sickness or superannuation.

Friendly Societies, South Australia

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Number of registered societies (a)	13	12	12	11	11
Number of members (a) (b)	50 664	50 779	49 888	48 057	45 815
Revenue (c):			\$'000		
Contributions and levies	12 198	15 023	21 626	18 805	39 802
Interest, dividends and rent	1 311	1 496	2 000	2 242	3 061
Other	2 726	3 120	5 179	5 015	3 268
Total revenue	16 235	19 638	28 805	26 063	46 132
Expenditure (c):					
Sick pay	173	158	156	150	134
Medical attendance and medicine	4 401	4 981	7 435	4 472	15 386
Sums payable at death ..	142	143	150	167	175
Hospital benefits	8 432	10 045	14 567	11 597	15 864
Administration	1 793	2 149	2 883	3 317	4 709
Other	613	571	644	2 508	754
Total expenditure	15 554	18 047	25 835	22 212	37 022
Total funds	22 865	24 456	27 426	31 277	40 387

(a) At 30 June.

(b) Full benefit members; does not include those who contribute for medical and hospital benefits only.

(c) Receipts and payments of Commonwealth Government medical and hospital benefit subsidies excluded.

The Friendly Society Medical Association operates thirty pharmacies in the metropolitan area one at Port Pirie where medicines are dispensed for Friendly Society members at concession prices. The Mount Gambier United Friendly Societies' Dispensary Incorporated operates a shop at Mount Gambier.

The Friendly Societies Act also prescribes the nature of assets which societies may hold. Their most important investment is in property mortgages and in particular in housing loans to members. They may also invest in government securities.

6.7 MARRIAGE

Registration of marriage has been compulsory in South Australia since 1842 when Acts 'for regulating Marriages in the Province of South Australia' and 'for registering Births, Deaths and Marriages in the Province of South Australia' were passed. The present legislation relating to marriages is the Commonwealth *Marriage Act* 1961 which came into full operation on 1 September 1963 superseding, in South Australia, the *Marriage Act, 1936-1957*.

The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the Marriage Act), the District Registrars appointed to the twenty-two registration districts, and other persons authorised to perform marriages.

After a marriage the celebrant is required to forward the official certificate of marriage to the Principal Registrar who maintains at his office a register of all marriages celebrated in South Australia. In addition, a copy of the marriage certificate is forwarded by the office of the Principal Registrar to the District Registrar who maintains a register of the marriages celebrated in his district.

The total marriages and marriage rates for selected years from 1846 are shown in the Statistical Summary, Appendix A. Particulars relating to first marriages, remarriages and crude marriage rates for the last five years are shown in the following table. The crude marriage rate rose throughout the sixties from 6.99 in 1960 to 9.38 in 1970, gradually declined to a level of 8.72 in 1974 and fell substantially to 7.86 in 1975. The 1976 rate of 8.64 coincided with the introduction of the Family Law Act and a substantial increase in the number of divorced persons remarrying. In 1977 the rate fell to 7.93 despite a further increase in remarriages of divorced persons. The crude marriage rate does not take into account changes over time in the age distribution of the population. Influences underlying the increase during the sixties include the upsurge of births immediately following the 1939-45 War, together with the effects of post-war immigration.

Previous Marital Status of Persons Marrying, South Australia

Year	Bridegrooms			Brides			Total Marriages	Rate (a)
	Bachelor	Widower	Divorced	Spinster	Widow	Divorced		
1973	9 649	309	848	9 716	349	741	10 806	8.87
1974	9 538	353	878	9 560	388	821	10 769	8.72
1975	8 504	297	1 042	8 571	336	936	9 843	7.86
1976	8 515	391	1 996	8 659	459	1 784	10 902	8.64
1977	7 672	334	2 120	7 863	398	1 865	10 126	7.93

(a) Per 1 000 of mean population.

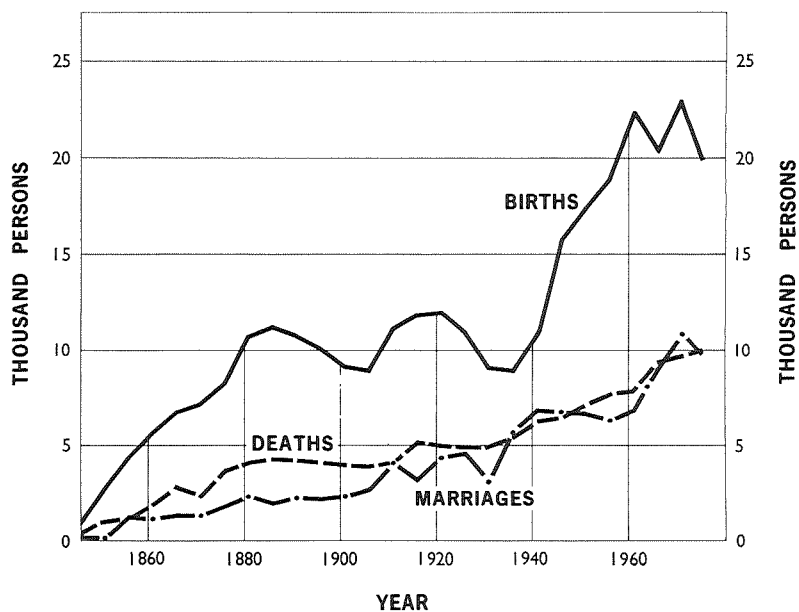
Since 1970 the absolute number of both brides and bridegrooms marrying for the first time has declined, particularly marked decreases occurring in 1975 and 1977. However, over the period 1970 to 1975 the number of divorced persons remarrying rose substantially, bridegrooms by 65 per cent and brides by 66 per cent. Between 1975 and 1976 the increase in numbers of divorced persons re-marrying was 91.6 per cent for bridegrooms and 90.6 per cent for brides; in 1977 the increase was 6.2 per cent and 4.5 per cent for bridegrooms and brides respectively.

Age at Marriage and Previous Marital Status, South Australia, 1977

Age	Previous Marital Status							Total
	Bridegrooms				Brides			
	Bachelor	Widower	Divorced	Total	Spinster	Widow	Divorced	
Under 21 years	1 393	—	1	1 394	3 997	—	11	4 008
21-24 years	3 814	3	90	3 907	2 726	4	204	2 934
25-29 years	1 762	11	493	2 266	820	19	538	1 377
30-34 years	411	9	473	893	201	29	417	647
35-39 years	124	13	317	454	61	31	244	336
40-44 years	60	17	257	334	20	37	176	233
45 years and over	108	281	489	878	38	278	275	591
All ages	7 672	334	2 120	10 126	7 863	398	1 865	10 126

BIRTHS, DEATHS AND MARRIAGES

SOUTH AUSTRALIA 1846 TO 1975



During 1977 the median age (that age at which one half of the total number of persons are below the age and the other half exceed it) of persons marrying for the first time was 23.3 years for bachelors and 21.0 years for spinsters, a difference of 2.3 years. The following table shows median ages for last five years of all persons marrying, classified by marital status at the time of marriage.

Median Age at Marriage and Previous Marital Status, South Australia^(a)

Year	Median Age of Bridegrooms (Years)				Median Age of Brides (Years)			
	Bachelor	Widower	Divorced	Total	Spinster	Widow	Divorced	Total
1973	22.9	58.3	36.4	23.4	20.7	51.6	33.4	21.1
1974	22.9	59.4	35.4	23.4	20.7	53.1	33.6	21.1
1975	22.9	59.3	35.2	23.6	20.7	52.8	32.0	21.2
1976	23.2	58.2	35.5	24.4	20.9	50.9	32.3	21.8
1977	23.3	60.8	35.0	24.7	21.0	52.4	31.8	21.9

(a) The term 'median age' refers to that age which divides total age distribution into two parts of equal magnitude.

The following table highlights the tendency for brides to marry bridegrooms older than themselves. Although the age difference has narrowed generally over the past decade, this phenomenon, together with the greater life expectancy of females compared to males as shown in the table on page 148, tends to perpetuate the predominance of aged widows over widowers within community and welfare institutions.

Relative Age Differences of Parties to Marriage, South Australia

Elder Partner of Marriage	Number of Marriages			Proportion of Total Marriages		
	1975	1976	1977	1975	1976	1977
	Per cent					
Bridegroom:						
8 years or more	952	1 347	1 288	9.7	12.4	12.7
7 years	337	364	326	3.4	3.3	3.2
6 years	489	482	492	5.0	4.4	4.9
5 years	615	689	621	6.3	6.3	6.1
4 years	889	947	882	9.0	8.7	8.7
3 years	1 233	1 239	1 192	12.5	11.4	11.8
2 years	1 508	1 547	1 414	15.3	14.2	14.0
1 year	1 467	1 513	1 397	14.9	13.9	13.8
Bride:						
1 year	524	618	539	5.3	5.7	5.3
2 years	279	322	319	2.8	3.0	3.2
3 years	173	206	167	1.8	1.9	1.6
4 years	120	166	136	1.2	1.5	1.3
5 years or more	236	392	372	2.4	3.6	3.7
No age difference	1 021	1 070	981	10.4	9.8	9.7
Total	9 843	10 902	10 126	100.0	100.0	100.0

MARRIAGE RITES

The number of marriages performed by civil officers in South Australia during the decade from 1960 to 1969 accounted for 10.9 per cent of all marriages but reached a record level of 32.0 per cent in 1977. The increase in civil ceremonies during the 1970s is evident from the following table, and can partly be accounted for by the improved facilities now provided at the office of the Principal Registrar of Births, Deaths and Marriages.

Marriages: Marriage Rites, South Australia

Rites	Number of Authorised Celebrants January 1977	Number of Marriages			Proportion of Total Marriages		
		1975	1976	1977	1975	1976	1977
Denomination:				Per cent			
Baptist	71	234	289	240	2.4	2.7	2.4
Catholic	240	1 833	1 824	1 656	18.6	16.7	16.4
Church of England	206	1 587	1 468	1 236	16.1	13.5	12.2
Churches of Christ	72	263	278	288	2.7	2.6	2.8
Congregational	46	238	288	(a) 106	2.4	2.6	(a) 1.0
Lutheran	146	570	584	544	5.8	5.4	5.4
Methodist	219	1 934	2 083	(a) 1 079	19.6	19.1	(a) 10.7
Orthodox	19	148	166	165	1.5	1.5	1.6
Presbyterian	33	283	266	(a) 143	2.9	2.4	(a) 1.4
Salvation Army	34	55	57	79	0.6	0.5	0.8
Uniting Church	(b)	..	..	(c) 1 051	..	..	(c) 10.4
Other denominations	206	314	300	(d) 298	3.2	2.7	(d) 2.9
Total	1 292	7 459	7 603	6 885	75.8	69.7	68.0
Civil Ceremonies by:							
State Officers	30	2 285	3 018	2 845	23.2	27.7	28.1
Other Civil Celebrants	13	99	281	396	1.0	2.6	3.9
Total	1 335	9 843	10 902	10 126	100.0	100.0	100.0

(a) Includes only those marriages celebrated before the inauguration of the Uniting Church on 22 June 1977.

(b) Number of authorised celebrants at 22 June 1977 was 288.

(c) Includes only those marriages celebrated after 22 June 1977.

(d) Includes marriages celebrated according to Presbyterian rites after 22 June 1977.

MARRIAGE OF MINORS

The *Marriage Act* 1961 stipulates the marriageable age to be eighteen years or over for a male and sixteen years or over for a female. Under exceptional circumstances a judge or magistrate can, upon application by a party who has not attained marriageable age but who is at least sixteen in the case of a male or fourteen in the case of a female, authorise him or her to marry a particular person who is of marriageable age.

Before 1 July 1973 prior consent had to be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances, where a party to a marriage was under twenty-one years. From 1 July 1973 the age of majority for purposes of the *Marriage Act* was reduced to eighteen years.

The proportion of persons marrying under 21 years of age has changed significantly since details were first recorded in 1903. In that year 2.7 per cent of males and 19.2 per cent of females marrying were under twenty-one years of age. Over the years the proportion of males has ranged from a low of 2.6 per cent in 1916 to a high of 18.3 per cent in 1974. The corresponding proportions for females were 14.7 and 49.3 per cent recorded in 1919 and 1974 respectively. These proportions fell in 1977 to 13.8 per cent for males and 39.6 per cent for females.

Figures relating to the marriages of persons under twenty-one years of age for the five years to 1977 are shown in the following table.

Marriages of Persons Under 21 Years of Age, South Australia

Year	Age in Years						Total Under 21	Percentage of Total Marriages	
	Under 15	15	16	17	18	19			20
BRIDEGROOMS									
1973	—	—	4	24	257	554	1 091	1 930	17.9
1974	—	—	7	27	282	567	1 085	1 968	18.3
1975	—	—	2	23	217	553	973	1 768	18.0
1976	—	—	7	17	198	480	925	1 627	14.9
1977	—	—	—	13	165	421	795	1 394	13.8
BRIDES									
1973	3	8	215	487	1 220	1 682	1 690	5 305	49.1
1974	1	12	195	463	1 249	1 635	1 757	5 312	49.3
1975	1	8	154	448	1 113	1 530	1 459	4 713	47.9
1976	—	8	141	343	1 083	1 410	1 564	4 549	41.7
1977	—	6	119	322	898	1 301	1 362	4 008	39.6

6.8 DIVORCE

The Supreme Court of South Australia had exclusive jurisdiction in divorce under the Matrimonial Causes Act, 1858 from 1 January 1859. Uniformity throughout Australia of dissolution of marriage and other matrimonial causes has operated since 1 February 1961 under the *Matrimonial Causes Act 1959*. Jurisdiction to hear and determine causes under the Act was vested in the Supreme Courts of the States and Territories. The South Australian Registry of the Family Court of Australia commenced operations under the *Family Law Act 1975* on 5 January 1976. The Supreme Court had concurrent jurisdiction to deal with outstanding applications, presented before that date, until 31 May 1976.

The jurisdiction of the Supreme Court provided for petitions for nullity of marriage, judicial separation, restitution of conjugal rights and jactitation of marriage in addition to the most common petition for dissolution of marriage (commonly known as divorce).

Family Court (SA Registry)

Matrimonial causes within the jurisdiction of the Court include dissolution of marriage, maintenance, custody, property settlement, enforcement and injunction proceedings. The hearing of applications for dissolution commenced on 1 March 1976. The hearing of other matrimonial causes commenced earlier.

Under the provisions of the *Family Law Act 1975* the sole ground for dissolution of marriage is irretrievable breakdown, established by twelve months separation. Prospective applicants are encouraged to seek help from marriage counsellors attached to the Family Court or from voluntary marriage guidance organisations.

Maintenance entitlement is determined largely by the needs of the applicant and the capacity of the respondent to pay. Any transfer or settlement of property is also taken into consideration.

In custody proceedings the welfare of the child is regarded as paramount. The Court can order that a child be separately represented in matters affecting his custody or maintenance. Both parties are considered liable for his maintenance according to their respective financial resources. If the proceedings are contested, both parties may be referred to a welfare officer, and the Court may then require a report on the child's circumstances.

In settling disputes over matrimonial property the Court takes into account any maintenance order and the effective contribution of each party to that property.

Decrees Granted

In 1976 there were 6 148 decrees for dissolution of marriage; of these, 1 407 were made under the *Matrimonial Causes Act 1959*, and 4 741 under the *Family Law Act 1975*. In 1977 there were 4 452 decrees. Under the *Family Law Act 1975* the period before a decree *nisi* may become absolute is one month, whereas under the *Matrimonial Causes Act 1959* the minimum period was three months.

The following table shows the number of decrees granted for dissolution and nullity of marriage and decrees granted for judicial separation. A further table shows details of the grounds on which decrees have been granted for the years 1972 to 1976.

**Dissolution of Marriage and other Matrimonial Causes
Decrees Granted, South Australia**

Period	Dissolution of Marriage			Nullity of Marriage	Judicial Separation
	To Husbands	To Wives	Total		
Annual Average:					
1951-55	262.8	350.0	612.8	4.6	1.2
1956-60	244.2	294.2	538.4	7.6	1.6
1961-65	334.6	446.8	781.4	4.6	0.6
1966-70	363.8	599.2	963.0	5.8	1.8
1971-75	568.0	922.8	1 490.8	5.2	1.8
Year:					
1972	479	756	1 235	4	2
1973	585	997	1 582	6	—
1974	605	956	1 561	4	1
1975	698	1 114	1 812	4	3
1976	2 533	3 609	6 142	6	—

Dissolution of Marriage: Grounds on which Decrees were Granted, South Australia

Grounds	1972	1973	1974	1975	1976		
					To Husband	To Wife	Total
MATRIMONIAL CAUSES ACT							
Dissolution of marriage:							
Single grounds:							
Desertion	430	489	515	597	140	220	360
Adultery	459	634	641	800	315	334	649
Separation	149	182	171	182	67	114	181
Cruelty	161	237	196	189	1	175	176
Drunkenness	18	22	26	18	2	12	14
Other single grounds	2	5	3	8	—	2	2
Dual grounds:							
Desertion and,							
Adultery	2	4	—	3	—	2	2
Separation	2	1	2	4	2	3	5
Cruelty	—	1	2	1	—	—	—
Drunkenness	1	1	—	—	—	—	—
Cruelty and,							
Drunkenness	11	5	5	10	1	8	9
Other dual grounds	—	1	—	—	1	3	4
Total	1 235	1 582	1 561	1 812	529	873	1 402

**Dissolution of Marriage: Grounds on which Decrees were Granted, South Australia
(continued)**

Grounds	1972	1973	1974	1975	1976		
					To Husband	To Wife	Total
Nullity of marriage:							
MATRIMONIAL CAUSES ACT (continued)							
Bigamy	1	1	—	—	1	4	5
Incapacity to consummate	1	5	3	3	—	—	—
All other grounds	1	—	1	1	—	—	—
Total	3	6	4	4	1	4	5
Judicial separation	2	—	1	3	—	—	—
Total under Matrimonial Causes Act	1 240	1 588	1 566	1 819	530	877	1 407
FAMILY LAW ACT							
Dissolution of marriage .....	..	..	..	..	2 004	2 736	4 740
Nullity of marriage .....	..	..	..	..	—	1	1
Total Under Family Law Act .....	..	..	..	..	2 004	2 737	4 741
ALL DECREES							
Total	1 240	1 588	1 566	1 819	2 534	3 614	6 148

Details of the relative ages at marriage of husbands and wives for marriages dissolved in 1976 are contained in the following table.

Dissolution of Marriage: Ages of Parties at Time of Marriage, South Australia, 1976

Age of Husband (Years)	Age of Wife (Years)								Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
Under 20	623	108	4	1	—	—	—	—	736
20-24	1 546	1 742	134	13	9	3	1	1	3 446
25-29	286	611	188	37	13	5	3	—	1 143
30-34	50	156	82	54	20	4	2	—	368
35-39	11	31	36	27	27	18	8	—	158
40-44	5	14	19	24	17	16	15	—	110
45 and over	4	2	4	14	26	29	85	—	164
Not stated	4	—	3	1	—	—	5	1	14
Total wives	2 529	2 664	470	171	112	75	119	2	6 142

The following table shows the duration of marriage, *i.e.* the interval between marriage and the date the decree was made absolute, for marriages dissolved during the five years to 1976.

**Dissolution of Marriage: Duration of Marriage
South Australia**

Year	Duration of Marriage (Years)							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 and Over	
1972	137	380	228	158	159	100	73	1 235
1973	175	507	313	217	176	114	80	1 582
1974	150	523	325	213	149	118	83	1 561
1975	162	602	384	263	179	123	99	1 812
1976	915	1 904	1 145	728	652	449	349	6 142

For marriages dissolved in 1976 the following two tables show the relative ages of husbands and wives at the time of dissolution, and the duration of marriage and number of children of the marriage.

Dissolution of Marriage: Ages of Parties at Time of Dissolution, South Australia, 1976

Age of Husband (Years)	Age of Wife (Years)							Not Stated	Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45-49	50 and Over		
Under 25	324	36	1	2	—	—	—	—	363
25-29	472	859	62	7	2	1	1	—	1 404
30-34	55	587	472	49	4	4	1	—	1 172
35-39	11	99	362	290	32	6	4	—	804
40-44	4	19	86	289	245	48	17	—	708
45-49	2	7	20	82	254	214	64	—	643
50 and over	1	2	9	38	102	219	662	1	1 034
Not stated	3	—	—	—	—	1	9	1	14
Total wives	872	1 609	1 012	757	639	493	758	2	6 142

Dissolution of Marriage: Duration of Marriage and Number of Children of the Marriage South Australia, 1976^(a)

Duration of Marriage (Years)	Marriages Dissolved With							Total Dissolutions	Total Children
	No Children	1 Child	2 Children	3 Children	4 Children	5 Children	6 or more Children		
Under 5	621	235	43	8	7	1	—	915	378
5-9	678	591	496	105	25	4	5	1 904	2 048
10-14	149	191	483	244	60	18	—	1 145	2 219
15-19	80	90	220	199	90	32	17	728	1 754
20-24	158	145	165	103	58	14	9	652	1 144
25-29	254	105	62	20	4	3	1	449	326
30 and over	285	40	18	2	3	1	—	349	99
Total dissolutions	2 225	1 397	1 487	681	247	73	32	6 142	..
Total children .....	..	1 397	2 974	2 043	988	365	201	..	7 968

(a) Number of children living and under 21 years at time of petition under the Matrimonial Causes Act, and 18 years at time of application under the Family Law Act.

The following table shows the number of children of marriages dissolved in the years 1972 to 1976.

Dissolution of Marriage: Children of the Marriage, South Australia^(a)

Year	Number of Marriages Dissolved with							Total Dissolutions	Total Children
	No Children	1 Child	2 Children	3 Children	4 Children	5 Children	6 or more Children		
1972	349	301	293	172	78	26	16	1 235	1 949
1973	464	366	416	212	78	27	19	1 582	2 408
1974	449	383	418	198	73	27	13	1 561	2 324
1975	505	422	481	239	109	42	14	1 812	2 842
1976	2 225	1 397	1 487	681	247	73	32	6 142	7 968

(a) Number of children living and under 21 years at time of petition under the Matrimonial Causes Act, and under 18 years at time of application under the Family Law Act.

PART 7

LABOUR

7.1 EMPLOYMENT

THE LABOUR FORCE

Particulars of the number of persons who constitute the labour force in South Australia are available from periodic population censuses. For the 1966 Census the definition of the labour force was revised to accord with the recommendations of the Eighth International Conference of Labour Statisticians, and the revised approach has been retained for subsequent Censuses. The major factor in this change was the inclusion of a number of females working part-time who did not previously consider themselves as 'engaged in an industry, business, profession, trade or service'.

In the first table population at the 1971 and 1976 Censuses is classified by occupational status, which refers to the status of each person in his or her occupation *e.g.* employer, worker on own account, working for wages, etc. Those persons reporting themselves as not engaged in an industry, business, profession, trade or service take as their occupational status 'not in the labour force'.

The female proportion of the labour force has continued to increase, from 32.1 per cent in 1971 to 36.7 per cent in 1976. This has been paralleled by an increase in the proportion of married females in the labour force, which increased from 18.9 per cent in 1971 to 23.6 per cent in 1976.

**Occupational Status of the Population, South Australia
Censuses 1971 and 1976**

Occupational Status	30 June 1971			30 June 1976		
	Males	Females	Persons	Males	Females	Persons
In labour force:						
Employer	19 468	5 832	25 300	} 55 168	25 711	80 878
Self-employed	29 713	8 302	38 015			
Employee	275 292	135 712	411 004	291 670	166 638	458 308
Helper	1 009	2 240	3 249	1 489	6 659	8 148
Unemployed ...	4 682	3 673	8 355	10 608	8 947	19 555
Total labour force	330 164	155 759	485 923	358 934	207 955	566 889
Not in labour force	255 887	431 897	687 784	261 221	416 641	677 862
Total population	586 051	587 656	1 173 707	620 156	624 596	1 244 752

The following table shows the employed population at the 1976 Census classified by occupation. Occupation refers to the kind of work a person normally performs e.g. carpenter, clerk, and is classified according to the Australian Classification of Occupations which has been adapted from and closely adheres to the principles embodied in the International Standard Classification of Occupations issued by the International Labour Office, Geneva 1958 and as revised in 1968. It contains 11 major groupings subdivided into 73 minor groups further subdivided into 395 individual categories.

Employed Population: Occupation, South Australia, 30 June 1976

Occupation Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
		Per cent		Per cent		Per cent
Professional, technical and related workers	34 455	9.9	33 437	16.8	67 893	12.4
Administrative, executive and managerial workers	28 608	8.2	4 841	2.4	33 449	6.1
Clerical workers	28 254	8.1	54 310	27.3	82 564	15.1
Sales workers	20 479	5.9	22 720	11.4	43 199	7.9
Farmers, fishermen, hunters, timbergetters and related workers	34 203	9.8	16 190	8.1	50 394	9.2
Miners, quarrymen and related workers	1 259	0.4	46	0.0	1 306	0.2
Workers in transport and communication	23 274	6.7	3 591	1.8	26 865	4.9
Tradesmen, production-process workers and labourers (n.e.i.)	150 979	43.3	20 732	10.4	171 710	31.4
Service, sport and recreation workers	14 080	4.0	30 690	15.4	44 771	8.2
Members of armed services, enlisted personnel	2 667	0.8	111	0.1	2 778	0.5
Occupation inadequately described or not stated	10 068	2.9	12 340	6.2	22 408	4.1
Total employed population	348 328	100.0	199 009	100.0	547 336	100.0

Industry refers to the branch of productive activity, trade or service in which the individual works or carries out his occupation. The Australian Standard Industrial Classification (ASIC), designed primarily as a system for classifying establishments (e.g. individual mines, factories, shops etc.) by industry, was used as a basis for the 1976 Census. Tabulations derived from the Census divide the whole field of industry into twelve major industry groups, which in turn are divided into forty-eight subdivisions, 121 groups and 432 classes. For Census purposes a number of additional 'undefined' categories were added to qualify imprecise or generalised descriptions of industrial activities reported in Census Schedules. Revised versions of the Subdivision 'Agriculture' and the Group 'Education' were also adopted.

In the next table the number of employed males and females aged fifteen years and over at the 1976 Census are classified according to industry. The proportion of the employed population engaged in community services increased from 12.6 per cent in 1971 to 15.3 per cent in 1976. The percentage recorded as employed in manufacturing industries continued to fall, from 24.4 per cent in 1971 to 20.8 per cent in 1976, in contrast to the opposite trend evident between 1933 and 1966.

Employed Population: Industry, South Australia, 30 June 1976

Industry Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
		Per cent		Per cent		Per cent
Agriculture, forestry, fishing, etc.	31 051	8.9	16 402	8.2	47 453	8.7
Mining	3 123	0.9	342	0.2	3 465	0.6
Manufacturing	88 333	25.4	25 261	12.7	113 594	20.8
Electricity, gas and water	9 524	2.7	531	0.3	10 055	1.8
Construction	40 154	11.5	4 024	2.0	44 177	8.1
Wholesale and retail trade	59 120	17.0	41 602	20.9	100 722	18.4
Transport and storage	21 337	6.1	3 194	1.6	24 530	4.5
Communication	7 952	2.3	2 467	1.2	10 419	1.9
Finance, business services, etc.	18 336	5.3	14 878	7.5	33 214	6.1
Public administration, defence	16 660	4.8	5 942	3.0	22 602	4.1
Community services	29 565	8.5	54 053	27.2	83 617	15.3
Entertainment, recreation, etc	9 998	2.9	15 787	7.9	25 786	4.7
Other and not stated	13 174	3.8	14 529	7.3	27 703	5.1
Total employed population	348 327	100.0	199 009	100.0	547 336	100.0

The next table shows the age distribution of the labour force at the 1971 and 1976 Censuses.

Age Distribution of the Labour Force, South Australia Censuses 1971 and 1976

Age Group (Years)	30 June 1971			30 June 1976		
	Males	Females	Persons	Males	Females	Persons
15-19	29 336	28 566	57 902	34 513	31 426	65 939
20-24	43 697	29 018	72 715	46 532	34 519	81 051
25-34	71 629	27 821	99 450	90 085	47 164	137 250
35-44	68 277	30 743	99 020	66 832	40 651	107 483
45-54	65 280	26 701	91 981	68 829	36 251	105 080
55-59	26 057	7 715	33 772	26 501	10 413	36 913
60-64	17 633	3 199	20 832	18 429	4 560	22 989
65 and over	8 255	1 996	10 251	7 215	2 972	10 187
Total labour force	330 164	155 759	485 923	358 935	207 955	566 890

Labour Force Survey

In addition to complete census counts, estimates of the civilian labour force are prepared from the results of surveys conducted at a sample of dwellings throughout Australia. These surveys began in 1960 on a quarterly basis and were initially confined to the six State capital cities, but in 1964 were extended to include non-metropolitan urban and rural areas, thereby enabling derivation of estimates of the total civilian labour force in Australia. From February 1978, the surveys have been conducted on a monthly basis. The proportion of the population included in the surveys varies from State to State (1 per cent in South Australia) but in aggregate about 0.67 per cent of the Australian population is included.

Statistics obtained from the surveys include numbers employed and unemployed; labour force participation and unemployment rates; duration of unemployment; analyses of reasons for working less than 35 hours per week; as well as age, sex, occupation and industry characteristics.

The following table shows, for South Australia, quarterly estimates of the employment status of the civilian population fifteen years of age and over from February 1977 to November 1978.

Civilian Population 15 Years of Age and Over: Employment Status, South Australia

Month	In Labour Force				Not in Labour Force	Civilian Population Aged 15 years and Over	
	Employed			Un-employed			
	Agriculture(a)	Other Industries	Total				
MALES ('000)							
1977 Feb.	30.5	332.7	363.2	16.0	379.3	82.3	461.6
May	30.6	331.5	362.1	16.4	378.5	85.2	463.7
Aug.	31.6	327.6	359.2	20.6	379.8	86.5	466.3
Nov.	32.6	326.3	358.9	19.2	378.1	91.0	469.1
1978 Feb.	31.3	325.4	356.8	22.9	379.6	91.9	471.5
May	30.2	324.8	355.0	23.5	378.5	94.9	473.4
Aug.	30.2	320.0	350.2	28.4	378.7	96.7	475.3
Nov.	30.5	318.9	349.4	26.2	375.6	101.9	477.5
FEMALES ('000)							
1977 Feb.	8.2	198.3	206.4	20.6	227.0	248.6	475.6
May	7.9	200.0	207.9	18.9	226.8	251.3	478.2
Aug.	9.0	199.8	208.7	17.8	226.6	254.1	480.7
Nov.	11.3	194.4	205.8	17.6	223.3	259.6	483.0
1978 Feb.	11.3	185.6	196.9	22.6	219.4	266.6	486.0
May	8.9	192.1	200.9	16.7	217.6	270.8	488.4
Aug.	10.0	193.1	203.2	15.8	219.0	271.5	490.4
Nov.	9.4	197.3	206.7	18.0	224.7	267.9	492.7
PERSONS ('000)							
1977 Feb.	38.7	531.0	569.6	36.6	606.3	330.9	937.2
May	38.5	531.5	570.0	35.3	605.3	336.6	941.9
Aug.	40.6	527.4	568.0	38.5	606.4	340.6	947.0
Nov.	44.0	520.7	564.7	36.8	601.5	350.6	952.1
1978 Feb.	42.6	511.0	553.6	45.4	599.1	358.5	957.5
May	39.0	516.9	555.9	40.2	596.1	365.6	961.8
Aug.	40.2	513.2	553.4	44.2	597.6	368.1	965.8
Nov.	40.0	516.2	556.1	44.2	600.3	369.9	970.2

(a) Includes services to agriculture.

Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaire and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample and not the whole population was enumerated. The smaller the estimate the higher is the relative standard error. For example, the relative standard error of an estimate for South Australia of 500 000 persons is approximately 0.6 per cent (3 200), while that of an estimate of 3 000 is approximately 16 per cent (500). There are about two chances in three that a sample estimate will differ by less than one standard error from the figures that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. Further details may be obtained from bulletins relating to the surveys which are discussed in the following pages.

Estimates for the period from August 1971 have been revised recently using the results of the 1976 Census rather than those of the 1971 Census used in earlier estimates.

The definition of the labour force used in the Population Census is similar to that used in the survey. However, data from the Labour Force Surveys is based upon a sample employing a personal interview approach, while Census data is obtained from Census schedules completed by householders. This may result in differences occurring between the two sets of data, and should be borne in mind when making comparisons between them.

Further details may be obtained from the following bulletins issued monthly by the Australian Statistician: *Unemployment, Preliminary Estimates* (Catalogue No. 6201.0); *The Labour Force (Preliminary)* (Catalogue No. 6202.0); *The Labour Force* (Catalogue No. 6203.0).

Special Studies

The sample of dwellings referred to in respect of the Labour Force Survey has provided the framework for a number of special studies. These have recently included: information on post-school study and adult education; school leavers; the nature and extent of multiple jobholding; the distribution of weekly earnings of wage and salary earners; information on persons not in the labour force; information about persons who had recently been looking for work; the frequency of pay of wage and salary earners; information about changes of employment or job location and other aspects of the mobility of the labour force. Brief summaries of some of these studies are given in the following pages.

Since the estimates provided in these studies are based on sample surveys they are subject to sampling error, the magnitude of which is described in some detail in the bulletins for each topic published by the Australian Statistician.

School Leavers

In August 1978, a survey was conducted in conjunction with the Labour Force Survey in order to obtain, among other things, information about persons aged 15 to 25 years who had attended full-time at a school, university or other educational institution at some time during 1977. Separate information was obtained in respect of persons who had returned to full-time education in 1978 and those who had not returned to full-time education. The latter group was defined as being school leavers.

The number of school leavers who entered the labour force expressed as a percentage of total leavers describes their labour force participation rates. This rate for South

Australian males in August 1978 was 99.2 compared with the national rate of 96.8 while the equivalent rate for females was 92.1 in this State and 92.8 for Australia.

Detailed results of this survey and other similar surveys carried out in February of each year from 1964 to 1974, in May 1975 and 1976 and in August 1977 may be obtained from bulletins entitled *Leavers from Schools, Universities or other Educational Institutions* (Catalogue No. 6227.0) published by the Australian Statistician.

Multiple Jobholding

In August 1977 the Labour Force Survey was extended to obtain information about the nature and extent of multiple jobholding. Results show that an estimated 170 100 persons, or 2.7 per cent of the total Australian labour force stated that they held more than one job in August 1977. In August 1975 when a similar survey was held, the corresponding figure was 197 100 or 3.3 per cent of the total labour force.

The following table shows by State and for Australia the proportion of persons in the labour force who held a second job.

Multiple Jobholders: Proportion of Persons in the Labour Force who Held a Second Job, by Marital Status, August 1977 (a)

Multiple Jobholders	NSW	Vic.	Qld	SA	WA	Tas.	ACT	Australia (b)
Per cent								
Males:								
Married	3.5	3.1	3.1	4.9	3.6	4.9	4.5	3.5
Not married (c)	2.2	1.9	(d)	3.7	3.3	(d)	(d)	2.1
Total	3.1	2.7	2.4	4.6	3.5	3.9	3.7	3.1
Females:								
Married	2.2	2.2	2.3	3.2	3.0	(d)	(d)	2.4
Not married (c)	1.4	(d)	(d)	3.6	(d)	(d)	(d)	1.8
Total	1.9	1.8	2.1	3.4	3.0	(d)	(d)	2.1
Persons:								
Married	3.1	2.8	2.8	4.3	3.4	3.9	3.5	3.1
Not married (c)	1.9	1.6	1.4	3.6	3.1	(d)	(d)	2.0
Total	2.7	2.4	2.3	4.1	3.3	3.0	2.9	2.7

(a) Multiple jobholders in each group as a percentage of the civilian labour force in the same group.

(b) Includes the Northern Territory.

(c) Never married, widowed and divorced.

(d) Subject to sampling variability too high for most practical purposes.

Further details may be obtained from the bulletin *Multiple Jobholding*, August 1977 (Catalogue No. 6216.0), published by the Australian Statistician.

Persons Not in the Labour Force

In May 1977, the Labour Force Survey included questions to obtain information about persons aged 15 to 64 years who were not in the labour force: in particular, their intentions regarding entering or re-entering the labour force, whether they had ever held a regular job and, if so, how long ago and for what reason they had left it, and their educational qualifications.

The following table shows for persons not in the labour force, who would or might like a job, the reason for not looking for work. It excludes persons who were looking for work in the survey week but had not taken active steps to find a job and others who had been looking for work in the three weeks before the survey week.

**Persons Aged 15 to 64 Years Not in the Labour Force who Would or Might Like a Job
Reason for Not Looking for Work, May 1977^(a)**

Reason for Not Looking for Work	NSW	Vic.	Qld	SA	WA	Tas.	Australia (b)
MALES ('000)							
Own ill health or physical disability	6.6	(c)	3.8	(c)	(c)	(c)	17.2
Attending an educational institution	18.0	14.9	5.3	4.8	5.8	(c)	50.9
Total males (d)	35.2	24.1	14.0	9.1	9.6	2.0	95.9
FEMALES ('000)							
Own ill health, physical disability or pregnancy	18.0	13.9	6.7	3.4	3.0	1.6	47.4
Attending an educational institution	22.7	12.9	5.5	6.0	5.2	(c)	54.7
Has no need to work	18.4	10.2	7.8	4.1	4.2	(c)	46.0
Family considerations (e)	73.2	54.9	30.9	16.2	15.8	5.4	200.8
Unable to find child care	8.7	5.6	3.3	(c)	2.0	(c)	21.7
Preferred to look after children	46.0	33.0	19.3	10.2	9.7	3.3	123.8
Discouraged (f)	23.1	12.8	10.3	5.0	3.7	1.8	57.8
No jobs in locality or line of work	17.6	9.8	8.5	2.8	2.1	(c)	42.9
No jobs in suitable hours	7.9	(c)	(c)	(c)	(c)	(c)	15.2
Other (g)	10.6	7.5	3.3	(c)	2.2	(c)	28.1
Total females	174.0	115.8	65.3	37.7	35.4	12.3	450.0

(a) Highest-ranked reason only.

(b) Includes NT and ACT.

(c) Subject to sampling variability too high for most practical purposes.

(d) Includes all other reasons.

(e) Includes 'ill health of other than self', 'spouse disapproved' and 'other family considerations'.

(f) Defined as persons who wanted a job but were not looking for work because of any of the following reasons: considered too young or too old by employers; language or racial difficulties; lacked necessary training, skills or experience.

(g) Includes persons who had a job to go to.

Of the 95 900 males who would or might like a job 66.6 per cent stated they intended to look for work in the next twelve months, 12.3 per cent stated they might look for work, 14.9 per cent stated they would not look for work and 6.2 per cent stated they either already had a job to go to or that they did not know whether they would look for work. Of the 450 000 females not looking for work the corresponding figures were 38.7 per cent, 19.1 per cent, 34.2 per cent and 8.0 per cent.

More details from the May 1977 Survey have been published in the bulletin *Persons Not in the Labour Force* (Catalogue No. 6220.0) published by the Australian Statistician.

Persons Looking for Work

In July 1978 a survey, based on the Labour Force Survey, was conducted throughout Australia in order to obtain information about persons who had recently been looking for work, including particulars of their last job, difficulties experienced in finding a job, family status, and duration of last job.

The following table shows for various age groups the main difficulty in finding work. (Similar surveys were conducted in May 1976, November 1976 and May 1977). In July 1978, 15.1 per cent reported that their main difficulty in finding a job was that there were no vacancies in their line of work (16.4 per cent in May 1977); a further 38.2 per cent reported that there were no vacancies at all (30.4 per cent in May 1977) while 10.9 per cent were considered by employers to be too young or too old (9.6 per cent in May 1977).

**Persons Looking for Work: Main Difficulty in Finding Work by Age
July 1978, Australia^(a)**

Main Difficulty in Finding Work	Age Group (Years)				Total
	15-19	20-24	25-34	35 and Over	
	'000				
Own ill health or handicap	3.9		3.1	6.7	13.8
Considered by employers to be too young or too old	9.8	6.1	3.3	21.2	40.4
Unsuitable hours	(c)	4.6	3.7	9.1	9.1
Too far to travel/transport problems	10.1	4.3	(c)	3.2	19.9
Lacked necessary education, training or skills	9.5	7.2	3.8	3.2	23.6
Insufficient work experience	14.1	9.1	4.3	(c)	29.3
No vacancies in line of work	10.4	11.8	15.1	18.7	56.1
No vacancies at all	51.8	27.6	30.4	31.7	141.5
Other difficulties (b)	3.8	5.6	5.6	8.7	23.7
No difficulties reported	3.4	4.5	5.5		13.4
Total	116.0	79.3	73.4	102.0	370.7

(a) For this survey persons looking for work were defined as all civilians aged 15 years and over who during survey week did not work and did not have a job, but could have taken one had it been available, and had been actively looking for full-time or part-time work in the four weeks up to and including the survey week.

(b) Includes about 5 800 persons whose main difficulty was language problems or discrimination against migrant or racial groups.

(c) Subject to sampling variability too high for most practical purposes.

More details from the July 1978 survey have been published in the bulletin *Persons Looking for Work* (Catalogue No. 6222.0) published by the Australian Statistician.

Labour Mobility

A sample survey was conducted in February 1976 to obtain information about some aspects of the mobility of the labour force, e.g. the number of different employers for whom employees had worked during 1975 or the number of different businesses in which employers and self-employed persons had been engaged.

A summary of results for Australia indicates that:

- (1) 86.1 per cent of males and 87.3 per cent of females employed at the end of 1975 had not changed their employer or business during the year;
- (2) 10.6 per cent of males and 10.5 per cent of females had made one change;
- (3) 3.3 per cent of males and 2.2 per cent of females had changed at least twice;
- (4) for males the highest proportion with more than one employer or business occurred among sales workers (19.0 per cent). For females the highest proportion (13.9 per cent) was recorded for clerical workers and service, sport and recreation workers.

Further information is available in the bulletin *Labour Mobility*, February 1976 (Catalogue No. 6209.0) published by the Australian Statistician.

Job Tenure

In August 1976 a survey based on the Labour Force Survey was conducted throughout Australia to classify estimates of employed persons according to the length of time they had been in the job held in August 1976.

The following table shows that in August 1976 approximately 22 per cent of males and 33 per cent of females had been in their current jobs for less than a year, while half of the males and one quarter of the females had been in their current jobs for five years or more.

Employed Wage and Salary Earners: Duration of Current Job
South Australia, August 1976

Duration of Current Job	Males	Females		All Persons
		Married Women	Total (Including Other)	
			Per cent	
Under 3 months	8.9	11.6	12.4	10.1
3 months and under 6 months	4.6	6.6	7.9	5.9
6 months and under 1 year	8.8	9.9	12.2	10.1
Total under 1 year	22.3	28.2	32.5	26.1
1 year and under 2 years	9.9	14.2	14.4	11.6
2 years and under 3 years	9.3	14.1	13.6	10.9
3 years and under 4 years	7.2	8.5	9.2	8.0
4 years and under 5 years	5.2	8.2	6.4	5.6
5 years and under 10 years	18.0	18.8	16.0	17.2
10 years and under 15 years	10.5	4.5	3.9	8.0
15 years and over	17.6	3.4	4.1	12.5
Total	100.0	100.0	100.0	100.0

Further information may be obtained in the bulletin *Job Tenure*, August 1976 (Catalogue No. 6211.0) published by the Australian Statistician.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT

Details of the number of wage and salary earners in civilian employment other than at census dates are available from periodic estimates. These estimates, which exclude employees in agriculture and private domestic service, are based on information obtained at population censuses, known as bench-marks, and adjustments to these bench-marks are made from certain current information.

The industry classification used in the following table is the Australian Standard Industrial Classification (ASIC). This industrial classification is not directly comparable with those adopted for population censuses before 1971. 'Manufacturing' includes employees of manufacturing enterprises who are not directly associated with the productive process, such as sales and distribution personnel. The category 'community services' covers employees in education, health, welfare and other community services while the category 'other' includes employees in mining, electricity, gas and water, public administration and entertainment, restaurants, hotels and personal services.

Wage and Salary Earners in Civilian Employment, South Australia^(a)

June	Manufacturing	Construction	Transport, Storage and Communication	Wholesale and Retail Trade	Finance, Insurance, Real Estate and Business Services	Community Services	Total Employment (Incl. Other)
MALES ('000)							
1974	96.6	32.6	24.1	50.6	15.8	28.1	278.4
1975	89.4	36.2	24.5	50.6	15.7	29.8	278.3
1976	89.0	33.5	24.2	52.5	15.6	31.7	278.5
1977	86.2	33.0	23.9	51.7	15.8	33.0	275.5
1978	79.7	31.0	23.7	49.9	15.9	33.5	266.0
FEMALES ('000)							
1974	30.5	1.4	5.2	39.5	13.8	48.2	161.0
1975	25.7	1.5	5.4	38.0	13.4	51.3	159.5
1976	26.2	1.6	5.2	40.1	13.7	55.5	166.5
1977	24.8	1.7	5.2	40.3	14.0	57.9	168.8
1978	23.0	1.6	5.2	39.5	14.5	60.1	168.5
PERSONS ('000)							
1974	127.1	34.0	29.3	90.1	29.6	76.3	439.4
1975	115.1	37.7	29.9	88.6	29.1	81.1	437.8
1976	115.2	35.1	29.4	92.6	29.3	87.2	445.0
1977	111.0	34.7	29.1	92.0	29.8	90.9	444.3
1978	102.7	32.6	28.9	89.4	30.4	93.6	434.5

(a) Excludes employees in agriculture, private domestic service and defence forces.

The following table shows the distribution of wage and salary earners at June 1977 and June 1978 by class of employer.

Wage and Salary Earners in Civilian Employment: Class of Employer, South Australia^(a)

Class of Employer	June 1977			June 1978		
	Males	Females	Persons	Males	Females	Persons
'000						
Private	182.6	112.7	295.3	172.4	110.2	282.6
Government:						
Commonwealth	24.2	7.5	31.7	31.4	8.1	39.5
State	63.0	47.5	110.4	56.2	48.9	105.1
Local	5.7	1.1	6.9	6.0	1.3	7.3
Total government	92.9	56.1	149.0	93.6	58.3	151.9
Total employment	275.5	168.8	444.3	266.0	168.5	434.5

(a) Excludes employees in agriculture, private domestic service and defence forces.

The government sector (government departments, local government authorities, public corporations and public trading and financial enterprises) employs 34 per cent of total civilian wage and salary earners.

Further information on employment in specific sectors such as factories, agriculture, the building industry, etc. is found in the relevant sections of this Year Book.

UNEMPLOYMENT

Labour Force Surveys

Estimates of unemployment are derived from the monthly population survey. Until February 1978, surveys were conducted quarterly in February, May, August and November each year.

For the purpose of the survey, unemployed persons are those aged 15 years and over who were not employed during the survey week and:

- (a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and;
 - (i) were available for work in the survey week, or would have been available except for temporary illness (*i.e.* lasting for less than four weeks to the end of the survey week); or
 - (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or
- (b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown.

With the change to the monthly population survey, the collection was based on a new sample selected in order to reflect changes in the distribution of the population shown by the 1976 Population Census results. The questionnaire was also revised, to provide more accurate and detailed information concerning the labour force.

Because the estimates are based on information obtained from occupants of a sample of dwellings they, and the movements derived from them, are subject to sampling variability, *i.e.* they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included in the survey. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors.

The following table contains estimates of the number of unemployed persons in South Australia and the corresponding unemployment rates, and the standard errors of each estimate.

Unemployed Persons, South Australia

Particulars	Month			Standard Error		
	Oct. 1978	Nov. 1978	Dec. 1978	Nov. 1978 Estimate	Dec. 1978 Estimate	Nov. to December Movement
	NUMBER ('000)					
Looking for full-time work:						
Aged 15-19 years	16.5	13.4	18.0	1.0	1.1	0.9
Aged 20 years and over	24.4	25.4	24.1	1.3	1.3	1.0
Total	40.9	38.8	42.1	1.5	1.5	1.2
Looking for part-time work	4.7	5.4	4.6	0.7	0.7	0.6
Total	45.7	44.2	46.6	1.6	1.6	1.2

Unemployed Persons, South Australia (continued)

Particulars	Month			Standard Error		
	Oct. 1978	Nov. 1978	Dec. 1978	Nov. 1978 Estimate	Dec. 1978 Estimate	Nov. to December Movement
UNEMPLOYMENT RATE (a)						
Looking for full-time work:						
Aged 15-19 years	26.2	21.4	25.1	1.7	1.5	1.3
Aged 20 years and over	5.7	5.9	5.6	0.3	0.3	0.2
Total	8.3	7.8	8.4	0.3	0.3	0.2
Looking for part-time work	4.4	5.3	4.4	0.6	0.7	0.6
Total	7.6	7.4	7.7	0.3	0.3	0.2

(a) The unemployment rate is the number of unemployed in each group as a percentage of the estimated labour force (i.e. employed plus unemployed) in the same group.

Further details may be obtained from the following bulletins issued by the Australian Statistician: *Unemployment, Preliminary Estimates* (Catalogue No. 6201.0); *The Labour Force (Preliminary)* (Catalogue No. 6202.0); and *The Labour Force* (Catalogue No. 6203.0).

EMPLOYMENT SERVICES

The Commonwealth Employment Service, administered by the Department of Employment and Youth Affairs, commenced operations in South Australia in May 1946. The main function of the Employment Service is to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

Further details concerning the operations of the Commonwealth Employment Service may be found in the *Official Year Book of Australia* No. 62, 1977-78.

The Department of Employment and Youth Affairs is also responsible for the administration of three schemes offering financial assistance to employers to recruit and train new staff. The National Employment and Training system (NEAT) is a vocational training scheme designed to assist persons whose employment prospects would be enhanced by training. Further information on the NEAT scheme is contained in Part 6.2 Education. The Special Youth Employment and Training Programme (SYETP) is specifically designed to encourage employment of people under 25 years of age. The Commonwealth Rebate for Apprentice Full-time Training (CRAFT) scheme offers tax free rebates to offset the cost of time lost in formal off-the-job training to firms taking on apprentices.

The State Government has two major programs designed to alleviate unemployment in South Australia. A Youth Work Unit was established in 1976 to help school leavers and other unemployed young people to find jobs by co-ordinating the education and job-finding capacities of Commonwealth and State Government departments with existing community welfare bodies and voluntary agencies. The State Unemployment Relief Scheme, administered by the Department of Labour and Industry, began operating at the end of 1975, providing employment opportunities throughout the State by initiating specific projects in the community. The activities of the scheme were substantially escalated during 1977.

There are also a number of private employment agencies, all of which are required to register with the Department of Labour and Industry. At 31 December 1978 there were thirty-seven such agencies registered.

7.2 ARBITRATION AND INDUSTRIAL ORGANISATIONS

INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government-tribunals has been developed, with the Commonwealth and the State Parliaments each passing their own industrial legislation.

Under Section 51 of the Constitution, the Commonwealth Parliament may make laws in relation to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. In addition the Parliament may legislate under certain industrial powers for the stevedoring industry, the maritime industry, the Commonwealth Public Service, certain national projects, the Snowy Mountains Area and flight crew officers. Federal arbitration is binding only on the parties to a dispute and decisions need not be of general application to an industry.

Employees not specifically covered by Federal awards are subject to State industrial jurisdiction, but where an award or determination of a State industrial tribunal is in conflict with an award of a Federal tribunal, the latter prevails.

Federal Industrial Tribunals

Before 1956 a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. In that year substantial amendments were made to the Conciliation and Arbitration Act separating the judicial and arbitral functions of the Court by the establishment of the Australian Industrial Court and the Australian Conciliation and Arbitration Commission.

In February 1977 a further change was made when the jurisdiction exercised by the Industrial Court was transferred to the Industrial Division of the Federal Court of Australia.

The Conciliation and Arbitration Commission comprises a President and as many Deputy Presidents and Commissioners as are necessary.

The Commission carries out its functions of conciliation and arbitration through panels. The President assigns an industry or a group of industries to a panel consisting of a Presidential Member and one or more Commissioners.

Certain matters cannot be determined by a single member of the Commission. Those matters which must be determined by a Full Bench of the Commission, consisting of a number of Presidential Members and Commissioners, include standard hours, national wage cases, equal pay principles, annual leave and long service leave.

The jurisdiction of the Commission is limited to conciliation and arbitration of interstate industrial disputes between employers and employees. The employees must be engaged in employment that is 'industrial' in nature.

State Industrial Tribunals

The South Australian legislation governing State intervention in industrial relations is the Industrial Conciliation and Arbitration Act, 1972-1975, the principal Act having come into operation on 1 January 1973. This Act, which made various changes in the existing industrial law provides for:

- (1) an Industrial Court which deals with matters of law and hears claims for recovery of money payable under awards or agreements;
- (2) an Industrial Commission which makes awards covering workers not under the jurisdiction of Conciliation Committees; and
- (3) Conciliation Committees which make or vary awards for an industry or area of the State in relation to which each Committee is appointed.

The Commission is composed of a President, two Deputy Presidents and Commissioners. Arbitral functions of the Commission may be exercised by a presidential member or a Commissioner as directed by the President. The Commissioners are chairmen of conciliation committees consisting of an equal number of representatives of employers and employees. Conciliation committees have the same jurisdiction in industrial matters as the Commission. If the process of conciliation before a committee fails then the Chairman sits as a Commissioner to determine the unresolved matters.

The President and Deputy Presidents of the Industrial Court are the President and Deputy Presidents, respectively, of the Commission. Proceedings before the Industrial Commission may be commenced by an application submitted by:

- (1) the Minister of Labour and Industry;
- (2) an employer, or group or registered association of employers in an industry employing, in the aggregate, not less than twenty employees or 75 per cent of the employees in the industry, whichever is the lesser;
- (3) a group or registered association consisting of not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser.

At the end of December 1976, there were seven associations of employers and seventy-two associations of employees registered with the Industrial Registrar. Membership of these employee associations totalled 190 099.

Further details regarding State Industrial Tribunals may be found in the *South Australian Year Book 1977*.

EMPLOYEE ORGANISATIONS

At 31 December 1976 there were 137 separate unions operating in South Australia; although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralised control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The following table gives particulars of the number of separate unions and union membership for the years 1972 to 1976. The table includes estimated percentages of trade union members to total wage and salary earners in employment. The estimates of total wage and salary earners have been derived by adding figures for employees in agriculture and private households employing staff to the estimates of employees in all other industries at the end of each year. The percentages shown should be regarded as giving only a broad indication of the extent of union membership among wage and salary earners because they are based on estimates of *employed* wage and salary earners that are subject to revision. The degree of unemployment of reported union members would affect the percentages for a particular year and comparisons over time. The employment estimates are incorporated from bench-marks derived from the 1971 Population Census and other sources and are classified according to the Australian Standard Industrial Classification.

**Trade Unions, South Australia
At 31 December**

Year	Separate Unions	Members			Proportion of Members to Total Wage and Salary Earners		
		Males	Females	Persons	Males	Females	Persons
	No.			'000	Per cent		
1973	135	181.6	60.2	241.8	64	39	55
1974	135	189.4	63.4	252.8	66	39	56
1975	135	187.3	68.2	255.6	66	41	57
1976	137	186.4	69.3	255.7	64	40	55
1977	140	189.0	75.9	264.9	67	44	58

The central labour organisation for the State is the United Trades and Labor Council of South Australia, and combined union councils exist for Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, the Upper Murray, Leigh Creek and Whyalla. These central organisations, together with individual unions are affiliated with the Australian Council of Trade Unions (ACTU). All major unions are affiliated with the ACTU, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labor Council is the State branch of the ACTU and has the right to appoint one representative to act on the executive of the ACTU.

A historical summary of the growth of the trade union movement in South Australia was included on pages 280-1 of the *South Australian Year Book* 1969.

EMPLOYER ORGANISATIONS

In industrial matters there are four dominant employer organisations in the State:

- (1) The South Australian Employers Federation Inc., which works mainly under the State Industrial Conciliation and Arbitration Act, is a federation of employer organisations, although provision is made for individual membership. Services provided include the negotiating and drafting of industrial agreements, and the preparation and presentation of cases before industrial tribunals. Advice is provided on existing awards and determinations, and on various aspects of industrial legislation.
- (2) The Chamber of Commerce and Industry (SA) Inc., which also works mainly under the State Industrial Conciliation and Arbitration Act, has individual members who subscribe directly to the Chamber for the industrial and other services provided. Where appropriate, members are grouped into trade associations. The Chamber's industrial advocates represent members in the making and variation of awards, and assist members in the settlement of disputes. The Chamber monitors Bills presented to the Parliaments and, where appropriate, makes representations on behalf of its members seeking amendments to legislation.

- (3) The Metal Industries Association, South Australia (MIASA) is the principal employers' organisation registered under the provisions of the Commonwealth Conciliation and Arbitration Act. It represents the varied interests of the State's metal and engineering manufacturing sector by monitoring developments in industrial relations, education and training, trade, economic and legislative matters.
- (4) The South Australian Automobile Chamber of Commerce Inc., also registered under the Commonwealth Conciliation and Arbitration Act, is an industrial organisation aimed at protecting and conserving the interests of employers in the motor and allied industries.

EMPLOYEE PARTICIPATION

The principal instruments of the State Government policy on employee participation in management are the Unit for Industrial Democracy in the Premier's Department, whose role is to develop guidelines and methods of implementation for the private and public sectors, and two specialist committees.

The first of these committees is the Tripartite Advisory Committee on Industrial Democracy, whose function is to inform both the private and public sectors of industry and their trade unions and representative organisations of the State Government's intentions, and in turn keep the State Government informed of reactions to those initiatives. During 1977 this committee published an important policy document entitled 'Industrial Democracy—Philosophy, Nature and Scope' in which it defined industrial democracy as being concerned primarily with providing employees with the opportunity and right to influence decisions within their work organisation.

The second committee, the Public Service Advisory Committee, is concerned with the special circumstances which arise in implementing an industrial democracy program in the State Public Service. This committee now includes representatives of the trade union movement.

Emphasis is continuing to be directed towards public sector organisations and a number of Public Service departments have industrial democracy schemes operating at various stages. A number of the more significant statutory authorities have also begun development of systems appropriate to their own structure.

In the private sector companies have taken initiatives, in some instances with the help of State Government resources and in some other cases independently. The nature of these projects range from development of new work organisations for individual small scale work areas, to consideration of company-wide re-organisation, introducing concepts such as semi-autonomous work groups, consultative councils and in some cases financial participation.

A continuing program of education in concepts of industrial democracy and its implications for organisations, trade unions and employees involving seminars, conferences, workshops and individual enterprise programs is supplemented by a newsletter and papers on specific topics.

For further details on industrial democracy in South Australia, refer to pages 377-9 of the *South Australian Year Book 1977*.

INDUSTRIAL DISPUTES

Details of the number and extent of industrial disputes occurring in South Australia are shown in the next table. Effects on other establishments because of lack of materials, disruption of transport services, power cuts, etc. are not included in these statistics.

Industrial Disputes, South Australia^(a)

Period	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
				\$'000
Annual averages:				
1951-55	30	17 800	50 500	310.0
1956-60	24	12 800	22 400	157.4
1961-65	39	18 500	26 000	234.6
1966-70	82	45 100	62 600	717.6
1971-75	156	71 300	149 600	2 752.0
Year:				
1973	159	56 900	130 600	2 144.0
1974	180	116 300	316 500	6 105.1
1975	194	69 600	127 600	3 168.2
1976	118	130 400	151 800	4 285.2
1977	93	26 400	30 600	940.0
1978	119	50 000	79 100	2 639.0

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved at the establishments where the stoppages occurred.

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days and wages lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute. Because of difficulties in identifying all participants in every dispute the statistics should be regarded as giving only a broad measure of the extent of work stoppages.

In the following table industrial disputes occurring during 1978 are compiled according to the Australian Standard Industrial Classification (ASIC). A dispute involving workers in more than one industry group is counted once only and is included in the industry group which has the largest number of workers involved. Other details are allocated to their respective industry groups.

Industrial Disputes: Industries, South Australia, 1978^(a)

Industry	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
		'000	'000	\$'000
Agriculture, forestry, fishing and hunting	—	—	—	—
Mining	—	—	—	—
Manufacturing:				
Food, beverages and tobacco	10	5.5	14.5	511
Textiles, clothing and footwear	—	0.1	0.1	2
Wood, wood products and furniture	—	—	—	—
Paper and paper products, printing and publishing	1	0.1	0.2	7
Chemical, petroleum and coal products	4	0.6	5.8	163
Metal products, machinery and equipment (c)	38	26.8	33.5	1 133
Other manufacturing (d)	3	1.6	2.3	79

Industrial Disputes: Industries, South Australia, 1978^(a) (continued)

Industry	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
Electricity, gas and water	4	0.4	0.6	21
Construction	19	1.0	2.6	102
Wholesale and retail trade	2	0.2	0.2	8
Transport and storage, communication:				
Water transport	9	2.3	3.9	137
Railway transport, air transport	7	5.3	8.5	252
Road transport, other transport and storage, communication	13	5.4	6.2	194
Entertainment, recreation, restaurants, hotels and personal services	1	(e)	(e)	1
Other industries	8	0.6	0.7	28
Total	119	50.0	79.1	2 639

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved at the establishments where the stoppages occurred.

(c) Includes basic metal products, fabricated metal products, transport equipment and other industrial machinery and equipment and household appliances.

(d) Includes non-metallic mineral products and leather, rubber and plastic products.

(e) Less than 50 workers involved and less than 50 working days lost.

7.3 WAGES AND HOURS

WAGES

Before the National Wage Cases of 1967, wages consisted of two distinct elements, a basic or living wage and a margin or loading which was appropriate to the employee's occupation. A more detailed description of these elements was included on pages 253 and 257-8 of the *South Australian Year Book 1967*.

The total wage concept was accepted by the decision of the Conciliation and Arbitration Commission in June 1967. The application of this concept (until the introduction of wage indexation guidelines in 1975) limited the number of national wage cases in any year to one and provided the Commission with a flexible basis for decisions.

National Wage Fixation

The *Conciliation and Arbitration Act 1904* gives the Australian Conciliation and Arbitration Commission power to make an award or to certify an agreement 'making provision for, or altering, rates of wages, or the manner in which rates of wages are to be ascertained, on grounds predominantly related to the national economy and without examination of any circumstance pertaining to the work upon which, or the industry in which, persons are employed'. The Commission holds wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction. A detailed account of the history of national wage fixation before the introduction of the total wage concept appears in the Arbitration Reports and a summary was included on pages 257-60 of the *South Australian Year Book 1968*.

In the 1975 National Wage Case, principles were adopted which included indexing award wages to changes in the Consumer Price Index. The following table shows the change in the Consumer Price Index, the award wage increase and the increase in the weekly minimum wage for each quarter from the beginning of 1975.

Wage Indexation: Changes in Award Total Wage and Minimum Wage

Consumer Price Index		Award Wage Increase	Minimum Wage (a)	Date Operative
Quarter	Increase			
	Per cent		\$	
1975:				
March	3.6	3.6 per cent	male 79.60 female 71.60	15 May 1975
June	3.5	3.5 per cent	82.40	18 Sept. 1975
September	0.8	} 6.4 per cent	87.70	15 Feb. 1976
December	5.6		(b)	
1976:				
March	3.0	3.0 per cent on award wages up to \$125 per week and \$3.80 per week on award wages above \$125.	95.50	15 May 1976
June	2.5	\$2.50 per week on award wages up to \$166 per week and 1.5 per cent on award wages above \$166.	98.00	15 Aug. 1976
September	2.2	2.2 per cent	100.20	22 Nov. 1976
December	6.0	\$5.70 per week	105.90	31 Mar. 1977
1977:				
March	2.3	1.9 per cent on award wages up to \$200 per week and \$3.80 per week on award wages above \$200.	107.90	24 May 1977
June	2.4	2.0 per cent	110.10	22 Aug. 1977
September	2.0	1.5 per cent	111.80	12 Dec. 1977
December	2.3	1.5 per cent on award wages up to \$170 per week and \$2.60 per week on award wages above \$170.	113.50	28 Feb. 1978
1978:				
March	1.3	1.3 per cent	115.00	7 June 1978
June	2.1	} 4.0 per cent		
September	1.9		119.60	12 Dec. 1978

(a) From the beginning of the pay period which included 30 June 1975 the adult male and female minimum wage were equalised.

(b) Minimum wage further increased to \$92.70 from 1 April 1976.

Following a conference of parties the Commission held an inquiry in 1978 into the wage fixation principles. In a decision in September 1978 it announced variations to the principles including the reduction of the periodicity of wage hearings from quarterly to six monthly with sittings to be held in April and October following the publication of the Consumer Price Index for the March and September quarters. Another significant change was to allow applications for the indexing of over-award payments.

State Wage Fixation

For many years, all awards of both the State Industrial Commission and Conciliation Committees created under the Industrial Conciliation and Arbitration Act, 1972-1975 had included a 'living wage' for both adult male and adult female employees. In determining such living wages, the Full Commission could, as deemed fit, take into consideration any

decision of the Australian Conciliation and Arbitration Commission which related to awards of that tribunal and was likely to affect employees subject to awards in South Australia. As such, in May 1975 the Full Commission granted a 3.6 per cent increase in all ordinary award rates to employees under State awards and agreements, being a flow-on of the National Wage decision of 30 April 1975. The living wage for adult males was increased to \$48.20 per week and to \$38.60 for adult females.

However, the Industrial Conciliation and Arbitration Act provided that no new determination of a South Australian living wage could be made until at least 6 months from the date of the previous determination. Thus in September 1975 the Act was amended to facilitate flow-on from quarterly National Wage decisions by deleting reference to the living wage, award rates thereafter being specified as total wages.

Following a recommendation by the Australian Conciliation and Arbitration Commission concerning indexation of over-award payments, the State Government agreed in late September 1975 to make wage rises due to indexation apply to over-award and service payments for weekly paid Government employees and to back date the decision to 15 May 1975, the beginning of indexation.

In a judgment by the Full Commission in October 1975 it was ruled that the Commission had the power to make 'paid rates' awards as well as 'minimum rates' awards. This judgment means that it is now possible for over-award payments to be built into awards, leading to greater uniformity in wage rates for employees under State awards.

In December 1975, the Full Commission finally adopted the Federal wage indexation guidelines but reserved the right to deal with anomalous situations outside the scope of wage indexation.

The Full Commission went a step further than the Australian Conciliation and Arbitration Commission in June 1976 when it ruled that, under State awards service payments, leading hand rates and other special allowances should be included in the ordinary rates to which indexation rises apply.

Equal Pay

In a decision handed down on 15 December 1972, the Full Bench of the Australian Conciliation and Arbitration Commission decided to enlarge the concept of 'equal pay for equal work' to that of 'equal pay for work of equal value', *i.e.* awards rates for all work should be considered without regard to the sex of the employee. The new principle is applied to all awards of the Commission. However, it was considered that the social and economic consequences of the decision would be wide-ranging and so under normal circumstances implementation would take place by three equal instalments so that one-third of any increase was payable no later than 31 December 1973, half of the remainder by 30 September 1974 and the balance by 30 June 1975. Under principles established in 1969, equal pay was to be given for equal work and the decision was not intended to rescind those principles under which females could become entitled to equal pay earlier than they would under the December 1972 decision.

In the 1972 decision, the Commission rejected the claim that adult females be paid the same minimum wage as adult males because of the family considerations involved in male minimum wages. However, in the 1974 National Wage Case the Commission discarded the family component concept and decided to extend the male minimum wage to females in three stages, the rates for both males and females becoming equal from the beginning of the pay-period in which 30 June 1975 occurred.

Following an amendment to the Industrial Conciliation and Arbitration Act in September 1975, the concept of a separate State living wage for both males and females was abolished by a decision of the Full Bench of the South Australian Industrial Commission handed down on 15 December 1975.

A historical discussion on the relativities of male and female wage rates was included on pages 290-2 of the *South Australian Year Book* 1970.

Award Wages

The minimum weekly amounts provided in awards, determinations, and registered agreements under Federal and State jurisdiction are known as award rates. The amounts shown in the following tables are a weighted average of minimum weekly wage rates payable to adult males and females in South Australia. Generally these are award rates; however, in a few cases where unregistered agreements are dominant in a particular industry, rates prescribed therein are used. The amounts shown should not be regarded as actual current averages, but rather as indexes expressed in money terms. The minimum rates used are for representative occupations within each industry, the weights for each occupation and industry being based on sample surveys conducted in 1954, with allowance made where necessary for subsequent changes in the industrial structure. Because of coverage difficulties rural industries are excluded. The statistics are designed to show movements in minimum wages as distinct from salaries, with the result that those awards, etc. which relate solely or mainly to salary earners have been excluded.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

Weekly Wage Rates: Industrial Groups, South Australia^(a)
At 31 December

Industrial Group	1974	1975	1976	1977	1978
	Dollars				
	ADULT MALES				
Mining and quarrying	103.49	112.03	127.33	142.40	151.68
Manufacturing:					
Engineering, metal work, etc.	101.55	110.71	126.86	140.26	153.13
Textiles, clothing and footwear	91.49	107.35	123.37	135.60	145.01
Food, drink and tobacco	98.34	110.46	127.16	140.40	150.61
Sawmilling, furniture, etc.	99.88	107.12	122.87	135.65	145.04
Paper, printing, etc.	108.84	118.95	137.40	150.99	161.39
All manufacturing groups	100.89	110.91	127.43	140.74	152.51
Building and construction	106.60	127.65	144.54	158.00	167.99
Railway services	100.27	107.38	122.84	135.51	144.86
Road and air transport	104.63	112.52	129.18	142.61	154.08
Shipping and stevedoring	112.56	138.80	157.57	172.21	184.76
Communication	129.73	140.52	159.70	174.72	186.93
Wholesale and retail trade	104.19	112.35	131.82	145.79	157.48
Public authority (n.e.i.) and community and business services	97.23	111.46	129.16	142.35	152.16
Amusement, hotels, personal services, etc.	92.44	105.47	121.06	133.78	143.01
All industrial groups	103.32	115.13	132.20	145.69	156.96
	ADULT FEMALES				
Manufacturing:					
Engineering, metal works, etc.	92.19	99.00	121.89	134.59	146.28
Textiles, clothing and footwear	81.88	101.43	118.67	133.04	142.24
Food, drink and tobacco	89.51	99.07	121.31	136.39	145.86
Other manufacturing	87.21	100.56	121.45	134.15	143.77
All manufacturing groups	87.76	100.03	120.98	134.38	144.53
Transport and communication	101.81	113.16	132.10	145.26	155.22
Wholesale and retail trade	96.24	106.22	131.97	145.95	156.00

Weekly Wage Rates: Industrial Groups, South Australia^(a)
At 31 December (continued)

Industrial Group	1974	1975	1976	1977	1978
	Dollars DOLLARS ADULT FEMALES				
Public authority (n.e.i.) and community and business services	90.85	104.85	122.81	141.33	150.91
Amusement, hotels, personal services, etc.	84.94	99.98	116.90	129.94	138.94
All industrial groups	91.47	103.34	125.11	139.06	148.99

(a) Weighted average minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

Classified as Federal are awards of, or agreements registered with, the Australian Conciliation and Arbitration Commission and the Coal Industry Tribunal, and determinations of the Commonwealth Public Service Arbitrator. Incorporated under the State heading are awards or determinations of, or agreements registered with, State industrial tribunals, together with any unregistered agreements used in the computations.

The following table shows weighted average minimum weekly wages rates for adult males and adult females with separate details shown for award rates within Federal and State jurisdictions. The index numbers refer to the weighted average minimum weekly wage rates of all awards.

Weekly Wage Rates, South Australia^(a)

31 December	Rates of Wage				Index Numbers	
	Federal Awards		State Awards		All Groups (Base: Australia 1954 = 100)	
	Adult Males	Adult Females	Adult Males	Adult Females	Adult Males	Adult Females
	Dollars					
1974	104.75	89.50	100.21	92.81	365.8	459.5
1975	117.57	103.82	109.07	103.02	407.6	519.1
1976	134.03	119.67	127.68	129.70	468.1	631.0
1977	147.40	133.20	141.46	143.08	515.9	698.5
1978	159.29	143.25	151.20	152.93	555.8	748.4

(a) Weighted average of minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

EARNINGS

Figures given in this section relate to actual average weekly earnings (including award wages, salaries, overtime earnings, over-award and bonus payments and prepayments) of all wage earners and salaried employees, whether adult or junior, full-time, part-time, or casual. Payments to members of the defence forces are excluded.

Particulars of wages and salaries are not available for males and females separately and average earnings have therefore been calculated by using total civilian employment expressed in terms of 'male units'. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings.

Average Weekly Earnings per Employed Male Unit, South Australia

Year	September Quarter	December Quarter	March Quarter	June Quarter	Year
			Dollars		
1973-74	104.20	110.40	106.10	120.80	110.40
1974-75	129.80	141.80	137.40	145.30	138.60
1975-76	148.10	163.70	154.40	167.60	158.50
1976-77	175.00	182.80	172.80	187.40	179.50
1977-78	195.90	199.40	190.20	203.90	197.40
1978-79	206.90	211.70	207.20	215.50	210.30

As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. Because of variation in coverage, etc. these figures cannot be related to the minimum weekly wage rates shown in the preceding section.

Separate estimates of the average weekly earnings of males and females, and of adults and juniors, shown in the next table, have been obtained from sample surveys conducted in the last pay-period of October for each year since 1972.

Average Weekly Earnings: Private and Government Employment
South Australia^(a)

Adult Males						
October				Junior Males	Adult Females	Junior Females
	Overtime	Ordinary Time	Total			
				Dollars		
1974	11.90	126.90	138.80	74.50	107.60	68.40
1975	9.80	144.60	154.40	85.00	125.20	79.00
1976	12.50	166.30	178.80	97.60	151.10	96.70
1977	12.30	183.50	195.80	109.70	169.90	109.90
1978	14.40	196.20	210.60	112.60	180.20	116.50

(a) Full-time employees other than managerial, executive, professional and higher supervisory staff.

The surveys were based on a sample selection of private employers subject to payroll tax and details of employees in non-government hospitals not subject to payroll tax, employees of Commonwealth and State Government departments, authorities and semi-government bodies and local government authorities. Employees in agriculture and domestic service were excluded as were those of religious, benevolent and similar organisations exempt from payroll tax.

Similar surveys were also conducted in the last pay-periods of October for the years 1968 to 1971 but coverage in these years was restricted to private employers subject to payroll tax. Details of these earlier surveys were included on pages 344-5 of the *South Australian Year Book 1974*.

HOURS OF WORK

The 40-hour week is the standard working week for employees under Federal and State awards; however, the number of hours constituting a full week's work varies between occupations. Significant variations to this standard working week were achieved in the stevedoring industry during 1972 where a 70-hour fortnight has operated

from June 1975. Certain Federal awards covering rural industries prescribe hours in excess of forty, while other occupations by tradition work less than forty hours, although forty hours is generally retained in their awards.

The weighted average standard hours (excluding overtime) prescribed in awards, determinations, and agreements for a full working week for adult male employees in all industries in South Australia, except rural, shipping, and stevedoring was 39.90 hours at 31 December 1978. This compared with 43.83 hours at 30 September 1947 immediately before the introduction of the 40-hour week. The weighted average for female employees at 31 December 1978 was 39.77 hours. The weighted average figure for South Australian male employees has not changed significantly since 1953, nor for females since 1951. The normal working day in manual trades is of eight hours duration, and employees working beyond these hours are paid penalty rates.

The following table shows the relative distribution of employed civilian wage and salary earners in South Australia according to the number of hours worked in a specified week, as recorded in the August Labour Force Surveys. The distribution is based on actual hours worked, including overtime, rather than hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work because of sickness, accident and industrial disputes, and work stoppages caused by plant breakdowns and weather.

Employed Wage and Salary Earners: Hours Worked, South Australia^(a)

August	Proportion who Worked the Following Hours in the Specified Week							Total
	0	1-29	30-34	35-39	40	41-48	Over 49	
	Per cent							
1976	6.1	13.3	4.9	14.3	43.2	10.9	7.3	100.0
1977	4.6	15.1	4.3	15.2	42.5	10.6	7.7	100.0
1978	3.9	17.8	6.4	17.0	33.2	13.2	8.5	100.0

(a) Employed civilian population, fifteen years of age and over.

HOLIDAYS AND LEAVE

Public Holidays

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays normally receive an extra day's pay and are paid at penalty rates. From 1971 authorised public holidays are:

New Year's Day (1 January or the following Monday if that day falls on a Saturday or Sunday),

Australia Day (first Monday after 25 January),

Good Friday,

Easter Saturday,

Easter Monday,

Anzac Day (25 April or the following Monday if 25 falls on a Sunday),

Adelaide Cup Day (third Monday in May),

Queen's Birthday (usually observed on a Monday early in June),

Labour Day (second Monday in October),

Christmas Day (25 December or the following Monday if 25 falls on a Saturday or Sunday), and

Proclamation Day (28 December or the following Monday if 28 falls on a Saturday or Sunday).

The Holidays Act makes provision for other days to be proclaimed in lieu of the authorised holidays. Additional holidays may also be proclaimed.

Annual leave

Under Federal awards generally, four weeks annual recreation leave is granted to employees who have completed twelve months continuous service and there are provisions for a proportionate payment where employment is terminated before the completion of twelve months. Under State awards the Federal standard has generally been adopted.

Certain employees in special occupations or where regular shift work is involved *e.g.* police officers, nurses, etc., are entitled to annual recreation leave in excess of four weeks.

In addition to normal holiday pay many employees receive an annual leave bonus of 17.5 per cent of the payment they would have received had they not been on leave. Officers of the South Australian and the Commonwealth Public Service receive a 17.5 per cent leave loading on their salary up to a maximum of average weekly earnings for the September quarter of the year in which the leave accrued.

Sick Leave

The Industrial Conciliation and Arbitration Act, 1972-1975 provides that all full-time employees shall be eligible to receive annually not less than ten days cumulative sick leave on full pay. There is also provision for insertion in awards allowance for unlimited accumulation of such leave. Most Federal and State awards provide for two weeks sick leave a year.

Long Service Leave

In 1964 the Australian Conciliation and Arbitration Commission included, for the first time in a Federal award, long service leave, granting employees in the graphic arts and metal trades industries leave on the basis of thirteen weeks for twenty years service in respect of employment before the date of the decision, and eight and two-thirds weeks in respect of each ten years of subsequent service; these provisions have been extended to many other Federal awards. In a number of other cases, registered agreements provide for thirteen weeks leave after fifteen years service.

The South Australian Long Service Leave Act, 1967-1972 entitles employees, in respect of continuous service after 1 January 1972, to thirteen weeks leave for each ten years service. In respect of service before 1 January 1972 the entitlement is calculated at the rate of thirteen weeks for fifteen years service for the period 1 January 1966 to 31 December 1971 and at the rate of thirteen weeks for twenty years service for the employment period up to 31 December 1965. The obligation to grant leave is imposed on all employers in South Australia except in regard to employees entitled to long service leave pursuant to an award of the Australian Conciliation and Arbitration Commission. The Industrial Commission has the power to exempt an employer from the provisions of the Act where the employees involved have access to benefits not less favourable than those prescribed by the Act. Other provisions of the Act relate to payment for leave, deferment of leave, claim for leave on termination of employment, and notice of granting of leave.

State and local government employees are in general entitled to ninety calendar days

leave after ten years service, and Commonwealth Government employees to three months after ten years service. The long service leave provisions which apply to State public servants are also extended to teachers employed under the Education Act.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

Maternity and Paternity Leave

Since 1973 the Commonwealth Public Service has provided maternity leave for females. The current provision is for twelve weeks paid leave and up to fifty-two weeks leave in total. A qualifying period applies for the paid leave. Paternity leave was also provided for males but was withdrawn in 1979.

Maternity leave provisions also exist for female employees of the South Australian Public Service. The maximum special leave without pay is fifty-two weeks but leave on full pay to which the officer has an entitlement may be substituted for the special leave. No paternity leave is available to male employees.

There are provisions in the Education Act for maternity leave for teachers in the South Australian Education Department with the maximum leave being fifty-two weeks and the minimum fourteen weeks. Leave is taken without pay except when long service credits are used.

In March 1979 the full bench of the Australian Conciliation and Arbitration Commission handed down a decision granting maternity leave to employees under Federal awards. An application was subsequently lodged with the South Australian Industrial Commission for a flow-on to cover workers under State awards in South Australia. The draft Federal order provides for up to fifty-two weeks unpaid leave for full- and part-time employees (but not casual or seasonal workers) with not less than twelve months continuous service.

7.4 INDUSTRIAL SAFETY

SAFETY REGULATIONS AND INSPECTION

General principles on safety, health and welfare applicable to all employed persons in industry (primary as well as secondary), commerce and in State Government are contained in the Industrial Safety, Health and Welfare Act, 1972-1978. It authorises the making of detailed provisions by regulations for different industries and different processes. The Act is progressively coming into operation for different industries as regulations are prepared. The Construction Safety Regulations, 1974-1977 were the first to be prepared and apply to persons employed on building and construction sites. They came into force on 1 April 1974 and revoked all regulations made under the Construction Safety Act, 1967. The Rural Industries (Machine Safety) Regulations, 1975 and the Power Driven Machinery (Safety) Regulations, 1975 came into effect on 1 January 1975. The Industrial Safety Code Regulations 1975-1976, dealing with factories and workshops came into effect on 1 September 1975. On 6 October 1977, the Logging Industry Safety Regulations 1977 came into effect and were followed on 1 October 1978 by the Commercial Safety Code Regulations covering shops, offices, warehouses and places where meals or refreshments are served.

At present most of the legislation directed at industrial safety is administered by the Department of Labour and Industry, although other authorities hold responsibilities in certain fields.

Department of Labour and Industry

The general working conditions in industrial premises (factories, shops, offices and warehouses) are regulated by the Industrial Safety Code Regulations and the Commercial Safety Code Regulations. Inspections are made by Departmental officers to ensure that the requirements of the Safety Regulations with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions on industrial premises are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Boilers and Pressure Vessels Act, 1960-1978. The Lifts and Cranes Act, 1960-1978, regulates the use of lifts, escalators, cranes and hoists, and requires the Department to approve new installations and to inspect regularly existing lift equipment. The Inflammable Liquids Act, 1961-1976, and the Liquefied Petroleum Gas Act, 1960-1973, regulate the storage and carriage of these products.

Department of Mines

Regulations under the Mines and Works Inspection Act, 1920-1970 provide for the health and safety of persons engaged in mining, quarrying or associated treatment plants and for the protection of the general public. Mining sites and camps must be maintained in safe condition with specific attention given to ventilation, sanitation, the use of explosives and the protection of the area amenity and environment. All mining operators are required to achieve some form of rehabilitation of areas disturbed by mining. The legislation includes operations conducted by local government authorities and road and rail construction authorities.

Officers of the Department inspect mines and quarries; ensure there is no undue impairment of the environment; check old workings; investigate mining accidents and complaints associated with mining activities; and give advice to industry on matters pertaining to mining and explosives.

South Australian Health Commission

Health aspects of industrial safety are the responsibility of the Occupational Health Branch of the Health Commission. The Commission investigates health hazards resulting from the presence of toxic and noxious substances in industry, both on its own initiative and on reference from employers, unions, other authorities, and individuals. Hazards investigated include chemicals and such physical agents as noise, heat and radiation, including the use of radio-active substances and irradiating apparatus for industrial, scientific, or medical purposes.

Department of Services and Supply (Chemistry Division)

The Explosives Act, 1936-1974 regulates the importation, manufacture, carriage, storage, and sale of explosives. The Chemistry Division is responsible for the maintenance of government magazines and the licensing and inspection of magazines. Vehicles used in the carriage of explosives are also licensed. Commercial explosives entering the State are inspected by the Division.

Electricity Trust of South Australia

Consumers' electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Trust officers. Persons engaged in installation, maintenance or repair of electrical installations and permanently connected equipment must be licensed to do this work in accordance with the provisions of the Electrical Workers and Contractors Licensing Act, 1965-1966. Under the Electrical Articles and Materials Act,

1940-1967 certain classes of electrical articles and materials may only be sold or hired or offered for sale or hire if they are of a type approved by the Trust or a recognised interstate authority.

WORKMEN'S COMPENSATION

Legislation

Provisions describing assistance for workmen sustaining personal injury out of or in the course of their employment are included in the Workmen's Compensation Act, 1971-1974. The provisions of the Act extend to injuries arising out of or in the course of employment and cover accidents during recess periods, travelling to or from work, travelling to or from or while in attendance at a place of pick up, travelling to or from or attending a trade or technical school, and travelling for medical treatment while on compensation.

An injury may be physical or mental, including diseases contracted and the aggravation or recurrence of an injury or disease and a pre-existing coronary heart disease.

Compensation is payable when the injury results in death, or in total or partial, permanent or temporary incapacity. Where death results from the injury, the Act provides for payment to members of the family wholly or partly dependent on the earnings of the deceased. For full dependants, compensation will be an amount equal to the sum of the workman's earnings in the six years before the accident plus \$500 for each dependent child, with a minimum of \$8000 and a maximum of \$25 000 (plus \$500 per dependent child), as well as funeral expenses to a maximum of \$500. If the workman has not been in the same employment for six years the amount will be his average weekly earnings in the job at which he was working at the time of the accident multiplied by 312, with the above maxima and minima. Where a workman dies leaving no dependants, compensation covering medical, funeral (\$500 maximum) and other expenses will be paid into the estate.

Where the injury does not result in death, the most common form of compensation is weekly payment. If incapacity is for one week or more compensation is an amount equal to average weekly earnings during the twelve months preceding the incapacity. The maximum liability of an employer is \$18 000, unless the workman is totally and permanently incapacitated, when it is \$25 000 or such greater amount as may be fixed by the Court having regard to the special circumstances of the case. Weekly payments must begin within two weeks of the workman providing the employer with a medical certificate and his declaration in the correct form stating that he believes himself entitled to compensation. Payments must be made to the workman on his usual pay days.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement or by proceedings in the Industrial Court of South Australia on application of either employer or employee.

Lump sum payments are payable for certain specified injuries *e.g.* loss of limbs, for permanent injuries which may involve total or partial incapacity for work whether actual or potential *e.g.* speech or hearing loss, or no incapacity for work *e.g.* severe facial scarring.

In addition to other compensation reasonable medical, hospital, nursing, constant attendance, rehabilitation and ambulance expenses are paid and compensation is provided to \$150 for loss or damage to clothing and personal effects and \$300 for loss or damage to tools of trade.

Excluded from the scope of the Act are members of the crews of fishing vessels remunerated by a share in the profits or the gross earnings of the working of such vessels, certain persons who are contestants in sporting or athletic activities, service

personnel and Commonwealth Government employees. Compensation for employees of the Commonwealth Government is provided by the *Compensation (Commonwealth Government Employees) Act 1971*

Workmen's Compensation Insurance

The Workmen's Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government, which provides its own cover through the State Government Insurance Fund, and any employer who can satisfy the Minister of Labour and Industry of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

During 1976-77, approximately 75 100 claims were lodged under the Workmen's Compensation Act, 1971-1974, and compensation payments totalling \$49.2 million were made for wages lost, hospital and medical expenses and lump sum settlements. Further details may be obtained from the bulletin *Industrial Accidents, 1975-1976* (Catalogue No. 6301.4) published by the South Australian office of Australian Bureau of Statistics.

INDUSTRIAL ACCIDENTS

The statistics set out below have been compiled from reports of workmen's compensation claims closed during the year ended 30 June 1977 and of unclosed claims of three years duration at 30 June 1977. Reports are submitted by insurance companies, self-insurers, and State Government departments, through the South Australian Department of Labour and Industry.

For the purpose of this collection an 'industrial accident' is defined as a compensated work injury causing the absence of the injured person from work for one week or more but excluding disease cases (for which separate statistics are available) and accidents during journey or recess periods if the victim is not engaged in normal occupational duties. 'One week' is interpreted as one week of seven (7) calendar or five (5) working days. Because of a problem of inadequate reporting no statistics of fatal accidents are available for 1976-77.

Although the term 'industrial accident' is used, the statistics represent workmen's compensation claims finalised during the year ended 30 June 1977. The accidents, to which the claims refer, may have occurred in the year the claim was finalised or during any other year within the coverage of the current collection, *i.e.* within the previous three financial years. For accidents which occurred since 1 July 1973 and for which the claims had still not been finalised by 30 June 1977, estimates of amounts yet to be paid are included in the statistics: however, there is evidence that the reporting of such claims is incomplete.

Each original claim has been regarded as a separate accident and although reports have been received of re-opened claims, no details of these have been included in the statistics.

Only persons within the coverage of the South Australian Workmen's Compensation Act, 1971-1974 are included. Notable exclusions are self-employed persons (although following a change in legislation persons supplying labour only in contracts have been included from 1 January 1974) and all Commonwealth Government officers and employees.

The exclusion of self-employed persons is likely to have considerable effect in industries where self-employment is significant (*e.g.* retail trade, rural industries). Because of the exclusion of Commonwealth Government employees, defence services

and Government communications industry groups are not covered, while coverage is reduced in other industries (e.g. building and construction). Because of the movement of employees across State boundaries some reports received may refer to accidents occurring in States other than South Australia. The number of such reports is thought to be negligible.

Industrial accident statistics are industry classified by use of the 1969 Preliminary Edition of the *Australian Standard Industrial Classification* (ASIC).

During 1976-77, 14 800 non-fatal accident claims each involving lost time of one week or more were reported as finalised: total time lost as a result of those accidents was slightly less than 83 700 weeks (more than 2000 man-years of working time).

**Non-fatal Accidents: Industry Groups, Number, Time Lost and Amount Paid
South Australia, 1976-77**

Industry	Accidents		Time Lost		Amount Paid (a)	
	Number	Percentage Of Total	Total	Average	Total	Average
			Weeks		\$'000	\$
Agriculture, forestry, fishing and hunting	781	5.3	3 841.8	4.9	884.2	1 132
Mining	127	0.9	565.0	4.4	149.8	1 179
Manufacturing:						
Food, beverages and tobacco	1 677	11.3	6 606.0	3.9	1 540.5	919
Wood, wood products and furniture	395	2.7	1 741.6	4.4	423.1	1 071
Glass, clay and other non-metallic mineral products	423	2.9	2 236.4	5.3	698.9	1 652
Basic metal products ..	553	3.7	3 564.6	6.4	918.3	1 661
Fabricated metal products	652	4.4	3 563.0	5.5	972.0	1 491
Transport equipment ..	1 253	8.5	8 057.6	6.4	2 051.8	1 638
Other industrial machinery etc., and household appliances	686	4.6	3 801.2	5.5	1 161.0	1 692
Other	619	4.2	3 512.8	5.7	961.8	1 554
Total manufacturing	6 258	42.3	33 083.2	5.3	8 727.5	1 395
Electricity, gas and water	359	2.4	2 782.8	7.8	741.0	2 864
Construction	2 841	19.2	17 686.0	6.2	4 460.0	1 570
Wholesale and retail trade	1 701	11.5	7 557.2	4.4	1 753.6	1 031
Transport, storage and communication	1 026	6.9	6 156.6	6.0	1 479.3	1 442
Finance, insurance, real estate and business services	158	1.1	1 070.4	6.8	217.4	1 376

**Non-fatal Accidents: Industry Groups, Number, time Lost and Amount Paid
South Australia, 1976-77 (continued)**

Industry	Accidents		Time Lost		Amount Paid (a)	
	Number	Percentage Of Total	Total	Average	Total	Average
			Weeks		\$'000	\$
Public administration	75	0.5	511.2	6.8	179.0	2 387
Community services	1 101	7.4	7 624.4	6.9	1 781.0	1 618
Entertainment, recreation, restaurants, hotels and personal services	373	2.5	2 815.2	7.5	617.7	1 656
Total	14 800	100.0	83 693.8	5.7	20 990.3	1 418

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

In the following table industrial accidents are allocated to an accident factor; this being the underlying agency, other than human failing, which appeared to contribute most materially to the accident.

Non-fatal Accidents: Industry Groups, Accident Factor, South Australia, 1976-77

Industry	Machinery, Vehicles	Falling, Stumbling, Slipping, Stepping On, Etc.	Objects		Total
			Handling	Moving or Falling Other(a)	
Agriculture, forestry, fish- ing and hunting	152	150	174	91	781
Mining	17	33	27	28	127
Manufacturing	669	1 441	2 094	913	6 258
Electricity, gas and water	19	104	99	65	359
Construction	193	868	815	469	2 841
Wholesale and retail trade	139	445	573	240	1 701
Transport, storage and communication	135	381	266	158	1 026
Finance, insurance, real estate and business services	10	78	41	9	158
Public administration	2	34	20	4	75
Community services	41	366	343	64	1 101
Entertainment, recreation, restaurants, hotels and personal services	14	140	98	25	373
Total	1 391	4 040	4 550	2 066	14 800

(a) Includes electricity, explosions, hand tools, harmful substances etc.

The following table indicates the distribution of non-fatal accidents for 1976-77 by nature and location of injury.

Non-fatal Accidents: Nature and Location of Injury, South Australia, 1976-77

Nature of Injury	Head (Including Eye)	Neck and Spine	Trunk	Arm and Hand	Leg and Foot	Total (Including Other)
Bruising, contusion and superficial injury	71	34	419	788	924	2 236
Lacerations	154	2	23	1 995	353	2 527
Foreign bodies	181	—	—	—	—	181
Burns and scalds	78	3	18	217	160	476
Fractures	43	45	129	575	447	1 239
Dislocations	—	112	6	40	16	174
Sprains, strains, hernias ...	—	617	3 752	1 691	1 486	7 546
Traumatic amputations	—	—	—	72	4	76
Concussion	95	—	—	—	—	95
Enucleation	—	—	—	—	—	—
Internal injury	—	—	54	—	—	54
Nerve injury	40	16	4	40	21	121
Other and unspecified	4	—	2	6	9	75
Total	666	829	4 407	5 424	3 420	14 800

Industrial Diseases

The International Labour Office distinguishes an occupational disease from a work injury in that it exhibits one or more of the following characteristics:

- (1) the slow and protracted nature of its cause;
- (2) its ascribability to repeated or continuous action of a mechanical, physical or chemical cause; it is not the effect of a single event but of a cause acting imperceptibly and constantly;
- (3) indeterminateness of the time of its beginning due to its slow and insidious development;
- (4) the possible importance of individual predisposition as a factor in the development of the pathological conditions.

Where there is any evidence at all that a disease has resulted from an initial injury, the episode is classified as an injury rather than a disease. On the other hand, disabilities caused purely by continuous movement of a joint are treated as a disease.

The problem of inadequate reporting of fatal accidents extends also to the reporting of fatal disease cases and as a consequence no statistics of fatal diseases are available for 1976-77.

Non-fatal Diseases: Number, Time Lost and Amount Paid, South Australia, 1976-77

Diseases	Number		Time Lost		Amount Paid	
	Males	Females	Males	Females	Males	Females
			Weeks		\$'000	
Infective and Parasitic diseases	40	48	327.8	191.0	64.1	23.6
Neoplasms	—	—	—	—	—	—

Non-fatal Diseases: Number, Time Lost and Amount Paid, South Australia, 1976-77
(continued)

Disease	Number		Time Lost		Amount Paid	
	Males	Females	Males	Females	Males	Females
			Weeks		\$'000	
Diseases of the nervous system and sense organs	21	3	148.4	25.8	47.2	4.4
Diseases of the circulatory system:						
Arteriosclerosis and degenerative heart disease	35	1	989.0	70.6	262.9	20.0
Other	1	2	1.6	5.2	0.3	0.8
Diseases of respiratory system	11	—	171.8	—	75.1	—
Diseases of skin and cellular tissue:						
Occupational dermatitis	122	39	611.0	394.6	169.4	87.6
Other	32	15	155.4	72.4	23.7	10.1
Diseases of bone and organs of movement	39	42	149.2	228.0	42.1	54.7
Other	5	5	24.6	18.8	13.5	2.7
Total	306	155	2 578.8	1 006.4	698.4	203.8

PHYSICAL DEVELOPMENT

8.1 WATER SUPPLY AND SEWERAGE

WATER SUPPLY

Water conservation is of vital importance to South Australia as 96 per cent of the State receives less than 500 millimetres of rain a year, while high temperatures encourage a higher use of water and a high rate of evaporation causes heavy losses from reservoirs.

The Waterworks Act, 1932-1978 gives the Minister of Works power to divert and impound the water from any streams or springs and take the water found in or under any lands for the purpose of constructing, completing, extending or maintaining any waterworks or for supplying water to or in any water district. The Act also gives the Minister power to declare any district, place or town a water district. The function of exploiting water resources is performed through the Engineering and Water Supply Department.

In 1973, the State Government announced its new water resources management policy. This statement embraced the same important principles contained in a document *Proposed National Approach to Water Resources Management*, being developed under the auspices of the Australian Water Resources Council and adopted by the Commonwealth and State Governments in 1976.

With the Water Resources Act, 1976 coming into effect on 1 July 1976, the Control of Waters and Underground Preservation Acts were repealed.

The Water Resources Act provides for the assessment, conservation, development and management of the water resources of the State by the Minister of Works and for the control and management of their utilisation, quality and other purposes.

Its provisions include the establishment of a South Australian Water Resources Council, Regional Water Resources Advisory Committees, the Water Resources Appeal Tribunal and a Well Drillers' Examination Committee. Four Regional Water Resources Advisory Committees, River Murray, Padthaway, Northern Adelaide Plains and Arid Areas, have been appointed.

The Water Conservation Act, 1936-1975 provides for the control of small reservoirs, bores, tanks etc. established in remote areas as emergency water supplies or to assist local development.

The following table gives details of water supplies in South Australia at 30 June for the five years to 1978.

Water Supplies, South Australia^(a)

At 30 June	Area of Works	Storage Capacity (a)	Length of Mains
	km ²	Megalitres	km
1974	69 005	230 030	20 946
1975	68 973	228 770	21 278
1976	69 013	228 240	21 688
1977	69 030	228 810	22 049
1978	69 040	228 860	22 381

(a) Includes pipeline storage tanks and service reservoirs on distribution systems.

Water Filtration

The Hope Valley Water Filtration Plant commenced supplying filtered water to the Metropolitan Distribution System in November 1977.

Construction of the Anstey Hill Water Filtration Plant continued during the year and is expected to be completed by mid-1979. Work commenced on the Barossa Water Filtration Plant in the latter part of 1977 and is expected to be completed by late 1981.

DISTRIBUTION OF WATER RESOURCES

Drainage Systems

In agreement with the States, the Australian Water Resources Council has divided Australia into twelve surface water drainage divisions. The divisions which constitute major surface water resources for South Australia are the South Australian Gulf Drainage Division which lies wholly within the State and in which are located all important State reservoirs, and the Murray-Darling Division, of which only a part is located in South Australia, and the waters of which are allocated between this State, Victoria, and New South Wales in accordance with the terms of the River Murray Waters Agreement (see pages 350-1).

Part of the large Lake Eyre Drainage Division covers the northern and eastern areas of the State, but, although streams in the area may flood extensively on occasions, they are generally unreliable and significant only to the local pastoral industry. The section of the South-East, Coast Drainage Division which intrudes into the south-east corner of South Australia has no good dam sites but a high rainfall in the area provides a good underground water resource of considerable importance to the State. Underground resources on the seaward edge of the Western Plateau Division, which covers the south-western part of the State, are recharged also from local rainfall.

South Australian Gulf Drainage Division

The eastern boundary of this Division is formed partly by the Mount Lofty Ranges, which rise to a maximum of 727 metres east of Adelaide and to over 1 000 metres north of Burra, and further north it follows the Flinders Ranges which reach a height of 1 166 metres at St Mary Peak. The boundary then rounds Lake Torrens and, further south, the western boundary is formed by a discontinuous line of hills on Eyre Peninsula. Kangaroo Island is also included, so that in all, the Division covers the whole perimeter of the South Australian gulfs. The individual river basins in this Division are all very small.

Most of the South Australian reservoirs are situated in this Division as can be seen from the map on page 343. The Little Para Dam, constructed on the Little Para River north of Adelaide at a cost of \$11 million, began service in early 1979. The capacity of this reservoir is 21 400 megalitres and the waterspread is 125 hectares. The following table shows the capacity, area at full supply level and the catchment area of the eleven largest reservoirs at 30 June 1979.

Major Reservoirs, South Australia^(a)
At 30 June 1978

Reservoir	Capacity	Area at Full Supply Level	Catchment Area
	Megalitres	Hectares	km ²
South Para	51 300	444	228
Mount Bold	47 300	308	388
Myponga	26 800	280	124
Kangaroo Creek	24 400	121	289
Little Para Dam	21 400	125	83
Millbrook	16 500	178	233
Happy Valley	12 700	188	451
Tod River	11 300	134	196
Bundaleer	6 370	85	1 671
Baroota	6 140	63	136
Warren	5 080	105	119

(a) All reservoirs with a capacity in excess of 5 000 megalitres.

Rainfall in excess of 750 millimetres a year occurs only on a very small area in the Mount Lofty Ranges, while in the north-west of the Division the annual average is less than 150 millimetres. In the southern parts of the Division, average precipitation generally exceeds potential evaporation only from May to August, and over most of the Division monthly evaporation rates exceed rainfall throughout the year.

The average annual run-off in this Division at the lowest practical dam sites is estimated at 430 000 megalitres but is subject to considerable variation. The two best streams, the Onkaparinga and the Torrens, account for 135 000 megalitres of the average flow and the combined annual flow of these two has varied between 467 000 megalitres down to 8 600 megalitres in the last eighty years.

After the major dam sites in the Mount Lofty Ranges had been developed because of the small size of the individual catchments in the Division, and the relatively low run-off and its high variability, it was found more economical to provide additional water to Adelaide and other high demand centres *via* pipelines from the River Murray. However, as demand continues to rise and problems with the quality of the River Murray water increase, attention is being re-directed to further development of streams within the Division.

The present average annual extraction of water by the Engineering and Water Supply

Department from the Gulf Drainage Division is about 120 000 megalitres; private diversion may take a further 13 000 megalitres.

River Murray

The River Murray is the most important source of water supply for South Australia. Under the terms of the River Murray Waters Agreement (see pages 350-1), South Australia is entitled to 1 550 000 megalitres of water annually and, after Dartmouth Reservoir has been completed and declared to be effective, this entitlement will be increased to 1 850 000 megalitres, subject to the declaration of restriction by the River Murray Commission. Losses by evaporation and seepage account for about 1 100 000 megalitres per annum. Over the past ten years, irrigation diversions have average 387 000 megalitres per annum and domestic, industrial and stock supplies have average 73 000 megalitres per annum. In a dry year, domestic, industrial and stock supplies may be as high as 129 000 megalitres.

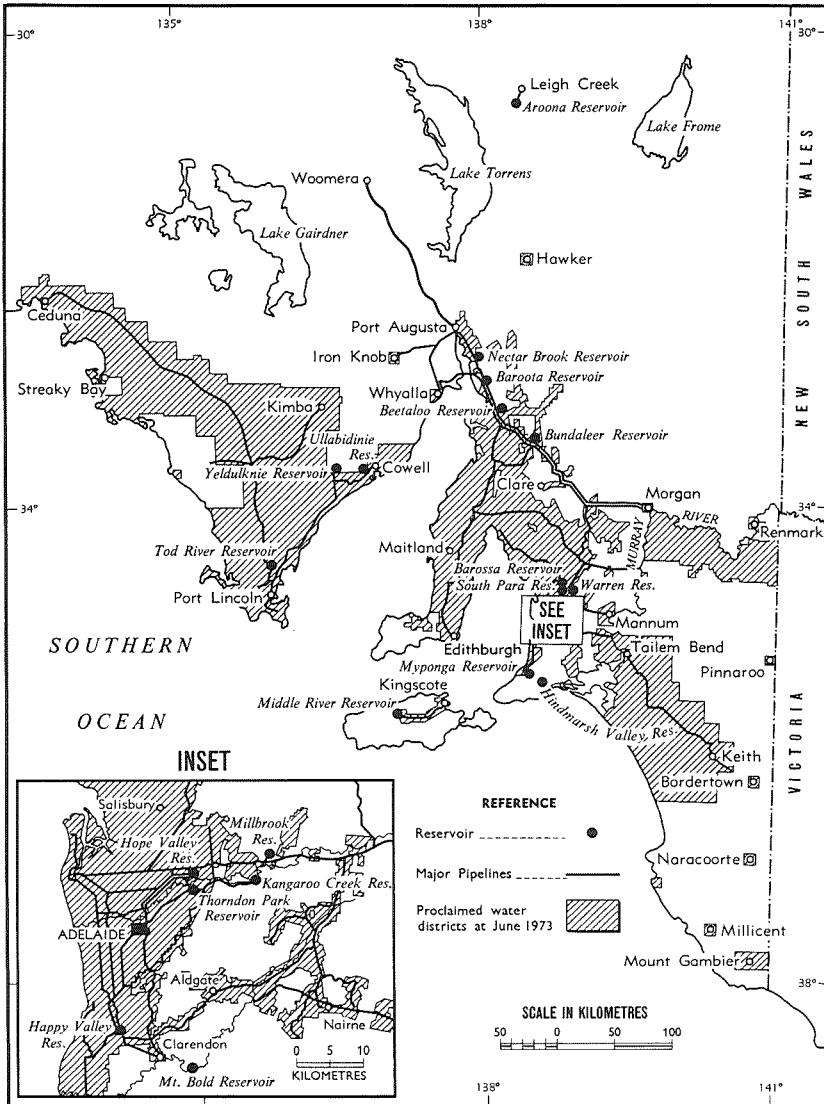
Adelaide metropolitan water supplies are supplemented by River Murray water through the Mannum-Adelaide and Murray Bridge-Onkaparinga pipelines. The Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines provide the water supply for extensive country areas or augment local resources in these areas. The first water pumped through the Mannum-Adelaide Pipeline reached the metropolitan system in 1954. The water is drawn from the River at Mannum nearly 67 kilometres in a direct line from Adelaide, and is raised by three pumping stations a total of 457 metres to a 137 megalitre summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

A second large pipeline to augment the metropolitan supply was completed in 1973. The pipeline extends for 48 kilometres from the River Murray near Murray Bridge to the River Onkaparinga near Hahndorf, and the water is distributed through the reservoirs on the latter stream. Three pumping stations lift the water 418 metres over the first 40 kilometres of the pipeline to a summit storage from which an 8-kilometre gravity section of the line discharges into the Onkaparinga. A branch main supplies the town of Murray Bridge and other branch mains supply areas in the Mount Lofty Ranges.

The Morgan-Whyalla pipeline, completed in 1944, includes four pumping stations which lift the water 478 metres over a distance of 92 kilometres from Morgan to a summit storage at Hanson. From here the water gravitates 267 kilometres *via* Port Augusta to Whyalla. Branch lines have been laid to Woomera (177 kilometres) and other country centres. The Morgan-Whyalla pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main was completed in 1966 and appurtenant works comprising additional storages and four new pumping stations were commissioned early in 1970. The second main which more than doubles the capacity of the scheme, parallels the original main to Baroota Reservoir, then extends westerly to Whyalla *via* a 12-kilometre undersea crossing of Spencer Gulf.

A 53-kilometre pipeline between Swan Reach and Stockwell which connects to the distribution section served by Warren Reservoir commenced operating in 1969 to supplement the supplies for lower northern areas from the Murray. A 143-kilometre pipeline between Tailem Bend and Keith completed in 1969 forms the backbone of a scheme involving 800 kilometres of branch mains subsequently laid to supply River Murray water to towns and farmlands in the Upper South East. The River Murray also supplies towns along its banks by means of direct pumping.

PORTION OF SOUTH AUSTRALIA
WATER SUPPLIES



Other Water Resources

Eyre Peninsula

Eyre Peninsula has no perennially flowing streams with the Tod River the only stream that can be relied upon in normal years to provide some flow of water. Underground basins, mainly in the southern portion of Eyre Peninsula provide most of the water supplies. Port Lincoln is supplied entirely with underground water available at shallow depth in the Lincoln Basin and Uley South Basin. The Uley-Wanilla Basin supplies Cleve and Cowell *via* the East Coast Main and also supplements the natural intake of the Tod Reservoir which was built in 1922 on a tributary of the Tod River.

A trunk main, 384 kilometres in length, from the Tod Reservoir to Ceduna and Thevenard was laid between 1923 and 1926 and a program of replacement and enlargement was completed in 1974. A 106-kilometre trunk main from Lock on the Tod Trunk Main supplies water to Kimba and intervening farmlands. This supply is augmented with water from the Polda underground basin.

South East

The hydrology of the South East covers a complex of surface and underground waters with substantial water resources but to date most work has been concentrated on the removal of water by drainage and this is discussed on pages 351-2.

Eight Mile Creek to the east of Port MacDonnell carries a permanent natural overflow from the springs of the Ewen Ponds area and discharges 68 000 megalitres a year into the Southern Ocean and there are other visible outlets. The Blue Lake now provides 4 000 megalitres annually to Mount Gambier. There is scope for considerable development in the South East and it is likely that up to 600 000 megalitres could be used annually from the underground water resources of the Region.

Other Underground Supplies

Many other areas of the State are dependent on underground supplies, particularly for stock drinking water. The aquifers of the North Adelaide Plains provide the major source of water for market gardens and related irrigation, but the demand level of 21 000 megalitres has been found to be beyond the permanent capability of the area. Usage is subject to Government control, and investigations on means of prolonging the life of the aquifers are in progress. A more complete discussion on underground water appears on pages 22-4.

Metropolitan Water Supply

In the following table, details of metropolitan services as well as revenue and expenditure are given for the metropolitan water supply district for the years 1974-75 to 1977-78.

Adelaide Metropolitan Waterworks, South Australia

Particulars (a)	1974-75	1975-76	1976-77	1977-78
Length of mains (kilometres)	6 874	7 049	7 268	7 470
Number of services	285 125	293 644	302 817	308 728
Revenue:			\$'000	
Rates and excess water	22 072	28 771	33 602	38 462
Other	260	187	469	281
Total	22 332	28 957	34 071	38 743

Adelaide Metropolitan Waterworks, South Australia (continued)

Particulars (a)	1974-75	1975-76	1976-77	1977-78
Expenditure:				
Working expenses	13 118	15 295	20 842	25 960
Interest	8 996	10 279	12 004	14 632
Total	22 114	25 575	32 846	40 592
Surplus	218	3 383	1 225	-1 849

(a) Includes particulars relating to near country areas supplied by extensions of the Metropolitan distribution system.

Water Consumption

The following table gives details of water used during the year and storage capacity of major reservoirs at the end of the year for metropolitan and country districts for the years 1974-75 to 1977-78. The quantity of water pumped from the River Murray through the major pipelines is also shown.

Water Storage and Consumption, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78
Capacity of major storages (at end of year):				
Adelaide metropolitan water supply (a)	188 680	188 680	188 680	188 680
Country water supply	34 860	34 860	34 860	34 860
Water consumption:				
Adelaide metropolitan water supply (b)	156 900	172 300	175 645	191 640
Country water supply (c)	76 400	82 800	84 192	86 946
Pumped from River Murray:				
Mannum-Adelaide pipeline	19 300	39 000	78 602	91 179
Murray Bridge-Onkaparinga pipeline	3 700	5 800	68 354	76 367
Morgan-Whyalla pipeline	21 500	27 600	29 229	32 465
Other supply systems	10 900	13 800	24 220	29 123

(a) Includes storages on the Mannum-Adelaide and Murray Bridge-Onkaparinga pipelines.

(b) Consumption within the Adelaide Statistical Division.

(c) Includes consumption in various areas outside of the Adelaide Statistical Division supplied from the Metropolitan distribution system.

WATER RATES AND CHARGES

Water rates are levied on all properties served from or abutting a water main except where specific exemption from rating applies or the property is in an area not subject to rating.

Amounts payable by individual ratepayers are determined by a base water rate on the annual value of a property and a water rate per kilolitre. Payment of the base rate on property permits use of a water allowance which is determined by dividing the sum involved by the water rate per kilolitre. Water used in excess of the allowance is charged at the rate per kilolitre.

Valuation equalisation was introduced in Metropolitan and Country Water Districts from 1 July 1975. This system provides for a more even distribution of rates and properties of equal market value pay approximately the same base water rates irrespective of location or year of valuation. A minimum charge of \$32 is applicable.

In Country Lands Water District (farm lands) the current base water rate is 37 cents for each hectare located within 1.6 kilometres of a main. A minimum charge of \$32 is applicable.

The current water rate per kilolitre applicable in City, Township and Country Lands Water District is 22 cents per kilolitre. Where water is supplied to properties outside of proclaimed water districts or otherwise beyond ratable limits it is supplied by measure at the ruling rate per kilolitre.

Approved churches, charitable institutions and schools are exempted from payment of water rates on annual values and water is supplied to them by measure at concessional prices. A remission of up to 60 per cent of water rates, with a maximum of \$75 a year, is provided to eligible pensioners.

Services from mains to property boundaries are installed and maintained by the Engineering and Water Supply Department. Connection fees are uniform throughout the State and are currently \$100 for a 20 millimetre service and \$150 for a 25 millimetre service with commensurately higher fees for larger services.

SEWERAGE

ADMINISTRATION

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the Sewerage Act, 1929-1977. The Act is administered by the Engineering and Water Supply Department for the Minister of Works and provides for water borne sanitary sewerage schemes within proclaimed drainage areas. As a general rule the Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local Government authorities are empowered under the Local Government Act, 1934-1979 to provide sanitary drainage schemes and in recent years a number of these authorities have installed common septic tank effluent drainage schemes discharging to biological filters or oxidation ponds.

METROPOLITAN SEWERAGE

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewerage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the Australian capital cities.

The proclaimed Adelaide Drainage Area at 30 June 1978 served an estimated population of 897 000 persons and covered 674 square kilometres of the Adelaide Plains between Darlington and Smithfield, the area between Port Noarlunga and Aberfoyle Park and portion of the Blackwood and Belair area. Subdivision developers are required

to make capital contributions towards the cost of sewer and water extensions for all new allotments in areas capable of being served within the Drainage Area.

Four major sewerage systems are employed, each draining to separate sewage treatment works at Bolivar, Glenelg, Port Adelaide and Christies Beach. Islington Sewage Farm was abandoned in 1966 when the Bolivar Treatment Works was put into service. The Christies Beach Treatment Works began operating in August 1971, and will eventually serve the whole of the area between Coromandel Valley and Moana Beach. At present there are a number of small temporary treatment works installed in the Reynella-Morphett Vale area which will be phased out following connection of the developed areas to the Christies Beach Works.

A large number of common effluent drainage systems have been installed in fringe areas by local government authorities and most of these have been, or are planned to be, connected to the sewerage systems. A charge for each house connected is levied against local government authorities whose common effluent drainage systems discharge to sewer mains. Property owners pay an annual rate for the service to the local government authority concerned.

The following table shows details of metropolitan sewers for the last four years.

Metropolitan Sewers, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78
Adelaide Drainage Area (km ²)	652	662	666	674
Length of sewers (km)	4 368	4 538	4 718	4 887
Number of connections	298 472	309 781	320 456	324 366
	\$'000			
Revenue:				
Rates	15 914	20 503	23 572	24 734
Other	223	81	148	590
Total	16 137	20 584	23 720	25 324
Expenditure:				
Working expenses	9 751	11 008	13 575	16 626
Interest	5 963	7 298	9 118	10 509
Total	15 714	18 306	22 693	27 135
Surplus	423	2 278	1 027	-1 811

COUNTRY SEWERAGE

At 30 June 1978 the drainage areas of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 127 square kilometres; the length of sewers laid was 775 kilometres and the number of connections totalled 33 624.

Sewerage schemes are located at Angaston, Balhannah, Gawler, Gumeracha, Hahndorf, Lobethal, Mannum, Millicent, Mount Gambier, Murray Bridge, Myponga, Naracoorte, Oakbank, Port Augusta, Port Lincoln, Port Pirie, Stirling, Victor Harbor and Whyalla.

Construction of the Oakbank, Port Pirie, Port Augusta, Stirling and Victor Harbor sewerage systems is still in progress. In 1977-78, 46 kilometres of sewers and 2 079 new connections were laid in country drainage areas. In addition, the Engineering and Water Supply Department has constructed schemes at Mount Burr and Nangwarry townships for the Woods and Forests Department and numerous schemes to serve country hospitals, institutions etc., operated by other authorities.

Common effluent drainage schemes have been installed by local government authorities at Barmera, Berri, Birdwood, Bordertown, Burra, Cleve, Cobdogla, Crystal Brook, Cummins, Eudunda, Goolwa, Kadina, Kapunda, Lameroo, Lock, Loxton, Maitland, McLaren Vale, Meningie, Mount Barker, Mount Pleasant, Mount Torrens, Nuriootpa, Parndana, Penola, Pinnaroo, Renmark, Riverton, Saddleworth, Tanunda, Waikerie, Wallaroo, Williamstown, Willunga, Woodside, and portion of Ardrossan, Port Augusta, Port Wakefield and Streaky Bay.

In addition to local authorities installing township schemes, the South Australian Housing Trust has provided Housing Trust home areas with small schemes. These have been installed at Quorn, Echunga and Kingscote.

The Australian National Railways has provided schemes for settlements in the areas of Stirling North, Hesso and Pimba while the Department of Aboriginal Affairs has provided schemes at Point McLeay, Point Pearce, Nepabunna, Ernabella, Amata and Davenport Aboriginal reserves.

Construction of systems is currently being carried out at Tintinara, along with extensions at Barmera, Mount Barker, Nuriootpa and Tea Tree Gully. Surveys and designs are in progress for Kimba and Meadows and tenders have been let for schemes to be installed at Jamestown, Kingscote, Lyndoch and Tailem Bend.

SEWER RATES AND CHARGES

The Engineering and Water Supply Department provides sewer connections to property boundaries but internal drainage systems which are the responsibility of landholders must conform to regulations under the Sewerage Act and must be installed by authorised plumbers. Standard fees for sewer connections are \$50 and \$75 for 100-millimetre and 150-millimetre sizes respectively.

Sewer rates are levied on properties connected to or abutting a sewer, with a minimum annual charge of \$32. Valuation equalisation, as applicable to water rating, applies also to sewer rating. A marginally higher rate is charged in country areas. A remission of up to 60 per cent of sewer rates to a maximum of \$75 is provided to eligible pensioners.

Rates levied by local government authorities on properties connected to common effluent schemes are usually proportionate to the costs and interest charges involved in the schemes.

WATER AND WATER POLLUTION CONTROL LABORATORIES

The Engineering and Water Supply Department has the responsibility to control pollution of the State's water resources, to maintain public water supplies at an acceptable quality and to operate sewerage systems. For this purpose, the Department maintains the State Water Laboratories at Bolivar, where a staff of chemists, biologists and other scientists and technical personnel examine over 85 000 samples of water, effluent and industrial wastes each year. A more detailed discussion on these laboratories was included on pages 369-71 of the *South Australian Year Book 1975*.

8.2 IRRIGATION AND DRAINAGE

IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the administrative authority for Government irrigation areas has been the Department of Lands with the Engineering and Water Supply Department the constructing authority for the Minister of Irrigation, but from 30 June 1978, the authority has been transferred to the Minister of Works with the Engineering and Water Supply Department being the responsible administrative department. A more detailed historical discussion of irrigation in South Australia was included on pages 314-6 of the *South Australian Year Book* 1970.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. During 1977-78, 440 906 megalitres of water were diverted from the River Murray in South Australia for irrigation purposes.

Highland Areas

With the major exception of the Mypolonga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

These areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped from the river in open concrete-lined channels or pipes. Many of the recently developed areas use a system of overhead or under-tree sprays for watering the blocks in preference to the traditional surface reticulation. Sprays are also being used to develop land too high for reticulated watering. Landholders on Government controlled areas and on private lands constituted under special Parliamentary Acts pay an annual rate for routine irrigation and a charge is made for additional water, either on a measurement basis where meters have been installed, or on an hourly basis where channels are still utilised. The Renmark Irrigation Trust also supplies water on a volume basis to landholders in its district.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems either leading to shafts and bores or to comprehensive drainage systems which convey the water to evaporation basins.

Reclaimed Areas

On the lower Murray between Mannum and Wellington, a series of swamp and overflow areas have been reclaimed by Government and private agencies.

Although these reclaimed areas contain some market gardens they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped back into the river. Approximately 600 hectares of highlands adjacent to reclaimed areas have also been developed for the production of fodder crops through the use of spray irrigation and there are 370 hectares at Mypolonga used for horticultural crops.

Irrigation Areas, South Australia

Area Irrigated	1973-74	1974-75	1975-76	1976-77
Government controlled:			Hectares	
War Service schemes (1939-45 War)	3 253	3 236	3 281	3 274
Other	12 850	12 722	12 600	12 454
Non-government:				
Trusts, boards and association areas	7 875	7 875	7 875	7 875
Private schemes	18 875	18 875	18 875	18 875

Further details of the 15 728 hectares irrigated in Government-controlled schemes in the year 1976-77 are shown in the following table.

Government Controlled Irrigation Areas: South Australia, 1976-77

Area Irrigated	Highland Areas		Reclaimed Areas	Total
	Surface Reticulation	Spray Irrigation		
	Hectares			
War Service schemes (1939-45 War)	1 470	1 804	—	3 274
Other	7 170	1 726	3 558	12 454
Total	8 640	3 530	3 558	15 728

THE RIVER MURRAY AGREEMENT

The *River Murray Waters Act* 1915 ratified an agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provides that the minimum quantity of water to be allowed to be passed for supply to South Australia in each year shall be sufficient to maintain certain specified monthly flows in the lower river. The flow at Albury is shared equally by New South Wales and Victoria and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. South Australia is responsible also for the control and operation of Lake Victoria storage and the section of the River Murray downstream of its inlet channel. This section of the river contains three locks. Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition, five barrages were placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. These barrages were completed in 1940.

The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to more than 3 million megalitres. Except for that held in various lock pools, no water from the Murray is stored in South Australia. In 1962 agreement was reached for the construction of a reservoir of over 6 million megalitres covering 1 300 square kilometres with its dam at Chowilla, just inside the State border, but early in 1969 the River Murray

Commission recommended that an alternative dam be built at Dartmouth in Victoria before further consideration be given to the completion of the Chowilla Dam. Legislation ratifying an agreement based on the Commission's recommendation was passed by the Commonwealth, New South Wales and Victorian Parliaments in 1970 and an Act ratifying the agreement was passed in the South Australian Parliament in August 1971. In June 1974 the River Murray Commission accepted a tender for the construction of the Dartmouth Dam and appurtenant works. The bulk of the 14 million cubic metres of earth and rockfill material comprising the main embankment have now been placed. The river diversion tunnel was plugged on 3 November 1977 and filling commenced at that time.

DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State. The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence, drainage schemes have been constructed to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 40 000 hectares of land at a cost of \$300,000, this cost subsequently being included in the land allotment price. The system is maintained by the Millicent District Council from rates levied on land holders.

Following this early success the Government undertook the construction of further drains during the next sixty years. These drains were constructed under three sets of conditions: *National Drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *Petition Drains* were constructed on request from landholders who agreed to repay the full cost to the Government over a period of forty-two years; *Scheme Act Drains* commenced in 1908, provided for the Government and the landholders to share the cost, the landholders share being repayable over forty-two years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently, following a royal commission, the landholders' liability was reduced.

The passing of the South-Eastern Drainage Act Amendment Act, 1948 marked a new stage in the development of south-eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 700 kilometres of drains had been constructed at a capital cost of \$1 441 752. However, in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage program as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 160 000 hectares of land between the Millicent and Kingston districts, has now been completed. In 1960 the Eastern Division Drainage Scheme, for the drainage of 300 000 hectares of flats lying between Kalangadoo and 65 kilometres north of Lucindale, was commenced and construction on this scheme was completed in November 1969.

Under the schemes introduced since 1948 landholders were required to repay an amount based on a 'betterment assessment' of their property. As in the other schemes this amount was repayable over forty-two years. The 1971 amendment to the South-Eastern Drainage Act extinguished the liability of landholders to make a capital contribution in respect to existing drainage construction.

At 30 June 1978 approximately 1 450 kilometres of drains (excluding the Millicent scheme) had been constructed at a capital cost of \$18 890 000. These drains vary considerably in size from only a few metres to over 60 metres bottom width.

The Board now also maintains the Eight Mile Creek Drainage Scheme which is located 35 kilometres south of Mount Gambier near Port MacDonnell. Fifty kilometres of drains remove excess spring and rain water from 16 660 hectares of peat land on which 32 dairy properties are situated.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 700 bridges. Rates are levied on landholders to meet the costs of such maintenance.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1977.

8.3 ROADS

Roads in South Australia are officially classified either as main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads. Main and district roads within local government areas are vested in the various local government authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the roads carrying heavy traffic are constructed and maintained by the Highways Department. In areas outside the control of local government authorities roads are vested in the Minister of Local Government under the control and management of the Commissioner of Highways.

The National Association of Australian State Road Authorities (NAASRA) has defined a nine-level classification system which is used jointly by the Highways Department and the Bureau of Transport Economics for planning purposes. The Commonwealth Department of Transport has adopted a six-level system of road classification, based generally on the NAASRA system, for funding purposes.

The latter classification is used in the following table to show the length of roads, customarily used by the public, according to type of surface at 30 June 1978.

**Length of Roads: Type of Surface, South Australia
At 30 June 1978**

Class of Road	Type of Surface				Total
	Natural Surface	Formed Only	Paved		
			Unsealed	Sealed	
Kilometres					
National roads (a):					
National highways (b)	571	372	5	1 638	2 586
Commerce roads (c)	—	—	—	56	56
Arterial roads (d):					
Rural	—	513	1 723	7 579	9 815
Urban	—	8	40	1 049	1 097
Local roads (e):					
Rural	35 988	22 748	19 052	3 310	81 098
Urban	465	584	372	4 456	5 857
Total	37 024	24 225	21 192	18 088	100 529

(a) Roads declared by the Commonwealth Minister for Transport to be national highways or commercial roads under the provisions of the *States Grants (Roads) Act 1977*.

(b) Roads linking State capital cities with other State capital cities. Canberra, Darwin, other specified cities and other roads considered to be of national importance.

(c) Roads which facilitate trade and commerce. These roads are declared for the duration of construction only and revert to arterial status when completed.

(d) Roads declared by the Commonwealth Minister for Transport to be arterial roads under the provisions of the *States Grants (Roads) Act 1977*.

(e) Roads not included in above categories.

The natural surface roads shown in the table include tracks in localities outside of local government areas.

In closely settled areas, particularly in the metropolitan area and county towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light, roads may be formed of natural materials or be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved as traffic warrants, by the addition of a bituminous seal.

A continuous program of road improvement is carried out by reconstructing and widening arterial roads in the metropolitan area and the construction and sealing of important rural roads. Extensive road construction is carried out also in new housing development areas.

Ferry services across the River Murray are provided on a free and continuous basis and are under the control and management of the Commissioner of Highways. The Commissioner also operates a free ferry across Cooper Creek, on the Birdsville Track in the far north of the State, when the Creek is in flood.

ROAD FINANCE

Funds used for roadworks in South Australia are derived from four main sources, namely:

- (1) the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers;
- (2) grants from the Commonwealth Government;
- (3) charges imposed by the State Government under the Road Maintenance (Contribution) Act;
- (4) property rates and other levies imposed by municipal and district councils.

Funds received from the first three sources are expended by the Commissioner of Highways on works authorised by the Minister of Transport. The Highways Act provides for fees received for vehicle registrations and drivers licences, less cost of collection, to be credited to the Highways Fund. The Fund is credited also with interest on and repayments of advances made to local government authorities for roadworks and for the purchase of machinery; special contributions from the State Transport Authority under the Highways Act; contributions from local government authorities towards the cost of lighting roads; licence fees collected under the Hawkers Act, 1934-1960; and other minor sundry receipts. Receipts under the Road Maintenance (Contribution) Act are paid into a special account at the State Treasury and applied only to the maintenance of public roads.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, ferries, and associated works. Approximate expenditure by State and local government authorities during each of the past five years was; 1973-74, \$69 million; 1974-75, \$77 million; 1975-76, \$90 million; 1976-77, \$105 million and 1977-78, \$114 million. These figures include the cost of land purchased for new roads, for road widening and charges for depreciation of plant and machinery. Local government figures used to derive the totals include expenditure which is subsequently recouped from the public and expenditure on footpath maintenance and stormwater drainage.

**Highways Department, South Australia
Receipts and Payments**

Particulars	1974-75	1975-76	1976-77	1977-78
RECEIPTS (\$'000)				
Motor vehicle registrations, licences, fees, fines, etc.	25 840	27 574	40 081	39 848
Road maintenance charges	4 050	4 243	4 716	4 825
Commonwealth Government grants	31 770	41 100	39 359	40 749
Repayments of, and interest on, advances to local authorities	474	326	198	141
Other	570	2 901	484	881
Total	62 704	76 144	84 838	86 444
PAYMENTS (\$'000)				
Construction and reconstruction of roads, bridges, etc.	39 180	44 095	53 008	47 607
Maintenance of roads, bridges, etc.	14 964	18 479	19 998	21 750
Interest, debt redemption, etc.	675	707	770	806
Advances to local authorities	42	31	26	59
Net purchases of land, buildings, plant, equipment, materials, etc.	888	1 446	2 988	3 805
Other (a)	7 671	9 243	8 826	11 333
Total	63 420	74 001	85 616	85 360

(a) This includes provision for leave and plant overhauls which may be a negative figure in some years.

The biggest single element of roads expenditure omitted from the above table is the cost of work carried out under the provisions of the Planning and Development Act, 1966-1978, which requires persons and authorities (including the South Australian Housing Trust) who subdivide land for housing to provide roads to certain specifications.

Commonwealth Government Road Grants

Road grants by the Commonwealth Government have been made to the States since 1923-24. The current road grant arrangements are contained in the *States Grants (Roads) Act 1977*. Under this legislation a total of \$475 million was allocated to the States for the financial year 1977-78. The allocation to South Australia was \$40.4 million or 8.5 per cent of the total States allocation.

In arriving at the current road grant arrangements the Commonwealth Government took into account the Commonwealth Bureau of Roads *Report on Roads in Australia 1975*. In this report, the Bureau set out its assessment of the most appropriate road expenditure programs in each State for the years 1977-78 to 1980-81, and made recommendations regarding the Commonwealth Government road grants and arrangements considered necessary to achieve these expenditure programs.

Although the Commonwealth Government was guided to a considerable extent by the Bureau report, the roads grant program adopted differed significantly from that recommended by the Bureau.

Under the *States Grants (Roads) Act 1977* the Commonwealth Government allocated grants to national roads and to roads other than national roads. The total 1977-78 allocation for national roads to all States was \$194.42 million. The allocation to South Australia was \$18.2 million or 9.4 per cent of the total States allocation. The grants for

national roads are provided to meet the approved construction and maintenance costs of declared national highways, including in South Australia the principal road links connecting Adelaide to Melbourne, Adelaide to Perth and Adelaide to Darwin. In addition, national road grants are provided to meet the approved construction costs of declared national commerce roads. National commerce roads are roads which facilitate trade or commerce, or the development of trade or commerce, with other countries or among the States.

For roads other than national roads the total 1977-78 Commonwealth Government grant allocation to all States was \$280.58 million. The allocation to South Australia was \$22.2 million or 7.9 per cent of the total States allocation. These grants are provided for approved expenditures on rural arterial roads, rural local roads, minor traffic engineering and road safety improvements with respect to roads, urban arterial roads and urban local roads.

**Commonwealth Government Road Grants
South Australia, 1977-78**

	\$'000
National roads:	
National highways construction	15 000
National highways maintenance	1 900
National commerce construction	1 300
Total national roads	18 200
Roads other than national roads:	
Rural arterial construction	7 000
Rural local construction and maintenance	6 700
Miters (a)	1 700
Urban arterial construction	4 600
Urban local construction	2 200
Total other roads	22 200
Total roads	40 400

(a) Minor traffic engineering and road safety improvements.

Under the *States Grants (Roads) Act 1977*, the Commonwealth Government has stipulated that, as a condition to the receipt of road grants, each State should meet from its own resources minimum annual road expenditure quotas. The 1977-78 quota stipulated for South Australia was \$37.2 million.

In addition to grants for the construction and maintenance of roads, the Commonwealth Government provides grants to the States for planning and research projects associated with transport by land of persons or freight, or persons and freight. These grants are made under the *Transport Planning and Research (Financial Assistance) Act 1977*. The total 1977-78 grant allocation to all States was \$8.0 million. The allocation to South Australia was \$584 000 or 7.3 per cent of the total States allocation. For 1977-78 these grants are provided to meet two-thirds of the approved cost of all approved planning and research projects undertaken by the States in relation to transport by land.

ROADS SURVEY

A survey designated as the Australian Road Survey Update 1977, a joint undertaking by the National Association of Australian State Road Authorities and the Bureau of Transport Economics, has been completed. A report of the results of this survey will be prepared for the Commonwealth Government to use as a basis of road finance legislation for the three years 1980-81 to 1982-83.

FUTURE DEVELOPMENT

The *South Australian Year Book* 1970, on pages 319-25, contained some details of the reports of two major studies: these were the reports of the Town Planning Committee of South Australia (Metropolitan Development Plan), submitted in 1962, and the Metropolitan Adelaide Transportation Study (MATS) report, released in 1968. In June 1970 the Government undertook to review the MATS proposals with particular reference to public transport. The resultant Adelaide Transportation Report 1970 or 'Breuning Report' was discussed in the *South Australian Year Book* 1971, on pages 317-8.

One outcome of the Breuning Report was the appointment of a Director-General of Transport to advise the Minister on transport policy. In 1973 the Director-General submitted a report to the Minister, entitled *Public Transport in Metropolitan Adelaide*. The report contained a program of improvements to urban public transport ranging from specific projects to be executed in the near future to a broad program for up to thirty years in the future. This report has become the basis for current Government policy. A revised document to update this report was commenced in 1975.

Some extensive and important roadworks have proceeded, and will continue, along lines recommended in the earlier reports. These include major arterial road and street improvements and the progressive improvement of interstate road links. Major improvements to the main Adelaide to Melbourne route have been under way for some years and will continue.

Construction of the South Eastern Freeway has been completed as far as Murray Bridge. The Swanport Deviation, which was opened in May 1979, provides a by-pass of Murray Bridge including a new bridge over the River Murray.

RESEARCH

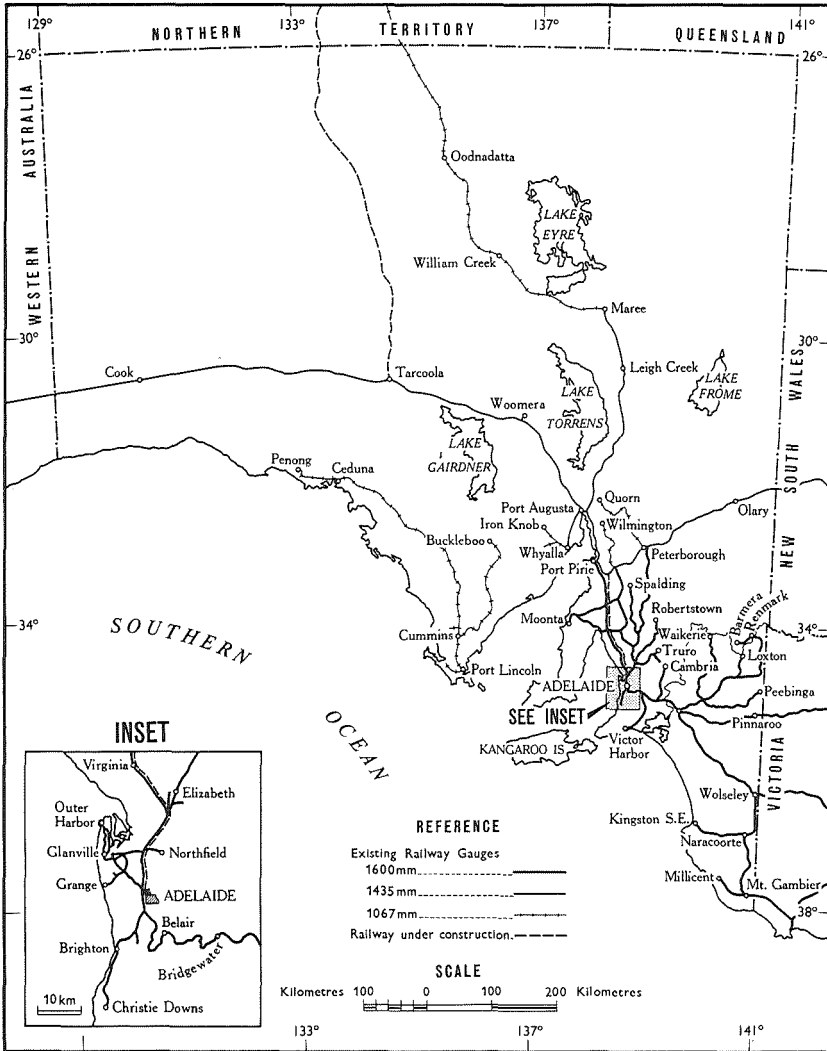
Because of the great area of South Australia and the wide variety of climatic and soil conditions, special sections of the Highways Department are engaged in constant investigation and testing of soils, materials, and construction methods to ensure that a high standard of road construction is maintained and that methods are adapted to the needs of particular areas.

South Australia contributes to Australian road development through its active participation in the National Association of Australian State Road Authorities. Specialist committees deal with bridge design, materials research, traffic engineering, bituminous pavements, plant and equipment, and long-term planning. The Association in 1960 established the Australian Road Research Board as a national centre for road research information and for the correlation and co-ordination of road research activities.

8.4 RAILWAYS

Railway systems in South Australia are operated by both the Commonwealth and South Australian Governments. Management of the Australian National Railways is vested in the Australian National Railways Commission.

SOUTH AUSTRALIA RAILWAY SYSTEMS



In 1851 a 'Board of Undertakers' was appointed in connection with the construction of the Adelaide to Port Adelaide railway and in 1856 a Board of Railways Commissioners was appointed to control South Australian railway operations. This Board was abolished in 1859 and from then until 1887 control was vested in the Commissioner of Public Works. The South Australian Railways Commissioners Act of 1887 gave almost complete authority for management and administration to three Railways Commissioners, reserving (as in the past) financial control to Parliament. The powers of the three Commissioners passed to one Commissioner in 1892. The South Australian Railways Commissioners Act, 1936-1975, under which the Commissioner was appointed for a period of seven years, incorporated many of the provisions of the 1887 Act, including those for financial control.

In August 1975 the State Government approved the transfer of non-urban railways to the Australian National Railways Commission, although the actual transfer did not become operative until 1 March 1978. In December 1975, under the provisions of the South Australian Railways Commissioners Act Amendment Act, 1975 the State Transport Authority took over control of the South Australian Railways, including non-urban lines pending their full amalgamation with the Australian National Railways in March 1978. For further details see pages 507-8.

In South Australia the only private railways open to general traffic are the lines owned by the Broken Hill Proprietary Co. Ltd from Iron Knob and Iron Baron to Whyalla (82 kilometres) used for the carriage of iron ore; and from Coffin Bay to Port Lincoln (40 kilometres) used for the carriage of limesand.

Only a small portion of the Adelaide metropolitan area is served by railways, the main trunk routes passing through northern and southern suburbs. The line to Noarlunga Centre serves south-western suburbs and carries passenger traffic and goods traffic to Port Stanvac and Lonsdale. This line serves the rapidly expanding industrial and housing development along the coast south of Adelaide. The Port Adelaide line, its extensions to Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide.

A more detailed historical survey on railways in South Australia was included on pages 263-6 of the *South Australian Year Book* 1966.

Standardisation of Rail Gauges

Narrow, standard, and broad gauge systems are all in existence in South Australia. For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transshipment of goods and passengers and with the provision, maintenance and operation of different sets of rollingstock. During recent years with the rapid development of road and air transport facilities there has been increasing pressure for standardisation of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

Details of lines that were standardised before the transfer of the non-metropolitan railways are shown on pages 347-8 of the *South Australian Year Book* 1978.

Following the enactment of the legislation for the transfer of the non-urban railways to the Australian National Railways Commission, a committee was appointed to review earlier plans for standardising the Adelaide-Port Pirie line. In December 1976 the committee recommended conversion of the existing broad gauge line to standard gauge on the existing earthworks between Salisbury and Port Pirie and a single additional standard gauge line from Salisbury to Adelaide with major terminal facilities in the

Adelaide metropolitan area. The revised proposals were estimated to cost \$75 million. Some expenditure on the project, involving engineering and planning and the purchase of a small quantity of track material, has been incurred, but the project has been deferred pending further consideration.

8.5 HARBOURS AND AERODROMES

HARBOURS

The State of South Australia, including Kangaroo Island, has a coastline of more than 3 850 kilometres. There are two large indentations, Gulf St Vincent and Spencer Gulf, which have many harbours for shipping.

Of the many seaports in South Australia, at present only sixteen are used by commercial shipping: nine of these have State-owned wharves or jetties and seven have privately-owned wharves or jetties. In addition the State maintains jetties or wharves for promenade and fishing purposes at fifty ports that are no longer used by commercial shipping and eighteen jetties are leased to district councils.

The Broken Hill Proprietary Co. Ltd owns and operates bulk handling facilities at Ardrossan, Rapid Bay, Whyalla and Proper Bay, while the Colonial Sugar Refining Co. Ltd owns and operates a bulk loading installation at Ballast Head, Kangaroo Island. The Australian National Railways operates the wharf at Port Augusta on behalf of the Commonwealth and the Port Stanvac oil terminal is owned by Petroleum Refineries (Aust.) Pty Ltd.

There are six deep-sea ports operated by the State, namely Port Adelaide, Port Pirie, Port Lincoln, Thevenard, Wallaroo and Port Giles while overseas vessels are also accommodated at Port Stanvac, Port Augusta, Whyalla and Ardrossan.

CONTROL OF HARBOURS

The control of State-owned harbours (including the River Murray) is vested in the Minister of Marine; he is responsible for the control of navigation within harbours and for all harbour facilities including lights, buoys, beacons, bulk loading plants and fishing boat accommodation. In addition he is responsible for the control of the competency of masters and others in charge of intrastate vessels and fishing vessels, and the seaworthiness and safety of such vessels. Relevant legislation includes the Harbors Act, 1936-1974, the Marine Act, 1936-1976 and the Fisheries Act, 1971-1977.

Department of Marine and Harbors Indebtedness, Revenue and Expenditure

Year	Loan Fund Indebted- ness	Revenue	Expenditure from Revenue			Surplus (+) or Deficit (-)
			Working Expenses	Interest	Total	
			\$'000			
1973-74	67 082	10 037	6 537	3 359	9 896	+141
1974-75	73 013	10 889	8 425	3 828	12 253	-1 365
1975-76	80 388	10 705	9 065	4 661	13 726	-3 021
1976-77	87 343	12 751	11 142	5 839	16 981	-4 230
1977-78	93 316	13 955	12 643	6 576	19 219	-5 264

In 1977-78 the Department of Marine and Harbors handled 6 476 970 tonnes of cargo (including general cargo at private ports) or approximately 47 per cent of the total tonnage of 13 903 718 tonnes passing through all the ports in South Australia; the balance, consisting mainly of bulk mineral shipments, being handled independently at the privately owned wharves.

HISTORICAL

For a detailed description of development in the nineteenth century see pages 270-1 of the *South Australian Year Book* 1966.

Trend of Development

As shipping has increased through growth in trade many wharves and jetties have been strengthened or replaced by better structures. To keep most harbours open for larger vessels it has been necessary to deepen and widen navigation channels, deepen existing berths and extend jetties into deeper water. An example of this type of project was the redevelopment of Thevenard harbour, completed in 1972, which entailed the dredging of a deeper channel and the reconstruction of the jetty so that bulk carriers twice the size of those previously accommodated could be fully loaded.

Since the establishment of new soldier settlements in the 1950s, shipping to and from Kangaroo Island has increased. Additional harbour facilities were made available with the provision of a trailership berth at Kingscote for the roll-on roll-off vessel *M. V. Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

A change in the pattern of intrastate shipping has occurred progressively since 1952 with the provision of bulk handling facilities for grain at major ports. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Thevenard and Port Giles, and also at Ardrossan under agreement with the owner of the private wharf. Grain is railed or trucked overland to terminal silos and loaded aboard ocean-going vessels by means of conveyors, so eliminating ketch trade from the smaller ports. Competition from intrastate road and rail transport has affected the larger ports as well, so that very little general cargo is carried between ports in this State.

Future developments at ports other than Adelaide are likely to be concerned primarily with bulk trades and the increasing size of bulk carriers. For example, bulk handling facilities, involving extension of an existing jetty to provide two outer berths for loading grain ships and an inner berth for unloading phosphate-rock carriers, have been completed at Port Lincoln. The phosphate-rock berth is in operation and caters for ships up to 35 000 tonnes. The first conveyor loader system was commissioned in May 1977 and the first ship loaded grain on 26 May 1977. A second ship loader, commissioned in February 1978, doubled the input capacity to 4 000 tonnes an hour. The two grain berths cater for ships up to 60 000 tonnes but could be modified for ships of 100 000 tonnes. The overall cost of the whole project (including dredging), is estimated at \$13 million.

Development of Port Adelaide

The Greater Port Adelaide Plan, details of which were released in 1949, included proposals for twenty projects for port development over the ensuing fifty years. Among those projects were:

- (1) the improvement and extension of wharves and allied cargo facilities;
- (2) the deepening, and widening of the shipping channels and provision of larger swinging basins;
- (3) the reclamation and development of low-lying land adjacent to the port for the creation of industrial, commercial and dock estates.

Some of these projects have been completed while others are still in progress, *e.g.* the Port River has been deepened to 9 metres at Low Water and a swinging basin of 305 metres diameter has been provided in the inner harbour. Currently the river channel is being widened to a minimum width of 150 metres. The material dredged in this operation is being used to reclaim part of the 800 hectares of low-lying land intended to be used for industrial and commercial sites and for port extensions.

To ensure the future of Port Adelaide as a major port, a container berth, capable of accommodating the largest cellular container ships likely to serve Australia in the foreseeable future, has been established at Outer Harbor. The berth, channel and swinging basin are suitable for ships of 290 metres in length, 11 metres in working draft and a capacity of almost 3 000 containers. The approach channel has been deepened to a depth of 12.3 metres so that ships would not be delayed by tide movements. The berth was officially opened on 17 March 1977 and 45 vessels used the facilities during 1977-78.

Two container depots have been built by private enterprise in the dock industrial estate 800 metres from the inner harbour waterfront and offer acceptance, forwarding, packing and unpacking facilities for international and interstate containers and other unit loads: to facilitate shipment of wool in containers a large wool store and a high density wool dumping centre have been established adjacent to these depots.

An interstate roll-on roll-off terminal in No. 3 Dock was opened early in 1971 and later in the year the facilities were extended to serve larger roll-on roll-off vessels engaged in overseas trade. A berth in No. 1 Dock has been modified to provide a reinforced concrete pad for the stern-loading type of vessel operating between Port Adelaide and ports in Tasmania. Recent developments include the provision of a steel handling berth to accommodate roll-on roll-off vessels and modifications to an outer harbour berth to serve larger overseas roll-on roll-off vessels.

AERODROMES

There were twenty-nine civil aerodromes in South Australia at 30 June 1978 including nine owned and operated by the Commonwealth Government and twenty licensed aerodromes owned and operated by local authorities or private interests. In addition there are numerous authorised landing grounds which are fields prepared for the operation of aircraft but not open to public use. These fields meet Commonwealth Government specifications less exacting than those used in the development of government owned or licensed aerodromes.

Government and licensed aerodromes in South Australia are set out below.

<i>Government Owned</i>		
Adelaide	Leigh Creek	Parafield
Ceduna	Mount Gambier	Port Lincoln
Kingscote	Oodnadatta	Whyalla
<i>Licensed</i>		
Amata	Granite Downs	Mount Dare
Cleve	Indulkana	Naracoorte
Cordillo Downs	Innamincka	Port Pirie
Cowell	Kimba	Renmark
De Rose Hill	Loxton	Tieyon
Ernabella	Millicent	Waikerie
Fregon	Minnipa	

The main terminal in South Australia is the Adelaide Airport at West Beach, and although not an international airport it can be used by international aircraft when required. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth, Canberra and Darwin and is the terminus of intrastate services.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about 18 kilometres north of Adelaide, has been restricted principally to use by light aircraft.

Other aerodromes are situated near the larger towns *e.g.* Mount Gambier, Whyalla, Port Lincoln and Port Pirie. About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State.

In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Defence, through the Defence Research Centre, and the other at Salisbury (Edinburgh Airfield) which are used by aircraft associated with trials operations and by civil charter aircraft carrying passengers and freight. Edinburgh Airfield is also the base for a Royal Australian Air Force maritime squadron.

A joint Government Advisory Committee consisting of representatives from Commonwealth Government departments, South Australian Government departments and local government authorities has been established to consider airport requirements for the Adelaide region.

Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13 October 1919. The *Air Navigation Act* 1920, under which a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence, had three main objectives:

- (1) generally to regulate civil aviation activities in Australia;
- (2) to carry out the provisions of the Convention on Air Navigation signed in Paris;
- (3) to apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodic inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, and the application of rules of the air.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 in which it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The *Air Navigation Act*, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

The Commonwealth civil aviation legislation at present includes the *Air Navigation Act* 1920, the *Australian National Airlines Act* 1945 and several other Acts, while the State legislation in South Australia includes the 1937 Act and the *Civil Aviation (Carriers' Liability) Act*, 1962-1971.

Civil aviation administration was a separate department under the Minister for Civil Aviation from 1939 until 1 December 1973 when it was incorporated in the Department of Transport.

Historical

A description of early aerodromes in South Australia and development was included on pages 277-8 of the *South Australian Year Book* 1966: an article describing the first flight from England to Australia, in 1919, appeared on pages 334-5 of the *South Australian Year Book* 1969.

8.6 ELECTRICITY AND GAS

ELECTRICITY

In 1946 the Electricity Trust of South Australia (ETSA), a public corporation, acquired the assets of the Adelaide Electric Supply Company and since then the Trust has been responsible for electricity supply throughout most of the State. Over the years indigenous fuels—coal from Leigh Creek and natural gas from the north-east of the State—have largely supplanted imported fuels. A detailed description of the development of electricity supply was included on pages 278-81 of the *South Australian Year Book* 1966.

Power Generation

The Osborne 'A' station produced all of the requirements of the South Australian electricity network from 1923 until 1947 when the 'B' station commenced operations and the 'A' station was subsequently closed in 1968. At 30 June 1978 the remaining generating capacity at Osborne (excluding emergency generating plants) was 240 000 kilowatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The 'A' section was completed in 1954 while the 'B' section was completed in 1964 to give a combined total generating capacity of 330 000 kilowatts.

Following the passing of the Electricity Trust of South Australia, (Torrens Island Power Station) Act in 1962 work commenced on the construction of section 'A' of the Torrens Island Power Station. Section 'A' was completed in the first half of 1971 and comprises four 120 000 kilowatt turbo-generators with associated boiler equipment. Stage 1 of Section 'B' comprising two 200 000 kilowatt turbo-generators has been completed with the second unit coming into service in October 1976. Stage 2 of Section 'B' also has two 200 000 kilowatt turbo-generators and erection of the first machine on site is in progress and should be ready for operational service by the end of 1979. Work on the second machine of Stage 2 is proceeding in the contractor's workshops and it should be operational by the end of 1980. Civil construction work for the stage is in progress and the erection of structural steelwork for the main building has been completed. When completed Section 'B' will have four 200 000 kilowatt units and this will make the combined capacity of 'A' and 'B' sections of Torrens Island Power Station 1 280 000 kilowatts.

At the Dry Creek Power Station, three gas turbine generators each with a capacity of 52 000 kilowatts have been installed to meet high load demands of short duration. Three 25 000 kilowatt gas turbine generators have been erected at Snuggery in the South East. These generators are fuelled by distillate and were ready for operation at the end of 1978.

In order to meet future electricity demands the Electricity Trust is building a new power station at Port Augusta. Preliminary works have commenced and it will be sited south of the existing power stations. Orders have been placed for two 250 000 kilowatt turbo-generators and two matching boilers; the first unit is planned for operational service in 1984. The boilers, specially designed to burn Leigh Creek coal, will be fitted with electrostatic precipitators to reduce dust emission.

Electricity Generation, South Australia
Installed Capacity of Generating Plant in Power Stations at 30 June

Power Stations	1967	1970	1973	1976	1978
Electricity Trust:			Kilowatts		
Osborne	311 525	240 000	240 000	240 000	240 000
Port Augusta	330 000	330 000	330 000	330 000	330 000
Torrens Island	120 000	360 000	480 000	480 000	880 000
Dry Creek	—	—	—	156 000	156 000
Mount Gambier	22 000	22 000	22 000	22 000	—
Port Lincoln	9 000	9 000	9 000	9 000	9 000
Total ETSA	792 525	961 000	1 081 000	1 237 000	1 615 000

Fuels

The development of the Leigh Creek coal field and the use of this coal as a source of power freed the Trust from its relative dependence upon New South Wales coal as a fuel source. Since commissioning, the Thomas Playford Power Station at Port Augusta has used this type of fuel exclusively.

The construction of oil refineries in Australia resulted in residual oil being supplied at a price competitive with coal and, over the years, the Osborne Power Station and, more recently, the Torrens Island Power Station, have used this type of fuel.

Natural gas discoveries in the north-eastern areas of South Australia and the construction of a natural gas pipeline to Adelaide has given the Trust a further source of indigenous fuel. The six boilers at Torrens Island have been equipped to use natural gas or oil, or both fuels simultaneously. The Trust commenced using natural gas in 1969 and it uses more of this type of fuel for generation than any other electricity authority in Australia.

Because of the continuing reduction in wood waste supplies, the Trust ceased operating the Mount Gambier Power Station in October 1976 and arrangements were made for some of the plant to be taken over by the Woods and Forests Department to generate electricity for internal use.

Electricity Trust of South Australia, Fuels Consumed in Power Stations

Year	NSW Coal	Leigh Creek Coal	Oil	Wood (a)	Natural Gas
		Tonnes			Millions of MJ
1966-67	51 045	2 123 459	232 674	187 687	—
1969-70	3 430	2 155 239	299 180	185 629	5 673
1972-73	—	1 588 735	37 893	198 496	29 040
1975-76	—	1 869 073	84 183	125 375	36 663
1977-78	—	1 758 048	68 585	—	50 498

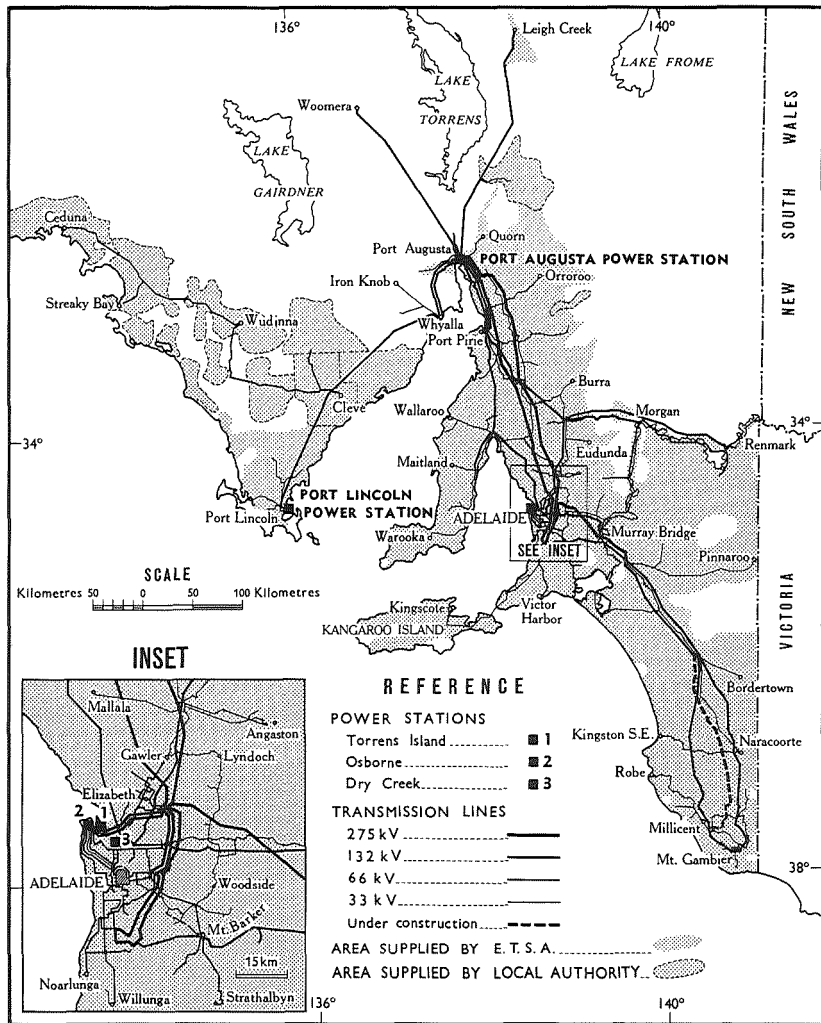
(a) Mill waste.

Transmission and Distribution

The Electricity Trust expanded its area of supply in the post-war years and this expansion required an extensive construction program of transmission and distribution

lines. In the first ten years of the Trust's operations the length of transmission and distribution lines rose from 4 400 kilometres in 1946 to 12 800 kilometres in 1956. Expansion over the next ten years was equally as active primarily because of the construction of 13 600 kilometres of the single wire earth return system. This system

SOUTH AUSTRALIA ELECTRICITY SUPPLY



allows supply in country areas where consumers are so scattered that supply by conventional methods would be impracticable. Most of the State is now covered by the Trust's system and expansion in recent years has been to meet the increased load on the system.

**Electricity Trust of South Australia, Transmission Lines
At 30 June**

Rated Voltage	1967	1970	1973	1976	1978
	Route Kilometres				
275 000 volt	595	716	745	846	846
132 000 volt	2 010	2 232	2 581	2 581	2 587
66 000 volt	750	832	1 246	1 328	1 569
33 000 volt	3 410	3 499	3 487	3 602	3 703
19 000 volt (SWER)(a)	13 591	17 083	18 694	19 734	20 045
11 000 and 7 600 volt	9 024	10 731	12 076	13 701	14 628
Total	29 380	35 093	38 830	41 792	43 378

(a) Single wire earth return system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at substations and distribution centres.

Transmission lines of 275 000 volts link power stations at Port Augusta and Torrens Island to a major substation at Para from which 275 000 volt connections radiate to Magill, Cherry Gardens and Happy Valley substations serving the Adelaide metropolitan area. A further 275 000 volt line has been built to Tailem Bend substation, which is the main supply point for the Lower Mallee and the South-East. One line from Port Augusta is tapped into a substation at Brinkworth to reinforce distribution to the mid-north area of the State.

Two 132 000 volt lines extend from Port Augusta to Adelaide and further 132 000 volt lines extend to Port Lincoln, Woomera and Leigh Creek. Other 132 000 volt lines connect Adelaide and Mannum, Cherry Gardens and Mobilong, Mannum and Tailem Bend. Two lines connect Tailem Bend and Mount Gambier.

A 66 000 volt transmission line has recently been built on Eyre Peninsula to supply the major towns and related areas of Cleve, Cowell, Elliston, Lock, Port Kenny, Wudinna, Streaky Bay and Ceduna.

In recent years there has been a progressive change from conventional overhead street mains to underground street mains in new subdivisions. In these subdivisions a 11 000 volt supply is used and a low voltage underground system is installed. The Electricity Trust and local government authorities share the costs of conversion from overhead to underground reticulation in areas such as parks and foreshores where aesthetic benefit to the general public would be gained. During 1977-78 the Electricity Trust approved 5 new schemes recommended by the Electricity Reticulation Advisory Committee bringing the total number of schemes approved to thirty-three.

The total number of consumers supplied directly by the Electricity Trust at 30 June 1978 was 533 787. During the past ten years, the number of consumers has increased by 142 295 or 36 per cent. In addition the Electricity Trust supplies approximately 8 300 consumers through local government authorities, mainly on upper Eyre Peninsula, taking supply in bulk from the Trust.

In the following table the numbers of Electricity Trust consumers in the various categories are given at selected dates.

**Electricity Trust of South Australia, Number of Consumers
At 30 June**

Consumers	1967	1970	1973	1976	1978
Residential	321 731	353 289	392 314	431 859	456 651
Commercial	38 949	41 772	43 738	45 828	47 967
Industrial	19 956	22 776	25 615	28 221	29 151
Bulk and traction	8	8	12	11	18
Total	380 644	417 845	461 679	505 919	533 787

The following table shows electricity sold by the Electricity Trust for the last five years.

**Electricity Trust of South Australia, Sales of Electricity
Year Ended 30 June**

Particulars	1974	1975	1976	1977	1978
			'000 kWh		
Residential	1 737 877	1 905 615	2 025 616	2 193 993	2 249 688
Industrial	1 609 443	1 554 772	1 602 333	1 745 203	1 837 747
Commercial	762 019	825 685	894 795	968 860	1 019 160
Bulk supply	88 839	77 626	80 124	67 280	72 620
Street lighting	31 338	33 137	34 837	36 163	38 664
Mannum and Murray Bridge pipelines	48 219	38 218	72 985	244 748	293 328
Total	4 277 735	4 435 052	4 710 690	5 256 247	5 511 207

GAS

The South Australian Gas Company, a privately owned company regulated by State legislation, was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorising a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of higher pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923 respectively. These plants together with the earlier Thebarton works were retained as holder stations. In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne Works were closed for several years during the 1930s depression.

Since the 1939-45 War a considerable expansion of manufacturing capacity and distribution facilities has taken place. This is evident from the following table which gives details of capital employed, number of consumers and length of mains at 30 June in selected years.

**South Australian Gas Company: Capital, Consumers and Mains
At 30 June**

Particulars	1940	1950	1960	1970	1978
Capital employed (\$m) (a)	5.4	6.0	19.4	40.0	50.8
Number of consumers (b)	61 207	84 629	121 720	186 670	237 732
Length of mains (km)	1 455	1 677	2 525	3 603	4 707

(a) Total assets less current liabilities.

(b) Includes consumers of bottled gas.

The manufacture of gas by the carbonisation of black coal imported from New South Wales was the conventional method of production until the end of the 1939-45 War. Under this process large quantities of coke and tar are produced as by-products but a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production.

In 1948 and 1950 the company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and could be brought into production much more rapidly than carbonising retorts.

In 1964 the first of four reforming plants was installed at Brompton. These plants operated initially on refinery tail gases and modifications were subsequently made to enable all four plants to reform a wider range of feedstocks, including light virgin naphtha and natural gas. A similar plant was in operation at Port Pirie for reforming light virgin naphtha.

When natural gas became available, the South Australian Gas Company contracted with the producers for a supply of this indigenous fuel. All coal carbonising and carburetted water gas plants making gas for distribution in the metropolitan area were shut down and the reforming plants ceased to operate in 1971 when the conversion of all appliances to use natural gas was completed. One section of the coal carbonising plant has been retained at the Osborne Works for the manufacture of metallurgical grade coke. Gas resulting from carbonisation is used partly for heating the coal chambers, the remainder being sold.

Port Pirie is now being supplied with natural gas following the completion of a \$2.5 million pipeline in June 1976. Natural gas from the line is supplied direct to industry, including Broken Hill Associated Smelters, and to all domestic consumers since conversion of domestic appliances to natural gas was completed in October 1977.

Gas is reticulated through most of the Adelaide metropolitan area and Port Pirie. In addition liquefied petroleum gas is distributed by reticulation at Mount Gambier by the Mount Gambier Gas Company Ltd (acquired by the South Australian Gas Company in June 1977), at Whyalla by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high and intermediate pressure mains traverses the metropolitan area, extending south to Hackham, north-east to Tea Tree Gully and north to Gawler. The pressure in these mains is reduced by means of governors for distribution to consumers.

The conversion of the metropolitan distribution system to use straight natural gas brought a marked change in the Company's operations. The Company is now concerned largely with the distribution and marketing of gas, rather than manufacturing. Great emphasis is placed on marketing gas to industry, where as a cheap, non-polluting fuel it is able to compete successfully with other fuels. This has produced the situation where industrial gas sales made up 65 per cent of all gas sold in 1978 compared with 14 per cent in 1969.

At 30 June 1978 the Company was maintaining 4 559 kilometres of mains in the metropolitan area serving 198 152 consumers with natural gas. The Port Pirie system involves 98 kilometres of mains serving 4 205 consumers. A distribution system has also been developed in Whyalla over the past seven years, and at 30 June 1978 involved 51 kilometres of mains serving 2 230 consumers. The distribution system at Mount Gambier serves 2 882 consumers. An additional 32 500 customers are supplied with liquefied petroleum gas in bottles.

8.7 HOUSING AND BUILDING

HOUSING

A feature of housing development in South Australia has been the change from the use of stone to brick as the major building material. The familiar old-style stone houses are still to be seen in most settled parts of the State, especially in rural areas. The 1947 Census was the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have been determined largely by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. In recent years brick veneer homes have become more popular, particularly in Urban Adelaide, but this is partly because of the poor building soil in some areas.

DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each census. For the purpose of the census a 'dwelling' is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' includes houses, home units and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution. Dwellings have been classified as 'private' or 'non-private'. A private dwelling is normally a house or flat but it can also be a tent, houseboat, or caravan (if standing on its own block of land) and not occupied by members of the same household resident in an adjacent dwelling. Non-private dwellings are hotels, hostels, hospitals, non-private boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. A caravan in a caravan park (whether permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest houses.

Dwelling counts from the eight censuses to 1976 are shown in the next table: figures for censuses before 1966 exclude dwellings occupied solely by full-blood Aborigines.

Dwellings in South Australia, Censuses 1921 to 1976

Census	Occupied			Unoccupied	Total Dwellings
	Private	Non-private	Total		
1921	104 295	3 619	107 914	4 431	112 345
1933	136 611	2 663	139 274	5 353	144 627
1947	166 118	2 420	168 538	3 547	172 085
1954	212 095	3 206	215 301	8 524	223 825
1961	259 344	2 564	261 908	17 061	278 969
1966	299 933	2 693	302 626	25 110	327 736
1971	342 064	2 048	344 112	30 553	374 665
1976	390 514	1 739	392 253	39 768	432 021

Occupied Dwellings

The next table gives details from the 1976 Census of dwellings and their occupants, according to the class of dwelling. Private dwellings were classified into the following five categories:

Self-contained Dwellings; include separate houses, semi-detached houses, terrace houses, self-contained flats, home units, villa units, town houses, which were completely closed off with their own cooking and bathing facilities;

Non-Self-contained Dwellings; include non self-contained flats, bedsitting rooms, non self-contained part of a detached house;

Improvised Dwellings; include sheds, garages, humpies, occupied on a permanent or semi-permanent basis;

Mobile Dwellings; include caravans, houseboats, tents;

Private Boarding Houses; private dwellings where three or more boarders were enumerated.

Dwellings and Number of Inmates by Class of Dwelling, South Australia, Census 1976

Class of Dwelling	Dwellings		Persons	
	Number	Proportion of Total	Number	Proportion of Total
		Per cent		Per cent
Private dwellings:				
Self-contained	383 806	88.8	1 183 275	95.1
Non-self-contained	3 812	0.9	8 792	0.7
Improvised	1 662	0.4	4 761	0.4
Mobile	1 132	0.3	2 741	0.2
Private boarding houses	102	0.0	427	0.0
Total occupied private dwellings	390 514	90.4	1 199 996	96.4
Non-private dwellings	1 739	0.4	43 149	3.5
Total occupied dwellings	392 253	90.8	1 243 145	99.9
Campers out, migratory	—	—	1 610	0.1
Unoccupied private dwellings ..	39 768	9.2	—	—
Total dwellings and population ...	432 021	100.0	1 244 755	100.0

The classification of different types of dwellings changed between the 1971 and 1976 Censuses. Intercensal comparisons are therefore restricted to total dwellings only, and should not be applied to individual categories.

The percentage of persons enumerated in private dwellings was 95.4 at the 1966 Census, and by 1971 this percentage had increased slightly to 96.1. The percentage of persons enumerated in non-private dwellings decreased from 4.3 to 3.7. At the 1976 Census the percentage of persons enumerated in non-private dwellings had decreased further to 3.5 while private dwellings had increased to 96.4.

Occupied Private Dwellings

There were 342 064 occupied private dwellings at 30 June 1971 and by 30 June 1976 this number had increased to 390 514. Characteristics of these dwellings are shown in the tables which follow. The columns headed 'Separate Self-contained Dwellings' refer to those dwellings which were described by the householder as being self-contained (see definition above) and also stated as not being attached to any other dwelling.

Occupied Private Dwellings by Number of Rooms, South Australia
Censuses 1971 and 1976

Number of Rooms Per Dwelling	30 June 1971		30 June 1976		
	Total	Separate Self- contained Dwellings	Other	Total	Proportion of Total
					Per cent
1.	3 636	126	1 182	1 308	0.3
2.	7 496	820	3 758	4 578	1.2
3.	19 637	2 938	13 770	16 708	4.3
4.	46 756	19 240	29 706	48 946	12.5
5.	160 110	110 660	31 056	141 716	36.3
6.	69 289	95 010	8 814	103 824	26.6
7.	22 786	40 532	2 318	42 850	11.0
8 and over	12 354	23 932	1 580	25 512	6.5
Not stated	—	938	4 134	5 072	1.3
Total	342 064	294 196	96 318	390 514	100.0
Average number of rooms per dwelling(a) ..	5.1	5.7	4.2	5.4	..

(a) Excludes 'Not Stated'.

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, toilet, pantry, laundry or storerooms or halls. A combined living-dining room was counted as one room.

The largest increase in the five-year period was in six-roomed dwellings. In 1971 six-roomed dwellings were 20.3 per cent of all occupied dwellings; by 1976 this percentage had increased to 26.6. The total increase in private dwellings was 48 450 and 34 535 of these were six-roomed dwellings.

The following table gives details of occupied private dwellings by the type of occupancy. The proportion of dwellings owned, or being purchased by instalments, remained fairly constant at approximately 68 per cent between the 1971 and 1976 Censuses. This can be compared with an increase of 9.6 per cent over the same period in the number of dwellings being rented.

**Occupied Private Dwellings by Nature of Occupancy, South Australia
Censuses 1971 and 1976**

Nature of occupancy	30 June 1971		30 June 1976	
	Total	Proportion of Total	Total	Proportion of Total
		Per cent		Per cent
Owner	233 715	68.3	114 710	29.4
Purchaser			148 352	38.0
Owner/Purchaser undefined			1 114	0.3
Tenant of Housing Trust	34 174	10.0	36 224	9.3
Tenant, other	59 640	17.4	66 598	17.1
Other	9 131	2.7	17 992	4.6
Not stated	5 404	1.6	5 524	1.4
Total	342 064	100.0	390 514	100.0

At the 1976 Census, occupants purchasing their dwelling were asked to identify the source of the mortgage(s) or contract(s) of sale on the dwelling. The following table summarises the results for South Australia. Note that the column headed 'Additional Mortgages' can include a dwelling more than once, for dwellings which had three or more mortgages, thereby affecting to some degree the figures in the column 'All Mortgages'.

**Mortgages by Source for Occupied Private Dwellings Being Purchased
South Australia, 30 June 1976**

Source of Mortgage	Number of Mortgages			Proportion of Total
	First Mortgage	Additional Mortgages	All Mortgages	
				Per cent
Trading bank	27 712	3 248	30 960	17.4
Savings bank	59 638	3 234	62 872	35.4
Building Society	10 840	648	11 488	6.5
Housing Trust	7 438	5 038	12 476	7.0
Other	41 410	16 796	58 206	32.7
Not stated	1 314	530	1 844	1.0
Total	148 352	29 494	177 846	100.0

The following table gives details of occupied private dwellings by material of outer walls.

**Occupied Private Dwellings by Material of Outer Walls, South Australia
Censuses 1971 and 1976**

Material of Outer Walls	30 June 1971	30 June 1976		
	Total	Separate Self-contained Dwelling	Other	Total
Brick, brick veneer	228 789	189 282	68 800	258 082
Stone	56 679	48 214	10 624	58 838
Concrete, cement block ...	10 154	14 846	7 268	22 114
Timber, weatherboard	13 833	9 906	936	10 842
Metal	7 785	4 870	1 558	6 428
Fibro-cement, asbestos	23 128	25 948	2 542	28 490
Other	1 696	262	338	600
Not stated	—	868	4 252	5 120
Total	342 064	294 196	96 318	390 514

At the 1971 Census 67 per cent of all occupied private dwellings had outer walls of brick or brick veneer as compared with 66 per cent of the 1976 Census. Dwellings of stone walls decreased from 17 per cent of all occupied private dwellings in 1971 to 15 per cent in 1976.

At the 1976 Census occupants of private dwellings were asked what type of fuel or power was used for the purposes of cooking, lighting, living room heating and bathroom water heating. The following table summarises the results for South Australia.

**Occupied Private Dwellings by Power or Fuel Used, South Australia
30 June 1976**

Power or Fuel Used	Purpose			
	Cooking	Lighting	Living Room Heating	Bathroom Water Heating
Coal, coke or briquettes ...	474	—	2 502	558
Wood	10 322	—	39 900	8 330
Electricity	200 432	377 006	141 092	216 712
Gas	172 590	884	82 524	145 598
Oil, kerosene	1 036	374	100 276	1 438
Solar energy	20	—	158	374
Other	50	166	3 226	614
No fuel used	94	62	3 106	2 028
Not stated	5 496	12 022	17 730	14 862
Total	390 514	390 514	390 514	390 514

At the 1966, 1971 and 1976 Censuses each householder was asked to state the number of motor vehicles (excluding motor cycles, scooters and tractors) used by members of that household that were garaged or parked at or near that dwelling on Census night. Data were obtained only for private dwellings.

**Occupied Private Dwellings by Number of Motor Vehicles, South Australia
Censuses 1966, 1971 and 1976**

Number of Vehicles	1966		1971		1976	
	Dwellings	Proportion of Total	Dwellings	Proportion of Total	Dwellings	Proportion of Total
		Per cent		Per cent		Per cent
No Vehicles	58 264	19.4	56 964	16.7	52 306	13.4
One Vehicle	155 999	52.0	173 834	50.8	184 214	47.2
Two Vehicles	58 880	19.6	78 907	23.1	108 262	27.7
Three or more vehicles	20 967	7.0	27 338	8.0	36 528	9.4
Not stated	5 823	1.9	5 021	1.5	9 204	2.4
Total	299 933	100.0	342 064	100.0	390 514	100.0

BUILDING

BUILDING CONTROL

The Building Act, 1923-1965 (the repealed Act) gave local government authorities power to control building operations within their municipality or district. This power was not automatic but followed a request from a local government authority for all, or a specified portion, of its area to be brought under the Act. The Building Act, 1970-1976 has brought each area of a local government municipality or district within the State under the provisions of the Act. However, the Act provides that any council to the area of which, or portion of the area of which, the repealed Act did not apply may petition the Governor for a proclamation that the Act (or any specified portion of the Act) shall not apply within its area or portion of its area. In local government areas outside the jurisdiction of the Act certain provisions under the Local Government Act, 1934-1979 apply.

Persons wishing to erect or alter buildings on land within an area to which the Building Act applies are required to submit to a building surveyor appointed by the local government authority details and plans of the work proposed and to receive written approval before commencing operations. Authorities concern themselves with such things as location of buildings, the material used, the height of ceilings and the provision of ventilation and drainage. They have the power to disapprove building work only where such work does not comply with the requirements of the Building Regulations, 1973-1978, subject to a right of appeal to building referees. Following the approval of the building work, local government building inspectors normally visit the construction site to inspect footings and foundations and may visit the site at other times to check that council requirements are being met.

In addition to administering the general site and structural requirements of the Act, councils could, under the repealed Act, make by-laws prescribing, *inter alia*, the minimum size of building allotments (which may have been higher than those prescribed in the Act), the minimum sizes of houses, etc. One of the most important by-laws

enabled the defining of particular areas or zones within which the nature of buildings and their use may be restricted. Thus certain areas may be proclaimed residential areas with industrial and commercial premises, beyond those already in existence, prohibited; other areas were designated as commercial or industrial zones.

In all local government areas which are subject to an authorised development plan under the Planning and Development Act, 1966-1978, the provisions of the above by-laws have no effect and are invalid. During 1971 the Builders Licensing Act, 1967-1976 came into force with provisions for the licensing of builders. The Builders Licensing Board of South Australia was established under the Builders Licensing Act, 1967-1976 to issue, subject to the provisions of the Act, general builders' licences, provisional general builders' licences and restricted builders' licences to applicants.

BUILDING OPERATIONS

Details of building operations in South Australia are compiled from returns collected from all builders of new dwellings and new other building valued at \$10 000 and over. The statistics relate only to buildings as distinct from other construction activity such as roads, bridges, earthworks and water storage. Alterations and additions of \$10 000 and over to existing buildings other than dwellings are included with new buildings but those to dwellings are shown as a separate item.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

Building Approvals

The following table shows the value of new buildings, and alterations and additions valued at \$10 000 and over on completion for which approval was given during 1976-77 and 1977-78.

Buildings Approvals, South Australia

Type of Building	1976-77			1977-78		
	Private	Govt	Total	Private	Govt	Total
	\$'000					
New houses	261 800	33 210	295 010	196 741	21 829	218 570
New other dwellings	49 328	11 707	61 035	25 376	15 451	40 827
Alterations and additions to dwellings (a)	17 957	187	18 144	19 803	195	19 998
Hotels, etc.	8 642	200	8 842	6 541	510	7 050
Shops	12 841	218	13 059	25 666	50	25 716
Factories	20 670	1 140	21 811	14 395	4 269	18 664
Offices	20 264	11 285	31 549	20 700	12 265	32 966
Other business premises	29 971	12 429	42 399	11 384	1 068	12 452
Education	2 859	40 472	43 331	4 299	50 716	55 014
Religion	3 932	—	3 932	2 534	—	2 534
Health	11 307	88 752	100 059	2 832	24 254	27 087
Entertainment, recreation	5 703	181	5 883	4 193	3 665	7 858
Miscellaneous	4 496	9 425	13 920	4 074	7 869	11 943
Total value of all buildings	449 771	209 205	658 975	338 539	142 140	480 678

(a) Valued at \$10 000 and over.

In addition to information on permits issued to private persons and organisations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have been started in areas outside building control and details of contracts let or expenditure authorised by government and semi-government authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may vary over the period of construction.

Buildings Under Construction

At the end of 1977-78 new buildings with an anticipated value when completed of \$357 878 000 were in the process of construction, with work done on these buildings valued at \$176 852 000. There were 3 355 houses and 1 423 other dwellings in the course of construction, having an anticipated value when completed of \$139 561 000.

Value of Work Done

One of the measures of building activity is that of value of work done, *i.e.* of work actually carried out on buildings during the period. Information on the value of work done on owner-built houses is not collected; however, an estimate based on the value of houses commenced, completed and under construction is calculated and this amounted to \$28.4 million, \$44.6 million and \$56.1 million in the years 1975-76, 1976-77 and 1977-78 respectively. The estimated values of work done on owner-built houses are included in the following table.

Buildings: Value of Work Done, South Australia

Type of Building	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Houses	146 352	165 261	244 471	325 272	254 831
Other dwellings	38 092	49 981	61 130	68 137	50 226
Total dwellings	184 444	215 241	305 600	393 409	305 057
Alterations and additions to dwellings	2 215	4 004	7 178	15 087	19 226
Hotels, etc.	4 602	3 853	5 613	4 275	9 372
Shops	15 269	12 105	12 820	15 140	25 732
Factories	18 621	28 780	21 795	35 699	26 457
Offices	19 472	31 369	39 890	39 895	51 364
Other business premises	12 110	11 137	15 694	23 048	13 941
Education	25 395	56 281	48 176	37 550	51 165
Religion	646	1 064	1 658	3 538	4 060
Health	12 490	19 803	24 055	31 907	29 847
Entertainment, recreation	6 434	6 214	11 053	11 613	10 323
Miscellaneous	11 447	8 676	5 560	9 358	12 940
Total buildings	313 146	398 525	499 091	620 519	559 483

Buildings Commenced

A building is regarded as having been commenced when expenditure on building work is first reported. In the following table, commencements during 1976-77 and 1977-78 have been classified according to ownership at the date of commencement. Almost all houses recorded under the 'Government' heading were being built for the South Australian Housing Trust, many of them being intended for sale on completion.

Buildings Commenced, South Australia^(a)

Type of Building	1976-77			1977-78		
	Private	Govt	Total	Private	Govt	Total
	\$'000					
New houses	273 010	33 007	306 017	200 595	30 956	231 551
New other dwellings	52 170	14 119	66 289	24 070	15 368	39 438
Alterations and additions to dwellings ^(b)	15 822	36	15 858	18 393	138	18 531
Hotels, etc.	7 223	568	7 791	4 780	660	5 440
Shops	18 655	1 427	20 081	44 563	74	44 636
Factories	20 505	9 720	30 226	17 837	6 517	24 354
Offices	25 984	13 410	39 393	29 384	18 087	47 470
Other business premises	14 080	1 110	15 189	10 003	2 700	12 703
Education	10 280	24 954	35 235	10 876	41 943	52 819
Religion	3 012	—	3 012	3 377	—	3 377
Health	12 835	19 225	32 060	5 536	10 702	16 237
Entertainment, recreation	7 098	2 182	9 280	5 479	4 255	9 733
Miscellaneous	3 927	8 386	12 312	6 031	6 989	13 020
Total value of buildings	464 601	128 144	592 745	380 923	138 388	519 310

(a) Anticipated completion value.

(b) Valued at \$10 000 and over.

Buildings Completed

Details of buildings completed and new dwellings completed for the years 1973-74 to 1977-78 are given in the next two tables. A building is regarded as having been completed when it is reported as completed or in the case of owner-builders is reported as completed or substantially completed and occupied.

Buildings Completed, South Australia

Year	Number of Dwellings		Value of Buildings				
	Houses	Other Dwellings	Houses	Other Dwellings	Alterations and Additions to Dwellings	Other	Total
	\$'000						
1973-74	8 952	3 955	131 839	35 644	1 748	103 067	272 296
1974-75	9 071	3 802	166 744	44 916	3 618	152 123	367 403
1975-76	9 921	4 032	221 287	61 462	6 813	189 216	478 778
1976-77	12 112	3 275	322 569	64 921	14 016	197 437	598 943
1977-78	8 996	2 681	272 770	59 797	19 414	245 245	597 226

Number of New Dwellings Completed, South Australia

Type of Dwelling	1973-74	1974-75	1975-76	1976-77	1977-78
Private:					
Contract-built houses	7 540	7 245	7 520	9 548	5 977
Owner-built houses ^(a)	587	638	922	1 026	1 410
Total houses	8 127	7 883	8 442	10 574	7 387
Other dwellings	3 460	3 303	3 254	2 597	1 974
Total private dwellings	11 587	11 186	11 696	13 171	9 361

Number of New Dwellings Completed, South Australia^(a) (continued)

Type of Dwelling	1973-74	1974-75	1975-76	1976-77	1977-78
Government:					
Houses	825	1 188	1 479	1 538	1 609
Other dwellings	495	499	778	678	707
Total government dwellings	1 320	1 687	2 257	2 216	2 316
Total all dwellings	12 907	12 873	13 953	15 387	11 677

(a) Owner-built houses are houses erected without services of contractor for whole job.

The value of buildings, other than dwellings completed over the same period is shown below. Included under 'other business premises' are service stations, warehouses and communication buildings and under 'miscellaneous' are defence establishments, buildings for law and order, and certain institutional premises.

Value of Buildings Other Than Dwellings Completed, South Australia

Type of Building	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Hotels, etc.	4 682	5 085	5 118	4 850	7 484
Shops	13 930	10 967	14 468	10 879	20 040
Factories	20 603	21 684	19 619	35 211	33 091
Offices	12 484	25 824	34 471	47 196	45 900
Other business premises	11 497	9 323	15 829	23 761	16 963
Education	17 810	33 514	67 628	37 007	43 875
Religion	752	758	1 639	3 202	4 313
Health	10 191	22 442	16 234	12 126	52 513
Entertainment, recreation	3 114	9 889	8 256	14 371	9 925
Miscellaneous	8 004	12 639	5 951	8 832	11 141
Total	103 067	152 123	189 216	197 437	245 245

New Houses—Material of Outer Walls

A plentiful supply of clay and building stone together with a paucity of suitable timbers in South Australia resulted in more houses being built of solid construction than brick veneer or other construction until 1974-75. In 1977-78 brick veneer houses constituted 50 per cent of commencements. Although a large proportion of brick veneer houses are built by the South Australian Housing Trust a wider acceptance of this type of construction is indicated by the increasing number being erected by private contractors.

In the following table new houses are classified according to the materials used in the outer walls.

New Houses: Material of Outer Walls, South Australia

Year	Brick, Concrete, Stone		Brick Veneer and Stone Veneer		Asbestos-cement		Other	
	Number	Value	Number	Value	Number	Value	Number	Value
		\$'000		\$'000		\$'000		\$'000
	COMMENCED							
1973-74	4 905	89 396	3 723	55 737	936	9 307	159	1 805
1974-75	3 273	78 696	3 479	61 651	1 467	19 210	101	1 579
1975-76	4 072	116 145	5 522	122 232	1 654	27 187	239	4 646
1976-77	3 298	113 083	5 941	155 811	1 597	30 915	281	6 209
1977-78	2 399	92 554	3 803	107 641	1 176	24 194	273	7 162
	COMPLETED							
1973-74	4 747	77 858	3 145	43 542	915	8 859	145	1 578
1974-75	4 116	87 994	3 633	61 377	1 224	15 844	98	1 531
1975-76	3 690	98 214	4 452	93 929	1 549	24 929	230	4 219
1976-77	3 716	120 848	6 506	164 579	1 633	31 399	257	5 742
1977-78	2 801	107 034	4 609	131 178	1 335	27 997	251	6 560

Building Employment

Details of building employment in South Australia are given in the next table. The figures are an average of the number of persons employed on four days in the year, namely at the end of September, in mid-December and at the end of March and June. They include all contractors and sub-contractors, and employees of contractors, sub-contractors and government instrumentalities, who were engaged on the construction, alteration, repair and maintenance of buildings. Excluded are persons working on owner-built houses or for contractors or sub-contractors who undertake only alterations, additions, repairs and maintenance. Persons 'actually engaged' include those temporarily laid off because of weather. Some duplications may occur as a result of frequent movement between jobs or because some persons (such as electricians) may work on several buildings which are under construction simultaneously.

Building Employment, South Australia

Classification	1973-74	1974-75	1975-76	1976-77	1977-78
PERSONS ENGAGED					
Occupational status:					
Contractors	767	963	938	901	853
Sub-contractors	4 447	3 806	4 127	4 604	4 239
Wage earners	11 026	9 557	8 942	8 635	6 941
Trade:					
Carpenters	3 843	3 660	3 588	3 638	3 050
Bricklayers	2 620	2 176	2 106	2 163	1 806
Painters	1 365	1 219	1 166	1 244	1 055
Electricians	1 106	994	921	932	872
Plumbers	1 523	1 306	1 265	1 369	1 148
Builders labourers	2 202	1 935	1 955	1 809	1 538
Other	3 581	3 037	3 007	2 985	2 564
Total	16 239	14 325	14 007	14 140	12 033

The average employment figure of 12 033 for 1977-78 was made up of 6 003 persons working on new dwellings, 5 487 working on other new buildings and 543 employed on additions, alterations, repairs and maintenance.

Location of New Dwellings

In recent years the greatest development has occurred in the local government areas of Noarlunga, Salisbury and Tea Tree Gully; during the five years 1973-74 to 1977-78, new dwellings in these areas accounted for 30 per cent of the total State completions. Of the country local government areas, Port Augusta recorded the greatest number of completions in 1977-78.

Location of New Dwellings Completed, South Australia ^(a)

Local Government Area	1973-74	1974-75	1975-76	1976-77	1977-78
Burnside (C)	393	363	263	159	167
Campbelltown (C)	365	386	486	553	303
Elizabeth (C)	256	175	171	212	282
Enfield (C)	559	397	158	123	130
Henley and Grange (C)	139	146	84	100	60
Marion (C)	487	520	457	790	597
Meadows (DC)	534	575	495	804	515
Mitcham (C)	592	427	347	504	338
Mount Barker (DC)	118	115	187	243	165
Mount Gambier (C)	223	186	195	270	154
Munno Para (DC)	129	336	271	286	641
Murray Bridge (DC) ^(b)	153	176	253	189	155
Noarlunga (C)	1 201	1 271	1 640	1 851	1 236
Payneham (C)	263	150	180	53	74
Port Adelaide (C)	217	157	263	399	279
Port Augusta (C)	108	113	116	158	217
Port Elliot and Goolwa (DC)	142	129	156	173	160
Port Lincoln (C)	94	79	117	106	83
Salisbury (C)	1 373	1 288	1 567	1 621	1 074
Stirling (DC)	162	215	212	275	222
Tea Tree Gully (C)	1 367	1 083	1 254	1 573	951
Unley (C)	174	313	266	186	234
Victor Harbor (DC) ^(c)	118	126	77	122	151
West Torrens (C)	234	259	292	155	145
Whyalla (C)	236	278	267	276	14
Willunga (DC)	107	143	184	381	212
Woodville (C)	652	835	1 154	873	608
Other ^(d)	2 532	2 647	2 851	3 010	2 550
Total State	12 928	12 888	13 963	15 445	11 717

^(a) Dwelling units comprise houses and other dwellings plus dwellings attached to other new buildings.

^(b) Includes Mobilong (DC) and Murray Bridge (M) before amalgamation on 4 April 1977.

^(c) Includes Encounter Bay (DC) and Victor Harbor (M) before amalgamation in October 1975.

^(d) Includes unincorporated areas.

(C) Municipality with city status (M) Municipality (DC) District Council

THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust, which was constituted by Act of Parliament in 1936, provides houses and flats for rental and sale.

Rental Dwellings

When the South Australian Housing Trust commenced operations in 1937 it undertook, in the words of its first Annual Report, 'the provision of accommodation necessary for decent living at low rentals for persons coming within the lower income group.' The enabling legislation confined the Trust's activities for many years to the building and letting of double-unit attached houses. Subsequent legislation provided for the construction of single-unit houses for rental and the removal of statutory limitations on the capital cost of houses permitted the construction of larger single-unit houses. At 30 June 1978 the Trust had completed 39 031 dwellings for rental.

In 1952 Trust rental accommodation was expanded with the construction of the first flats for single persons and for married couples without young children. Originally only two-storey flat developments were built; since 1953, however, three-storey flats and single-storey villa flats have also been constructed. At 30 June 1978 the Trust had built 2 469 flat units, of which 2 359 were for rental. In 1954 construction of small groups of cottage flats for elderly persons began on five sites in the metropolitan area. At 30 June 1978, 2 914 of these units had been built; 867 for charitable organisations and 2 047 for rental by the Trust.

Dwellings for Sale

Since the inception of its program of building houses for sale in 1946, the Trust has greatly expanded its operations in this area. Under the original scheme, purchasers were required to provide their own finance, either from a lending institution or from their own resources. Since 1952, however, the Trust has been able to advance money on second mortgage. During the year ended 30 June 1978, 853 houses were completed and sold throughout the State under the bank finance sales scheme.

In addition, under the rental-purchase scheme established in 1962, houses were made available for a minimum deposit of \$100 under an agreement to purchase. In January 1977 the minimum deposit was increased to \$500 and at the end of June 1978, 7 943 houses had been sold under these agreements.

Details of dwellings completed by the Trust since its inception, both for rent and for sale, are given in the following table.

South Australian Housing Trust, Number of Dwellings Completed ^(a)

Period	Dwellings				Rural Dwellings including Soldier Settlers	Total
	Single Units	Double Units (b)	Cottage Flats	Other		
1937-1973	40 335	(c) 25 700	2 299	2 008	1 234	71 576
1973-74	812	281	104	142	—	1 339
1974-75	1 118	269	121	81	—	1 589
1975-76	1 506	630	56	84	—	2 276
1976-77	1 473	505	135	31	—	2 144
1977-78	1 752	121	199	123	—	2 195
Total	46 996	27 506	2 914	2 469	1 234	81 119

(a) Excludes emergency and temporary dwellings.

(b) Number of individual dwelling units.

(c) Includes a small number of triple-units.

The Trust provides a variety of sizes and designs of 'for sale' houses, depending on cost, location, and availability of building materials. Houses are provided for primary producers on their own land and for employees of State Government departments at the request of the departments concerned.

The Trust's early activities concentrated on the provision of rental and sales dwellings in small groups. The expansion of its activities has led the Trust into the more complex areas of town planning and urban development. At Elizabeth, twenty-seven kilometres north of Adelaide, a comprehensive development including a wide range of houses for sale and houses and flats for rent has grown into a city, complete with commercial and industrial areas. A similar major development is well under way at Noarlunga and there are also several other areas throughout the State where the Trust is helping to provide housing in close proximity to employment.

Most of the funds used to finance the building operations of the Trust are borrowed either from the State Government under the Housing Agreement or from semi-government borrowings arranged in conjunction with the State Treasury. Details of funds employed, and of the revenue and expenditure of the Trust in recent years are given in Part 11.4 Public Corporation Finance.

Special Rental Houses

Under the terms of the *Housing Agreement Act 1973*, advances may be used to purchase and renovate older houses in order that they can be let to needy families. This scheme has enabled the Trust to increase its stock of rental houses especially in the City of Adelaide, and inner urban and industrialised areas where it cannot build many new houses because of the lack of vacant land. To 30 June 1978 the Trust had purchased a total of 1 091 of these dwellings.

Housing for Aborigines

In March 1973, the Trust took over responsibility for the Aboriginal Funded Program in South Australia and the 196 houses maintained under the scheme.

Encouraged by the Department of Aboriginal Affairs and the local Aboriginal Committee, the Trust in April 1974 took the step of reforming the then Aboriginal Housing Policy Committee. The new structure allowed five Aboriginal people elected by the Adelaide community to join the three Departmental representatives namely, Department for Community Welfare, Department of Aboriginal Affairs, and the Trust.

In July 1975, a further restructuring took place, principally to give greater representation to country areas. As a result, the Aboriginal Housing Board of South Australia was formed, followed soon after by the first five Housing Management Committees in regional areas of the State.

There are presently eight Housing Management Committees in South Australia and these are elected only by the local Aboriginal community. Each Committee is represented on the Aboriginal Housing Board which also has representation from the Trust, Department for Community Welfare, Department of Aboriginal Affairs, Aboriginal Hostels Limited and Department of Housing, Urban and Regional Affairs. These Committees make policy and administrative decisions. The administration and performance is carried out within the Trust.

The Trust's main roles comprise the supplying of houses by way of purchase and the upgrading of existing houses, the erection of new houses, sometimes in remote areas by supplying transportable pre-made houses, maintenance, rent collection and the processing of applications. A special Trust section has been established to handle these operations and its staff includes Aboriginal people.

The Aboriginal Housing Board is responsible for recommending policy, the allocation of capital funds, over-seeing the operations of Management Committees, specifying numbers of houses to be purchased in each region, setting rent levels, policies on rent arrears, maximum purchase price, conditions of tenancy and conditions of eligibility.

From the outset of the scheme, the decision was made to purchase existing houses rather than erect new dwellings. It is considered that buying in preference to building has many social advantages. For instance, it allows people to choose the area in which they wish to live and it also avoids the concentration of welfare tenants in particular areas.

There are now 734 houses administered under the Funded Scheme. In 1977-78 thirty-five houses were purchased. Vacancies and additions to stock enabled a total of 188 Aboriginal families to be allotted accommodation in Funded Houses. A purchase program designed specifically for Aboriginal people was introduced during 1976-77 and by 30 June 1978, sixteen families had contracted to buy the homes they occupied.

Industrial and Commercial Properties

The Trust is involved in the construction of industrial and commercial properties to assist in the State's development. The construction or purchase of factories by the Trust requires the recommendation of the Industries Development Committee and the consent of the Governor. The factories are usually leased with a right of purchase.

During 1977-78, the Trust completed one factory, commenced another and handed over two extensions to existing factories. Tenders were also received for a 9 884 square metres bottling plant and warehouse facility at Nuriootpa.

Industrial estates were also developed at Port Augusta, Mount Gambier, Murray Bridge, and Elizabeth West.

In the commercial field at Elizabeth City Centre the Trust completed five new shops and new brick paving which, together with new landscaping, enhanced the appearance of the Centre. An office building was constructed by an assurance company and additions made to a fast food outlet.

To the south, at Noarlunga Regional Centre, construction was well advanced. This Centre being developed by the Trust and the Australian Mutual Provident Society will, when completed, be even larger than Elizabeth City Centre.

At 30 June 1978, the number of shops let by the Trust was 396 and the total number of factories occupied was fifty-five.

HOUSING AGREEMENTS

Several Housing Agreements between the Commonwealth and the State have operated over the years and details of the earlier legislation were included on pages 374-5 of the *South Australian Year Book 1978*.

Under arrangements discussed and agreed to at the June 1973 Premiers' Conference, the Commonwealth Government entered into an agreement with each State, under which the States received advances for welfare housing purposes during the five years 1973-74 to 1977-78; these advances are outside, and in addition to, the State's Loan Council programs. The *Housing Agreements Act 1973* was passed by Parliament in the autumn session of 1973. Advances made under the Agreement will be repaid, with interest, over fifty-three years. During 1977-78 the Commonwealth Government advanced to the State \$58 460 000 in accordance with the Agreement.

Advances for Housing, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
	\$'000				
Advances for year:					
Housing Trust	15 500	33 560	33 560	33 560	34 810
Home builders accounts	17 250	22 800	22 800	22 800	23 650
Total	32 750	56 360	56 360	56 360	58 460
Liability at end of year (a):					
Housing Trust	159 732	191 959	225 531	259 226	293 110
Home builders accounts	129 796	151 648	173 351	194 896	217 127
Total	289 528	343 607	398 882	454 122	510 237

(a) Under Housing Agreements only.

HOME SAVINGS GRANT SCHEME

The Commonwealth Government's Home Savings Grant Scheme provides tax-free grants for first home acquirers irrespective of their age or marital status, provided they have a right of permanent residence in Australia. The grant is \$1 for each \$3 saved in Australia in an acceptable form from 1 January 1976.

Grants of up to \$667 are payable for homes acquired in 1977, up to \$1 333 for homes acquired in 1978, and up to \$2 000 from 1 January 1979. Savings periods as short as one complete year may qualify. Acceptable forms of savings include savings bank accounts, fixed deposits with trading banks, savings with registered building societies and credit unions and payments made for land on which the home is being built.

DEFENCE SERVICE HOMES SCHEME

The Defence Service Homes Scheme is administered by the Defence Service Homes Corporation.

The Scheme originated in the War Service Homes Commission which was set up in 1919 to help provide homes for ex-servicemen and their dependants. Persons currently eligible for assistance include ex-servicemen and women of the Australian Forces and Nursing Services who were enlisted, or appointed for or employed on active service outside Australia in the 1914-18 War, the 1939-45 War, Korea, Malaya or Vietnam, or in any other areas as specified from time to time by the Commonwealth Government. In addition, National Servicemen and Permanent Members of the Force may be eligible if their period of service did not cease before 7 December 1972.

Also eligible are certain other ex-service personnel who served in British Forces and who were resident in Australia before enlistment, and certain members of the Mercantile Marine Services. Assistance may also be granted to the widow or in some cases to the widowed mother of an eligible person, and to a representative of an approved welfare organisation who, subject to certain conditions, served outside Australia on or after 3 September 1939 with a body, contingent or detachment of the Australian Forces.

Assistance is given for building a home, in purchasing a new or existing home, or in discharging a mortgage which has been arranged with the prior approval of the Corporation. In certain circumstances a person who has not received the maximum loan may receive a further loan to undertake certain additions. The maximum loan available is \$15 000 and the interest rate is 3.75 per cent for the first \$12 000 lent and 7.25 per cent on the balance of loan above \$12 000.

Defence Service Homes Scheme, South Australia

Year	Activities During Year		Advances Outstanding at End of Year	
	Homes Provided	Capital Advanced	Number	Amount
		\$'000		\$'000
1973-74	804	10 580	16 747	84 354
1974-75	853	12 000	16 909	91 042
1975-76	745	10 490	16 778	95 398
1976-77	597	9 384	16 582	97 752
1977-78	582	9 769	16 456	100 444

HOUSING LOANS INSURANCE CORPORATION

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act 1965* to administer the Commonwealth Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. The Corporation consists of a Chairman (who is also Managing Director) and a Deputy Chairman, who are full-time members, and three part-time members, all of whom are appointed by the Governor-General.

An amendment to the Act in 1977 broadened the scope of the Corporation's activities so that loans for the purchase of vacant land and commercial housing propositions are insurable as well as loans for the purchase or construction of homes for owner occupancy.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to erect his home at a later date. In the commercial field, loans for rental housing ranging from single houses or home units to multi-storey structures together with loans for the purchase and development of land and the building of project housing (including home units) are acceptable.

A once only premium is charged by the Corporation at the time the loan is made. The premium is payable by the borrower but lenders may agree to add it to the amount of the loan for repayment by the borrower over the period of the loan. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1.4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of

valuation carry a loading of 10 per cent on the maximum 1.4 per cent rate. On loans less than 94 per cent of valuation, the premium falls progressively down to 0.25 per cent on loans of less than 76 per cent of valuation except that a concessional premium of 0.1 per cent is applicable where the loan is less than 76 per cent of valuation and relates to an owner occupied home. Premium rates for the purchase of vacant land are the same as for home ownership.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage, drainage, fences, roads, etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for amortised, fixed term or five-year loans.

PART 9

PRODUCTION

9.1 RURAL INDUSTRIES

South Australia has a semi-arid Mediterranean type climate with mild and humid winters and hot and dry summers. Cereal production and livestock are the main components of agriculture.

The State can be divided into three main zones based on rainfall. The dry inland area is known as the pastoral zone with the main activity being low intensity grazing of livestock. In the cereal zone of intermediate rainfall, major production is of cereal and livestock products. The higher southern rainfall zone has a more reliable growing season and farming is based on higher intensity grazing of sheep and cattle. Areas adjacent to the River Murray are devoted mainly to horticulture and viticulture. For details of rainfall, see Part 1.2 Climate and Meteorology.

RURAL INDUSTRY ORGANISATIONS

The South Australian Department of Agriculture and Fisheries provides advisory, regulatory and research services to all farming industries in this State. These services are complemented by educational and research organisations (see Part 6.2 Education and Part 6.3 Scientific and Research Organisations) and private firms which also provide expertise in the field of agriculture. Many other organisations which are often established by State or Commonwealth legislation also influence the State's rural industries. The following table gives details on some of these bodies.

Rural Industry Organisations and Major Activities, South Australia

Organisation	Activities
Australian Wheat Board	Sole authority for receival and marketing of wheat.
Australian Barley Board	Provides a marketing system for barley and oats.
South Australian Co-operative Bulk Handling Ltd	Bulk handles all wheat, barley and oats in South Australia.
Australian Wool Corporation	Controls marketing of wool in Australia and overseas.
Australian Meat and Livestock Corporation	Promotes the sale of meat and livestock in Australia and overseas.
South Australian Potato Board	} Regulate marketing and pricing of their respective products.
Dried Fruits Board	
Citrus Industry Organisation Committee of SA	
South Australian Egg Board	
Metropolitan Milk Board	} Regulate production and marketing of their respective products in the Adelaide metropolitan area.
South Australian Meat Corporation	

RURAL INDUSTRY ASSISTANCE

Details of financial assistance provided to the rural sector by the State Government are given in Part 4.2 Land Settlement Schemes.

RURAL STATISTICS

Most rural statistics are prepared from the annual Agricultural Census in which returns are collected from rural establishments. Particulars relate to rural operations for one complete year ended 31 March, but where harvesting of some crops (mainly fruit) has not been completed by that date, growers are asked to estimate production. An owner or occupier who works more than one rural establishment is normally required to report details for each. However, where they are near to one another and are in effect worked as one, a composite return is obtained, and is treated as covering a single rural establishment in the district in which the main farm is situated.

Since 1976-77, statistics have been compiled from Agricultural Census returns from rural establishments where the legal entities operating those establishments have estimated values of operations from agricultural activity of \$1 500 or more.

This criteria has resulted in the exclusion of a significant number of small rural establishments and for this reason it is not strictly valid to compare data before 1976-77 with later years. However, the exclusion of small holdings does not have a great effect on statistics of total agricultural production.

The number and area of rural establishments in each statistical division for the past two years are shown in the following table.

Rural Establishments: Statistical Divisions, South Australia

Statistical Division	Establishments		Area of Establishments	
	1976-77	1977-78	1976-77	1977-78
	Number		'000 hectares	
Adelaide	1 921	2 058	67	66
Outer Adelaide	4 332	4 501	939	930
Yorke and Lower North	3 216	3 172	1 871	1 891
Murray Lands	4 853	4 867	3 735	3 720
South East	3 380	3 460	1 812	1 801
Eyre	2 153	2 131	5 558	5 374
Northern	1 742	1 720	49 070	48 712
Total	21 597	21 909	63 052	62 494

Integrated Agricultural Register

In 1975 additional information was sought to assess structural details of the agricultural industry in Australia to enable compatibility and comparisons with other industries through financial data. Resulting from this need was the formulation of the Integrated Agricultural Register (IAR) which is used to compile details of the structure of economic units engaged in agriculture.

The economic units defined in the IAR are similar to those used for other industries, namely the enterprise and the establishment. The identification of these units within the agricultural sector has allowed the production of more meaningful statistics of economic size, legal status and industry classification. It has also provided some insight into the activities of agricultural enterprises in other sectors of the economy and the activities of non-agricultural enterprises in the agricultural sector.

The enterprise is that unit comprising all operations in Australia of a single operating legal entity. An agricultural enterprise is an enterprise mainly engaged in agricultural activities. The estimated value of operations of these enterprises includes the estimated value of non-agricultural operations.

The establishment is the smallest economic unit in the system, covering all operations carried out by one enterprise at a single physical location. For the agricultural sector a physical location has been interpreted to mean each individual agricultural holding. However, where two or more holdings in the one State are operated under one management and one set of accounts, the holdings are combined to form one establishment. An agricultural establishment is an establishment which is engaged mainly in agricultural activities. The estimated value of operations of these establishments includes the estimated value of non-agricultural operations.

The table below shows the number of agricultural enterprises in South Australia cross classified by industry and estimated value of operations.

Agricultural Enterprises: Industry and Estimated Value of Operations, South Australia 1976-1977

Industry of Enterprise	Estimated Value of Operations					Total Enterprises
	2-19	20-49	50-99	100-199	200 and more	
				\$'000		
Cereal grains	546	1 013	560	135	12	2 266
Oilseeds n.e.c.	10	9	4	1	2	26
Sheep—Cereal grains	1 179	2 525	1 055	149	15	4 923
Meat cattle—Cereal grains	83	63	22	4	—	172
Sheep—Meat cattle	579	517	162	43	18	1 319
Sheep	1 367	781	264	74	19	2 505
Meat cattle	628	124	39	12	11	814
Milk cattle	1 076	496	49	6	1	1 628
Pigs	193	143	45	11	4	396
Poultry for meat	21	26	5	1	2	55
Poultry for eggs	44	33	33	16	11	137
Grapes	1 178	448	53	5	1	1 685
Orchard and other fruit	747	502	132	36	7	1 424
Vegetables—potatoes	55	65	30	23	5	178
Vegetables—other	588	224	67	31	16	926
Multi-purpose farming	18	21	4	2	—	45
Nurseries and specialised horticultural activities (except forest nurseries)	15	26	17	8	2	68
Agriculture n.e.c.	309	32	11		2	354
Total	8 636	7 048	2 552	557	128	18 921

Further details are contained in the publication *Agricultural Sector: Part 1, Structure of Operating Units 1976-77* (Catalogue No. 7102.0) published by the Australian Statistician.

Agricultural Finance Survey

Estimates of the financial performance of the rural sector of the economy are derived each year from information obtained in the Agricultural Finance Survey, an annual and Australia-wide statistical collection which samples a representative cross-section of all agricultural enterprises.

The 1975-76 Survey was the final one conducted using a 2-phase sample design, a 'mail' phase and a 'field' phase. The mail phase involved the despatch of self-enumerating questionnaires to selected enterprises for their completion and return while the field phase entailed a follow-up interview with a sub-sample of the mail selections. This sub-sample was designed to measure the degree of reporting bias in the self-enumerating sample and hence enable the overall survey results to be calibrated on the basis of the field enumerated data.

Subsequent surveys have been conducted using a single (field) phase sample of approximately 3 500 enterprises throughout Australia, the interviews with selected businesses being carried out by trained Bureau field agents over a six month enumeration period.

The following table contains estimates of selected financial aggregates of South Australian agricultural enterprises for the years 1975-76 and 1976-77; the associated standard error (SE) for each estimate is also given, being a measure of the sampling error resulting from the use of sampling techniques as opposed to undertaking a complete census. More detailed information both on the statistics shown and the terms used are contained in the publication *Agricultural Sector: Part IV—Financial Statistics* (Catalogue No. 7507.0) published by the Australian Statistician.

Financial Estimates of Agricultural Enterprises: South Australia, 1975-76 and 1976-77

Items	1975-76		1976-77	
	\$m	SE%	\$m	SE%
Sales from crops	285.9	4	258.8	4
Sales from livestock	102.2	6	150.9	5
Sales from livestock products	152.6	3	175.6	5
Turnover	546.1	2	607.9	2
Purchases and selected expenses	235.4	3	259.7	3
Value added	329.1	4	327.8	4
Adjusted value added	302.6	4	293.6	4
Gross operating surplus	245.3	6	245.5	5
Cash operating surplus	205.8	6	246.2	4
Total net capital expenditure	99.5	6	80.2	8
Gross indebtedness	302.4	6	306.0	9

Caution should be exercised when making comparisons between estimates derived from the Agricultural Finance Survey and those compiled annually by the Bureau in its Value of Agricultural Production series. Some of the major reasons for differences between the estimates are as follows:

- (1) To enable a comparison to be made with statistics produced for other sectors of the economy, the Survey is conducted on an integrated basis which excludes from the survey enterprises which undertake some agricultural activity but their predominant activity is non-agricultural.
- (2) The Value of Agricultural Production estimates measure the income accruing from production for a particular year irrespective of whether the total production has been marketed or not. The Survey on the other hand operates generally on a cash basis recognising income only when payment has been received.
- (3) The Survey includes only the value for crops sold, whereas the Value of Agricultural Production estimates include the value of crops and seed produced and consumed on the farm.

LAND UTILISATION

Most of the land area of South Australia is arid or semi-arid and cannot be used for crop production. This severe natural limitation means that even with modern farming methods only 6 million of 62 million hectares in rural establishments are devoted to cropping or permanent improved pasture.

As shown in the following table the area under crop in recent years has varied between 2.0 and 2.5 million hectares. Most of this is planted to cereals for the production of grain, hay and forage and about 56 000 hectares are used for the production of fruit and vegetables.

Land Utilisation of Rural Establishments, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 hectares				
Area used for:					
Crops (a)	2 451	2 257	2 116	2 036	2 565
Sown pastures;					
Lucerne	390	196	174	140	107
Lucerne based	(b)	641	679	689	640
Clovers, grasses and medics	3 110	2 804	2 736	2 655	2 502
Balance of holdings (c)	58 892	57 928	57 873	57 531	56 680
Total area of holdings	64 843	63 825	63 577	63 052	62 494

(a) Excludes duplication on account of area double cropped. Excludes pastures harvested for hay and seed which have been included in 'Area used for sown pastures'.

(b) Not collected separately.

(c) Used for grazing, lying idle, etc.

The cereals—wheat, barley and oats—sown for grain account for about 90 per cent of the total area cropped in South Australia. In addition to hay and green forage the remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry hot summer, favour cereal growing, one advantage being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

Area Sown to Principal Crops, South Australia

Crop	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 hectares				
Cereals for grain:					
Wheat	1 431.9	1 220.4	958.5	839.1	1 090.0
Barley	627.3	700.7	832.0	855.4	1 073.4
Oats	152.2	134.9	119.0	116.7	130.0
Rye	17.2	10.2	7.8	12.7	23.0
Crops for hay:					
Oaten	56.4	35.0	34.4	40.9	41.3
Other	23.9	15.9	16.7	20.0	21.6
Crops for green forage	71.1	59.4	54.8	58.8	74.8
Vegetables:					
Potatoes	2.5	2.7	2.8	3.2	3.6
Tomatoes	0.5	0.6	0.4	0.4	0.4
Other	6.4	6.9	6.2	6.2	4.3
Fruit:					
Orchards	16.9	16.6	16.5	15.8	15.7
Vineyards	29.6	30.4	31.2	31.2	31.5
Other crops	15.3	23.6	35.3	36.0	55.0
Total area of crops	2 451.2	2 257.2	2 115.7	2 036.5	2 564.6

IRRIGATED CULTURE

The following table shows the approximate area of all irrigated culture in South Australia for the seasons 1971-72 to 1975-76. Of the areas shown below, about 60 per cent of both orchards and vineyards and about 15 per cent of pastures are in the River Murray irrigation areas listed in the table on this page.

Area Under Irrigated Culture, South Australia^(a)

Season	Orchards	Vineyards	Vegetables	Other Crops	Pasture	Total
	Hectares					
1971-72	12 969	15 843	6 375	977	39 914	76 078
1972-73	13 126	17 160	6 248	2 028	44 586	83 148
1973-74	13 211	16 973	5 599	1 434	42 960	80 177
1974-75	13 263	17 987	5 888	2 396	39 414	78 948
1975-76	13 132	18 387	5 601	2 205	38 569	77 894

(a) Approximations only.

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2.

River Murray Irrigation Areas: Area of Pasture and Area and Production of Vineyards and Orchards, 1977-78^(a)

Irrigation Area	Area			Production				
	Pasture (b)	Vineyards		Orchards	Vineyards		Orchards	
		Bearing	Not Bearing		Total Grapes Produced	Grapes used for Wine	Oranges	Nectarines and Peaches
	Hectares			Tonnes				
Upper Murray:								
Berri	76	2 024	117	1 064	31 611	25 199	9 419	1 912
Cadell	—	134	11	158	1 533	1 326	1 122	56
Cobdogla	33	532	18	18	10 275	8 943	73	1
Cooltong	47	181	7	304	3 593	3 383	5 292	145
Holder	—	111	18	111	1 925	1 861	1 678	18
Loveday	16	902	24	115	16 896	14 182	1 256	11
Loxton	—	1 520	50	1 118	30 055	27 051	24 540	794
Moorook	7	186	10	169	2 963	2 534	2 359	60
Nookamka	1	706	30	52	13 214	10 565	737	23
Ral Ral	41	304	23	118	3 855	2 758	156	711
Renmark	75	2 024	162	1 284	27 961	22 029	7 859	5 312
Sunlands	—	34	2	521	652	640	19 454	30
Waikerie	14	686	49	864	11 676	11 247	12 647	1 516
Other	48	345	55	842	5 679	4 767	16 043	1 315
Total	358	9 689	576	6 738	161 888	136 485	102 636	11 906
Lower Murray:								
Cowirra	386	—	—	—	—	—	—	—
Jervois	1 992	—	—	3	—	—	—	—
Montieth	647	—	—	—	—	—	—	—
Mypolonga	543	—	—	355	—	—	5 518	341
Neeta	365	—	—	—	—	—	—	—
Pompoota	412	—	—	—	—	—	—	—
Other	783	—	—	—	—	—	—	—
Total	5 128	—	—	358	—	—	5 518	341

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas. (b) Includes non-irrigated pastures.

The main crops in the Upper Murray irrigation areas are grapes, citrus fruit and stone fruit while the reclaimed swamp areas of the Lower Murray irrigation areas are used mainly for pastures.

FERTILISERS

Nearly all soils in the agricultural areas of South Australia are deficient in phosphoric acid, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements (manganese, copper, zinc and molybdenum) are added to the superphosphate to rectify the chronic shortage of these elements.

Principal Crops and Pasture Fertilised, South Australia, 1977

Type	of	Crop	Area Fertilised	Fertiliser Used			Per Hectare
				Super-phosphate	Other	Total	
			'000 hectares	Tonnes		kg	
Wheat			1 023	117 000	6 339	123 339	120.63
Barley, oats and rye			1 214	142 190	11 988	154 178	127.00
Vegetables			7	4 258	8 645	12 903	1 822.97
Fruit trees and vines			28	8 490	10 824	19 314	695.67
Other and unspecified crops			37	5 795	1 023	6 818	182.54
Total crops			2 309	277 733	38 819	316 552	137.11
Pasture			1 607	196 288	8 180	204 468	127.20
Total			3 916	474 021	46 999	521 020	133.04

Use of Artificial Fertilisers: Statistical Divisions, South Australia, 1977

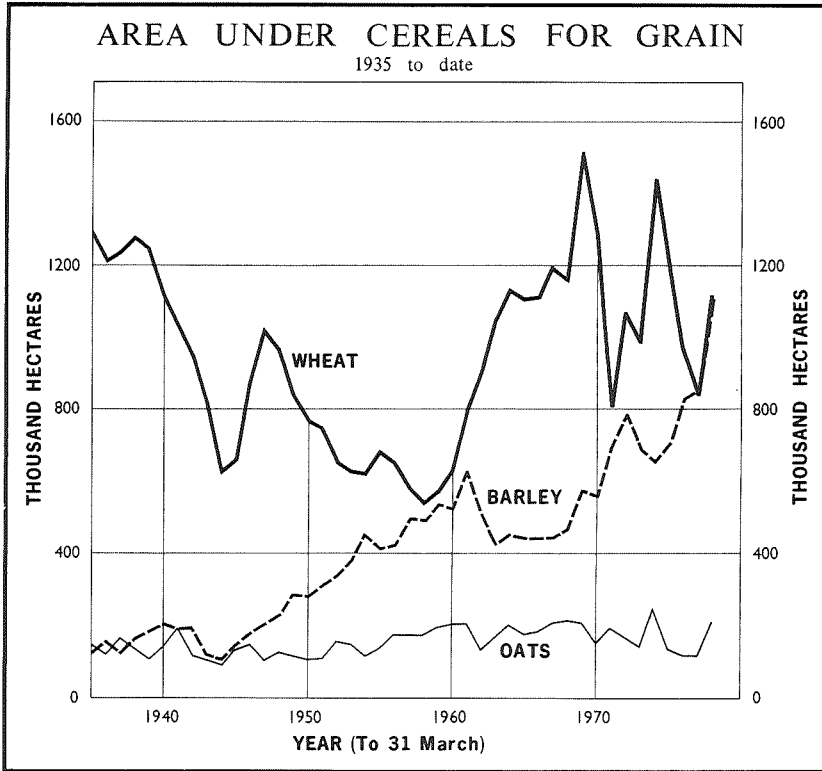
Statistical Division	Crops			Pastures	
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Area Fertilised	Fertiliser Used
	'000 ha	Per cent	Tonnes	'000 ha	Tonnes
Adelaide	13	69.05	9 052	9	1 593
Outer Adelaide	115	83.06	19 632	257	35 580
Yorke and Lower North	548	93.77	75 206	121	13 025
Murray Lands	505	89.66	68 662	202	27 001
South East	101	78.45	16 733	837	106 853
Eyre	826	90.97	105 934	147	16 402
Northern	201	90.12	21 333	35	4 014
Total	2 309	90.02	316 552	1 607	204 468

Use of Artificial Fertilisers, South Australia

Year	Crops			Pastures	
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Area Fertilised	Fertiliser Used
	'000 ha	Per cent	Tonnes	'000 ha	Tonnes
1973	2 146	87.53	310 010	2 425	382 845
1974	1 986	87.99	299 438	2 138	322 754
1975	1 821	86.07	267 794	1 133	146 995
1976	1 785	87.65	264 657	1 408	174 937
1977	2 309	90.02	316 552	1 607	204 468

CEREALS

The following graph illustrates variations in areas sown to the major cereal crops in South Australia since 1935.



WHEAT

Wheat has always been a crop of major importance to the economy of this State. South Australia produced 6 per cent of the Australian wheat production in 1977-78 compared with 7 per cent in 1976-77.

In the past twenty years a feature of the industry has been that average yields have fluctuated about a higher level of average yield mainly because of improved farming practices, including the adoption of nitrogen-building legumes in the rotation. The average yield per hectare for the 1977-78 season was 0.47 tonnes, a record of 1.58 tonnes being attained in 1960-61. The record wheat crop was 2 263 000 tonnes in 1968-69. Production in 1977-78 was 511 000 tonnes.

Varieties of Wheat

In each of the Australian States a committee has been set up to examine and recommend the wheat varieties which should be grown by farmers for marketing through the Australian Wheat Board. The South Australian Advisory Committee on Wheat Quality was established in 1962. Recommendation or approval of wheat varieties is decided each year by the Committee which brings together relevant available information on breeding, testing, commercial production, handling and end usage of wheat and more particularly of specific varieties. The Department of Agriculture and Fisheries and the Australian Wheat Board encourage growers to produce wheat with uniform characteristics in both the Hard class and Australian Standard White (ASW) class and this can be done more successfully if only a few of the best varieties are grown by the farmers.

The leading varieties of wheat sown for all purposes for the last three years are shown in the following table.

Principal Varieties of Wheat Sown, South Australia

Variety	Area			Proportion of Total Area		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
	'000 hectares			Per cent		
Condor	17	81	134	1.8	9.5	12.1
Dirk	25	23	25	2.6	2.7	2.2
Eagle	164	113	91	16.9	13.3	8.2
Festiguay	42	56	73	4.3	6.5	6.6
Gabo	31	19	25	3.2	2.3	2.2
Halberd	446	310	427	46.0	36.3	38.4
Heron	34	24	28	3.6	2.8	2.5
Kite	22	78	114	2.3	9.2	10.3
Raven	33	26	25	3.4	3.1	2.2
Other	154	122	170	15.9	14.3	15.3
Total area	970	853	1 111	100.0	100.0	100.0

The Advisory Committee has divided the State into seven wheat growing zones and each year recommends to farmers only those wheat varieties which are likely to give the best results as far as the protein content of the wheat is concerned, while maintaining a high rate of yield. For 1977-78, Halberd was the main variety recommended for ASW wheat and Kite was the most widely grown of the hard wheats.

Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 200 millimetre and 450 millimetre rainfall isohyets for the period April-November inclusive. The principal wheat producing districts are in the Eyre, Yorke and Lower North, Murray Lands and Northern Divisions. These districts accounted for about 95 per cent of the area sown in 1977-78.

**Wheat Sown for Grain: Area and Production, Statistical Divisions
South Australia**

Statistical Division	Area		Production	
	1976-77	1977-78	1976-77	1977-78
	'000 hectares		Tonnes	
Adelaide	1	1	745	1 0035
Outer Adelaide	29	30	27 384	21 857
Yorke and Lower North	191	205	229 300	153 346
Murray Lands	99	206	96 991	69 229
South East	21	22	46 595	25 568
Eyre	410	507	311 493	159 448
Northern	88	120	119 358	80 335
Total	839	1 090	831 866	510 813

Marketing*Australian Wheat Board*

The Board has legislative powers over the receipt and disposal of all wheat and wheat products. Under the stabilisation plan the Board is the sole authority for marketing wheat in Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 5.3 million tonnes. A record delivery of 14 million tonnes of wheat was made during 1968-69. Deliveries to the Board in 1977-78 totalled 8.5 million tonnes.

Deliveries to the Australian Wheat Board^(a)

Season	South Australia	Australia	Season	South Australia	Australia
	'000 tonnes			'000 tonnes	
1968-69	2 162	14 033	1973-74	1 672	11 199
1969-70	1 517	9 755	1974-75	1 377	10 704
1970-71	681	6 936	1975-76	1 042	11 247
1971-72	1 306	7 665	1976-77	725	10 932
1972-73	711	5 438	1977-78	416	8 542

(a) Mostly in bulk, but includes weight of bags where used.

During the year ended 30 November 1978 total exports of wheat (including wheat equivalent of flour and wheat products) were 8.1 million tonnes.

Bulk Handling

The South Australian Co-operative Bulk Handling Ltd, which was incorporated on 7 December 1954, is the sole bulk grain handling authority in this State, and is owned, financed and controlled by the growers. At 31 December 1978 the Co-operative had a total storage capacity, including current contracts let, of 3.5 million tonnes (3.2 million tonnes permanent storage and 0.3 million tonnes temporary storage).

The bulk handling operations of the State have been divided into seven divisions—Ardrossan, Port Giles, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The bulk capacity of the respective divisions for each of the three major cereals is shown in the following table.

Bulk Handling Capacity, South Australia
31 December 1978^(a)

Division	Wheat		Barley		Oats	
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
	'000 tonnes					
Ardrossan	148.3	—	102.1	—	—	—
Port Adelaide ..	643.6	57.3	240.6	—	14.4	—
Port Giles	24.5	—	111.8	—	—	—
Port Lincoln	629.5	95.4	163.4	—	1.8	—
Port Pirie	313.5	76.0	67.4	—	—	—
Thevenard	255.7	65.9	65.4	—	9.2	—
Wallaroo	345.5	—	81.9	—	—	—
Total	2 360.6	294.6	832.6	—	25.4	—

(a) Includes current contracts let.

The system by which payments are made to growers changed from the 1975-76 season. Previously growers forwarded claim forms through the bulk handling authority, after the delivery of wheat. Now a claim form containing the pre-harvest information required by the Board is forwarded by each grower. The form enables the prompt payment of the first advance, on a fortnightly basis after 1 December throughout the harvest period, by directly crediting the net payments to growers' individual bank accounts.

Under the system of pooling wheat, the cost of handling wheat by the Co-operative is reimbursed by the Wheat Board.

Grading of Wheat

To aid the Wheat Board in the marketing of wheat each season, a separate standard sample is determined for the various classes of exportable wheat produced in each State. Samples of the various classes of wheat are then packed in sealed bags and forwarded by the Wheat Board to the potential purchasers of Australian wheat.

In South Australia, the classes of wheat for which official standards are declared each season are South Australian Hard and Australian Standard White (SA). An official standard sample will also be determined for the class known as General Purpose in seasons when sufficient is available for export.

Test weights of the standard samples for the three classes of wheat segregated in season 1977-78 were declared as follows:

Class of Wheat	Kilograms per Hectolitre
ASW	79.0
Hard	81.0
General Purpose	<i>n. a.</i>

The segregation of South Australian wheat into classes was first introduced in the 1957-58 season when wheat was separated into a Semi-hard wheat class (after 1966 called Hard wheat) and into what, up to that time, was the long established FAQ (Fair Average Quality) class. This has been done in each season since 1957-58.

Prices

The following table shows the trend in export and domestic prices of Australian wheat for the years 1973-74 to 1977-78. The export prices shown in the table are the basic selling prices for ASW bulk wheat f.o.b., terminal ports.

Export and Domestic Prices of Australian Wheat

Year	Export Price per Tonne (a)	Home Price per Tonne
	\$	\$
1973-74	135.18	71.10
1974-75	116.52	83.40
1975-76	106.39	.
From 1/12/75 .....	..	98.70
From 4/5/76 .....	..	99.32
1976-77	96.79	105.40
1977-78	116.48	111.16

(a) Based on the average of each of the twelve monthly prices, year ended November.

BARLEY

Production

In 1977-78 the area sown to barley for grain in South Australia represented 38 per cent of the Australian total and yielded 25 per cent of the grain produced. Of the area sown for grain in South Australia, 98 per cent was 2-row barley, reflecting the suitability of certain areas of the State for the production of high quality malting barley. For malting purposes a plump mellow grain with fine skin coverings is required, and this can best be obtained when the ripening period is somewhat prolonged by cool conditions, without high temperature or drying winds.

Total area sown to barley in 1977-78 was 1 102 000 hectares, 1 073 000 hectares being sown for grain. A record production of barley of 1 134 000 tonnes was achieved in 1974-75. Production in 1977-78 was 592 000 tonnes.

Area and Production of Barley for Grain: Statistical Divisions, South Australia

Statistical Division	Area		Production	
	1976-77	1977-78	1976-77	1977-78
	'000 hectares		'000 tonnes	
Adelaide	4	4	5	5
Outer Adelaide	50	59	51	45
Yorke and Lower North	279	323	307	237
Murray Lands	172	264	167	96
South East	28	39	45	33
Eyre	260	307	227	130
Northern	63	78	86	46
Total	855	1 073	889	592

Unlike wheat, barley growing has nearly always been confined to very suitable districts resulting in high and remarkably stable yields, the record yield being 1.62 tonnes per hectare in 1974-75.

Yorke Peninsula is the major barley-producing district in South Australia. In the 1977-78 season this area contributed approximately 29 per cent of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

Varieties

The most widely grown barley variety before 1970-71 was Prior, which for the three seasons ended 1969-70 averaged about 60 per cent of the total area sown. Another variety, known as Noyep, is similar to Prior but is earlier maturing and is suitable to areas where a sudden cut-off in spring rainfall is experienced.

The malting variety, Clipper, was released in South Australia to replace Prior in 1968. Reported area sown to Clipper in the 1970-71 season was 330 000 hectares, in the 1971-72 season 512 000 hectares and in the 1977-78 season 723 000 hectares. The variety has greater straw strength, much less subject to wind damage, is adapted to conditions of high soil fertility and in tests produced substantially higher yields than Prior. These features together with improved malting quality represent considerable advantages for the grower and the industry as a whole. In 1977-78 Clipper was the most widely grown variety, accounting for 66 per cent of total area sown to barley. The percentage sown to Prior and Noyep was 3 and 1 per cent respectively. Another variety, Ketch, was released in 1970. The proportion sown to Ketch in 1977-78 was approximately 5 per cent.

Marketing

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States. In the 1977-78 season the Board received a total of 772 000 tonnes, the record being 1 420 000 tonnes in 1975-76. Since 1966-67 receipts of bulk barley have been greater than receipts of bagged barley.

For marketing purposes all barley is classified on sample before delivery. Classification is firstly by row variety and secondly by quality. With the wide acceptance of Clipper barley as the prime malting variety, the Board has renumbered its barley standards for South Australia for season 1975-76 and subsequent seasons to South Australian Clipper Barley Nos. 1 and 2 Grade, South Australian Two Row Barley Nos. 3 and 4 Grade, and South Australian Six Row Barley Feed Grade.

Australian Barley Board Receipts, South Australia

Season	2-Row				6-Row	Total
	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade	Feed	
	'000 tonnes					
1975-76	116	270	603	6	10	1 006
1976-77	82	213	502	9	5	812
1977-78	10	67	398	8	1	483

The price of malting barley is determined on the basis of an agreed formula and subsequently the prices of barley for distilling and pearling are calculated—the prices for feed purposes are determined monthly. The home consumption prices determined by the Board for barley for the seasons 1976-77 and 1977-78 are shown below.

Price per Tonne of Barley for Home Consumption

Season	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade
Bagged Barley		Dollars		
1975-76:				
3 year Contract	—	—	91.20	89.30
Other	101.70	98.70	96.00	94.00
1976-77:				
3 year Contract	—	—	95.00	96.90
Other	108.40	105.40	100.00	102.00
1977-78:				
3 year Contract	—	—	95.00	96.90
Other	114.00	111.00	100.00	102.00

OATS

The following table shows the area of oats sown for grain, for hay and for forage and the production of grain and hay in recent years.

Oats, South Australia

Season	Area Sown for			Total Area	Production	
	Grain	Hay	Forage		Grain	Hay
	'000 hectares				'000 tonnes	
1973-74	152	56	44	252	142	192
1974-75	135	35	45	215	112	117
1975-76	119	34	41	195	107	99
1976-77	117	41	40	198	90	114
1977-78	130	41	41	212	55	75

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most of the crop is used as animal fodder. As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow re-growth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful.

In 1977-78, 79 per cent of the total area of oats was sown in four varieties—Swan, 114 000 hectares; Avon, 29 000 hectares; Irwin, 13 000 hectares; and Kherson, 11 000 hectares.

RYE

Rye is a minor crop, but it has been used to control sand drift and particularly to stabilise the light soils of the Murray Mallee. Because the sands are deficient in two main nutrients (nitrogen and phosphorus), a mixed superphosphate-ammonia fertiliser is sown with the rye seed early in the season. The rapid early growth of the rye while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of controlling drifting sand. Rye provides early greenfeed while some grain is produced on a number of farms. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is of poor nutritional quality and only a few hundred tonnes are produced each year.

In 1977-78, 23 000 hectares of rye for grain yielded 5 680 tonnes. Record production was 12 000 tonnes from 23 000 hectares in 1958-59.

HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, lucerne, and clover and grass hay which together account for more than half of all hay produced.

Hay: Area and Production, South Australia

Season	Oaten	Wheaten	Lucerne	Barley and Rye	Clover and Grass	Total
AREA ('000 hectares)						
1973-74	56	14	45	10	143	268
1974-75	35	10	28	6	111	190
1975-76	34	10	25	7	83	159
1976-77	41	11	25	9	79	164
1977-78	41	12	20	10	55	138
PRODUCTION ('000 tonnes)						
1973-74	192	46	167	25	449	879
1974-75	117	34	119	17	375	662
1975-76	99	30	101	16	260	506
1976-77	114	27	99	20	252	512
1977-78	75	20	70	15	146	326

Between 20 000 and 50 000 tonnes of silage are produced in most years and in certain areas this is an important supplementary stock food; in 1977-78 production was 10 000 tonnes.

OILSEEDS

In recent years there has been a significant increase in the area sown to oilseeds. These have proved an alternative to wheat, wool and meat production and are mainly grown under contract to processors and stockfeed manufacturers. The seed is crushed to yield oils which have both domestic and industrial applications and the high protein meal by-product is used for the manufacture of stockfeeds. Details of area and production of selected oilseeds since 1973-74 are shown on the following page.

Selected Oilseed Crops: Area and Production, South Australia

Season	Linseed	Rapeseed	Safflower	Sunflower
		AREA (Hectares)		
1973-74	829	1 041	181	590
1974-75	3 165	1 238	363	2 417
1975-76	1 868	3 567	880	3 966
1976-77	2 613	3 767	528	4 426
1977-78	3 759	9 794	893	9 501
		PRODUCTION (Tonnes)		
1973-74	829	735	82	755
1974-75	3 162	1 781	279	2 576
1975-76	1 608	4 093	583	3 853
1976-77	3 202	5 425	302	4 357
1977-78	2 221	9 895	783	9 499

VEGETABLES

The market garden industry in South Australia is characterised by a large number of growers, most of whom cultivate only a few hectares. Many of the gardens form part of a larger holding. Much of the production of the industry comes from properties with easy access to the Adelaide market.

Of the total area of approximately 8 000 hectares devoted to market gardens, districts adjacent to Adelaide account for 4 500 hectares producing all types of vegetables, including large quantities of celery and early tomatoes for export. Over 2 000 hectares are cultivated in the South East Division, mainly peas, sweet corn and potatoes. An area of some 150 hectares in Northern Division (mainly on the coastal plains near Port Pirie) is used for the production of peas and early tomatoes for Adelaide and for export to the Melbourne market. Approximately 1 500 hectares along the River Murray are devoted to production of peas, pumpkins and melons for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The bulk of the potato production comes from the central and southern Adelaide hills and from the Mount Gambier area. The average yield has risen progressively to a record of 26 tonnes per hectare in 1972-73 and again reached this level in 1976-77; in 1977-78, average yield decreased slightly to 25 tonnes per hectare. The improvement is largely because of better quality seed, improved fertilisers and advances in pest and disease control.

In 1977-78, 798 hectares were sown to green peas in the South East Division for factory processing. Production of green peas from this area accounted for about 91 per cent of the total crop. The Port Pirie-Mambray Creek area, the hills to the south of Adelaide and Upper Murray irrigation areas are other important areas for pea production.

The Adelaide plains produce most of the South Australian tomatoes which are grown in glasshouses. Significant quantities, mostly for canning and juice production in local factories, are now grown in the Upper Murray irrigation areas. In recent years, high yields have resulted from the introduction of new varieties.

Vegetables for Human Consumption, South Australia

Vegetable	Area		Production	
	1976-77	1977-78	1976-77	1977-78
	Hectares		Tonnes	
Beans	42	32	198	162
Cabbages	206	226	8 713	8 907
Carrots	290	396	6 399	12 016
Cauliflowers	248	253	11 676	10 868
Celery	63	72	3 905	4 901
Lettuce	197	228	3 676	3 996
Melons	132	136	1 770	1 866
Onions	776	805	22 389	24 864
Peas	3 192	975	18 906	4 658
Potatoes	3 202	3 613	83 441	90 309
Pumpkins	377	404	6 136	6 368
Sweet corn	304	400	2 848	4 229
Tomatoes	391	391	16 006	15 611
Turnips	86	91	698	1 039
Other	273	303	..	..
Total	9 779	8 324	..	..

GRAPES

Approximately 43 per cent of Australia's vineyard area is located in South Australia where the bulk of the grapes are used for winemaking. In 1977-78 South Australia produced 190 million litres of wine and 6 409 tonnes of dried vine fruit representing 61.1 per cent and 10.6 per cent respectively of total Australian production. The following table shows the area and production of vineyards in South Australia for the seasons 1973-74 to 1977-78.

Area and Production of Vineyards, South Australia

Season	Vines		Production of Grapes for		
	Bearing Age	Not yet Bearing	Wine	Table	Drying
	Hectares		Tonnes		
1973-74	26 178	3 424	206 022	900	12 230
1974-75	26 833	3 533	272 007	1 388	17 166
1975-76	27 278	3 883	256 583	962	12 183
1976-77	27 858	3 387	280 109	1 440	11 950
1977-78	28 443	3 100	(a) 269 449	2 358	24 576

(a) Excludes an estimated 30 102 tonnes of grapes left on vine.

The area planted to vines at 31 March 1978 was a record 31 543 hectares exceeding the previous record at March 1977 by 299 hectares. Total production in 1977-78 was a record 296 383 tonnes. The previous record harvest of 293 489 tonnes was achieved in 1976-77.

Details of grape growing districts and grape varieties have been included in a special article on the wine industry in South Australia on pages 421-39 of this issue of the *South Australian Year Book*.

ORCHARD FRUIT

A large variety of fruit crops is grown in South Australia. The main types are oranges, peaches and apricots (predominantly grown in the irrigation settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills).

The following table of citrus trees of bearing age and production during the past five seasons shows the predominance of navel and valencia oranges. Other types of oranges, lemons and limes, mandarins, grapefruit, etc., together represent only 14 per cent of total citrus production.

Citrus Fruit: Trees and Production, South Australia

Season	Oranges			Lemons and Limes		Grape- fruit	Total Citrus
	Navel	Valencia	Other	Mandarins			
TREES OF BEARING AGE ('000)							
1973-74	540	802	8	72	66	45	1 533
1974-75	530	795	11	78	67	48	1 527
1975-76	520	797	10	87	68	52	1 534
1976-77	499	781	10	92	63	55	1 500
1977-78	504	783	11	101	62	63	1 524
PRODUCTION (tonnes)							
1973-74	45 750	66 985	631	6 108	3 847	6 017	129 338
1974-75	50 307	75 325	821	7 360	3 371	5 692	142 876
1975-76	54 812	87 778	1 019	7 151	3 619	7 066	161 445
1976-77	49 737	73 872	606	8 100	4 251	8 118	144 684
1977-78	49 961	87 468	881	9 655	4 162	8 155	160 283

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where approximately 80 per cent of the total crop is produced. The industry has shown great expansion in the last decade; in 1975-76 a record production of 161 445 tonnes was achieved. Production for 1977-78 was 160 283 tonnes.

Apple growing is the principal non-citrus fruit industry and is concentrated in the Adelaide Hills. A record production of 33 000 tonnes was achieved in 1940-41, while production in 1977-78 was 17 085 tonnes.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1970-71 harvest was a record 13 000 tonnes from 636 hectares. Production in 1977-78 was 8 041 tonnes.

The stone fruits industry became important following development of the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 3 000 tonnes from 835 hectares was typical for the crop until that time, but by 1966-67 the yield was a record 29 000 tonnes from 1 924 hectares. In the same period production of apricots rose from 11 000 to 28 000 tonnes. South Australia is the major apricot-producing State, with the greater part of the crop being dried and much of the remainder being canned.

Cherries, plums and prunes, and almonds are the most important of the remaining crops.

Non-citrus Orchard Fruit: Trees and Production, South Australia

Season	Apples	Apricots	Cherries	Peaches	Pears	Plums and Prunes
TREES OF BEARING AGE ('000)						
1973-74	509	369	45	334	157	57
1974-75	485	346	45	317	150	60
1975-76	473	332	42	300	145	58
1976-77	453	323	39	274	130	54
1977-78	445	320	41	244	126	58
PRODUCTION (tonnes)						
1973-74	18 551	21 046	814	19 442	10 091	1 678
1974-75	23 181	12 535	779	22 671	11 380	1 392
1975-76	19 302	12 184	741	20 108	9 235	1 879
1976-77	18 315	14 209	693	16 284	6 812	1 485
1977-78	17 085	14 679	1 003	16 624	8 041	1 795

The Upper Murray irrigation areas and the Barossa Valley of South Australia account for almost the entire Australian production of dried apricots, peaches, pears and nectarines. A small proportion of the Australian production of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds and chicory.

In 1977-78, 16 486 hectares of field peas were grown for grain yielding 6 267 tonnes; virtually all of this area is located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder or for processing into split peas.

Most of the lucerne and other pasture seeds are grown in the cooler, moist regions, particularly in the south-east of the State. During the 1977-78 season approximately 70 per cent of the 1 338 000 kg of lucerne seed produced in the State was grown in the South East Division.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

VALUE OF AGRICULTURAL PRODUCTION

The value of agricultural production may be expressed in terms of gross value, local value and net value. Gross value is defined as the value placed on recorded production at wholesale prices realised in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value of the principal market. Local value equals the gross value of production less marketing costs, and net value of production equals local value less the value of materials used in the process of production.

VALUE AND PRICES OF CROPS

The gross value of crops (including pastures) for South Australia in the 1977-78 season was \$287 389 000.

In the following table gross values of principal crops for the seasons 1973-74 to 1977-78 are shown.

Gross Value of Principal Crops, South Australia

Commodity	1973-74	1974-75	1975-76	1976-77	1977-78 ^p
			\$'000		
Cereals:					
Wheat	196 444	163 922	118 063	73 726	49 777
Barley	68 276	119 305	105 865	93 807	51 329
Oats	8 184	7 832	6 485	5 698	4 497
Rye	131	116	270	566	647
Canary seed	11	39	45	22	5
Crops for hay	9 276	5 944	5 115	6 015	6 659
Crops for green feed or silage	1 351	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Field peas	1 602	1 873	1 907	1 488	1 404
Orchard and berry fruit:					
Citrus	12 400	14 865	16 806	20 480	26 670
Apples	4 434	7 975	5 550	8 892	7 428
Apricots	5 226	4 016	4 500	6 776	6 766
Peaches	3 312	6 635	4 968	5 128	4 441
Other	5 419	6 727	7 378	7 753	9 443
Vine fruit:					
Wine grapes	19 119	33 802	35 988	37 593	36 164
Table grapes	340	654	443	739	1 224
Dried currants, raisins, etc.	2 097	3 046	1 768	2 958	6 000
Vegetables:					
Potatoes	11 172	9 285	9 966	10 997	10 443
Tomatoes	7 198	7 865	10 528	8 540	9 798
Other	17 108	18 056	19 641	20 651	26 748
Other crops	3 414	7 274	8 056	9 579	11 499
Total crops (excluding pastures)	376 513	419 230	363 341	321 409	270 943
Pastures:					
Pasture seed	4 929	5 092	4 066	3 328	3 751
Pastures cut for hay	11 242	9 014	6 590	6 657	12 696
Pastures cut for green feed or silage	63	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Total pastures	16 234	14 106	10 657	9 985	16 447
Gross value of crops	392 747	433 336	373 998	331 394	287 389

Market prices of principal crops grown in South Australia for the years 1973-74 to 1977-78 are set out in the following table.

Prices of Principal Crops, South Australia

Commodity	1973-74	1974-75	1975-76	1976-77	1977-78 <i>p</i> .
	Dollars per tonne				
Cereals:					
Wheat (<i>a</i>)	110.33	111.21	104.46	90.36	100.91
Barley (<i>a</i>)	88.29	106.11	98.14	106.52	90.06
Oats	63.49	74.10	65.20	71.90	96.11
Rye	61.92	75.41	100.00	123.17	116.79
Fruit:					
Apples	256.29	386.00	310.00	540.00	480.00
Apricots	271.45	541.00	411.00	518.00	563.00
Peaches	438.00	672.00	637.00	681.00	638.00
Pears	243.11	320.00	407.00	460.00	480.00
Oranges;					
Navel (<i>a</i>)	78.08	96.91	97.00	146.12	180.47
Other (<i>a</i>)	92.31	105.14	105.00	141.92	149.75
Grapes;					
Table	377.88	471.00	461.00	513.00	519.00
Wine (<i>b</i>)	92.80	124.27	140.26	134.21	136.94
Vegetables:					
Potatoes (<i>a</i>)	185.10	131.40	138.95	127.40	112.81
Onions	265.00	201.00	253.00	226.00	214.67
Tomatoes;					
Glasshouse	435.00	563.00	709.00	615.00	777.00
Other	352.00	289.00	569.00	481.00	513.50

(*a*) Average price realised.

(*b*) Weighted average price at winery.

PASTORAL AND DAIRYING

Pastoral activities, with sheep grazing predominant, are widespread in South Australia under widely varying climatic conditions from the arid saltbush plains in the Far North through to the lush, well-watered pastures of the South East.

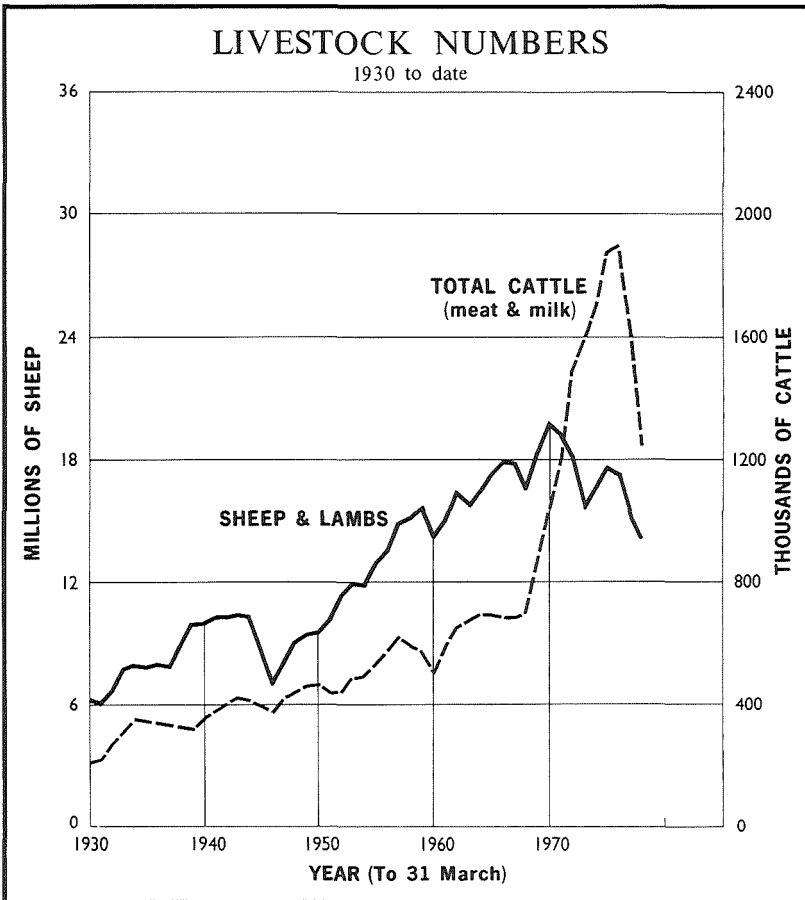
Livestock numbers increased markedly in the period 1960-1975 but since then numbers have fallen noticeably, particularly cattle for meat production. The bulk of the expansion of the industry was confined to the heavier rainfall districts.

The Dog Fence

This fence is an unbroken barrier of wire netting about 2 metres high extending for more than 8 000 kilometres through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States from dingoes (native dogs).

PASTURES

The Murray Mallee and Eyre Peninsular have been transformed from unstable farming districts to highly productive areas through the sowing of more and improved pastures. In earlier years most pasture plants available flourished only in the higher rainfall zones of the State. At that time Mount Barker subterranean clover was the predominant pasture. New varieties have been introduced, including Clare, Geraldton, Dwalganup and Yarloop subterranean clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.



Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Five medics are grown: Hannaford, Jemalong Barrel, Harbinger Strand, Gama Paragosa and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 250 millimetres of rainfall a year—it is both salt-resistant and drought-resistant. Strawberry clover is the important legume on the black soils of South East.

The most important perennial grasses in the better rainfall areas are phalaris tuberosa, perennial rye grass and cocksfoot while the annual, wimmera rye grass is most widely used in the medium to low rainfall areas. The naturalised annual grasses which occur over the whole of the State contribute substantially to total pasture production.

There has been a significant increase in the area of sown pastures over the past twenty years. Area under pasture for the years 1973-74 to 1977-78 is shown for statistical divisions in the following table.

Area Under Pasture: Statistical Divisions, South Australia^(a)

Statistical Division	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 hectares				
Adelaide	26	24	22	19	15
Outer Adelaide	419	406	403	376	368
Yorke and Lower North	297	299	275	279	242
Murray Lands	744	819	827	813	723
South East	1 287	1 307	1 289	1 263	1 239
Eyre	631	675	671	638	575
Northern	95	111	102	97	88
Total	3 500	3 641	3 589	3 484	3 249

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

SHEEP

Numbers and Distribution

At 31 March 1970 a record number of 19 747 000 sheep were being maintained in South Australia but recent drought conditions reduced the number to 14 073 000 at 31 March 1978.

Sheep Numbers: Statistical Divisions, South Australia
At 31 March

Statistical Division	1974	1975	1976	1977	1978
	'000				
Adelaide	112	96	108	76	159
Outer Adelaide	1 814	1 958	1 956	1 723	1 676
Yorke and Lower North	2 546	2 750	2 580	2 097	1 919
Murray Lands	2 274	2 499	2 363	1 994	1 885
South East	3 961	4 196	4 281	3 936	3 942
Eyre	2 512	2 699	2 606	2 199	1 902
Northern	3 211	3 422	3 384	3 108	2 591
Total	16 431	17 621	17 279	15 132	14 073

By far the greatest concentration of sheep is in the South East Division which carried 3.9 million sheep at 31 March 1978. The next largest concentration of sheep at 31 March 1978 was in the Northern Division, 2.6 million, and sheep numbers of nearly 2.0 million were reported both in Yorke and Lower North, and Eyre Divisions.

**Age and Sex of Sheep, South Australia
At 31 March**

Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
'000						
1974	215	8 417	536	3 430	3 832	16 431
1975	227	8 648	707	3 820	4 217	17 621
1976	227	8 338	824	3 899	3 991	17 279
1977	214	7 819	648	3 535	2 916	15 132
1978	203	7 407	516	3 133	2 814	14 073

Lambing

In 1969 a record 8 598 000 ewes were mated and the number of lambs marked totalled 7 193 000. In 1977, 6 996 000 ewes were mated and the number of lambs marked was 4 809 000. Early reports from farmers indicated that they intended to mate 7.1 million ewes in 1978—approximately 4.6 million to Merino rams, 0.8 million to other longwool rams and 1.6 million to shortwool rams.

Details of lambs marked and the lambing percentage in each statistical division in 1976 and 1977 are given in the next table.

Lambing: Statistical Divisions, South Australia

Statistical Division	Lambs Marked		Lambing Percentage (a)	
	1976	1977	1976	1977
'000				
Per cent				
Adelaide	28	26	76.81	84.02
Outer Adelaide	593	609	71.75	76.51
Yorke and Lower North	726	711	63.84	67.10
Murray Lands	718	756	63.81	68.83
South East	1 444	1 480	80.01	80.66
Eyre	599	524	63.75	59.65
Northern	847	702	60.34	54.13
Total	4 955	4 809	68.18	68.73

(a) Percentage of lambs marked to ewes mated.

Breeds of Sheep

The predominant breed in South Australia is the Merino which accounts for more than 87 per cent of the total sheep numbers. The South Australian Merino, having a robust constitution and a capacity to travel long distances to water, has adapted well to the hot, dry conditions of the interior.

**Breeds of Sheep, South Australia
At 31 March**

Breed	1969	1970	1971	1974	1977
			'000		
Merino	15 275.1	16 749.3	16 304.1	14 212.0	13 174.3
Corriedale	1 085.3	973.1	940.6	646.2	557.1
Dorset Horn	} 62.0	67.4	77.9	{ 46.5	45.6
Poll Dorset		29.6	27.7		35.0	58.3
Border Leicester	32.3	29.6	27.7	25.8	108.8
Polwarth	114.1	139.6	147.6	137.3	120.0
Romney Marsh	26.6	21.1	17.6	11.4	18.4
Ryeland	7.1	6.7	5.7	4.0	6.2
Southdown	5.3	4.9	4.7	3.1	2.3
Suffolk	16.9	14.9	18.4	19.0	23.9
Other	4.3	3.8	4.3	7.7	9.6
Merino-Comeback	198.8	168.4	214.7	133.6	73.5
Crossbred	1 564.3	1 568.3	1 402.6	1 149.3	934.2
Total	18 392.1	19 747.1	19 165.8	16 430.9	15 132.3

Of the remaining recognised breeds, the Australasian breeds, Corriedale and Polwarth, are most important. These are dual purpose sheep, used for mutton and at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback breed from the mating of Merino rams with Lincoln-Merino ewes.

British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes mainly to produce fat lambs but useful types of comeback and crossbred wools, are also yielded. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are used principally for production of export lambs.

Sheep Shearing and Wool-clip

In the agricultural areas of the State there is a predominance of shearing during the late winter and spring months, August to November. Shearing in the South East Division occurs somewhat later, with 50 per cent of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Northern Division) there are two main seasons, March-April and July-August. The next table gives details of sheep and lambs shorn, wool-clip and average fleeceweight in South Australia for the years 1973-74 to 1977-78.

Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, South Australia

Classification	1973-74	1974-75	1975-76	1976-77	1977-78
	NUMBER SHORN ('000)				
Sheep	13 965	14 651	15 355	14 645	13 499
Lambs	3 919	4 416	4 394	3 275	3 200
Total	17 885	19 067	19 748	17 920	16 699
	WOOL-CLIP ('000 kg)				
Sheep	82 314	88 965	84 148	82 181	73 571
Lambs	7 320	8 703	7 663	5 835	5 392
Crutchings	4 249	4 594	4 413	4 302	3 925
Total	93 883	102 261	96 224	92 317	82 888
	AVERAGE FLEECEWEIGHT (kg) (a)				
Sheep	6.20	6.39	5.77	5.91	5.74
Sheep and lambs	5.25	5.36	4.87	5.15	4.96

(a) Includes crutchings.

The total wool-clip, including crutchings, exceeded 100 million kg for the first time in 1966-67. More than 90 per cent of the total wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 5 kg a head for adult sheep, with a record 6.39 kg a head being achieved in 1974-75. This is significantly higher than the yield obtained in other States, and is primarily because of the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

A breakdown of the State figures for 1977-78 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas. The relatively light average fleece obtained in the South East Division is explained partly by the lower proportion of Merino sheep in the area (at 31 March 1977 only 72 per cent of total sheep in the South East Division were Merinos, compared with a total State figure of over 87 per cent), but more importantly by the lighter wool quality of the smaller framed sheep in this area.

Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, Statistical Divisions
South Australia, 1977-78

Statistical Division	Number Shorn			Wool-clip			Average Fleeceweight(a)	
	Sheep	Lambs	Total	Sheep	Lambs	Total (a)	Sheep	Sheep and Lambs
	'000			'000 kg			kg	
Adelaide	294	8	302	1 026	13	1 092	3.67	3.61
Outer Adelaide	1 538	381	1 919	8 204	598	9 235	5.61	4.81
Yorke and Lower North	1 846	423	2 269	10 547	691	11 807	6.02	5.20
Murray Lands	1 755	495	2 249	10 308	818	11 685	6.19	5.19
South East	3 568	1 038	4 606	19 167	1 839	22 013	5.65	4.78
Eyre	1 941	338	2 279	10 490	499	11 549	5.69	5.07
Northern	2 557	517	3 074	13 828	933	15 507	5.70	5.04
Total	13 499	3 200	16 699	73 571	5 392	82 888	5.74	4.96

(a) Includes crutchings.

WOOL INDUSTRY

Production of Wool

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcasses of dead sheep.

Since 1965-66 wool production has exceeded 100 million kg each year (except in 1976-77 and 1977-78), however, wool prices have varied markedly resulting in the gross value of production being as low as \$65 million in 1970-71 and as high as \$183 million in 1973-74.

Wool Production and Value, South Australia

Season	Production			Value of Wool Production
	Shorn Wool	Other (a)	Total	
		'000 kg		\$'000
1973-74	93 883	6 272	100 155	183 227
1974-75	102 261	5 191	107 452	125 044
1975-76	96 224	5 688	101 912	119 179
1976-77	92 317	6 125	98 442	155 293
1977-78	82 888	4 205	87 092	149 768

(a) Includes fellmongered wool, dead wool and wool exported on skins.

Wool Quality and Marketing

For many years approximately 9 per cent of the wool grown in South Australia was sold outside the auction system. This percentage has increased since the 1970-71 season reaching 19 per cent in 1972-73, falling to 14 per cent in 1973-74 and again rising to 22 per cent in 1976-77. Of the South Australian wool passing through the auction system approximately 85 per cent is received by the Adelaide selling centre with the remainder, predominantly of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales, and to a lesser extent from western Victoria.

Because of the development of a system of Objective Measurement for wool the traditional method of displaying wool for sale, whereby sample bales are opened for inspection by buyers, is declining in importance and much wool is now sold by sample. A high standard of clip preparation is required for sale by sample as there must be very little variation between the bales of wool of each grade.

When a suitable lot is received into store a core sample is taken and is tested to give measures of average fibre diameter (mean micron), degree of vegetable fault, and yield of wool (by three methods) and this information is entered on a certificate. As various other factors (*e.g.* length of wool, type of vegetable fault) must be assessed, a grab sample of 8 kg is taken from each lot and this is displayed on a show floor, together with the Objective Measurement certificate, for examination by buyers.

An advantage of the Objective Measurement system of clip preparation is that the sample may be inspected at a site remote from the location of the bulk of the clip. This has enabled wool held in Adelaide stores to be inspected, and sold, in Melbourne sales, which is of particular value to growers who deliver wool in late autumn and winter when there may be six to eight weeks between sales in Adelaide.

Quality Analysis of Greasy Wool Sold at Auction in South Australia

Mean Micron Classification	1974-75	1975-76	1976-77	1977-78
		Per cent		
20 and finer	0.8	3.7	4.1	6.0
21	6.7	11.7	14.0	18.3
22	9.2	19.3	21.7	25.0
23	21.9	26.5	26.4	22.7
24	20.8	16.4	14.4	11.9
25	14.7	8.5	7.8	5.6
26	11.4	5.4	4.4	3.1
27 to 38	12.8	} 6.7	5.6	5.6
Coarser	—			
Oddments	1.7	1.8	1.6	1.8
Total	100.0	100.0	100.0	100.0

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14 per cent of the wool's greasy weight the wool has to be treated by the carbonising process. In most seasons approximately 70 per cent of South Australian wool is free of, or contains only light burr and seed; almost 15 per cent contains medium or heavy burr and seed and some 13 per cent is carbonising wool.

Incidence of Vegetable Fault in Wool Sold at Auction in South Australia

Season	Free or Near Free	Light Burr and/or Seed	Medium Burr and/or Seed	Heavy Burr and/or Seed	Carbonising Wool	Combing Oddments	Total
Percentage of Total Number of Bales							
1973-74	50.2	26.4	7.4	2.2	12.2	1.6	100.0
1974-75	49.7	24.6	8.6	2.7	12.7	1.7	100.0
1975-76	37.0	31.8	12.7	3.1	13.6	1.8	100.0
1976-77	37.8	31.7	13.4	2.8	12.7	1.6	100.0
1977-78	44.2	32.1	9.1	1.6	11.2	1.8	100.0

Details relating to Adelaide wool sales during the past five seasons are shown in the following table.

Adelaide Wool Sales

Season	Wool Sold (Scoured and Greasy)		Amount Realised	Average Price Per kg (Greasy)	In Store at End of Season
	Bales	Weight			
	Number	'000 kg	\$'000	Cents	Bales
1973-74	487 336	74 249	131 078	176.54	30 582
1974-75	563 483	84 962	102 054	120.12	22 762
1975-76	517 176	77 810	104 626	134.46	17 079
1976-77	482 682	73 652	127 705	173.39	13 582
1977-78	397 183	62 755	112 350	179.03	6 829

Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realised in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales. In 1977-78 the average price for wool sold at auctions in Australia was 187.14 cents per kg greasy, compared with 179.03 cents per kg in South Australia.

CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1978 just over 4 per cent of those used mainly for meat production and about 6 per cent of those for milk production were in South Australia. At 31 March 1978 the total number of cattle in South Australia was 1 242 000.

**Cattle Numbers: Statistical Divisions, South Australia
At 31 March 1978**

Classification	Statistical Division						Total	
	Adelaide	Outer Adelaide	Yorke and Lower North	Murray Lands	South East	Eyre Northern		
	'000							
Cattle for milk production:								
Bulls (a)	0.1	1.1	0.2	0.4	0.8	—	0.1	2.7
Cows	4.1	52.4	4.6	22.7	25.9	0.7	1.3	111.8
Heifers	1.0	12.9	1.3	5.6	6.4	0.2	0.4	27.9
Calves under one year	0.9	9.8	1.1	4.1	5.0	0.2	0.3	21.4
House cows	0.2	0.8	1.0	0.8	1.0	1.1	0.5	5.5
Total	6.3	77.0	8.3	33.7	39.2	2.2	2.7	169.3
Cattle for meat production:								
Bulls (a)	0.3	3.0	1.3	2.1	11.7	1.2	4.8	24.5
Cows and heifers	6.4	64.7	24.0	54.2	248.5	25.8	140.2	563.8
Calves under one year	3.9	35.5	12.6	35.7	143.3	14.4	64.0	309.4
Other cattle	2.4	13.1	4.0	11.6	82.5	3.5	58.5	175.5
Total	13.1	116.2	41.9	103.6	486.0	44.9	267.5	1 073.2
Total cattle	19.4	193.2	50.2	137.3	525.2	47.1	270.1	1 242.5

(a) Used or intended for service.

Cattle for Meat Production

Numbers of cattle for meat production have increased in South Australia. At 31 March 1964, 424 000 cattle for meat production were recorded (this figure is not strictly comparable with earlier figures because of a change of classification adopted in 1964); by 31 March 1969, 631 000 cattle were reported for meat production on 8 706 rural establishments. The number at 31 March 1976 had risen to 1 683 000 cattle, but since then numbers have declined significantly and at 31 March 1978 there were 1 073 000 cattle for meat production.

In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus while near Adelaide, where a number of studs are located, several breeds are well represented. In recent years several European breeds have been introduced, most notably the Charolais.

Cattle for Milk Production

From March 1964 to March 1968 the total number of cattle for milk production declined by 39 000 to 231 000. A further decline in total numbers began in 1973-74; the total number at March 1978 was 169 000. At March 1966 there were 10 046 rural establishments with cattle used or intended to be used for milk production but by March 1977 the number had fallen to 3 018. Distribution within the State is little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing areas carry herds used mainly for milk production. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the sown pasture areas mainly market whole milk, either for consumption in the Adelaide area or for cheese making.

The Adelaide Hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay, embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Of the breeds used mainly for milk production, Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and an abundant water supply. The area has a very high carrying capacity of predominantly Friesian cattle.

The Lakes District owes much to the barrages across the mouth of the Murray which have helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. These have greatly contributed to the improvement of the productivity of this area and also have had the effect of maintaining a greater control over the level of the water in the river, thereby greatly facilitating irrigation of the reclaimed swamps upstream. The cattle for milk production are principally Jersey breed.

The most important dairying area not serving the Adelaide market is the Lower South East, where the high rainfall and low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular than other breeds.

DAIRY PRODUCE

Milk

Total milk production in any one year is not known precisely. However, as details are known of two major components of total milk utilisation in South Australia, namely the amount consumed by factories in the production of milk, cheese, butter and other milk products and home consumption in the Metropolitan Milk Board area, a carefully considered estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1977-78 and earlier seasons.

Production and Utilisation of Milk, South Australia

Year	Total Milk Produced	Butter (a)	Factory Cheese (b)	Milk Used for		
				Home Consumption		Other Purposes
				Milk Board Area	Outside Milk Board Area	
				'000 litres		
1973-74	438 829	101 648	190 465	95 389	41 346	9 980
1974-75	426 371	89 458	194 335	91 828	39 917	10 833
1975-76	397 500	64 947	192 166	90 868	39 501	10 018
1976-77	354 912	56 112	157 951	91 225	39 656	9 968
1977-78	316 681	51 136	128 960	92 213	40 085	(c) 4 288

(a) Includes farm production of butter until 1976-77.

(b) Factory production accounts for virtually all cheese produced.

(c) Other processing milk only: not comparable with previous years.

PIGS

In South Australia pigs were normally kept as a sideline on mixed farms or in conjunction with dairy cattle but the trend is towards specialising in pigs.

There have been substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices. In recent years the numbers have generally declined. The total number exceeded 200 000 for the first time in 1966 and has continued to exceed that number in subsequent years. Of the 311 000 pigs at 31 March 1978, approximately 56 per cent were in Outer Adelaide, and Yorke and Lower North Divisions. The principal breeds in South Australia are Large White, Berkshire, Landrace and Tamworth.

The following table shows the number of pigs on rural establishments at 31 March for the last five years.

Pig Numbers, South Australia

At 31 March	Boars	Breeding Sows	All Other	Total
1974	4 996	46 000	334 162	385 158
1975	4 664	44 318	299 973	348 955
1976	4 533	42 259	279 132	325 924
1977	4 376	41 431	270 700	316 507
1978	3 897	39 763	267 286	310 946

In the following table, rural establishments with pigs at 31 March 1977 are classified according to the size of the pig herd and the number of breeding sows. Of the 21 597 establishments of all types, 3 569 carried pigs.

Rural Establishments Classified to Number of Breeding Sows and Size of Pig Herd: South Australia, 1976-77^(a)

Number of Breeding Sows	Size of Pig Herd (Numbers)					Establishments with Breeding Sows
	1-9	10-19	20-49	50-99	100 and Over	
1-4	288	260	336	22	2	908
5-9	36	54	398	256	27	771
10-19	—	12	83	276	225	596
20-49	—	—	10	41	282	333
50-99	—	—	—	—	91	91
100 and over	—	—	—	—	32	32
Total	324	326	827	595	659	2 731

(a) Includes 838 establishments with pig herds which carried no breeding sows.

MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing approximately 8 per cent of total Australian production. The following table shows the number of livestock slaughtered for human consumption (including exports) and the production of meat during the last five years. Slaughtering and meat production on rural establishments are included in these figures.

Livestock Slaughtered and Meat Produced, South Australia

Season	Livestock Slaughtered for Human Consumption			Meat Production (Bone-in-Weight)			
	Cattle and Calves	Sheep and Lambs	Pigs	Beef and Veal	Mutton and Lamb	Pigmeat	Total
		'000			Tonnes		
1973-74	359	2 595	448	63 211	50 116	24 195	137 522
1974-75	465	2 984	344	84 649	54 818	18 699	158 166
1975-76	549	3 561	342	92 012	62 971	19 264	174 247
1976-77	656	3 426	344	110 058	60 472	19 455	189 985
1977-78	744	3 240	376	125 011	56 796	21 334	203 141

Average market prices of some of the principal classes of livestock are set out in the next table. Generally prices fluctuate considerably from year to year but, a comparison of prices for fat cattle and fat sheep for 1975 showed a dramatic fall.

Livestock, Average Prices at Adelaide Market

Class of Stock	1974	1975	1976	1977	1978
	Dollars				
Fat cattle:					
Bullocks and steers;					
Prime, medium	138-41	82-55	111-73	132-88	208-63
Good	116-77	68-79	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cows;					
Prime, medium	117-85	53-73	85-87	109-25	156-83
Good	101-28	34-93	43-97	61-31	105-64
Calves;					
Prime vealers	66-80	31-10	33-46	44-71	47-47
Good	51-85	23-91	23-08	30-08	57-73
Fat sheep:					
Merino wether;					
Prime	12-51	6-17	9-05	13-98	16-84
Medium	10-14	3-90	5-31	8-96	14-12
Lambs;					
Prime, medium	12-23	9-56	10-83	14-82	17-42
Good	9-93	6-00	6-21	9-98	13-16
Pigs:					
Choppers	118-67	125-87	123-69	111-39	142-46
Baconers	68-06	69-04	68-95	67-45	76-74
Porkers	37-79	40-56	42-12	40-83	46-23

GROSS VALUE OF LIVESTOCK PRODUCTS AND SLAUGHTERINGS

Gross value is the value placed on recorded production at the wholesale prices realised in principal markets.

The following table shows for the past five years the gross value of livestock products, and livestock slaughterings and disposals.

Gross Value of Livestock Products and Livestock Slaughterings and Disposals, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78 _p
	Livestock Products (\$'000)				
Wool	173 180	122 180	131 865	153 550	145 277
Whole milk used for:					
Butter	3 868	3 594	2 581	2 619	2 873
Cheese	10 503	12 942	11 603	10 188	11 615
Human consumption and other purposes ..	13 169	14 962	15 986	17 629	20 599
Eggs	11 409	14 043	13 618	14 702	17 351
Honey and beeswax	2 649	2 223	2 067	1 670	3 298
Total livestock products	214 779	169 943	177 720	200 357	201 013

Gross Value of Livestock Products and Livestock Slaughtering and Disposals, South Australia (continued)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78p
	Livestock Slaughtering and Disposals (\$'000)				
Cattle and calves	82 153	43 415	63 539	99 363	101 074
Sheep and lambs	44 416	22 212	25 832	39 546	67 175
Pigs	26 123	23 435	21 562	21 850	23 418
Poultry	12 305	13 723	15 158	18 089	22 673
Total livestock slaughtering and disposals	164 997	102 786	126 091	178 848	214 341

THE WINE INDUSTRY OF SOUTH AUSTRALIA*

The Australian wine industry is not large by world standards; average production of wine in Australia for the five years 1971-72 to 1975-76 was 308 million litres per year while total world production was estimated at 31 844 million litres per year. In comparison with the world's two largest producers, France and Italy, which had an estimated production of 7 293 million litres per year (22.9 per cent of world production) and 6 989 million litres per year (21.9 per cent) respectively, Australia produced only 1 per cent. Other major producing countries include Spain, USSR, Argentina and the United States, producing 10.0 per cent, 8.4 per cent, 7.4 per cent and 4.4 per cent of estimated world production respectively.

Though small in comparison with these countries, the wine industry is nevertheless an important one in Australia, especially in South Australia where approximately 44 per cent of the Australian vineyard area is located. In recent years South Australia has produced 61.5 per cent of Australia's wine, 91 per cent of brandy, and 6 per cent of dried fruit.

Although New South Wales and Victoria gained an early lead in wine production, the first position among Australia's wine producing States has long been held by South Australia.

Trial plantings of vines were made soon after the arrival of the first European settlers in 1836. Some of these were no doubt intended for fresh fruit production but some owners were also interested in testing the potential for wine.

John Reynell planted cuttings on his property about 22 kilometres south of Adelaide at Reynella and at about the same time Richard Hamilton planted vines at Glenelg from which the first wine was consumed in the early 1840s.

Although it is doubtful if these early plantings actually amounted to vineyards, they were soon extended and small commercial vineyards were established by John Reynell, Richard Hamilton, and other pioneers in the early 1840s with cuttings imported from New South Wales (including some cuttings from Macarthur's property at Camden Park), the Cape of Good Hope and Europe. An early impetus was given to the wine industry by the formation in 1840 of the 'Association for Introduction of Vines' with thirty subscribers and the arrival the following year of the *Elizabeth Moore* with 57 000 vine cuttings imported from Cape Town.

The growth of the early vineyards and the quality of the wines made from them were considered so promising that further planting following in selected areas near Adelaide

* Contributors: Dr B. C. Rankine and Dr R. E. Smart, Roseworthy Agricultural College; R. M. Cirmi, Department of Agriculture and Fisheries; Dr W. W. Forrest, Australian Wine Research Institute; C. W. Quirk, Australian Wine Board; G. M. Nettelbeck, Australian Wine and Brandy Producers' Association; and Dr M. R. Sauer, Division of Horticultural Research, CSIRO.

and also to the north and south of the young city. In 1844 Dr Rawson Penfold arrived in Adelaide with a number of vine cuttings which he planted at Magill about 6 kilometres east of the city; it is said that his object in bringing the cuttings was to grow grapes and make wine for the benefit of his patients. In 1853, Thomas Hardy began his wine-making enterprise at Thebarton and later moved to McLaren Vale.

The first Barossa vineyards were established before 1851 under such famous wine names as Gramp, Samuel Smith and Seppelt. In 1847 Johann Gramp planted vines at Rowland Flat in the hilly country at the foot of the Barossa ranges, built a cellar and made his first wine in 1850. At Angaston, Samuel Smith planted a vineyard and built a small cellar in 1849; to this he gave the name 'Yalumba', a name which is still associated with his descendants in the industry today. Joseph Seppelt planted his vineyard in 1851 and later built a cellar which was the fore-runner of one of the largest wineries in Australia.

North of Barossa are the Clare and Watervale districts which are topographically similar to the vineyard areas south of Adelaide and from which come some of Australia's most delicate white wines. Plantings were first made at Watervale in 1853 and at Sevenhill, near Clare, by the Jesuit Brothers in 1859. At about the same time the Bleasdale vineyard was started at Langhorne Creek south of Adelaide.

Coonawarra, noted for its red wines, is a isolated vine-growing area in the south-east of South Australia between Naracoorte and Mount Gambier and had its origin in the 'Coonawarra Fruit Colony' set up by a local land-owner, John Riddoch, who attracted migrants with the offer of 4 hectare fruit-growing blocks. In 1891, Riddoch planted 52 hectares of vines and built the first winery in the area. More recently, vineyards have been established at Padthaway about eighty kilometres north of Coonawarra.

The arrival in Australia in 1887 of two irrigationists from California, George and Ben Chaffey, was associated with a different and very significant development in South Australian viticulture. Brought to Australia by the Victorian Government to plan the irrigation settlement at Mildura, the Chaffey Brothers also became interested in Renmark and, by developing the first irrigation district there, laid the foundation for the mammoth fruit producing industry now established at numerous centres along the Murray River from the Victorian border to Cadell. This region, the Riverland, grows a large quantity of fruit, which includes over 60 per cent of the State's annual grape crop. Small areas of irrigated vineyards have recently been established at Nildottie and Bowhill on the Murray approximately eighty and 110 kilometres respectively down-stream from Cadell.

Originally grape plantings in the irrigated districts on the Murray were intended for the production of dried fruit. But a distillery, established at Renmark by Angoves in 1919 to process surplus grapes, was sufficiently successful to encourage fruit-growers to plant varieties of grapes which were ideal for making distillation wine but were not suitable for drying.

Following Angoves' lead, growers co-operatives established distilleries at Renmark, Berri, Waikerie and more recently, at Loxton; however they soon saw the opportunity to make beverage wines, particularly the sweet fortified styles. In more recent years the Riverland wineries have turned their attention to unfortified table wines and with advances in technology and the establishment of special sections within the wineries to give the detailed attention required, they are now able to make table wines.

GRAPE GROWING DISTRICTS

The grape-growing districts of South Australia are subject to substantial variety in geographical location, climatic variations and soil conditions and can be divided into seven easily recognisable regions (See map page 424) ranging from the Clare-Watervale district in the north to southern limit of the grape growing area at Coonawarra in the

south-east of the State and bounded by the warm irrigated areas of the Murray to the east.

This diversity of areas, each with its own characteristics, produces grapes with subtle differences which ensure that the wines produced attain a character unique to South Australia which is highly regarded both in Australia and overseas.

The grapegrowing areas along the Murray receive far less rainfall than the vine requires and irrigation is used to make up the large deficit. In the other grapegrowing areas of the State (the so-called non-irrigated districts) rainfall is normally less than optimal to achieve economic levels of production and, where water of adequate quality is available, more grapegrowers are irrigating.

Riverland

The irrigated districts, Renmark, Berri, Barmera, Loxton and Waikerie are in the warm, arid region of the Murray Valley where the annual average rainfall is only 250 millimetres, and horticulture is wholly dependent on irrigation from the River Murray. The area is a plain, relieved only by low sandhills and the channel of the river. The soils are alkaline and mainly sandy, generally high in salt content and underlain by a layer of accumulated lime. Tree crops are usually grown on the deeper sands while shallower clay and sandy textured soils are used for vines.

Water lifted from 15 to 30 metres from the river was originally distributed through open channels and applied to the plantings by furrows, but installations in the last fifteen years have generally used pressure lines containing appropriate outlets for distribution into furrows for the irrigation of vines. Over-head sprinklers run from these pressure lines and are normally confined to tree plantings although in recent years they have become increasingly common for vines as well. Furrow watering has many disadvantages as it is inefficient and wastes water, aggravates salinity problems and requires a large continuing labour input. 'Micro-jet' type irrigation systems which, employ a small low-pressure outlet between each vine, offer the potential for more efficient and economical irrigation.

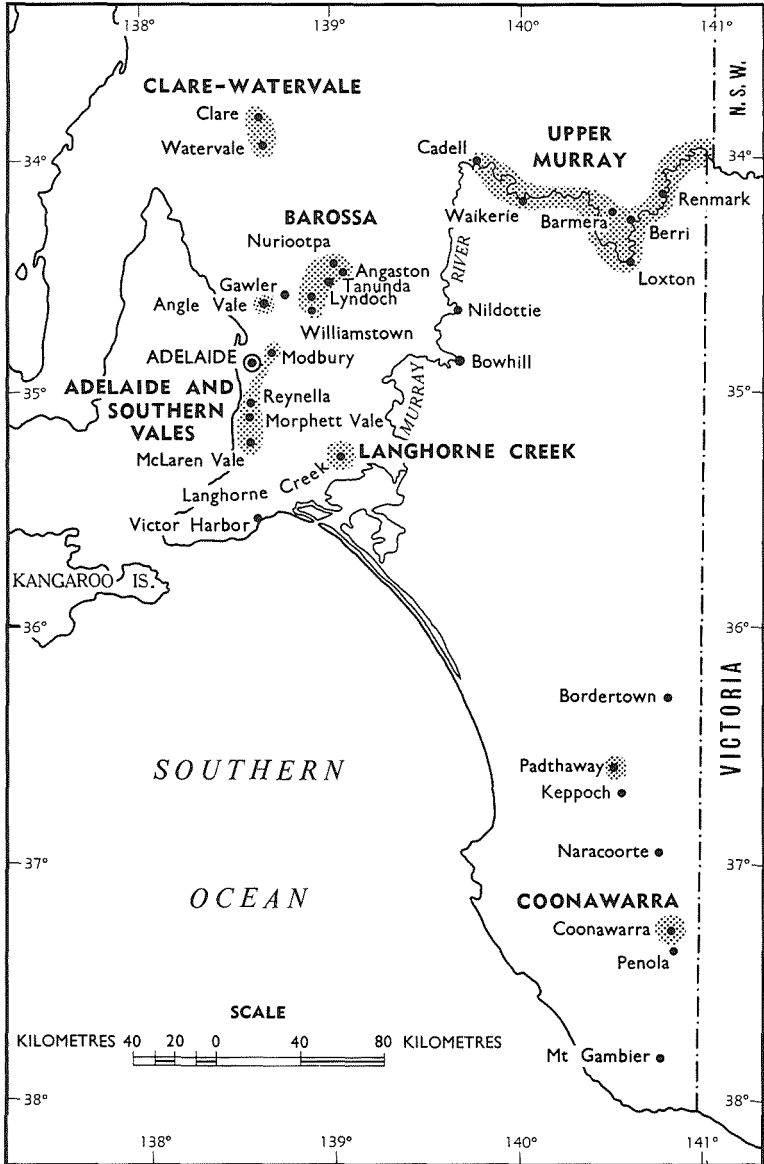
Barossa

The Barossa district loosely includes the Barossa Hills and surrounding countryside, as well as the Barossa Valley proper. The valley extends for a distance of about 30 kilometres in a north-easterly direction from Williamstown through Lyndoch to Nuriootpa and Angaston, its vineyards flourish on the slopes of and in the broad well-drained valley and are protected by steep hills thick with trees. This is not agriculturally 'rich' country; much of the land is plain and sandy, but a good underlying subsoil gives the vines solid foundations for their roots which, combined with adequate rainfall and an ideal climate, is enough to ensure that the crops are satisfactory.

East of the Barossa Valley lie the Barossa Hills in which are planted a number of vineyards between Angaston, Eden Valley and Springton. So far as grape-growing is concerned the Barossa Hills, as distinct from the valley proper, constitute an entirely different district. The elevation is around 460 metres; the soils are podsols characterised by an acid reaction and a gritty topsoil separated sharply from a clay subsoil; the temperatures are slightly lower and vines here ripen about three weeks later than in the Valley.

By comparison the elevation of the Valley is somewhat lower, being around 270 metres. The soils are varied in type but differ generally from the Hills in having a neutral surface underlain by alkaline subsoils, often with free lime present.

PORTION OF SOUTH AUSTRALIA GRAPE GROWING DISTRICTS



Clare-Watervale

In the past decade there has been a vigorous development of vine-growing in this district, 120 to 130 kilometres north of Adelaide.

The soils used for vine-growing are mainly red-brown earths, a soil type which is characterised by a sandy-loam to loam surface, slightly acid or neutral in reactions, overlying an alkaline clay subsoil usually containing some free lime. The rainfall at Clare averages 610 millimetres per annum and the elevation is 400 metres. Grapes in the district ripen later than in the Barossa Valley and at about the same time as in the Barossa Hills.

Adelaide and Southern Vales

Included in this area are McLaren Vale, McLaren Flat and Reynella south of Adelaide as well as the vineyards along the foothills east of Adelaide. These plantings are cultivated in a variety of soils but the red-brown earth is the most common. In the Southern Vales there are some leached sands and, in places, soils containing lateritic gravel; but in general lime is commonly found in the subsoils although the surface may be neutral or slightly acid. The rainfall in these districts is about 530 millimetres per annum and the elevation is below 150 metres.

Langhorne Creek

Sixty-five kilometres south-east of Adelaide is a vine area distinctly different in character from nearby districts. This is Langhorne Creek where 390 hectares of vines are grown under a system of winter flood irrigation which is used to supplement the inadequate rainfall of 350 millimetres.

The red-brown earth of the soil type which is dominant throughout the non-irrigated areas occurs again at Langhorne Creek although it is modified by alluvial deposits along the Bremer River.

Coonawarra

In the South East, 400 kilometres from Adelaide and near the southern limit of the region in which grapes can be grown and ripened, is the district of Coonawarra with over 1500 hectares of vineyards. Here the grapes ripen slowly and late, and the apparent association between a slow rate of ripening and wine-making quality is evident in this district which is noted for its red and white table wines.

The soil at Coonawarra belongs to the type called terra rosa; it is a red friable loam 15 to 45 centimetres deep over a layer of limestone with a hard capping. However, the extent of this soil type is quite limited and almost all of it has now been planted. Although Coonawarra's rainfall averages about 640 millimetres, the grapes are often irrigated from a copious supply of shallow underground water.

Padthaway

Padthaway is situated 80 kilometres north of Coonawarra and comprises over 1 000 hectares of vineyard. The soils are similar to those at Coonawarra but the area is slightly warmer. Maturity is earlier than at Coonawarra and a different style of wine is produced.

Both Coonawarra and Padthaway have a large proportion of proprietary company vineyards and the average size of holding is in excess of 100 hectares. Vineyard operations are highly mechanised and mechanical harvesting and pruning are extensively employed.

VINEYARDS

The proprietors of vineyards in South Australia fall mainly into four categories. (1) The proprietary companies which between them own a substantial proportion of the State's wine-grape plantings. The largest of them cultivate from 160 to 360 hectares each, represented in various properties, some of which are on the Murray. (2) Fruit-growers in irrigated areas who normally have 8 to 12 hectares of fruit in which grapes are included in various proportions with citrus, stone-fruits, pears and others. Approximately 10 per cent of the grapes grown on properties of this type are dried, the remainder is used for wine or spirit apart from an insignificant proportion which is used for table grapes. (3) Grape-growers in the non-irrigated areas who may also grow another crop but whose main enterprise is grape production. Normal vineyard size in this category is about 12 hectares. (4) Sideline producers who grow up to 4 hectares and sometimes more, in addition to some other enterprise which is of greater importance to them. The other enterprise is most often dairying or sheep grazing but in certain cases, particularly in the Barossa, the proprietor may have regular employment in some other business, often in a winery.

Land in the non-irrigated districts is normally held under a freehold title. On the Murray, about half the fruit-growing area is within one or other of the irrigation settlements; each irrigation settlement is a planned group of holdings with a comprehensive water supply administered by the Engineering and Water Supply Department and land is held under irrigation perpetual lease. Outside these settlements, but still on the River Murray, there are a number of private freehold properties with their own pump and water reticulation system. Most of these are privately owned and managed as separate units, but several are schemes developed privately and divided into a number of individual blocks under individual management.

Plantings

After only a few years experience, grape-growers found that the close plantings used in Europe were not necessary in Australia. Planting distances were opened out and have been standardised at 3.5 metres between rows and usually 2 metres between vines in the row, making 1 500 vines per hectare compared with 5 000 or more in Europe. Vines planted before 1890 were trained as bushes but the vigorous growth obtained in the new irrigation areas after 1887 made some support necessary and wire trellises came into use. Trellises were subsequently adopted in all areas and although bush vines are still seen growing, particularly in the Barossa, the Department of Agriculture and Fisheries recommends that all future plantings be trained on trellises. The unqualified success in recent years of vines planted in rows which follow the contours has led the Department of Agriculture and Fisheries to recommend further that contour plantings be considered for all new plantings in non-irrigated areas.

Area of Vineyards, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Vines:					
Bearing age	26 178	26 833	27 278	27 857	28 443
Not yet bearing	3 424	3 533	3 883	3 387	3 100

Yields

District averages in the irrigated areas are eighteen to twenty tonnes per hectare although individual vineyard yields of forty, and even fifty tonnes per hectare are not uncommon. In the non-irrigated districts the average is four to five tonnes per hectare with individual vineyards producing twenty or twenty-five tonnes in favourable years. About half of the State's wine-grapes are sold by private treaty to proprietary winemakers at prices, according to variety, which were until 1965, fixed by mutual agreement between representatives of the grape-growers and the winemakers. Agreement could not be reached for the 1966 vintage and as a result prices were brought under price-fixing legislation and are now determined by the South Australian Commissioner for Consumer Affairs.

About one-third of the State's wine-grape crop is received by the co-operative wineries. Nearly all of this is grown by members who receive a down payment on each tonne, followed by further payments over a period of up to five years according to realisation made on the product. Most of the wine, brandy and spirit made by co-operatives is sold in bulk to proprietary wineries but, there is an increasing trend to market directly under their own labels.

Production of Grapes, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Grapes:			Tonnes		
For wine	206 022	272 007	256 583	280 109	269 449
For table	900	1 388	962	1 440	2 358
For drying	12 230	17 166	12 183	11 950	24 576

Grape Varieties

The tremendous upsurge in tablewine sales in Australia over the last decade coupled with weakening export markets for dried vine fruits has caused a major shift in the types of grapes grown in South Australia. Areas of Sultana and Waltham Cross, the principal drying varieties have declined overall and the majority of those now grown are used for winemaking rather than for drying. Areas of Muscat Gordo Blanco, which can be used for both drying or wine making, have remained relatively constant while large areas of specialized wine varieties like Shiraz, Cabernet Sauvignon, Grenache (red wine grapes) and Rhine Riesling (white wine) have been planted in all grape growing districts.

Principal Varieties of Vines, South Australia

Variety	March 1975	March 1976	March 1977	March 1978
	Hectares			
Cabernet Sauvignon	2 153	2 413	2 441	2 457
Clare Riesling	(a)	(a)	966	990
Doradillo	1 787	1 750	1 751	1 731
Grenache	5 328	5 264	5 097	4 961
Mataro	1 628	1 635	1 597	1 552
Muscat Gordo Blanco	1 899	1 897	2 032	2 103

Principal Varieties of Vines, South Australia (continued)

Variety	March 1975	March 1976	March 1977	March 1978
	Hectares			
Palomino	2 514	2 486	2 410	2 334
Common Palomino				
Pedro Ximenez				
Rhine Riesling	(a) 2 891	(a) 3 225	2 565	2 841
Shiraz	5 297	5 576	5 546	5 583
Sultana	2 815	2 746	2 643	2 638
Other	4 054	4 169	4 196	4 353
Total	30 366	31 161	31 244	31 543

(a) Clare Riesling included with Rhine Riesling.

Surplus Grapes

It now appears that the planting of winegrapes has been excessive, particularly in the case of red winegrapes and substantial surpluses have occurred. Overplanting in excess of demand, an unexpected consumer switch away from red wines to white wines, declining sales for fortified wines and a marked decline in brandy sales have all contributed to the surplus problem.

The following table shows the estimated quantity of grapes left on vines, which was collected from all growers who reported an area under grape vines in the annual Agricultural Census at 31 March 1978.

Estimated Quantity of Grapes Left on Vine, South Australia, 1977-78^(a)

Varieties	Phylloxera Board District					Total State (a)
	Central	Barossa	Waikerie and Lower Murray	North Murray	South Murray	
	Tonnes					
Cabernet Sauvignon	104	n.p.	436	978	234	1 785
Doradillo	294	n.p.	558	2 081	830	3 796
Grenache	3 385	155	1 024	3 091	1 072	8 727
Malbec	—	11	214	302	138	665
Mataro	n.p.	112	365	2 492	756	3 774
Palomino	n.p.	n.p.	126	614	161	952
Common Palomino						
Pedro Ximenez						
Shiraz	1 719	372	1 200	3 495	1 366	8 463
Other	32	n.p.	361	1 113	392	1 940
Total	5 616	729	4 284	14 166	4 949	30 102

(a) Includes 21 tonnes in Northern and 337 tonnes in South-Eastern Phylloxera Board Districts.

Table Grapes

As grapes grow so easily in Adelaide and a number of the other large centres and because many families are able to have a home garden, home production of fresh grapes satisfies most of the demand. The table grapes sold annually in South Australia are less than one per cent of the total crop.

Phylloxera Board

Representatives from grape-growers, winemakers and the Government constitute the Phylloxera Board which was established by the Phylloxera Act in 1899. The Board is responsible for the protection of South Australia viticulture against invasion by phylloxera, and secondly, for the reconstruction of vineyards if phylloxera should appear. Reconstruction would consist of removing vines growing on their own roots, as they do at present, and replanting with the same varieties, but grafted on to phylloxera-resistant rootstocks.

At the time that phylloxera, a lethal root-feeding insect from North America was sweeping through the viticultural districts of Europe, South Australia placed a complete embargo on the importation of any vine material, a measure which has been successful in keeping this disease out of the State. This embargo remained from 1894 until 1948 when a change in legislation under the Phylloxera Act allowed the entry, under strictly controlled conditions, of rootstock varieties. A further amendment to this Act in 1964 permits the limited introduction of wine-grapes, as distinct from rootstocks and in the last fifteen years a number of classic varieties which were not in South Australia because of quarantine restrictions have been introduced by the Phylloxera Board. However, vine introduction, other than through this special channel, is still strictly forbidden and infringement of this law carries a severe penalty.

Pests and Diseases

The State is fortunately in a position where it is relatively free of major troubles from any pest or disease. Several, like phylloxera, have never gained entry. The major vine diseases for which routine treatment is necessary are downy mildew and powdery mildew (oidium). The main problem of South Australian viticulturists is not disease, but water, either the lack of it in non-irrigated areas, or its association with salting in irrigated areas.

WINEMAKING

Vintage in Australia lasts from late January until early May. The generally warm, dry air during ripening promotes a high sugar concentration with low natural acidity, enabling many robust and full-bodied wines to be produced. For production of the more delicate table wines the trend is now towards harvesting the grapes early in their maturation period to achieve a desirable balance of acidity and flavour. The climate, maturity and richness of the grapes, and the care and skill with which they are processed combine to bring forth wines of high overall quality. The making of Australian wines is the work of scientifically trained men and women, who exercise much control over the winemaking, maturation and bottling of the wines and their overall quality. It is said both in Australia and overseas that more science goes in to the making of Australian wines than those of any other country.

When the grapes are ripe they are gathered from the vines, either mechanically or by hand, and taken to the wineries where they are weighed and tested for sugar content. This is measured in degrees Baume or Brix: one degree Baume is equivalent to 1.8 degrees Brix or approximately 1.8 per cent of sugar, and results in the production of

approximately 1 per cent by volume of alcohol during fermentation. The sugar content of grapes ranges from approximately 8-14 degrees Baume or 14-25 per cent grape sugar (mainly glucose and fructose, or 'invert' sugar). Higher sugar content can be obtained with some grape varieties under certain climatic conditions. A recent development has been the harvesting of grapes at night using the favourable influence of cool temperatures.

The grapes are fed into a crusher which breaks the berries and may, or may not remove the stalks. These crushers or grape mills can handle up to 50 tonnes of grapes per hour. The grape juice or 'must' is handled in different ways depending upon the requirements of the winemaker and the type of wine which he intends to make. For white wines the crushed grapes are drained to separate the juice. The drained skins are pressed and this pressed juice can be combined with the 'free run' juice obtained by draining. The grape juice may be further clarified by settling, centrifugation, or filtration.

It is then inoculated with a pure selected yeast and fermented in vessels, usually made of stainless steel, in sizes up to 500 000 litres. Fermentation temperature is controlled by refrigeration. This procedure is used for the production of white table wines which may be sold as varietal wines, in which the single grape variety is specified, or as generic wines *e.g.* hock, chablis, moselle and sauterne. Base wines for the production of dry sherry, champagne and other sparkling wines are also made by this procedure.

For red wines the crushed grapes are placed directly in a fermenter, yeast is added and the fermentation allowed to proceed in the presence of the grape skins, from which the colour of red wine is obtained. During fermentation the grape skins are removed and pressed, and the fermenting juice allowed to ferment further. These wines are then matured in oak casks of various sizes to produce either varietal red table wines or generic wines such as claret and burgundy.

Wines are normally classified into two main groups: table wines containing between 8 and 14 per cent of alcohol by volume, and dessert or fortified wines containing 17-20 per cent alcohol by volume. In making a dry table wine, fermentation is allowed to continue until all or, most of the grape sugar is converted into alcohol and carbon dioxide, which is released from the fermenting juice as gas. For the production of dessert or fortified wines, grape spirit (distilled from wine) is added to the fermenting juice at an appropriate time to stop the fermentation, leaving a considerable amount of grape sugar. This results in sweet wines containing a higher level of alcohol than table wines. Yeasts will not normally ferment in the presence of more than 16 per cent alcohol by volume, and the resulting wine therefore retains its natural sweetness. After fermentation has ceased, in the case of table wines, or has been terminated, in the case of dessert or fortified wines, the wine remains in the fermentation vessel for several weeks to enable it to clarify naturally. This allows suspended matter, such as yeast cells and portions of grape flesh, to settle to the bottom of the tank. The clear wine is then pumped (racked) off the sediment and may be further clarified by fining or filtration. The sediment, called lees, is distilled to recover the grape spirit which it contains. During the first six months in the life of a wine it may be racked or decanted several times. When the racking process has been completed, the wine is usually cold-stabilised and treated by a clarifying or fining agent. These agents are clay (bentonite) or protein fining materials, such as gelatine and isinglass. The fining material is mixed with the wine and allowed to settle, and the clarified stabilised wine is racked into another vessel. This fining process usually leaves the wine quite bright, but before bottling it is normally filtered to ensure that no suspended matter remains. Wines are generally stored in either oak casks or vats, or, inert vessels such as stainless steel or concrete tanks lined with wax. The lighter and more delicate wines are stored in the coolest parts of the cellar, while the fortified wines mature better and more rapidly if stored in warm parts. According to the type of wine

and degree of maturity required, wines may be stored in oak casks from a few months to some years. White table wines may be matured in wood for a short time, while red table and dessert wines are usually aged in wood for a longer period, depending upon the quality and type of wine. White table wines are usually sold in the year of production but red table and other wines may be retained in storage to mature before being bottled and sold.

Sparkling wines are made either by the traditional fermentation in bottle or by fermenting in a large tank under pressure with cooling. After the secondary sparkling fermentation is complete the wine is clarified and, if necessary, sweetened and rebottled. Australia produces a wide range of sparkling wines.

In Australia it is not unusual for a large winery to produce white and red table wines, white and red dessert wines, sparkling wines, aperitif wines such as sherry, and flavoured wines such as vermouths, as well as brandy and fortifying spirit. This differs from the European practice of producing one or at the most two wine types.

Wines can also be classified according to whether they derive from one grape variety and viticultural area or from more than one variety and area. In the latter case the wines are blended by the winemaker if the composition of grapes from one particular area fall short of the optimum for winemaking due to deficiencies or excesses of certain components. Although grapes and wines of different varieties, districts and seasons differ in composition, it is possible to blend wines from components which are complementary in composition. The object is to choose and assemble together complementary wines in such proportions that the resulting wine is superior to the components of the blend. It is important that these wines should be of uniform composition and, accordingly, blending is practised to achieve the uniformity required.

Wine and Brandy: Summary of Manufacturing Operations, South Australia and Australia 1976-77^(a)

Item	Unit	South Australia	Australia	South Australia as a percentage of Australia
				Per cent
Number of establishments at 30 June	number	83	170	48.8
Average employment:				
Males	number	1 845	3 404	54.2
Females	number	828	1 550	53.4
Wages and salaries	\$'000	20 258	38 241	53.0
Turnover	\$'000	135 432	244 837	55.3
Stocks, closing	\$'000	117 791	187 666	62.8
Value added	\$'000	57 669	106 787	54.0
Fixed capital expenditure	\$'000	6 894	13 229	52.1

(a) Excludes single establishment enterprises employing fewer than four persons.

Wine contains a quantity of natural alcohol which may be separated from the non-volatile constituents by distillation. Two types of grape spirit are produced—brandy, and rectified spirits, the latter of which are used for fortifying dessert wine. Brandy is generally distilled at a lower strength than rectified spirit (83 per cent by volume or lower

compared with about 95 per cent by volume) and therefore retains many of the associated volatile constituents, such as higher alcohols, esters and aldehydes, which are responsible for its particular character. Brandy is required by law to be matured in wood for at least two years before marketing. Certain selected brandies are matured for a much longer period to produce premium liqueur brandy.

In 1976-77, 27 wineries operated in the Barossa Valley employing 46.9 per cent of the total employment in the industry in South Australia.

Wine and Brandy: Summary of Manufacturing Operations, South Australia, 1976-77^(a)

Region	Number of Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Adelaide	8	278	2 215	12 147	4 917
Southern Vales (b)	20	369	2 712	15 709	8 070
Barossa	27	1 254	9 847	71 601	28 931
Clare-Watervale	7	188	1 165	7 450	5 122
Riverland	16	505	3 793	24 296	8 405
Coonawarra (c)	5	79	526	4 229	2 224
Total State	83	2 673	20 258	135 432	57 669

(a) Excludes single establishment enterprises employing fewer than four persons.

(b) Includes Langhorne Creek.

(c) Includes Padthaway.

The Riverland produced 43.3 per cent of fortified wine and 29.4 per cent of unfortified wine in 1976-77, while the Barossa Valley produced 36.2 and 46.0 per cent respectively.

Beverage Wine: Production and Sales, South Australia, 1976-77

Region	Fortified Wine			Unfortified Wine		
	Production	Sales	Value of Sales	Production	Sales	Value of Sales
	'000 litres		\$'000	'000 litres		\$'000
Adelaide	1 906	3 849	4 342	4 009	4 256	4 594
Southern Vales (a)	4 030	2 303	1 883	11 306	9 879	7 078
Barossa	13 668	22 161	18 982	55 265	58 170	42 744
Clare-Watervale	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	6 983	5 181	5 730
Riverland	16 316	15 899	10 136	35 412	18 426	9 781
Coonawarra (b)	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	7 284	7 694	3 874
Total State	37 677	45 651	36 405	120 258	103 606	73 801

(a) Includes Langhorne Creek.

(b) Includes Padthaway.

Recent Developments

There has been an increase in production of table wines in recent years because of new grape plantings particularly suited to table wine production, and improved winery equipment and winemaking techniques. Much closer control of the process of wine-making is now possible which is particularly important for production of high quality table wines. It is now common practice for the winemaker to carry out fermentations with selected yeasts at controlled temperatures, and to exercise close control over the quality of the product by means of the winery laboratory. Many of the larger wineries have modern well-equipped laboratories. The function of such laboratories is to help control the various stages and operations in the making and maturation of wine. Winemaking has become highly technical and quality control by the laboratory is becoming increasingly important.

Australian winemakers have the advantage that they are not hampered by tradition, as the wine industry is young by European standards and does not have many restrictive laws and regulations. Accordingly, the industry has developed a number of important advances in winemaking technology, enabling production of wines of particular qualities at economical prices. Australian winemakers travel to overseas wine-growing areas, and adopt new practices that will be advantageous to wine production.

Wine Shows

The Australian wine industry holds shows annually in seven capital cities including Canberra. There are several smaller regional shows and exhibitions and in South Australia these are held in the Riverland, Barossa and Southern Vales. The major wine show is held annually in Adelaide under the auspices of the Royal Agricultural and Horticultural Society of South Australia Incorporated. Over 1 000 wines are exhibited for gold, silver and bronze medals in 50 classes including one for small winemakers and another for wines made from specified single grape varieties. The latter class is intended to foster the production of high quality varietal table wines, which are becoming popular in Australia.

MARKETING

The Australian Wine Board was established in 1929 under the Wine Overseas Marketing Act. Originally known as the Wine Overseas Marketing Board its main function was to control the export of wine but later the Board was given its present title and acquired the power to promote the sale and improve the quality of Australian wine and brandy in Australia and overseas. The office of the Board is in Adelaide. Although the Wine Board operates under a Commonwealth Act, it is completely autonomous, having no source of income other than that obtained by a levy on wine grapes processed by all wineries and distilleries in Australia. The rate of levy on the 1979 vintage was \$2.40 per tonne, while the maximum allowable charge was \$2.50 per tonne.

The Board, consisting of representatives from wineries and distilleries, grapegrowers, and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued; it also engages in wine publicity and trade promotion activities both in Australia and overseas. The Board has its National Promotions Manager located in Sydney, while in London the Board maintains the Australian Wine Centre, which is both a medium for promoting interest in Australian wines and brandy and a retail outlet for the sale of these products.

By world standards Australian wines are recognised for their high quality and Australia is in the fortunate position that it can produce all types of wines of considerably good quality from vintage to vintage.

History

The first commercial shipment of Australia wine reached England in 1854. From that time there was a steady expansion of wine exports reaching an average of about 3.6 million litres per year around 1900. An Imperial Preference tariff for Empire-grown wines was granted by the British Government in 1925 and Australian wines profited by a 50 per cent preferential duty which enabled Australia to compete with the strongly entrenched European products. In 1927 more than 18 million litres of wine were shipped from Australia and from then until 1939 the average was about 14 million litres a year, most of which was sold to the United Kingdom. At the time, the Australian Government was paying a bounty on wine exports which made Australian winemakers very competitive. Most of the wine exported was bulk wine and a large part of it was sold for blending and as a base wine for cocktails. Owing to lack of shipping space only a small quantity of wine was exported during the 1939-45 War years and furthermore, war measures in Britain gradually reduced the benefit of preferential duty to the point where it became non-operative. In immediate post-war years it was found that the demand for the style of wine previously supplied to the United Kingdom had lapsed and the export bounty was repealed in 1947. Subsequently winemakers began to supply different styles of wines.

Exports

Under the Customs (Prohibited Exports) Regulations the export of wine from Australia is prohibited if the quality is such that it would be harmful to the reputation of Australian wine in the country to which it is exported. The Regulations are administered by officers of the Bureau of Customs, who with the assistance of inspectors appointed by the Wine Board, examine samples of wine for export.

It is a requirement of the *Wine Overseas Marketing Act 1929* that a person wishing to export wine must hold a licence granted by the Minister of Primary Industry who reviews licences triennially. In May 1979 renewals of export licences were granted to ninety-five exporters, of whom, thirty-six were South Australian companies.

In recent years exports have been falling. An important factor in overseas trade is price and, the Australian wine industry is faced with continually increasing freight and labour costs and grape prices. It is becoming increasingly difficult to retain trade in the United Kingdom because of the restrictive policies of the European Economic Community, of which, the United Kingdom is a member.

However, there are signs of improvement in trade with other regions, notably Asia and Oceania.

Exports of Wine and Brandy: Principal Countries, Australia, 1977-78

Type	Canada	United Kingdom	New Zealand	Papua New Guinea	Hong Kong	Total (Incl. Other)
Litres						
Sparkling wine:						
Champagne	12 870	8 523	9 977	18 884	7 650	84 395
Other	156 852	374	16 179	10 349	738	205 045
Still wine:						
Sherry:						
In containers,						
Not exceeding 4.6 litres	276 961	19 153	10 137	14 425	6 083	370 747
Exceeding 4.6 litres	282 143	7 940	3 271	9 037	162	346 636

Exports of Wine and Brandy: Principal Countries, Australia, 1977-78 (continued)

Type	Canada	United Kingdom	New Zealand	Papua New Guinea	Hong Kong	Total (Incl. Other)
Litres						
Dessert wine:						
In containers,						
Not exceeding 4.6 litres	144 434	3 060	6 594	13 116	11 876	221 441
Exceeding 4.6 litres	205 390	348 452	205	—	72 931	677 275
Table wine:						
In containers,						
Not exceeding 4.6 litres	402 711	89 455	395 570	303 103	189 000	2 626 963
Exceeding 4.6 litres	79 655	200	—	6 159	—	109 622
Other	—	8744	1 570	400	1 100	15 701
Other (including grape must)	4 000	—	26	990	630	7 517
Vermouth and flavoured wine	—	—	—	13 304	—	16 520
Total Wine	1 565 016	485 901	443 529	389 767	290 170	4 681 862
Litres of alcohol						
Brandy	93 903	603	2 358	11 212	129	131 826

Total exports of wine from Australia in 1977-78 was 4 681 862 litres of which 1 565 016 litres were exported to Canada while only 485 901 litres were exported to the United Kingdom.

The following table shows exports of wine from South Australia by 'State of Lodgment' (of Export Documents) for the three years 1975-76 to 1977-78. Figures are shown also for the ten months ended April 1979 by State of Final Shipment and State of Origin.

Exports of Wine and Brandy, South Australia^(a)

Type	1975-76	1976-77	1977-78	10 Months Ended April 1979 p	
				State of Final Shipment	State of Origin
Litres					
Sparkling wine:					
Champagne	8 861	4 478	10 122	2 601	37 653
Other	86 397	55 621	23 704	41 363	73 571
Still wine:					
Sherry:					
In containers,					
Not exceeding 4.6 litres	327 121	251 503	27 811	61 697	164 129
Exceeding 4.6 litres	1 206 561	509 870	170 547	2 365	292 598
Dessert wine:					
In containers,					
Not exceeding 4.6 litres	76 929	175 667	172 909	77 059	113 830
Exceeding 4.6 litres	860 698	717 868	612 315	29 115	403 561
Table wine:					
In containers,					
Not exceeding 4.6 litres	1 197 863	1 082 582	925 044	444 190	1 150 743
Exceeding 4.6 litres	92 282	62 255	83 048	11 050	59 947
Other	9 179	20 090	11 546	1 893	11 788
Other (including grape must)	7 235	12 280	6 246	8 021	25 911
Vermouth and flavoured wine	2 862	7 959	495	126	990
Total Wine	3 875 988	2 900 173	2 043 787	679 480	2 334 721
Litres of alcohol					
Brandy	130 015	129 900	96 572	66 022	103 329

(a) Before July 1978 details are by 'State of Lodgment' (of Export Documents).

Sales in Australia

For most of its life the Australian wine industry made more fortified wines than dry table wines. The change to table wines, began twenty years ago when dry table wines accounted for less than 20 per cent of total wine sales in Australia.

By 1968 the two categories had reached an equal share of the market. In 1978 table wines represented 62 per cent of the total wine market, almost the reverse of the situation applying twenty years ago. This change in market share is not a swing away from rich, sweet fortified wines but represents new sales of dry table wines. There has been an emergence of new forms of packaging: 2.3 litre flagons early this decade and more recently 4.6 litre casks.

In 1978 the ratio of dry white wine sales to dry red wine was approximately 3:1, whereas in the late 1960s red out sold white by almost 2:1. This change in the market has had an effect on the grapegrowing industry. Adjustments to such changes in the market take considerable time as newly planted vines take 4 to 5 years to reach bearing age and, have an economic life of forty years.

Australia produces fine brandies ranging from the lighter styles to the very old liqueur brandies. Brandy sales reached a peak in 1973 when the equivalent of 13.5 million bottles were sold. However, since then increases in excise tax, five hundred per cent in 5 years, have caused a dramatic contraction in the overall size of the brandy market. In addition, the Australian brandy industry has had to contend with imported brandy taking an increasing share of the market.

Promotion

Following a consumer survey of the Australian market in 1954 a national promotional campaign was started by the Australian Wine Board.

The promotional function of the Board was further extended with the formation of the State Wine Information Bureaux in the 1960s. The Bureaux are administered by the States' Wine and Brandy Producers' Associations and, are mainly financed by the Board. Under guidelines approved by the Board the Bureaux distribute promotional material, handle public relations and conduct wine-appreciation courses.

The Board promotes wine and brandy through its Promotions Committee whose membership is composed of the Chairman of the Australian Wine Board, one Wine Board member with commercial experience, and five marketing experts appointed from within the industry. The aim is to increase the overall demand for wine and brandy within Australia, supplementing individual wine-makers' advertising campaigns. The Board has conducted media campaigns promoting Australian wine and brandy, has documentary films and in 1979 another approach to promotion was taken with the formation of Wine Press Clubs.

Total sales of Australian wine have more than doubled this decade and per capita consumption of wine was 8.8 litres per head of population in 1971-72 whereas in 1976-77 it was 13.7 litres.

RESEARCH

The development of a research unit specialising in the problems of the Australian wine industry started in 1934, with a problem of spoilage in fortified wines. The University of Adelaide, with finance from the Australian Wine Board, appointed a research officer who carried out the investigation at the Waite Institute. The Commonwealth Scientific and Research Organization (CSIRO), then the Council for Scientific and Industrial Research (CSIR), became involved in 1938, and at that time an Oenological Research Committee was founded to give advice and general direction on oenology. In 1945, CSIR took

control of the investigations and shared the costs equally with the Wine Board. Some expansion of activities took place, and the results obtained demonstrated to the members of the wine industry the value of scientific research.

Accordingly, it was decided that the industry should have its own independent research body, and the first step in achieving this was the passing of the Wine Research Act by the Commonwealth Parliament in 1955. Under this Act, the Australian Wine Research Institute was established as a type of industrial research association. Provision was made for the sum of \$1 000 000 held by the Federal Treasury in a Wine Industry Assistance Account to be transferred to a Wine Research Trust Fund. This Trust Fund is controlled by the Commonwealth Minister for Primary Industry, and is made available to the Institute under specified conditions. At the time of its establishment, this fund was the major source of finance for the Institute, but expansion and further demands on the resources of the Institute have changed the financial basis so that, the major funding now is made from the wine industry through the Australian Wine Board, with a smaller grant from the Commonwealth Department of Primary Industry and CSIRO.

The Institute is controlled by a Council of nine members, three members representing the Australian Wine Board, three elected by the wine industry and one each representing the Commonwealth Department of Primary Industry, CSIRO and the University of Adelaide. Its laboratories, built in 1958 are on the campus of the Waite Agricultural Research Institute of the University of Adelaide.

The Australian Wine Research Institute was established to promote and conduct research in connection with the technical problems of winemaking. Its functions include both research, and the provision of technical services to the industry throughout Australia. These services include the supply of selected wine yeasts to winemakers, consultation on day to day technical problems, and, where necessary, investigation of these problems in the laboratory. These services are available to, and used by winemakers in all Australian States. The Institute also maintains a technical oenological library, the John Fornachon Memorial Library. However, the main function of the Institute is research, which has been concerned mainly with factors affecting the composition and quality of Australian wines and brandy. Recent major investigations have included studies of colour composition, pigments and tannins and their relation to quality in red table wines, oxidation of white table wines, methods of improvement in the distillation process to give quality improvements in brandy and grape spirit, and systematic study of the properties of winemaking yeasts. Results of such research is disseminated to the industry by publication in the technical oenological journals and by bulletins and newsletters circulated to winemakers.

While the Institute maintains close liaison with viticulturists, it does not carry out any viticultural research itself.

Viticultural research is conducted by the South Australian Department of Agriculture and Fisheries, the CSIRO Division of Horticultural Research, Roseworthy Agricultural College and the Waite Agricultural Research Institute. Other research, generally of a problem solving nature, is also carried out by individual wine firms.

Research by the South Australian Department of Agriculture and Fisheries is carried out from two centres, at Loxton in the Riverland and Nuriootpa in the Barossa Valley. A major program has been mounted on vine improvement research with the aim of providing the grape growing industry with disease-free, true-to-type and high yielding planting material. Over half of South Australia's 31 000 hectares of vineyards are older than forty years, and will require replanting in the near future. Clonal selection in commercial vineyards is undertaken, and selected 'candidate clones' are compared with clones from other regions, in Australia and overseas, for yield and wine quality (assessed

with small-scale fermentations). Considerable attention is given to rootstocks; at present they have limited commercial application, despite awareness of soil pathogens such as root-knot nematodes. Root-stock and scion variety interactions are being studied in major grapegrowing areas of the State, particularly for effects on yield and wine quality.

Recent changes in quarantine regulations have permitted the introduction of 150 new varieties and clones which are being assessed for viticultural and oenological potential.

In order to fully utilise the potential of high performance planting material, the technology of efficient production is being investigated. Broad areas of research include irrigation, soil management, salinity, trellis design and pruning systems, setting problems, pest and disease control, vine propagation and post-harvest physiology.

Grapevine research by the CSIRO Division of Horticultural Research is conducted at both the Adelaide and Merbein Laboratories.

Research is mainly concerned with vine improvement by vine breeding and plant introduction, virology and plant physiological and biochemical studies.

The Division aims to breed new grapevine varieties better suited to Australia's hot, inland irrigated regions. Characteristics sought for wine grapes include late maturity, high acidity and good flavour. Three new wine grape varieties were released in 1975. One of these, Tarrango, should be available as a commercial light red wine in 1979. The Division also introduces and evaluates grape varieties from overseas and maintains a variety collection to ensure accurate identification of vine material.

Other research involves the development of new methods of vine virus detection, the use of micropropagation as a possible source of virus-free material and studies on the effect of rootstocks on ion uptake by vines and on fruit quality. Emphasis is being placed on experiments to assess the salt tolerance of rootstocks.

Roseworthy Agricultural College has research programs in vine physiology, applied climatology and vineyard variety conversion by top working. Studies in physiology include crop maturity delayment by double pruning, whereby the fruit maturity takes place under cool autumn conditions as opposed to the heat of summer. Wine grapes so produced have better chemical composition, and commercial evaluation was carried out at the 1979 vintage. Climatology research analyses the interaction of climatic elements in vineyard micro-climate, and also seeks new grapegrowing areas which would have specific oenological or viticultural advantage. Studies in top grafting vineyards have analysed techniques developed overseas for converting vineyards of unwanted varieties to more desirable varieties, with considerable savings of money and time compared to replanting. The College is also undertaking research into mechanical pruning of grapevines with plots in different regions of the State.

The Waite Agricultural Research Institute of the University of Adelaide conducts research into grapevine diseases and vine physiology. The cause of dying arm disease (*Eutypa dieback*) has been determined and control measures are being sought. These involve developing a unit to apply protective fungicide to pruning cuts. New trellis systems are being developed also at the Waite Institute. The 'Link' trellis is in its fifth year of evaluation (1979) and provides for very high yields. Basic physiological research into mechanisms of sugar accumulation in the grape berry and control of development are also undertaken.

The Australian Wine and Brandy Producers' Association Incorporated is assisting Professor S. P. Burley of La Trobe University in his efforts to construct econometric models of the industry. These are computer simulation models whose general structure is designed to represent the main technical, economic and institutional properties of the

industry. They are then made more precise by statistical fitting to numerical data corresponding to the recent history of the main industry variables.

The wine model shows how the important shift from red to white wine sales has influenced overall industry expectations concerning future sales and how these expectations have in turn influenced stock building and production policy.

The brandy model shows in rather more detail how changes in excise, other prices and incomes have influenced brandy sales and hence stocks and production. It has proved to be extremely accurate in forecasting the effects on the local industry of the excise and import quota changes of recent years.

Work currently in progress is attempting to develop similarly successful models of the viticultural side of the industry.

EDUCATION

Roseworthy Agricultural College provides courses in oenology, viticulture and wine marketing. They are a three-year full-time Bachelor of Applied Science in Oenology, a two-year full-time Associate Diploma in Wine Marketing, and a one-year Graduate Diploma in Agriculture specialising in viticulture. Oenology has been taught at Roseworthy from before the turn of the century and the first diploma course was commenced in 1936. From then until 1977 when the course was given degree status, 168 diplomas were awarded, and, Roseworthy was largely responsible for training Australian wine-makers. The College has several vineyards with two more being planted, a 150 tonne modern winery, a small experimental winery and a marketing department. In addition, research work in viticulture, oenology and wine marketing is carried out. At the beginning of 1979 approximately 90 students were enrolled full-time in the wine courses, including 32 in the first year of oenology and 20 in wine marketing. Roseworthy is developing into a centre for grape and wine technology in Australia.

OTHER RURAL INDUSTRIES

Poultry Farming

Poultry farming is a specialised and distinct industry and it is from the specialised hatcheries and chicken raising establishments that the bulk of commercial production is obtained. The industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. Chickens, scientifically bred for rapid weight gain and known as 'broilers', account for over 90 per cent of total poultry slaughtered.

The main production centres for both categories of this industry are located within an 80 kilometre radius of Adelaide, near the processing works and main consumption outlets. Particular concentrations of growers are at Murray Bridge and Gawler, with some broiler growers established in the Adelaide Hills.

The trend in the egg industry in South Australia is towards a reduction in the total number of poultry farms, but an increase in average flock size. Housing of birds for commercial purposes is largely planned on the intensive principle, with deep litter pens or single and multiple bird cage units. Laying stock consists mainly of a specially produced crossbred between the White Leghorn and Australorp breeds.

The annual average egg production controlled by the South Australian Egg Board was 10.6 million dozen in the five years ended 1960-61, 10.1 million dozen over the next five years and 15.4 million dozen in the five years ended 1970-71. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

Poultry Numbers and Egg Production, South Australia^(a)
At 31 March

Particulars	1974	1975	1976	1977	1978
			'000		
Hens and pullets	1 671	1 716	1 410	1 255	1 448
Other fowls and chickens	2 728	2 476	2 976	2 708	2 737
Ducks	23	29	18	10	9
Turkeys	17	13	12	9	7
Egg production (b)	216 409	227 382	204 878	186 042	203 028

(a) Excludes poultry kept in backyards.

(b) Recorded by the South Australian Egg Board. Year ended 30 June.

Broiler Industry

The broiler industry in South Australia has grown rapidly during the past 20 years, annual production increasing from about half a million birds in 1959 to over 17 million birds at the present time. Broilers are specially bred meat strain birds of either sex, that are slaughtered between eight and ten weeks of age at a live weight of approximately 1.5 kg. This rapid growth and efficient conversion of feed to meat has been achieved by extensive breeding programs; the use of specially prepared high protein and energy value poultry feeds; growth promotion and disease control drugs; and by the development of enclosed, factory-like broiler houses, with controlled temperature, ventilation and light, conducive to fast growth.

The following table shows the number of eggs set and chicks hatched for the last five years.

Eggs Set and Chicks Hatched in Commercial Hatcheries
South Australia

Year	Chicks Hatched (b) and Intended to be Raised for:					
	Eggs Set (a)		Chicken Meat		Egg Production	Breeding (d)
	Meat Strains	Egg Strains	Meat Strains: Unsexed	Egg Strains: Cockerels (c)	Egg Strains: Pullets (c)	Egg Strains: Pullets and Cockerels
				'000		
1973-74	17 529	4 842	13 384	95	1 770	25
1974-75	20 448	4 260	16 089	65	1 723	13
1975-76	21 884	4 585	17 789	52	1 833	12
1976-77	22 506	4 057	19 167	40	1 558	n.a.
1977-78	24 182	4 038	20 117	36	1 431	n.a.

(a) Including eggs which failed to hatch. (b) Excluding chicks destroyed. (c) Egg strain chicks sold as 'unsexed' have been allocated equally between chicks for chicken meat and chicks for egg production. The number so reported was 55 000 in 1973-74; 69 000 in 1974-75; 54 000 in 1975-76; 45 000 in 1976-77 and 26 000 in 1977-78. (d) Details of meat strain chicks for breeding purposes are not available for publication.

The following table shows details of poultry slaughtered for human consumption for the last five years.

Poultry Slaughtered for Human Consumption
South Australia^(a)

Period	Chickens (Broilers, Fryers or Roasters)	Hens and Stags	Ducks and Drakes	Turkeys	Total
1973-74	13 553	521	43	7	14 124
1974-75	15 249	524	24	7	15 805
1975-76	16 177	432	21	7	16 637
1976-77	17 251	466	12	5	17 734
1977-78	19 452	421	16	4	19 894
DRESSED WEIGHT OF POULTRY SLAUGHTERED (Tonnes) ^(b)					
1973-74	15 164	832	86	25	16 108
1974-75	16 773	834	51	31	17 689
1975-76	18 064	661	40	28	18 793
1976-77	19 243	761	25	19	20 048
1977-78	21 892	722	33	21	22 667

(a) Excludes geese slaughtered.

(b) Dressed weight of whole birds, pieces and giblets as reported by producers.

Beekkeeping

Beekkeeping in South Australia is a small industry—in 1977-78 there were 433 beekkeepers with forty or more hives. Most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

Before 1975-76, statistics on beekkeeping had been compiled from returns from apiarists with five or more hives. After 1975-76, returns were requested from apiarists with forty or more hives, hence the figures for 1976-77 and 1977-78 in the table below are not comparable with those for earlier years.

Beekkeeping, South Australia^(a)

Season	Beekeepers	Hives		Honey Produced '000 kg	Yield of Honey per Productive Hive kg	Beeswax Produced '000 kg
		Productive	Un- productive			
1973-74	No. 894	No. 84 944	No. 16 730	4 650	55	76
1974-75	978	89 464	18 909	5 510	62	97
1975-76	482	83 870	16 107	4 592	55	80
1976-77	455	75 155	23 128	2 787	37	58
1977-78	433	78 907	14 020	4 316	55	81

(a) Excludes particulars for producers having less than five hives. From 1975-76 excludes producers with less than 40 hives.

9.2 MINING, FORESTRY AND FISHERIES

MINING

South Australia has a well developed mineral industry and, although iron ore is the major product, the State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production which exceeded \$143 million in 1977-78.

MINING ADMINISTRATION

The Mining Act, 1971-1978 reserves all minerals to the Crown and regulates and controls all mining operations in South Australia.

The state and conditions of the mine, machinery, ventilation, and all other matters relating to the safety, health and well-being of the employees and general public are regulated by the Mines and Works Inspection Act, 1920-1978.

The Petroleum Act, 1940-1978 and the Petroleum (Submerged Lands) Act, 1967-1974 provide for the control of petroleum exploration and the production, conservation and distribution of petroleum by pipeline.

The administration of these Acts is the responsibility of the Minister of Mines and Energy and the Director-General of Mines and Energy. The principal functions of the Department of Mines and Energy are:

- (i) the administration of mining and petroleum legislation including the granting of mineral leases and collection of royalties and fees;
- (ii) geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources;
- (iii) drilling to test mineral deposits, petroleum reserves and underground water supplies;
- (iv) the testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories;
- (v) control of mining and rehabilitation;
- (vi) co-ordinating State Government activities and formulating policy advice in the discovery, assessment and development of all energy resources within the State.

MINERAL INDUSTRY STATISTICS

A mining establishment is one predominantly engaged in an activity specified in Division B of the Australian Standard Industrial Classification (ASIC). The ASIC defines 'mining' as including the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas, by such processes as underground mining, open-cut extraction methods, quarrying, operation of wells or evaporation pans, dredging or recovery from ore dumps or tailings. Establishments mainly engaged in dressing or beneficiating ores or other minerals by crushing, milling, screening, washing, flotation or other, including chemical beneficiation processes, or mainly engaged in briquetting are included because the processes are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption and purifying plants are also included.

Statistics on the operations of establishments in Division B are collected each year in the mining census, which since 1968-1969 has been conducted on an integrated basis with other economic censuses.

The following two tables detail mining establishments operations in South Australia for 1977-78 classified according to industry subdivision.

Metallic minerals (copper and iron ore being the major industries), coal and natural gas operations accounted for 62 per cent of mining employment. Construction materials (building stone, gravel, sand and road materials) industries employed 23 per cent of total mining employment.

Mining Establishments: Summary of Operations by Industry Subdivision, South Australia, 1977-78

Industry Subdivision	ASIC Code (a)	Number of Establishments Operating at 30 June 1978	Persons Employed			Wages and Salaries
			Males	Females	Total	
\$ million						
Metallic minerals	11	5				
Coal	12	1	1509	181	1 690	20.0
Crude petroleum including natural gas	13	1				
Construction materials	14	56	560	63	623	7.4
Other non-metallic minerals	15	41	394	9	403	4.4
Total mining, excluding services to mining		104	2 463	253	2 716	31.9

(a) Australian Standard Industrial Classification 1978 edition.

(b) At 30 June 1978; includes working proprietors.

Mining Establishments: Turnover and Value Added by Industry Subdivision, South Australia, 1977-78

Industry Subdivision	ASIC Code (a)	Turnover	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added
			1977	1978		
\$ million						
Metallic minerals	11	} 124.7	19.0	22.0	53.3	74.4
Coal	12					
Crude petroleum including natural gas	13					
Construction materials	14	26.0	1.8	2.5	9.7	16.9
Other non-metallic minerals	15	27.0	3.2	3.8	15.9	11.7
Total mining, excluding services to mining		177.7	24.0	28.2	78.9	103.0

(a) Australian Standard Industrial Classification 1978 edition.

MINERAL COMMODITY STATISTICS

Mineral commodity statistics published in the *South Australian Year Book* are those recorded by the Director-General of Mines and Energy. The quantity and value of production of the major minerals for the years ended 30 June 1977 and 1978 are listed in the following table.

Mining and Quarrying Production, South Australia^(a)

Mineral	Unit of Quantity	Quantity		Value (b)	
		1976-77	1977-78	1976-77	1977-78
\$'000					
Metallic:					
Copper .....	..	..	..	14 776	8 942
Iron Ore	'000 tonnes	3 450	2 189	30 782	19 431
Other .....	..	..	..	349	373
Non-metallic:					
Barite	'000 tonnes	8	10	300	395
Clays	'000 tonnes	1 024	925	1 476	1 324
Coal	'000 tonnes	1 919	1 757	7 215	8 820
Dolomite	'000 tonnes	514	596	1 082	1 212
Gypsum	'000 tonnes	749	618	3 033	2 439
Limestone	'000 tonnes	1 726	1 888	2 541	3 258
Opal (c) .....	..	..	..	33 000	35 000
Salt	'000 tonnes	714	723	2 854	2 891
Talc, soapstone	'000 tonnes	19	15	404	202
Other .....	..	..	..	823	896
Construction material quarrying	'000 tonnes	14 382	16 030	26 342	20 211
Natural gas	millions of m ³	2 006	2 516	27 993	38 000
Total .....	..	..	..	152 972	143 393

(a) Quantities disposed of as recorded by the Director-General of Mines and Energy.

(b) Ex-mine site.

(c) Estimated.

(d) Value at Moomba plant outlet.

Details of mining of individual minerals are given below. Reference should also be made to Part 1.3 which contains particulars of the location of mineral resources.

Iron Ore

The only proved high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks in which occur local concentrations of high grade ore.

The Iron Monarch deposit near Iron Knob has provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the smaller deposits of Iron Prince and Iron Baron is maintained by the Broken Hill Proprietary Company Limited (BHP)—in 1977-78 production was 2.2 million tonnes, a decrease of thirty-seven per cent from 1976-77. This fall was due mainly to lower demand and to BHP's use of increased quantities of iron ore from Mount Newman, Western Australia, for the steel works in New South Wales. The bulk of the South Australian ore is shipped to Newcastle and Port Kembla, but a proportion is exported in pellet form and some is used for the production of iron in the Whyalla blast furnaces. The molten iron is transferred from the blast furnace to the basic oxygen steel plant, where ingot steel is produced for use in the Whyalla rolling mills.

Reserves of high grade iron ore are estimated at about 160 million tonnes. The grade of ore at more than 60 per cent iron is high by world standards. In view of the known limitation of high grade ore, BHP has carried out an active exploration program, and has studied the possible future use of the very large reserves of low grade siliceous ores which occur in the Middleback Ranges.

Copper

Copper mining was very important in the early days of the settlement of South Australia. The rich discoveries at Kapunda in 1842, Burra in 1845, and Wallaroo-Moonta in 1859-60 came at a time when the colony's development was stagnating and severe financial difficulties were being encountered. Many small copper mines, scattered throughout the central metalliferous areas, were also opened but most of the mines only lasted until the richer secondary copper cut out at depths mostly less than 150 metres.

From 1842 to 1923, when the great Wallaroo-Moonta mines closed, copper was by far the State's most important mining produce. The copper products accounted for over eighty per cent of the State's recorded mineral production (construction materials were not recorded and so not included). The copper products sold during this period contained 450 000 tonnes of copper metal and were worth \$33 million giving an average of \$72 per tonne of copper in the products.

During the next forty-five years (1924-1968), until the commencement of the mining boom, copper production was very small and intermittent with a production of only 5 600 tonnes of copper in the mineral products.

The renewed interest in copper mining during the boom led to the discovery of new, but lower grade, ore bodies at the old copper fields of Kanmantoo and Mount Gunson, and the working of remnant low-grade ore at Burra. These deposits are worked by open-cut methods which can produce much larger tonnages than the underground methods used to produce most of South Australia's copper during the earlier period of copper mining.

There were only two copper producers in 1977-78 because the continued low world copper prices had caused the continued closure of the smaller producers and Kanmantoo mine which is being run on a care and maintenance basis until world copper demand increases. In 1977-78 the Mount Gunson and Burra mines together produced 11 977 tonnes of copper in the concentrates and copper oxide which they sold. This was 27 per cent lower than the output of 16 380 tonnes of copper for 1976-77.

Seventy-five per cent of the production came from the Mount Gunson mine which sells copper sulphide flotation concentrates to Japanese smelters. The Samin Company at Burra uses the ammonia leaching process to produce high quality black copper oxide of seventy-seven per cent grade copper which is sold direct to industry in Australia and overseas.

The ex-mine site value of the copper products sold in 1977-78 was \$8.9 million.

Zinc

In South Australia the only production of zinc comes from a high grade (about forty per cent zinc) deposit of zinc silicate found at Puttapa near Beltana in the Flinders Ranges. Several other smaller occurrences of this unusual zinc ore have been found in this part of the State but they are not being mined at present. The deposit is of high enough grade not to need concentration but is mined, crushed, and then sent to various markets in Europe, Africa and to Risdon in Tasmania with small amounts going direct to the Australian fertiliser industry for use as trace element supply for zinc deficient soils.

In 1977-78, 4 137 tonnes of zinc silicate ore of forty-five per cent zinc grade, worth about \$362 000, was sent to overseas and Australian users.

Barite

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and also the Olary district. Barite is still used in the

paint and other industries, but the main use is in drilling mud for oil exploration where the grade does not have to be so high. Production of barite totalled 9 967 tonnes in 1977-78.

The company operating the Oraparinna Mine in the Flinders Ranges is the major Australian producer of barite.

Gypsum

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits in general have been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum. The most important coastal deposits are found at Lake MacDonnell and on Kangaroo Island. Inland deposits mainly of seed gypsum occur at Moonabie, Lake Fowler, Cooke Plains and along the Murray River. The gypsum deposits have been worked extensively over the past fifty years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. In 1977-78 production was 618 000 tonnes.

Reserves of high grade gypsum at Lake MacDonnell have been proved by the Department of Mines and Energy to exceed 500 million tonnes, sufficient to meet Australasian requirements for the plaster industry and for portland cement for many years. The port of Thevenard, 55 kilometres from the deposit by rail, has been deepened to accommodate larger ships of up to 20 000 tonnes capacity.

Salt

The semi-arid climate and high evaporation rate along much of South Australia's coastline, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. In the early days the availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt-lakes on Yorke Peninsula and elsewhere.

There was 723 000 tonnes of salt produced in 1977-78. The industry in South Australia is capable of expansion, but the future export market appears to have been largely captured by salt development in Western Australia.

Opal

The estimated value of raw opal production in 1977-78 was \$35 million, a slight increase on 1976-77. In terms of value it was the second most important mineral produced in South Australia during 1977-78. Overseas exports of opal from South Australia during 1977-78 were reported at \$4.5 million but additional large quantities were exported through other States.

In spite of the value of opal being won at present, opal mining remains a small scale operation at Andamooka and Coober Pedy. The distances from Port Augusta to Andamooka and from Port Augusta to Coober Pedy are 290 and 630 kilometres respectively.

Mining at both centres is relatively shallow, rarely exceeding 30 metres. During 1976, two new fields were discovered at Andamooka as a result of a subsidised mining program by the Department of Mines and Energy, and areas of potential opal bearing ground have been outlined. New finds at Stuart Creek, north of Andamooka, and Mintabie, north of Coober Pedy produced rushes to each field.

Talc

The principal occurrences of talc are to be found at Mount Fitton in the northern Flinders Ranges and in the Gumeracha and Lyndoch districts. From these sources 15 000 tonnes were mined in 1977-78. The Mount Fitton talc is particularly high grade, and is in demand for use by the cosmetic industry. Lower grade material is used in the rubber, paint, and ceramics industries. Bulk samples have been taken from the Tumbay Bay deposit on Eyre Peninsula to enable the quality to be tested.

Coal

South Australia is deficient in accessible bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The present development of the field commenced with Department of Mines and Energy drilling operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Meanwhile testing by the Department of Mines and Energy continued for some years, proving a total of 52 million tonnes of coal available by open-cut methods and a further 370 million tonnes of underground reserves. Changing economic conditions have caused these estimates to be revised to 150 million tonnes and 280 million tonnes respectively, of which approximately 37 million tonnes has been mined to date by open-cut methods. Combined mining development of the Telford Basin at Leigh Creek requires the relocation of Leigh Creek township. Plans for the new town have been prepared and work has commenced.

Coal production in 1976-77 was approximately 1.8 million tonnes. Almost the entire production is railed to Port Augusta for use in power generation.

Natural Gas

The natural gas production in 1977-78 was 2 516 million cubic metres valued at the plant outlet at \$38 million, a twenty per cent increase in volume and a thirty-six per cent increase in value to production in 1976-77.

Limestone and Dolomite

The combined quantity of limestone and dolomite extracted for use in industry (*i.e.*, excluding road stone, etc.) each year is approximately two million tonnes. The principal deposits mined are limestone at Rapid Bay and dolomite at Ardrossan for the steel industry; limestone at Penrice, near Angaston, for the chemical and cement industries; and limestone at Klein Point for the cement industry. Details of limestone production for the years 1974-75 to 1977-78 are given in the following table.

Limestone Production, South Australia
(Excluding Limestone Used as Building Stone, Road Materials, Etc.)

Classification	1974-75	1975-76	1976-77	1977-78
	'000 tonnes			
Flux	297	287	298	342
Cement	839	903	957	1 059
Chemical	387	370	420	437
Other	11	35	51	51
Total	1 535	1 594	1 726	1 888

Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes.

Because of the scarcity of local timber supplies, softwood excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of Australia. The clay brick industry is concentrated near Adelaide. There are also widely distributed occurrences of special clays for ceramic and refractory ware.

The Department of Mines and Energy, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

Details of clay production for the years 1974-75 to 1977-78 are given in the following table.

Clay Production, South Australia

Classification	1974-75	1975-76	1976-77	1977-78
	'000 tonnes			
Brick clay and shale	671	797	864	754
Cement clay (shale)	91	123	129	145
Fire clay	29	29	14	14
Kaolin and ball clay	13	10	13	11
Pottery clay	17	7	4	1
Total	821	967	1 024	925

Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programs and highway construction, has resulted in a rapidly increasing demand for construction materials. Production of aggregate, sand and roadstone (including all building stone) was 16 million tonnes in 1977-78 compared with 2.2 million tonnes in 1947.

Road and Other Construction Materials, South Australia

Type of Material	1974-75	1975-76	1976-77	1977-78
	'000 tonnes			
Limestone	3 553	3 043	2 376	3 673
Quartzite	3 461	3 384	3 471	2 116
Sand	2 419	2 690	2 990	3 596
Other materials	3 514	4 069	5 518	6 616
Total	12 948	13 186	14 355	16 001

A variety of building stones is quarried, including, Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a light coloured stone of pleasing appearance; and Mount Gambier limestone, a bryozoal limestone of the South East. Limestone deposits have also been worked at Overland Corner, Cadell and Waikerie. A quantity of granite is extracted each year and marble occurrences are

worked at Angaston, Kapunda, Macclesfield and Paris Creek. The main sources of slate in South Australia are at Mintaro and Jones Hill in the northern Flinders Ranges. Both areas supply paving slate and a large quantity is dressed and polished for use in billiard tables. A quantity of paving material is also being obtained from Wistow near Mount Barker.

Building Stone, South Australia

Type of Stone	1974-75	1975-76	1976-77	1977-78
	'000 tonnes			
Granite	5.0	2.8	3.1	2.8
Gravel	0.6	0.5	0.3	0.2
Limestone	16.5	20.1	15.3	17.1
Marble	7.4	7.2	3.8	2.0
Sandstone	5.0	3.9	1.6	1.6
Slate	7.0	7.0	3.2	5.7
Total	41.6	41.4	27.3	29.3

MINERAL DEVELOPMENTS

In October 1972, agreement was reached between the consortium of companies developing the petroleum resources of the Cooper Basin and the Australian Gas Light Company to supply natural gas to the Sydney area. Natural gas deliveries into the Moomba-Sydney pipeline commenced on 22 August 1976, and gas reached the Sydney terminal at Wilton on 16 December 1976. In order to meet the increasing demands for natural gas in the Adelaide and Sydney areas, almost continuous development of Cooper Basin production facilities has taken place. In the three producing fields, Gidgealpa, Moomba and Big Lake, there are now 75 wells completed for production, and construction of gathering lines and installation of compressors to boost production is continuing. In the Moomba gas processing plant, a fifth carbon dioxide removal train is expected to be commissioned in 1979, and some rearrangement of plant facilities is being effected to improve flexibility and reliability of operation. Compressors have now been installed at six stations on the Moomba-Adelaide pipeline to increase capacity as the market grows. Standby units for these stations and Station No. 7, the most southerly one located near Booborowie, are planned.

Following Loan Council approval for a new tier of borrowings to finance infrastructure for development projects, the DOW Chemical Company is undertaking a detailed engineering and economic feasibility study into the establishment of a large petrochemical complex at Redcliff. The existence of large scale imports of caustic soda for the Australian alumina industry and the imminent short fall in domestic ethylene capacity when combined with the local availability of raw materials could provide a sound economic basis for the establishment of a petrochemical plant at Redcliff. The plant would be designed to use light hydrocarbons from the Cooper Basin and salt from Lake Torrens or Spencer Gulf areas to manufacture caustic soda and a range of petrochemical products.

Indications of a dramatic upturn in mineral exploration became evident in late 1976 with the announcement by Western Mining Corporation Ltd. of a major copper and uranium discovery with significant contents of gold and rare earths at Roxby Downs, 260 kilometres north of Port Augusta in a new area west of Andamooka. This has stimulated interest in the entire area of the Stuart Shelf and has resulted in a large number of applications for exploration licences.

Coal investigations by private companies lessened during 1977-78 but this was offset by continued exploration programs instigated by the Department of Mines and Energy and the Electricity Trust of South Australia (ETSA). ETSA completed the assessment of the deeper Leigh Creek coal resources and mining is planned there until at least the year 2005.

The Department of Mines and Energy has continued an extensive coal exploration program in search of steaming coal for future power generation. More than \$200 000 will be spent on this exploration project, a combined program involving both ETSA and the Department of Mines and Energy.

Testing by Utah Development of the Lake Phillipson coal deposits (found originally in 1905) has indicated that the total recoverable quantity could exceed 2 000 million tonnes. These deposits of medium to low grade steam coal, which have a marginally higher calorific value than Leigh Creek coal, are located about ninety kilometres south of Coober Pedy and near the proposed Tarcoola-Alice Springs railway.

Uranium is associated with the newly discovered copper deposits at Roxby Downs. Other small deposits of uranium in the Lake Frome area have been examined by the Department of Mines and Energy in association with Australian Mineral Development Laboratories (AMDEL) to determine if recovery is possible by in situ leaching.

Mapping and shaft sinking by the Department of Mines and Energy have proved the opal level to exist in several previously untested areas in the Andamooka area. As a result two new fields were established. Work has also begun at Mintabie and Stuart Creek, north of Andamooka.

At 30 June 1978, 180 exploration licences were current, involving thirty-nine companies. The total area held under licence was approximately 177 000 square kilometres.

The Australian Mineral Foundation Inc., established at Frewville four kilometres to the east of the centre of Adelaide, provides short-term specialist training at professional and sub-professional levels for the mining and petroleum exploration and production industries.

The Australian Mineral Development Laboratories (AMDEL), also at Frewville, continue to carry out valuable research, development and laboratory service work for the mineral industry of Australia and neighbouring countries.

The Department of Mines and Energy spent \$6.3 million in 1977-78 (\$5.5 million in 1976-77) on geological and other investigations, drilling and mineral research work to assist the State's mineral industry.

The following table shows details of private mineral exploration, other than petroleum, in South Australia for 1976-77 and 1977-78.

Private Mineral Exploration (Other than Petroleum), South Australia^(a)

Particulars	Unit	On Current Producing Leases		On Other Areas		Total Private Exploration	
		1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Depth drilled:							
Core	'000 m	—	—	19	22	19	22
Non-core	'000 m	—	—	85	122	85	122
Total depth drilled	'000 m	—	—	104	144	104	144

Private Mineral Exploration (Other than Petroleum), South Australia^(a) (continued)

Particulars	Unit	On Current Producing Leases		On Other Areas		Total Private Exploration	
		1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Expenditure:							
Drilling:							
Core	\$'000	—	—	892	1 347	892	1 347
Non-core	\$'000	<i>n.a.</i>	—	<i>n.a.</i>	1 633	823	1 633
Total drilling	\$'000	<i>n.a.</i>	—	<i>n.a.</i>	2 980	1 715	2 980
Other	\$'000	—	<i>n.a.</i>	4 378	<i>n.a.</i>	4 378	6 361
Total expenditure							
	\$'000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	6 093	9 341

(a) Excludes exploration for water and all development work. Excludes details of exploration by business undertakings operated by State and local government authorities.

Details of private petroleum exploration and development for South Australia are shown in the following table for the years 1973 to 1976.

Private Petroleum Exploration and Development, South Australia

Particulars	Unit	1974	1975	1976	1977
Wells drilled (a)	No.	1	6	3	5
Depth drilled	'000 m	2.4	9.9	6.2	11.8
Expenditure:					
Private sources	\$'000	2 205	12 530	5 257	5 714
Government subsidy (b)	\$'000	187	266	—	—
Total expenditure	\$'000	2 392	12 796	5 257	5 714

(a) Number of wells reaching total depth during year.

(b) Payments under the *Petroleum Search Subsidy Act 1959*.

FORESTRY

There are an estimated 6 million hectares of land classified as wooded in South Australia, but much of this is too small or scattered to be of current economic value for wood production or is better retained in its present form for environment protection reasons. Some 780 000 hectares carry forest or forest woodland, a decreasing part of which is still exploited for minor quantities of timber and fencing or firewood materials. Many of the forested or wooded areas are of considerable value for soil conservation, watershed protection, shelter, shade, conservation of indigenous plants and animals, and natural scenery.

Certain areas have been set aside as State forest reserves, the total area thus reserved at 30 June 1978 being 131 050 hectares. In addition the Woods and Forests Department is responsible for 2 176 hectares of reservoir lands, of which 1 106 are planted with pines.

In recent years the total area reserved has varied little, mainly because of the increasing unavailability of land. The net increase over the last five years was 4 777 hectares. During the same period the area under plantation on Forest Reserves increased by 5 649 hectares.

A more detailed history of forestry development in South Australia was included on pages 432-4 of the *South Australian Year Book* 1970.

Indigenous Forests

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are used to a limited extent for the production of poles, posts, rails and sleepers.

Some areas of forest reserves not planted with conifers are maintained under native hardwoods but it is unlikely that further hardwood plantations will be established for timber purposes.

Plantations

Seedlings raised in nurseries are planted out in the forest at densities of 1 700-2 200 trees to the hectare. A series of thinnings, starting when the trees are about 20 metres high, reduces density to about 150 trees to the hectare by about age forty. These thinnings are carried out on a commercial basis and make the major contribution to present timber and pulpwood output. The final felling age is aimed at forty to fifty years although for management purposes some earlier felling has been made in the past. Trees of the same age may vary in height; on some sites trees reach 20 metres after ten years of growth, but on other sites this may not be reached until after twenty years of growth.

Exotic softwoods accounted for approximately 99 per cent of the planted forest area at 31 March 1978. As can be seen from the accompanying table, the majority of the planted forest is in the Lower South East. The 625 mm rainfall line roughly divides the South East in two; the Lower South East, with an annual rainfall in excess of 625 mm is quite suitable for commercial forestry, but the Upper South East is not.

Forests, South Australia
Area Planted During 1977 and Net Area of Plantations at 31 March 1978

Location	Planted during 1977			Plantations at 31 March 1978		
	Softwoods		Hard- woods	Softwoods		Hard- woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
	Hectares					
State forests:						
Northern Region;						
Bundaleer	—	—	—	1 363.9	35.8	196.5
Wirrabara	44.5	—	—	1 965.2	69.0	39.6
Other forests	—	—	—	—	—	146.6
Total Northern	44.5	—	—	3 329.1	104.8	382.7
Central Region;						
Mount Crawford	107.1	—	—	5 944.5	362.2	41.7
Kuitpo	45.3	—	—	2 215.7	382.6	114.0
Blackwood	—	—	—	7.4	—	—
Second Valley	27.3	0.6	—	1 725.6	168.7	34.4
Total Central	179.7	0.6	—	9 893.2	913.5	190.1

Forests, South Australia
Area Planted During 1977 and Net Area of Plantations at 31 March 1978 (continued)

Location	Planted During 1977			Plantations at 31 March 1978		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
	Hectares					
Riverland Region;						
Parilla	—	—	—	—	6.1	48.6
Other forests	—	—	—	—	—	—
Total Riverland	—	—	—	—	6.1	48.6
South Eastern Region;						
Penola	95.7	—	—	12 249.8	1 884.6	1.2
Comaum	49.8	—	—	2 948.0	304.0	6.7
Mount Burr	124.8	6.0	—	9 207.9	590.3	76.8
Noolook	170.0	—	—	3 219.2	4.0	—
Mount Gambier	214.0	—	—	6 886.2	701.0	7.7
Kongorong	—	—	—	1 328.3	6.3	—
Tantanoola	42.2	—	—	7 920.4	988.2	6.3
Caroline	180.1	—	—	6 456.1	668.3	—
Myora	8.0	—	—	5 829.8	217.3	—
Cave Range	—	—	—	206.9	105.2	—
Total South Eastern	884.6	6.0	—	56 252.6	5 469.2	98.7
Western Region;						
Wanilla	—	—	0.4	46.6	24.7	350.9
Waterworks reserves	—	—	—	980.2	126.0	3.6
Total State forests ..	1 108.8	6.6	0.4	70 501.7	6 644.3	1 074.6
Total private forests		411			17 358	99
Total forests		1 526.8			94 504	1 173.6

The previous table clearly illustrates the predominant importance of one species, *Pinus radiata*, in the composition of South Australian forests. Areas of other species are now minor, although over a hundred species have been tried in earlier years.

FOREST ADMINISTRATION

State Forests

State forests are administered by the Woods and Forests Department which is responsible for the establishment, maintenance and exploitation of State forests, including the management of forest reserves and operation of mills for processing timber

produced by those forests. The Forest Reserves are organised into Districts and are under the charge of professionally trained foresters. The Department is also the major timber producer in South Australia, and operates three sawmills and two wood preservation plants through its Commercial Division.

In earlier years, when large areas of plantations were being established, expenditure by the Department exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had matched expenditure on establishment and maintenance of plantations, and annual surpluses of the Department are now paid to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to \$59 585 000 at 30 June 1978 of which \$32 766 000 was timber and land at net cost. The present value of the State-owned pine forests is approximately \$172 million at current royalty rates.

Private Forests

Private forests accounted for approximately 18 per cent of the planted area at 31 March 1978. Two private companies operating pine plantations in the South East control the bulk of private forest land, with the balance representing a large number of holdings of a few hectares on farming properties throughout the State.

PRODUCTION

The following table gives the quantity of forest logs used during the years 1973-74 to 1977-78.

Forest Log Usage, South Australia

Year	Softwoods	Hardwoods
	Cubic Metres	
1973-74	902 929	5 197
1974-75	902 142	7 017
1975-76	953 704	6 746
1976-77	987 983	3 878
1977-78	973 683	2 602

Log production is met from final fellings and thinning operations, and planned forest management ensures that the amount of timber cut each year does not exceed new growth. For many years thinnings have provided the bulk of the logs produced but with the increasing age of the plantations the quantity of logs coming from final fellings is rising. In 1977-78 approximately forty per cent of total log production was from final fellings. With the increasing area of forest reaching the stage of regular and repeated thinning at intervals of about seven years, log production is rising steadily towards the full annual yield which can be cut indefinitely.

EMPLOYMENT

The number of persons directly employed by the Woods and Forests Department in forestry activity in recent years is given in the following table. The Department also employs 851 persons in milling activities.

**State Forestry Employees, South Australia
At 30 June**

Classification	1974	1975	1976	1977	1978
Professional staff:					
Foresters	51	53	49	49	51
Other	29	26	28	27	29
Non-professional field staff	35	38	42	42	44
Clerical staff	130	122	132	131	138
Labour (silvicultural forest works, etc.)	281	314	305	262	278
Total	526	553	556	511	540

The extraction of timber from State forests is carried out by contractors.

RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and improvement of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and works very closely with the South Australian Regional Station of the Division of Forest Research of the Commonwealth Scientific and Industrial Research Organization (CSIRO) at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of CSIRO, the Waite Agricultural Research Institute, the University of Adelaide, the Flinders University and the Department of Forestry of the Australian National University.

Research activities aimed at an expansion of forestry production include the development of fertiliser use, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Silvicultural research is concerned with the maintenance of soil fertility and with combating various diseases and pests. Permanent sample plots are maintained in departmental forests for research into various aspects of forest yield and management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through its nurseries at Monarto, Belair and Berri, a wide variety of trees suitable for planting in various climatic and soil conditions.

FOREST PROTECTION

The hot dry summer conditions normal to the State require forest management to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the manning of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent plant disorders, measures to control insect pests in the forest, and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the Sirex wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests, and the State has contributed to development of biological control measures.

FISHERIES

The entire coastline of South Australia, except for the unpopulated area west of Fowlers Bay, is fished commercially. In the sheltered waters of the gulfs, Kangaroo Island, the Coorong and the West Coast bays, there are prawn, net and handline fisheries; in the open off-shore waters tuna, lobster and shark are sought and on exposed coasts abalone are taken. Inland in the River Murray a small quantity of fresh water fish is caught each year.

ADMINISTRATION

Exploitation of the State's fish resources is controlled by three Acts, the South Australian Fisheries Act, 1971-1977, the Commonwealth Fisheries Act 1952 and the *Continental Shelf (Living Natural Resources) Act 1968*.

Under the State Act, which is administered by the Department of Agriculture and Fisheries, provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by licence limitations, the establishment of size limits, closed areas and closed seasons, the regulation of amount and type of gear, the prohibition of the use of explosive or noxious substances in any waters and the establishment of aquatic resources.

FISHING BOATS

Vessels exceeding 20 metres in length are engaged primarily in tuna fishing and prawn trawling while the majority of vessels in the 8 metres to 20 metres range are used for rock lobster fishing. Abalone divers generally operate from small aluminium or fibreglass boats between 5 metres and 10 metres in length. The remainder are engaged mainly in handline and net fisheries. Boats and equipment were valued at \$54.6 million in 1977-78.

Details of the number of boats engaged in commercial fishing activities are shown in the following table.

Fishing: Boats Engaged, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Boats engaged:					
Under 6 metres	1 771	1 150	1 000	1 077	1 226
6 metres and under 9	410	327	292	307	292
9 metres and under 12	181	162	167	178	168
12 metres and under 15	114	108	109	116	116
15 metres and under 18	42	39	42	46	49
18 metres and under 21	21	19	22	23	23
21 metres and over	19	19	18	17	18
Total	2 558	1 824	1 650	1 764	1 892

PRODUCTION

Fish

The main commercial fish species, together with their production in recent years, are listed in the following table.

Fish: Production by Species, South Australia
Estimated Live Weight

Species	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 kg				
Marine:					
Australian salmon	1 897	873	680	1 099	1 169
Bream (black)	14	23	18	16	12
Garfish	539	487	463	354	318
Mullet	408	252	427	349	274
Mulloway	55	107	67	113	72
Ruff	209	211	227	284	354
Shark	1 161	459	1 546	944	1 055
Short finned pike	160	136	118	128	131
Snapper	445	284	307	333	385
Tuna	7 403	4 842	7 530	8 941	4 992
Whiting	823	977	991	796	831
Other marine species	129	155	133	323	723
Total	13 243	8 806	12 507	13 680	10 316
Freshwater:					
Golden perch (callop)	80	190	188	<i>n.a.</i>	77
Murray cod	9	4	5	<i>n.a.</i>	4
Bony bream	315	58	51	<i>n.a.</i>	87
European carp	44	166	325	<i>n.a.</i>	196
Catfish	14	7	7	<i>n.a.</i>	4
Other freshwater species	283	77	45	<i>n.a.</i>	9
Total	745	502	621	<i>n.a.</i>	377
Total fish production	13 988	9 308	13 128	<i>n.a.</i>	10 693

Tuna, Australian salmon, shark, whiting, snapper and garfish are the most important marine species taken in South Australian waters.

Tuna are taken in the waters west and south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although purse-seining has been attempted, the most successful technique to date is pole fishing with live bait. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln or Streaky Bay although occasional landings have been made at Port Adelaide.

Whiting are taken commercially in Spencer and St. Vincent Gulfs, Investigator Strait and the West Coast bays. In many areas hand lining continues to provide profitable catches as this fish attracts a high price. In other areas of the gulfs and the West Coast large quantities of whiting and garfish are netted.

Shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main landing ports are the South East lobster ports, Port Adelaide, Port Lincoln and Streaky Bay. Shark are taken by long line and, more recently, by mesh netting.

Australian salmon provides useful off-season fishing for a number of tuna fishermen with the best catches being taken in Spencer Gulf and around Kangaroo Island. Most of these fish are landed at Port Lincoln for canning. In the South East large quantities of

salmon trout are netted for rock lobster bait. Of other species, mullocky and snapper are regarded highly as table fish. Mullocky are netted in the River Murray Mouth area and snapper are taken by hand and long line in most areas of the State, and by netting in shallower parts of the gulfs and West Coast bays.

Approximately 120 part-time commercial fishermen using drum nets, gill nets and set lines are engaged in fishing on the River Murray and Lakes area. This is the only commercial source of fresh water fish in the State because of the general lack of permanent streams and lakes. The river has been sectioned into 'reaches' and 'reserves' and each commercial river fisherman is issued with a permit to fish a separate reach.

Production in 1977-78 was valued at \$8 287 000, the gross values of the major species being:

	\$
Tuna	2 250 000
Whiting	2 686 000
Snapper	555 000
Garfish	573 000
Australian salmon	427 000
Shark	801 000
All other	995 000
	8 287 000

Crustaceans

The prawn fishing industry operates in Spencer and St Vincent Gulfs, Investigator Strait and on the West Coast of the State. Since 1975-76 it has been South Australia's most valuable single fishery.

Prawn Production, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Estimated gross weight ('000 kg)	2 921	2 530	2 579	2 831	2 234
Value (\$ '000)	3 797	3 795	7 762	9 727	7 062

Southern rock lobster are taken by pots from the shore to the edge of the continental shelf. The south-east coast between Kingston and the Victorian border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near the Althorpe Islands and Port Lincoln, and along the West Coast. Rock lobster is one of South Australia's most important fisheries. However, with over 80 per cent of the catch exported annually, mainly to the United States of America, its profitability is dependent on overseas markets.

Rock Lobster Production, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Estimated gross weight ('000 kg)	2 637	1 862	2 228	1 906	1 912
Value (\$ '000)	6 223	4 672	6 351	6 611	7 307

To prevent over exploitation, both the rock lobster and prawn fisheries are 'limited entry' fisheries with constraints being placed on the number and size of vessels that may fish and the type of gear that can be used.

Molluscs

Abalone are found in greatest numbers at depths of 12 to 30 metres on the extensive limestone bottom off the shores of western Eyre Peninsula. Smaller numbers are taken in Spencer Gulf, around Kangaroo Island and off the South East coast.

All abalone divers must hold a commercial fisherman's licence as well as a special abalone permit issued by the Department of Agriculture and Fisheries.

Abalone Production, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Gross (in shell) weight ('000 kg)	757	608	616	675	770
Value (\$'000)	752	618	846	1 533	1 337

Squid and cuttlefish are taken in the general net fisheries and mainly sold for bait, although the domestic squid market for human consumption is increasing.

At present several private consortiums are interested in farming the Pacific oyster. This oyster was introduced into the State in September 1969 from Tasmania. Farms have been established in seawater ponds at Dry Creek, 28 kilometres north of Adelaide, at Coffin Bay and near Edithburgh where young oysters (spat) are imported annually and grown to market size. The marketing of oysters from the Dry Creek farm commenced in February 1977.

MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Tuna are landed at Port Lincoln and then canned for local consumption or frozen for export. Large catches of salmon are generally landed and canned at Port Lincoln, a deep sea port. Southern rock lobster are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Some prawns are cooked and sold locally but most are frozen and exported. Abalone are either canned or frozen for export. Shark are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution.

All of the main landing ports have chilling or freezing facilities and many have processing plants. Several of these are operated by individual buyers or co-operatives but most are depots of the South Australian Fishermen's Co-operative Limited (SAFCOL). In addition to collecting, processing and distributing fish from the outports, SAFCOL also operates the Adelaide fish market. This is an auction market which handles fish for both members and non-members.

RESEARCH

The realisation that research is essential for effective fisheries management has promoted several research programs. Scallop, rock lobster, shark and abalone resources are being investigated by joint Commonwealth and State Government research groups consisting of the Division of Fisheries and Oceanography of the Commonwealth Scientific and Industrial Research Organization (CSIRO), the Fisheries Division of the

Commonwealth Department of Primary Industry, and the Fisheries branches of New South Wales, Victoria, Tasmania and South Australia. In addition, the State Fisheries Division is conducting rock lobster, prawn, yabbie, blue crab, abalone, freshwater fish, whiting, snapper and oyster research programs and is measuring commercial fish species to determine frequency and distribution of various sizes throughout the commercial fish catch. A co-operative research program on the Australian salmon by the CSIRO Fisheries and Oceanography Division and the Western Australian Department of Fisheries and Wildlife commenced also in 1975. The State Fisheries Division is giving logistic support.

The decision in 1966 of the Commonwealth Government and the States to establish a joint Fisheries Research and Development Fund gave impetus to already expanding research programs. The Fishing Industry Research Trust Account was established under the *Fishing Industry Research Act 1969* which authorises an appropriation from Commonwealth Government revenue equal to amounts collected from the fishing industry by the State fisheries authorities and expended by them in 1976 for the development and management of State fisheries.

The State Government has financed exploratory deep-water trawling for gemfish in the South East and has purchased a twenty-three metre \$300 000 tuna pole boat for use as a fisheries research vessel in South Australian waters. This was renamed the 'Joseph Verco' and refitted to undertake studies of prawns, rock lobster, blue swimming crabs, scale fish and abalone.

Conservation

The importance of protecting the marine and freshwater environment against pollution and other man-caused degradation is recognised in Section 56 of the Fisheries Act, 1971-1977 which enables the Governor to make regulations for regulating or prohibiting the discharge, placing or flow into waters of any matter (whether solid, liquid or gaseous) declared by the regulations to be poisonous or injurious to fish or their spawn, and generally for protecting fish and the spawn against destruction or injury by the discharge, placing or flow of any such matter into waters.

The State Department of Agriculture and Fisheries has pioneered, in Australia, the concept of marine national parks and has created a number of aquatic reserves to protect seal colonies, mangrove communities and areas of scientific and educational interest. Mangrove communities and allied samphire flats have received particular attention because of their recently recognised contribution to the productivity of the near-shore marine environment. All mangroves in South Australia are fully protected.

9.3 MANUFACTURING

DEVELOPMENT

Early factory production was oriented to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840s. Also in operation were the smaller establishments of saddlers and coachbuilders, while various food and clothing industries were being established. Heavy industry can probably be traced to the production of agricultural machinery, beginning with the stripper of 1843 and including the stump-jump plough of 1876.

The discovery of copper in 1842 provided an impetus to certain industrial activities but the finding of gold in Victoria in 1851 encouraged many skilled persons to leave South Australia and the Colony's infant industries did not fully recover for two decades.

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up of Port Pirie's population from about 900 at the 1881 Census to some 8 000 twenty years later, making the town at that time the largest country centre in South Australia.

Despite some industrial growth, South Australia in the 1930s was predominantly a primary producing State, but since then a rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the 1930s coincided with Government action which reduced company taxation and wharfage charges, and provided for a program of low-cost housing. The needs of war provided a further stimulus to the industrialisation process during the 1940s but it is since the 1939-45 War that the most impressive development has taken place.

Extensive development has occurred particularly in the consumer durable industries (*e.g.* motor vehicles, electrical and household appliances) and these industries now employ a significant proportion of the State's labour force. Major improvements also have been made in the State's energy sources with the development of the Port Augusta and Torrens Island Power Stations and the Port Stanvac Oil Refinery, and the introduction of natural gas as a fuel.

ASSISTANCE TO INDUSTRY

Department of Economic Development

The Department of Economic Development is responsible for assisting in the formulation and implementation of Government policy on industrial, commercial and general economic development. The functions of the Department are to assist existing industry to expand and diversify and to promote new industries compatible with the long-term economic growth of the State. It also provides industrial forecasting and co-ordinating services to Government and industry.

The Small Business Advisory Unit, which operates within the Department, provides a co-ordinated assistance service for small businesses by counselling those with financial and other management problems. It also organises and participates in training seminars for small business and directs firms to other sources of assistance as appropriate.

The Research and Planning Division is responsible for all inquiries on industrial research and new product developments. The South Australian Agent-General and his trade officers in London actively seek joint venture and manufacture under licence proposals, mainly from western European countries, which are directed to local companies who have indicated an interest in diversifying into the particular type of product concerned. Initiatives have been made in the Middle East as well.

The Department, through the Development Division, is responsible for publicising the State as an industrial location, and for promoting local products and expertise within Australia and overseas through exhibitions and the media. The Department also organises the South Australian exhibits at appropriate fairs and exhibitions.

South Australian Development Corporation

The South Australian Development Corporation, established under the Industries Development Act, 1941-1978, commenced operations in 1971-72.

The objectives of the Corporation are to promote and to develop the State's industries through the provision of financial assistance. The Corporation offers loans of up to \$300 000 to eligible firms on specified terms and conditions. It can also participate in the equity structure of a firm and make grants where appropriate.

Before granting assistance to any person under the Act, the Corporation must satisfy the Treasurer:

- (1) that except in the case of assistance proposed to be granted in respect of an overseas industry, the assistance sought by the applicant is not obtainable by him in the ordinary course of business upon reasonable terms and conditions otherwise than from the Corporation;
- (2) that there is reasonable prospect that the industry in respect of which the assistance is given will be profitable; and
- (3) that it is in the public interest that the assistance be given.

Other Assistance

Other specific forms of financial assistance made available to industry by the State Government include payroll tax rebates, relocation grants, consultancy grants and assistance in the provision of services such as roads, water, electricity and transport. The South Australian Housing Trust makes serviced land available on industrial estates at cost, and may construct factories, either for sale or annual rental with option to purchase, throughout the State.

MANUFACTURING INDUSTRY STATISTICS

For the year ended June 1969, the Censuses of Manufacturing and Electricity and Gas Establishments were conducted for the first time on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69. As well as this change in the method of obtaining information on economic activities, different criteria have been used to define manufacturing and this has resulted in a significant fall in the number of establishments. In particular, service establishments such as dry cleaners and motor repair workshops are no longer classified as manufacturing. In addition to the changes in industry classification, information is now collected for all activities (including such things as installation work or wholesaling) undertaken by manufacturing establishments.

Thus, manufacturing industry statistics collected for the 1968-69 Census and subsequent censuses are not comparable with figures obtained from previous censuses. A more detailed explanation of these changes was included on pages 440-4 of the *South Australian Year Book 1972*.

Also, from 1974-75, detailed statistics have not been collected from single establishment enterprises employing fewer than four persons as their contribution to statistical aggregates other than the number of establishments is only marginal. In 1976-77 there were 794 establishments employing fewer than four persons.

LEGISLATION

Industrial legislation is dealt with in Part 7 Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1978, local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937, provides for the proclamation of certain areas wherein proprietors and occupiers of factories are protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trade Act, 1943-1965, have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the outer northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Excessive noise from industrial premises is regulated under the Noise Control Act, 1976-1977. Protection against health hazards is provided under the Health Act, 1935-1976.

CLASSIFICATION OF MANUFACTURING ESTABLISHMENTS

The Australian Standard Industrial Classification (ASIC) described in the publication *The Australian Standard Industrial Classification (Preliminary Edition)*, 1969 Volume 1, classifies the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them.

The classes relevant to the manufacturing sector of the economy were listed on pages 492-6 of the *South Australian Year Book 1975*.

STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Industrialisation since the 1939-45 War, to a considerable extent, has evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion. These industries are located in, or near Adelaide. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market, has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide.

The following tables show this concentration of manufacturing activity in the Adelaide Statistical Division.

Manufacturing Establishments: Summary of Operations, Adelaide Statistical Division and South Australia, 1976-77^(a)

Item	Unit	Adelaide Statistical Division	South Australia	A.S.D. as percentage of S.A.
Number of establishments at 30 June	number	1 800	2 242	Per cent 80
Persons employed:	number			
Males	number	71 509	89 917	80
Females	number	21 973	25 477	86
Wages and salaries	\$'000	789 731	981 380	80
Turnover	\$'000	2 891 659	3 768 136	77
Value added	\$'000	1 263 595	1 597 007	79

(a) Excludes single establishment enterprises employing fewer than four persons.

Manufacturing Establishments: Summary of Manufacturing Operations by Statistical Division, 1976-77^(a)

Statistical Division	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Adelaide	1 800	93 482	789 731	2 891 659	1 263 595
Outer Adelaide	118	3 379	25 060	154 080	56 672
Yorke and Lower North	53	758	5 141	31 050	14 194
Murray Lands	93	2 905	22 914	131 369	49 317
South East	77	4 317	40 352	179 542	73 873
Eyre	26	656	4 828	21 442	7 121
Northern	75	9 897	93 353	358 996	132 234
Total State	2 242	115 394	981 380	3 768 136	1 597 007

(a) Excludes single establishment enterprises employing fewer than four persons.

A summary of manufacturing operations by industry subdivision within the Adelaide Statistical Division is detailed below and the distribution of activity between this Division and the rest of the State can be seen by comparing this and the subsequent table.

Manufacturing Establishments: Summary of Operations by Industry Subdivision Adelaide Statistical Division, 1976-77^(a)

Industry Subdivision	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Food, beverages and tobacco	185	11 803	96 435	426 965	184 291
Textiles	33	2 025	16 721	84 277	27 159
Clothing and footwear	78	3 891	25 651	80 418	42 322
Wood, wood products and furniture	289	6 468	48 956	203 010	85 612
Paper and paper products, printing	161	5 838	49 295	158 684	89 767
Chemical, petroleum and coal products	50	2 565	28 014	123 670	52 941
Non-metallic mineral products	98	4 005	38 860	166 774	85 858
Basic metal products	42	3 987	37 243	155 760	58 918
Fabricated metal products	303	7 989	63 357	252 052	111 456
Transport equipment	122	21 994	197 000	630 885	225 550
Other machinery and equipment	270	17 481	143 075	458 643	220 852
Miscellaneous manufacturing	169	5 436	45 124	150 521	78 870
Total manufacturing	1 800	93 482	789 731	2 891 659	1 263 595

(a) Excludes single establishment enterprises employing fewer than four persons.

Generally, industrial plants outside the Adelaide Statistical Division are located near raw materials sources of supply. At country centres there are either meat slaughtering, dairy produce or fish processing factories processing regional produce for local and export markets. There are exceptions to this, including the production of agricultural machinery at Mannum, woollen mills at Lobethal, clothing production at Mount Gambier and heavy engineering at Whyalla. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertiliser production.

The two most important undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the lead smelters at Port Pirie. These undertakings together with the power station at Port Augusta are sited for important mineral sources. Other factories are located near sources of primary products—these include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Riverland, the wineries and distilleries of the Barossa Valley and the Riverland, and various dairy produce factories and fish processing plants.

In the following table details of manufacturing establishments for 1976-77 are classified according to industry class.

**Manufacturing Establishments: Summary of Operations by Industry Subdivision
South Australia, 1976-77^(a)**

Industry Subdivision	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Food, beverages and tobacco	379	18 124	143 415	717 781	293 766
Textiles	36	2 316	18 634	92 198	29 936
Clothing and footwear	82	4 103	27 010	82 385	44 063
Wood, wood products and furniture	340	8 993	70 035	293 573	127 407
Paper and paper products, printing	198	7 268	65 150	229 113	113 273
Chemical, petroleum and coal products	56	2 763	29 849	141 214	58 473
Non-metallic mineral products	143	4 431	43 106	188 545	94 271
Basic metal products	46	10 280	98 712	437 374	153 220
Fabricated metal products	347	8 586	67 880	272 417	120 510
Transport equipment	139	24 565	220 955	676 519	249 067
Other machinery and equipment	299	18 301	149 886	478 708	232 412
Miscellaneous manufacturing	177	5 664	46 747	158 309	80 608
Total manufacturing	2 242	115 394	981 380	3 768 136	1 597 007

(a) Excludes single establishment enterprises employing fewer than four persons.

Transport equipment accounted for 16 per cent of value added while fabricated metal products, machinery and equipment etc., accounted for 22 per cent. Employment in these industries was 21 per cent and 23 per cent respectively of the total manufacturing employment. Also of considerable importance to South Australia are the food and drink industries (18 per cent of value added, 16 per cent of employment) particularly milk processing and winemaking.

The importance of manufacturing industry in South Australia relative to Australia as a whole can be gauged from the following comparison.

**Manufacturing Establishments: Summary of Operations, South Australia and Australia
1976-77^(a)**

Item	Unit	South Australia	Australia	South Australia as a percentage of Australia
Number of establishments at 30 June	number	2 242	26 849	Per cent
Average employment:				8.4
Males	number	89 917	876 592	10.3
Females	number	25 477	299 567	8.5
Wages and salaries	\$'000	981 380	10 531 450	9.3
Turnover	\$'000	3 768 136	44 822 514	8.4
Stocks, closing	\$'000	788 916	8 003 930	9.9
Value added	\$'000	1 597 007	19 237 468	8.3
Fixed capital expenditure	\$'000	153 157	1 550 604	9.9

(a) Excludes single establishment enterprises employing fewer than four persons.

In the following table manufacturing establishments are grouped according to the number of persons employed.

**Manufacturing Establishments: Selected Variables by Size of Establishment
South Australia, 30 June 1977^(a)**

Size of Establishment (average employment)	Establishments	Persons	Turnover	Value Added
		Employed		
		Number		\$'000
Fewer than 10	1 030	5 792	178 581	73 383
10 but fewer than 20	434	6 077	186 668	81 784
20 but fewer than 50	392	12 007	441 905	188 737
50 but fewer than 100	169	11 693	438 823	180 625
100 but fewer than 200	135	19 475	687 480	304 856
200 but fewer than 500	51	15 283	613 162	260 690
500 or more	31	42 184	1 210 799	499 520

(a) Excludes single establishment enterprises employing fewer than four persons.

Although there were 2 242 establishments operating at 30 June 1977 only 217 or 9.6 per cent had an employment in excess of 100 persons while 1 030 establishments, or 46 per cent of the total, employed less than 10 persons. The 31 largest establishments employed 42 184 persons or 37 per cent of the total.

Details of persons employed and distribution of employment in manufacturing establishments for 1976-77 are given in the following tables. Females constituted 22 per cent of the total employment, but industries traditionally associated with female employment had a much higher component; textiles, clothing and footwear industries, in particular, employ a large number of females.

**Manufacturing Establishments: Average Number of Persons Employed, South Australia
1976-77^(a)**

Industry Subdivision	Males	Females	Total	Percentage of
				Total Employment
				Per cent
Food, beverages and tobacco	12 715	5 409	18 124	15.7
Textiles	1 349	967	2 316	2.0
Clothing and footwear	962	3 141	4 103	3.5
Wood, wood products and furniture	7 755	1 238	8 993	7.8
Paper and paper products, printing	5 377	1 891	7 268	6.3
Chemical, petroleum and coal products	2 302	461	2 763	2.3
Non-metallic mineral products	4 023	408	4 431	3.8
Basic metal products	9 441	839	10 280	8.9
Fabricated metal products	6 844	1 742	8 586	7.4
Transport equipment	22 292	2 273	24 565	21.3
Other machinery and equipment	13 063	5 238	18 301	15.9
Miscellaneous manufacturing	3 794	1 870	5 664	4.9
Total manufacturing	89 917	25 477	115 394	100.0

(a) Excludes single establishments employing fewer than four persons.

Manufacturing Establishments: Average Number of Persons Employed by Type of Employment, South Australia, 1976-77^(a)

Industry Subdivision	Working Proprietors	Employees	Total
Food, beverages and tobacco	213	17 911	18 124
Textiles	15	2 301	2 316
Clothing and footwear	47	4 056	4 103
Wood, wood products and furniture	267	8 726	8 993
Paper and paper products, printing	108	7 160	7 268
Chemical, petroleum and coal products	4	2 759	2 763
Non-metallic mineral products	26	4 405	4 431
Basic metal products	7	10 273	10 280
Fabricated metal products	190	8 396	8 586
Transport equipment	61	24 504	24 565
Other machinery and equipment	88	18 213	18 301
Miscellaneous manufacturing	115	5 549	5 664
Total manufacturing	1 141	114 253	115 394

(a) Excludes single establishment enterprises employing fewer than four persons.

WAGES AND SALARIES

The following table shows wages and salaries associated with the usage of labour classified by industry subdivision. Wages and salaries paid to administrative, office, sales and distribution employees were 29 per cent of total wages paid, but in the food, beverages and tobacco; paper and paper products, printing and chemical, petroleum and coal products industries a much higher component was paid to these employees.

Manufacturing Establishments: Wages and Salaries, South Australia, 1976-77^(a)

Industry Subdivision	Wages and Salaries Paid to		
	Administrative, Office, Sales and Distribution Employees	Production and All Other Workers	All Employees
		\$'000	
Food, beverages and tobacco	49 958	93 457	143 415
Textiles	4 680	13 954	18 634
Clothing and footwear	5 146	21 864	27 010
Wood, wood products and furniture	16 680	53 354	70 035
Paper and paper products, printing	23 942	41 207	65 150
Chemical, petroleum and coal products	12 744	17 105	29 849
Non-metallic mineral products	11 741	31 365	43 106
Basic metal products	30 253	68 460	98 712
Fabricated metal products	22 152	45 728	67 880
Transport equipment	51 380	169 576	220 955
Other machinery and equipment	43 698	106 188	149 886
Miscellaneous manufacturing	12 307	34 440	46 747
Total manufacturing	284 682	696 697	981 380

(a) Excludes single establishment enterprises employing fewer than four persons.

SELECTED FACTORY PRODUCTS

The factory products listed in this section are not necessarily the principal items produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted.

Selected Articles Produced: South Australia, 1975-76 and 1976-77^(a)

Item	Units of Quantity	1975-76			1976-77		
		Production	Sales and Transfers		Production	Sales and Transfers	
		Quantity	Quantity	Value	Quantity	Quantity	Value
Aerated and carbonated waters	'000 l	104 332	103 843	\$'000 29 973	110 918	110 964	\$'000 35 124
Barrels, kegs, vats, drums and tanks	..	..	..	5 654	..	..	6 267
Blinds and awnings:							
Metal venetian	..	..	..	545	..	..	659
Outdoor, canvas	..	..	..	939	..	..	1 443
Outdoor metal	..	..	..	1 288	..	..	1 932
Brandy	'000 lal	1 485	1 758	3 805	1 943	2 088	4 476
Bread, total value	..	..	..	31 514	..	..	36 628
Bricks, clay	'000	128 137	127 612	12 434	171 782	166 165	18 794
Cakes, pastry, pies and puddings (not canned)	..	..	..	24 445	..	..	27 821
Cheese (excluding processed cheese)	'000 kg	18 352	18 360	n.a.	15 487	15 060	n.a.
Cheese, total value	..	..	..	19 055	..	..	15 691
Chickens	'000 kg	17 839	17 844	21 946	19 535	19 770	26 306
Flour, white	tonnes	101 222	107 288	16 215	89 644	95 073	15 853
Fluorescent light fittings	..	..	..	3 323	..	..	4 963
Fruit, crystallised and glace	'000 kg	726	682	1 168	969	907	1 902
Furniture:							
Sheet metal	..	..	..	7 795	..	..	9 899
Wooden	..	..	..	33 746	..	..	39 536
Gloves, work	doz.	24 264	31 764	463	27 350	28 007	551
Ice	tonnes	18 305	18 298	516	12 792	12 792	389
Ice cream	'000 l	15 371	15 588	7 041	15 482	15 662	6 865
Machinery:							
Conveyors and appliances	..	..	..	8 011	..	..	4 733
Hoists, cranes lifting machinery	..	..	..	1 829	..	..	2 033
Mining and drilling	..	..	..	4 032	..	..	1 644
Pumping	..	..	..	3 421	..	..	4 828
Mattresses, innerspring	number	62 454	62 458	2 502	59 118	59 507	2 582
Milk, liquid whole, packed	'000 l	..	129 882	25 168	..	143 959	30 516
Newspapers and periodicals printed and published	..	..	..	13 309	..	..	14 384
Paints:							
Architectural and decorative:							
Primers and undercoats	'000 l	697	658	1 025	577	578	1 042
Finishing coats	'000 l	4 376	4 177	6 538	4 329	4 265	7 244
Ready-mixed concrete	m ³	1 240 567	1 239 937	38 619	1 155 071	1 155 071	38 565
Smallgoods	..	..	..	16 619	..	..	15 817
Steel, fabricated constructional	tonnes	60 592	53 451	23 156	42 881	42 066	20 712
Tallow, inedible	'000 kg	23 713	24 492	5 657	25 819	26 880	7 640
Tarpaulins	..	..	..	553	..	..	526
Tents, flies and marquees	..	..	..	739	..	..	963
Window frames, aluminium	..	..	..	11 490	..	..	14 957
Wine:							
Fortified	'000 l	38 693	45 000	31 865	35 344	45 631	36 404
Unfortified	'000 l	100 603	88 782	66 624	115 634	103 606	73 801

(a) Includes details for Northern Territory.

SELECTED INDIVIDUAL FIRMS

A brief description of a selection of manufacturing firms operating in South Australia is included below. Details shown were not collected under the *Census and Statistics Act 1905* but were supplied by the Department of Economic Development and have been included with the permission of the relevant firms.

Actil

Actil, a subsidiary of Bradmill Industries Limited, commenced manufacturing in South Australia in 1942. Actil employs approximately 900 persons at its Woodville plant.

Actil's plant is vertically integrated and contains spinning, weaving, finishing and making-up divisions.

While a wide range of textile products are manufactured, the company specialises in fashion bed linen, bed sheeting, drill, fabrics for use as apparel, and terry nursery squares. Most fabric produced is pure cotton but the fashion bed linen is all polyester/cotton.

A major modernisation of the plant was begun in 1969 leading to substantially increased efficiency.

Adelaide Brighton Cement Ltd

The Company operates cement works at Birkenhead, and at Angaston in the Barossa Valley.

The Birkenhead Works has an annual capacity of about one million tonnes. Most of its raw materials are shipped from the Company's quarry at Kleins Point, Yorke Peninsula, in the Company's ship *M.V. Accolade*. The Angaston Works has an annual capacity of about 250 000 tonnes; it manufactures special cements and lime in addition to ordinary Portland cement. Raw materials for this Works are obtained from the Angaston district. Adelaide Brighton Cement Ltd also operates a cement blending plant at Alice Springs. Total employment within the Company is approximately 450 persons.

South Australia is the main market for the Company's products, however it has an extensive market interstate, particularly for special cements and lime. In addition large shipments of cement clinker (partially processed cement) are made interstate and overseas.

Advertiser Newspapers Limited

Advertiser Newspapers Limited is the parent of a group of companies that is involved in most aspects of communications in the State including newspapers, radio, television, printing and packaging. It employs approximately 2 600 persons, 1 700 within South Australia.

The Advertiser, the State's only major morning newspaper, was first published in 1858 as *The South Australian Advertiser*. The metropolitan circulation of *The Advertiser* exceeds 234 000 of which 85 per cent is home delivered.

Advertiser Newspapers Limited celebrated its 50th year as a public company in 1979.

Berri Fruit Juices Co-operative Limited

Situated at Berri, the Co-operative is the largest processor of citrus fruit in Australia. It employs approximately 300 people and produces fruit juices (canned and chilled) cordials, citrus juice, citrus juice concentrate, citrus oils and candied citrus peel. Approximately 76 per cent of the Co-operative's production is sold interstate.

Broken Hill Associated Smelters Pty Ltd

Broken Hill Associated Smelters Pty Ltd operates at Port Pirie, the largest lead smelting and refining plant in the world and it is also a substantial producer of zinc, silver, antimonial lead alloys and sulphuric acid. It is owned jointly by Australian Mining and Smelting Ltd (70 per cent) and North Broken Hill Limited (30 per cent). The Head Office of the Company is in Melbourne, but approximately 1 800 people are employed in the plant at Port Pirie.

This is predominantly an export industry with approximately 75 per cent of the lead and 50 per cent of the zinc going to overseas markets.

Broken Hill Proprietary Co. Ltd

Operations commenced just before the turn of the century after BHP Co. Ltd acquired iron ore leases in the Middleback Ranges, initially to supply a flux for Port Pirie smelting operations. Later, in 1915, this ore was used to feed the newly erected steelworks in Newcastle, New South Wales.

The ore was shipped through Whyalla, and until 1938 this was Whyalla's prime function. Just prior to the 1939-45 War, a decision was made to establish both a blast furnace and shipbuilding yard, plus other facilities, which saw Whyalla grow from a population of about 800 to 8 000.

In 1958 a decision was made to establish a fully integrated steelworks. The rolling mills were commissioned in 1964, and progressively a steel making plant, a second blast furnace, coke ovens and an iron ore pelletising plant were added.

Whyalla has Australia's only universal rolling mill and provides the nation's requirements for structural beams and columns. In March 1979, it was announced that the Whyalla mill would become the rail rolling centre for both domestic and export demands.

Current employment is about 5 600 people, with iron making capacity of 1.2 million tonnes per annum, steel making capacity of 1.3 million tonnes per annum and steel rolling capacity of 1.7 million tonnes per annum.

FJ Trousers (Mount Gambier)

FJ Trousers Mount Gambier production centre "Pleasant Park" was officially opened in September 1972 and it is the only FJ manufacturing establishment in South Australia. Garments are produced on commission for another company of the group and completed garments are forwarded to a central warehouse for dispatch to different stores.

The Company at present employs 188 persons in the manufacture of trousers, shorts, jeans and jackets.

Simpson Pope Limited

Simpson Pope Limited is one of Australia's largest manufacturers of household appliances and industrial equipment with three large factories all of which are located in South Australia. The Company has distribution centres in every State of the Commonwealth.

The products manufactured by the Company include washing machines, dryers, electric ranges and disposal units. In the industrial product area it produces both fractional electric motors and industrial motors up to 370 kW as well as air conditioning equipment and irrigation and garden products.

South Australian Fishermen Co-operative Limited (Safcol)

SAFCOL is the largest fishermen's co-operative in the world and its complex at Port Lincoln is the largest seafood processing operation in Australia.

SAFCOL operates processing plants at Port Lincoln, Millicent, Streaky Bay and

Adelaide. Approximately 300 people are employed in processing frozen fish, crustaceans, abalone, tuna, salmon and pet food.

T. O'Connor and Sons Pty Ltd

Established in 1894, the Company's Head Office, and South Australian and Northern Territory Division operate from an 18 hectare site at Gepps Cross, north of Adelaide.

The Company employs over eight hundred people and is involved in such activities as industrial and commercial air conditioning, sheet metal work, mechanical conveyors, industrial piping, pipe bending, manufacture of pressure vessels and general engineering.

In 1964 the Company entered into a joint venture with Sandovers Ltd of Perth and, trading as Sandovers O'Connor Pty Ltd, the Company has become the leading specialist in industrial and commercial air conditioning in Western Australia.

In 1976 the Company entered into a joint venture with the Sam P. Wallace Company Inc. of Dallas, Texas. Trading as Wallace O'Connor International Ltd this Company has been successful in winning electrical, plumbing and air conditioning contracts in the Middle East and South East Asia.

In 1977 the Company jointly with Kinhill Pty Ltd, another South Australian company, formed Kinhill O'Connor Pty Ltd. This Company provides engineering management design and construction services for mining and industrial developments in Australia.

Uniroyal Pty Ltd

The name of the Company was changed in 1970 from SA Rubber Mills Pty Ltd which was incorporated in 1939.

Uniroyal Inc., which was originally known as the United States Rubber Company until 1967, holds a 60 per cent equity in Uniroyal Pty Ltd.

Uniroyal is the major producer of steel belted radials in Australia. Other Uniroyal Pty Ltd products include rubber and plastic automotive parts, parts for the electrical appliance industry, irrigation systems, refrigeration insulation, indoor and outdoor furniture, carpet underlay, garden hose, industrial and building products.

Uniroyal has factories in South Australia situated at Salisbury and Edwardstown employing approximately 1 700 persons. Other factories and marketing divisions throughout Australia employ an additional 450.

INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, statistics relating to a number of important industries are not published in order to maintain confidentiality of details for individual businesses.

Wine and Brandy

A special article on the wine industry in South Australia is included in Part 9.1 Rural Industries on pages 421-439.

Meat and Abattoir By-products

Most of the abattoirs in South Australia are located in country areas but the two largest establishments are within the Adelaide Statistical Division. Details of country butchers who slaughter livestock mainly for sale in their own retail shops are not included in the following table.

Meat and Abattoir By-products, South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	11	2 627	23 084	38 905	73 632	34 997
Other	14	1 246	9 583	30 365	43 517	13 952
Total	25	3 873	32 667	69 270	117 149	48 949

(a) Excludes single establishment enterprises employing fewer than four persons.

Wood and Wood Products

The major activities in this sector of manufacturing are log sawmilling, resawn and dressed timber and joinery and wooden structural fittings industries. In 1976-77 wood and wood products industries accounted for 5.6 per cent of manufacturing employment in South Australia.

Wood and Wood Products, South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	176	3 996	31 863	90 464	143 805	56 059
Other	49	2 517	21 046	51 356	90 344	41 699
Total	225	6 513	52 909	141 819	234 149	97 758

(a) Excludes single establishment enterprises employing fewer than four persons.

Printing and Publishing

There are two large establishments producing newspapers in Adelaide. Newspaper printing offices are also located in most large towns, and a number of these produce newspapers for more than one locality. Particulars of general printing establishments, including the activities of the Government Printing Division of the Department of Services and Supply, are also incorporated in the following table.

Printing and Publishing, South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	140	4 726	39 960	46 359	115 734	71 683
Other	32	363	2 466	1 827	6 330	4 589
Total	172	5 089	42 426	48 186	122 064	76 272

(a) Excludes single establishment enterprises employing fewer than four persons.

Cement and Concrete Products

There are two firms producing cement at three locations in South Australia. One firm produces cement at two locations, one at Birkenhead and the other at Angaston. The Angaston cement plant, based on the limestone deposits, is an example of a manufacturing location being established near the source of the raw material. In 1976-77, 51 plants produced ready-mixed concrete, of which 26 were in the Adelaide Statistical Division and 25 were in country areas. Two firms produce concrete pipes at five separate locations of which two are in the country.

Cement and Concrete Products, South Australia, 1976-77^(a)

Statistical Divisions	Establishments	Persons Employed	Wages and Salaries	Purchases Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	57	1 880	19 315	57 552	95 019	42 120
Other	35	310	3 500	12 239	19 468	7 003
Total	92	2 190	22 815	69 791	114 488	49 122

(a) Excludes single establishment enterprises employing fewer than four persons.

Basic Iron and Steel

In 1941 a blast furnace was installed at Whyalla to utilise the iron ore from the Middleback Ranges. The ore is transported by rail a distance of 55 kilometres to Whyalla. Before 1965 Whyalla was the major source of Australia's foundry iron but this changed in 1965 when the Basic Oxygen Steelmaking plant began producing steel.

There are a number of large pipe and tube making firms located in and near Adelaide. These firms accounted for slightly less than 19 per cent of the Australian output of ferrous pipes, tubes and fittings. Details for these plants, together with details for establishments making basic forgings and castings of iron and steel, are included in the following table.

Basic Iron and Steel, South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	24	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Total	27	8 008	77 092	207 264	297 095	94 097

(a) Excludes single establishments enterprises employing fewer than four persons.

Transport Equipment (Motor Vehicles and Parts)

The largest single industry in South Australia and a major contributor to industrial growth since 1945 is the motor vehicle industry. However, as there are only a few firms engaged in motor vehicle production, no detailed figures are published for confidentiality reasons.

Immediately after the 1939-45 War, General Motors-Holden Pty Ltd prepared for the production of an Australian-built car, and volume production commenced in 1948. A number of major increases in productive capacity have been made by this firm involving not only considerable expansion at the Woodville site but also the establishment of a plant at Elizabeth.

Tonsley Park has become the centre of manufacturing operations for Chrysler Australia Ltd and in July 1967 the company expanded its operations to include a large foundry and engine plant at Lonsdale, near Port Stanvac.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components. Other manufacturers produce omnibus and commercial vehicle bodies, fork lift trucks, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

In 1976-77 establishments mainly engaged in the manufacture of motor vehicles and parts contributed 17 per cent of South Australia's total employment in manufacturing. It should be noted that this figure understates the importance of the motor vehicle industry to South Australia as some firms involved in the manufacture of components and accessories are classified to other industries. (For example, firms making rubber components for the motor industry are considered to be in the rubber industry.)

Transport Equipment (Motor Vehicles and Parts), South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	88	19 767	178 185	430 324	592 757	203 974
Other	3	29	129	242	517	241
Total	91	19 796	178 314	430 567	593 274	204 216

(a) Excludes single establishment enterprises employing fewer than four persons.

Transport Equipment (Other than Motor Vehicles)

In 1976-77 the transport equipment (other than motor vehicles) industries accounted for 4 per cent of the employment in manufacturing in South Australia.

Transport Equipment (Other than Motor Vehicles), South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	34	2 227	18 815	15 851	38 128	21 576
Other	14	2 542	23 827	17 223	45 118	23 275
Total	48	4 769	42 642	33 075	83 245	44 851

(a) Excludes single establishment enterprises employing fewer than four persons.

Motor vehicles and parts and other transport equipment together accounted for 21 per cent of total South Australian manufacturing employment.

Appliances and Electrical Equipment

For many years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines and stoves. These items constitute a significant part of the total activity shown in the next table. Also represented are manufacturers of radio and television components, water-heating systems, batteries and other electrical machinery and equipment.

This group of industries is the second most important in the State and in 1976-77 employed nearly 11 per cent of total manufacturing employment in South Australia.

Appliances and Electrical Equipment, South Australia, 1976-77^(a)

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number			\$'000	
Adelaide	95	12 058	98 524	182 238	324 791	147 054
Other	4	138	876	1 779	2 698	1 529
Total	99	12 196	99 400	184 017	327 488	148 583

(a) Excludes single establishment enterprises employing fewer than four persons.

PART 10

COMMERCE

10.1 INTERNAL TRADE

Extensive statistics of retail trade have been collected and published over many years but the first full census of wholesale trade was conducted as part of the integrated Economic Censuses of 1968-69 which was discussed in detail on pages 446-57 of the *South Australian Year Book 1971*.

RETAIL TRADE

A Census of Retail Establishments and Selected Service Establishments for the year ended 30 June 1974 was conducted primarily to provide the necessary data to update the sample for the quarterly survey of retail sales. The census included all establishments classified to retail trade in Subdivision 48 of the Australian Standard Industrial Classification (ASIC) with the exception of bread and milk vendors, footwear repairers and door to door salesmen. In addition the census included service establishments classified as cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs and hairdressers and beauty salons.

The definition of retail trade adopted in the 1973-74 Retail Census was the same as that used in previous censuses *i.e.* the sale of new and used goods to the final consumer for household and personal purposes.

For further information and detailed tables relating to the 1973-74 Retail Census, reference should be made to the *South Australian Year Book 1978*, pages 457-9 and the bulletin *Census of Retail Establishments and Selected Service Establishments, 1973-74* (Catalogue No. 8601.4).

**Retail and Selected Service Establishments: Summary of Operations
by Industry Group South Australia, 1973-74**

Industry Group	Establishments at End of June	Employment at End of June		Wages and Salaries	Retail Sales	Turnover (a)
		Males	Females			
		Number			\$'000	
Retail establishments:						
Department, variety and general stores	221	4 031	9 539	41 345	265 836	278 172
Food stores	4 263	8 349	12 584	35 367	445 255	450 206
Clothing, fabric and furniture stores	1 397	2 651	4 066	17 755	151 385	153 143
Household appliance and hardware stores	823	2 458	1 618	13 226	93 547	113 980
Motor vehicle dealers, petrol and tyre retailers	2 648	14 563	3 845	60 610	460 663	605 582
Other retailers	1 838	2 716	3 850	13 834	109 358	112 676
Total retail establishments ...	11 190	34 768	35 502	182 137	1 526 044	1 713 759
Selected Service establishments:						
Restaurants and licensed hotels	881	5 948	8 178	39 043	117 934	169 640
Licensed clubs	161	849	650	3 656	9 521	13 486
Hairdressing and beauty salons	948	510	2 435	4 414	907	11 787
Total selected service establishments	1 990	7 307	11 263	47 113	128 362	194 913
Total retail and selected service establishments	13 180	42 075	46 765	229 250	1 654 406	1 908 672

(a) Sales of goods (retail and wholesale) and other operating revenue.

A comparison of retail trading in South Australia and in Australia during 1973-74 is shown in the following table. In this and in the earlier table showing employment and wages, employment figures include working proprietors but wages exclude the drawings of working proprietors.

Retail and Selected Service Establishments: South Australia and Australia, 1973-74

Particulars	South Australia	Australia
	Number	
Establishments operating at 30 June 1974	13 180	151 120
Persons employed at 30 June 1974	88 840	984 964
	\$ million	
Wages and salaries	229.3	2 739.0
Retail sales	1 654.4	19 070.7
Wholesale sales	84.2	1 403.2
Other operating revenue	170.1	2 259.8
Turnover	1 908.7	22 733.7

The value of sales of the commodity items collected in the 1973-74 Census are shown in the following table. Many establishments reported takings in more than one commodity item so that the number of establishments showing sales for individual items will exceed the total number of retail and selected service establishments.

**Retail and Selected Service Establishments: Sales by Commodity Group, South Australia
1973-74**

Commodity Item	Number of Establishments	Retail Sales of Goods		
		Total	Sales Per Establishment	Sales Per Head of Population
		\$'000	\$	\$
Groceries, other food items, etc.:				
Groceries	2 802	192 949	68 860	159.4
Fresh meat	1 163	80 819	69 490	66.7
Confectionery, ice cream, soft drinks, etc.	3 516	50 154	14 260	41.4
Other food	3 006	79 966	26 600	66.0
Beer, wine and spirits, cigarettes, etc.:				
Beer, wine and spirits	1 033	127 317	123 250	105.2
Cigarettes and other tobacco products	4 827	50 218	10 400	41.5
Fabrics, clothing and footwear:				
Clothing and drapery	1 733	200 292	115 580	165.4
Footwear	763	33 575	44 000	27.7
Hardware:				
Domestic hardware, china, glassware, jewellery, watches and clocks (including garden equipment)	1 453	48 084	33 090	39.7
Household appliances:				
Radios, radiograms, tape recorders, television sets and accessories, musical instruments, records, sheet music, etc.	580	39 072	67 370	32.3
Domestic refrigerators and freezers, washing machines, stoves, household heating appliances and other household appliances (including bottled liquid petroleum gas)	543	56 384	103 840	46.6
Furniture and floor coverings:				
Furniture, mattresses, blinds, etc. (including installation and repairs)	364	45 609	125 300	37.7
Floor coverings, carpets, lino, etc., including laying of floor coverings	354	32 754	92 530	27.1
Motor vehicles, petrol, boats, caravans, etc.:				
New motor vehicles, new and used motor cycles, boats and caravans	486	193 634	398 424	159.9
Used motor vehicles	572	113 443	198 327	93.7
New and used parts and accessories, petrol, oils, tyres, batteries, etc.	1 970	150 857	76 577	124.6
Miscellaneous:				
Cosmetics, perfumes, toilet preparations	1 774	24 129	13 600	19.9
Prescription and patent medicines and therapeutic appliances	836	35 387	42 330	29.2
Books, stationery, newspapers, etc.	1 735	37 737	21 750	31.2
Goods not included above	2 191	62 022	28 310	51.2
Total retail sales .....	..	1 654 406	..	1 366.4

Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales are calculated from returns received from a sample of retail establishments covering businesses which account for approximately 45 per cent of all retail sales in Australia.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups for the 1973-74 Census, and retail survey estimates for the years 1975-76 to 1977-78. Retail sales of motor vehicles and parts, petrol, etc., and of delivered milk and bread are excluded.

Value of Retail Sales: Commodity Groups, South Australia

Commodity Group	Value of Retail Sales of Goods			
	1973-74	1975-76	1976-77	1977-78
	\$ million			
Groceries	192.9	294.2	355.2	410.1
Butchers meat	80.8	102.1	116.1	128.1
Other food	130.1	180.6	209.0	225.6
Total food and groceries	403.9	576.9	680.3	763.8
Beer, wine and spirits	127.3	198.0	214.7	228.9
Clothing, drapery, etc.	200.3	279.1	319.0	335.2
Footwear	33.6	44.8	51.8	58.0
Hardware, china, etc.	48.1	70.7	79.4	84.6
Electrical goods	95.5	187.5	203.3	179.6
Furniture and floor coverings	78.4	113.5	127.9	125.1
Chemist goods	59.5	91.2	96.3	106.5
Newspapers, books and stationery	37.7	58.4	67.9	77.3
Other goods	112.2	161.0	182.4	193.4
Total	1 196.5	1 781.1	2 023.0	2 152.4

WHOLESALE TRADE

The term wholesale trade was used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

Wholesale Establishments: South Australia and Australia, 1968-69

Particulars	South Australia	Australia
	Number	
Establishments operating at 30 June 1969	3 159	33 356
Persons employed (a)	32 462	358 811
	\$ million	
Wages and salaries	87.0	1 045.3
Sales on own account, transfers out, commissions received and other operating revenue	1 226.9	15 899.1
Stocks at 30 June:		
1968	135.8	1 945.5
1969	144.9	2 343.4
Purchases, transfers in and selected expenses	1 006.7	13 524.0
Value added (b)	229.3	2 773.0

(a) At end of June 1969; includes working proprietors. (b) Sales on own account, transfers out and other operating revenue *plus* increase (or *less* decrease) in the value of stocks, *less* purchases, transfers in and selected expenses.

TOURIST ACCOMMODATION

The importance of tourism is recognised by a wide cross section of the community and this has caused a demand for comprehensive statistics on the industry. To satisfy requests from various organisations expressing a need for statistics on tourism the Bureau conducted a Census of Tourist Accommodation Establishments for the year ended 30 June 1974 to identify and measure the amount, type and location of accommodation available.

The census covered establishments classified as hotels, motels and guest houses providing predominantly short-term accommodation (for periods of less than two months) to the general public. Caravan parks were also included. Establishments which had nil takings from accommodation, or in which the number of short-term guests was less than long-term guests, were excluded.

Census of Tourist Accommodation: South Australia, 1973-74

Size of Establishment (Guest Rooms)	Establishments	Guest Rooms		Employment at End of June		Wages and Salaries	Takings from Accommodation
		With all Facilities	Other	Full-time	Other		
Number							
\$'000							
LICENSED HOTELS							
1-15	367	500	2 243	2 343	3 101	15 646	1 914
16-25	56	314	772	594	659	4 103	1 196
26 and over	40	1 344	506	823	928	6 042	3 937
Total	463	2 158	3 521	3 760	4 688	25 791	7 047
LICENSED MOTELS							
1-15	7	71	7	20	29	72	158
16-25	15	275	34	55	131	385	710
26 and over	37	1 680	36	657	497	3 529	6 699
Total	59	2 026	77	732	657	3 986	7 567
UNLICENSED MOTELS							
1-15	36	373	—	77	74	141	712
16-25	17	323	8	50	72	272	771
26 and over	16	548	47	71	133	533	1 631
Total	69	1 244	55	198	279	946	3 114
PRIVATE HOTELS AND GUEST HOUSES							
1-15	22	29	169	38	30	56	161
16-25	6	—	116	10	5	11	69
26 and over	8	26	389	35	42	207	432
Total	36	55	674	83	77	274	662
TOTAL ESTABLISHMENTS							
1-15	432	973	2 419	2 478	3 234	15 916	2 946
16-25	94	912	930	709	867	4 772	2 746
26 and over	101	3 598	978	1 586	1 600	10 310	12 698
Total	627	5 483	4 327	4 773	5 701	30 998	18 390

In addition to type of establishment and type of guest, information was sought on the capacity of accommodation with and without facilities, *i.e.* rooms with private bath/shower and toilet, employment, wages, takings from accommodation, meals and liquor sales. Details collected for caravan parks included the number of sites, on-site vans and cabins. The various items of data were tabulated for regions within the State and information for some items, depending on the number of establishments operating, is available for individual local government areas.

To support the census information, a series of accommodation surveys was introduced in September quarter 1975 to provide an indication of the utilisation of accommodation available by measuring occupancy rates. The surveys include establishments which provide accommodation predominantly to short-term visitors and calculates occupancy rates as the proportion of guest rooms or sites occupied to the number of rooms or sites available for accommodating paying guests. Establishments in the surveys are grouped into three categories—licensed hotels with facilities *i.e.* bath or shower and toilet in most guest rooms; licensed or unlicensed motels, private hotels or guest houses with facilities; and caravan parks with powered sites for caravans and toilet, shower and laundry facilities available for guests. Caravan parks were included in the surveys from the September quarter 1977. Excluded at that time were licensed hotels, private hotels and guest houses without facilities.

The number of establishments identified in the survey varies slightly according to services and facilities provided, but 108 licensed hotels with facilities, 133 motels and 150 hotels without facilities were included in June 1978. The following table shows occupancy rates and takings from accommodation from June quarter 1977 to June quarter 1978.

Accommodation Survey, South Australia

Particulars	Unit	June Qtr 1977	Sept. Qtr 1977	Dec. Qtr 1977	Mar. Qtr 1978	June Qtr 1978
LICENSED HOTELS WITH FACILITIES						
Room occupancy rate	%	48.1	45.2	45.1	50.2	46.5
Takings	\$'000	2 139	2 031	2 086	2 378	2 232
MOTELS ETC. WITH FACILITIES						
Room occupancy rates	%	62.0	58.1	60.3	67.1	57.8
Takings	\$'000	4 221	4 032	4 213	4 965	4 266
CARAVAN PARKS						
Site occupancy rate	%	<i>n.a.</i>	14.2	19.2	29.5	15.3
Takings	\$'000	<i>n.a.</i>	818	1 157	1 631	982

10.2 OVERSEAS TRADE

LEGISLATION AFFECTING OVERSEAS TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Commonwealth Government on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The legislation affecting overseas trade includes the *Customs Act*, the *Customs Tariff*, and the *Customs Tariff (Anti-Dumping) Act*. The *Customs Act* is the administrative Act under which the Bureau of Customs of the Department of Business and Consumer Affairs operates, while the *Customs Tariff* provides the statutory authority for imposing the actual rates of duty operative from time to time and the *Customs Tariff (Anti-Dumping) Act* provides protection for Australian industry against various forms of unfair trading.

The Customs Tariff

The first Australian Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended—the last major amendment was in 1965 when the tariff was re-issued in 'Brussels Nomenclature' form.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to particular imports from certain countries of the British Commonwealth. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are an important source of revenue, but in its protective character the tariff has an influence also on the Australian economy. The present tariff provides for preferential and general rates of duty.

The preferential rates apply to goods which are the produce or manufacture of the United Kingdom, Ireland, Canada, New Zealand and Papua New Guinea. The preferential treatment applies also to the products of countries which have been declared to be preference countries. At present the preference countries are comprised mainly of members of the British Commonwealth of Nations and most of the United Kingdom's dependencies. Certain developing countries are given preferential treatment for selected products.

General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

Primage Duties

In addition to the duties imposed by the *Customs Tariff, ad valorem* primage duties at rates of 3 per cent, 7 per cent or 10 per cent are charged on some goods according to the type and origin of the goods. Goods which are the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Island, Christmas Island or Papua New Guinea, are exempt from primage duty.

By-laws

Under Customs by-laws, goods may be admitted free of duty or at rates of duty lower than those normally applicable. A pre-requisite for by-law admission is that suitably equivalent goods are not reasonably available from Australian production. There are provisions under the by-law system for remitting duty in certain circumstances on imported goods which are to be incorporated in goods for export.

Anti-dumping Legislation

The *Customs Tariff (Anti-Dumping) Act 1975* provides protection for Australian industry against various forms of unfair trading. This Act authorises the imposition of a dumping duty when goods are sold to Australia at a price which is less than the normal value of the goods, or a countervailing duty on subsidised goods, where the dumping or subsidy causes or threatens material injury to an Australian industry. Special duties may be collected also if dumped or subsidised goods are imported to the detriment of the trade of a third country in the Australian market.

Import Controls

A system of import licensing was introduced in 1939 as a war-time measure. In the post-war years these controls were gradually relaxed but were re-imposed in 1952. In

1962 most of these restraints were lifted but some goods remain under control for reasons associated with the protection of certain Australian industries. The Customs (Prohibited Imports) Regulations list those commodities the import of which is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act 1908* and the *Therapeutic Goods Act 1966*.

Export Controls

Under Section 112 of the *Customs Act* the export of goods from Australia may be prohibited absolutely, prohibited to a specific place, or prohibited unless prescribed conditions or restrictions are observed.

The *Banking Act 1959* contains provision to ensure that the full proceeds of goods exported from Australia are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia.

ADVISORY AUTHORITIES ON OVERSEAS TRADE

Industries Assistance Commission

The Tariff Board was replaced on 1 January 1974 by the Industries Assistance Commission appointed under the *Industries Assistance Commission Act 1973*. The Commission consists of not less than five and not more than nine members and its function is to hold inquiries and make reports to the Minister for Business and Consumer Affairs in respect of matters affecting assistance to industries and any other matters that may be referred to it in accordance with the Act.

The Minister is required to refer to the Commission for inquiry and report on among other matters, the necessity for new, increased or reduced import duties; the necessity for prohibition or restriction of importation of any goods into Australia, or the extension, reduction or removal of any such existing restriction; the necessity to provide financial assistance to an industry by the Commonwealth Government or for increase, reduction or withdrawal of such assistance.

The Minister may refer to the Commission for inquiry and report on the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed, and any matters in respect of which action may be taken under the *Customs Tariff (Anti-Dumping) Act 1975*.

Temporary Assistance Authority

The Minister for Business and Consumer Affairs may also request the Temporary Assistance Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Industries Assistance Commission. The Temporary Assistance Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by the Temporary Assistance Authority may be imposed only if the matter is under reference to the Industries Assistance Commission and may operate only for a period of up to three months after the date of receipt by the Commission of the final report on the goods concerned.

ENCOURAGEMENT OF OVERSEAS TRADE

Trade Commissioner Service

The *Trade Commissioners Act 1933* provides for the appointment of Trade Commissioners and Assistant Trade Commissioners for Australia in such places as the Governor-General determines. At 31 January 1979 there was an establishment of 169 Trade Commissioners and Assistant Trade Commissioners in Australia and in 55 posts in 46 countries.

In 1957 Australia's official commercial representation was extended by the introduction of a system of Trade Correspondents. These correspondents, who are appointed in countries where there is no Trade Commission, are engaged on a part-time basis and operate under the general direction of the Trade Commissioner in whose area they are located.

The Trade Commissioner Service is administered by the Department of Trade and Resources and is responsible for overseas commercial intelligence. Particular facilities offered to Australian exporters and export organisations include market surveys, advice on selling and advertising methods, arranging introductions with buyers and agents, providing reports on the standing of overseas firms, assisting business visitors and organising trade missions, trade displays and other publicity and promotion media.

Trade Commissioners participate in inter-governmental negotiations on economic and commercial matters and where necessary make representation to Government authorities of the countries in which they are located on behalf of the Commonwealth Government and Australian firms. A Trade Commissioner may also be called upon to act as the Commonwealth Government representative in areas where there is no Australian diplomatic or consular mission.

In a number of cities where there is a diplomatic or consular mission but no Trade Commissioner, Marketing Officers are appointed to assist Australian businessmen. They work under the direction of the Trade Commissioner whose territory includes the city in which the Marketing Officer is based.

Export Market Development Grants

The *Export Market Development Grants Act 1974*, and the *Export Expansion Grants Act 1978* provide forms of financial incentive designed to encourage Australian exporters and prospective exporters to seek out and develop overseas markets for products, services, industrial property rights and know-how, which are substantially of Australian origin.

Amendments to the *Export Market Development Grants Act* in 1978 have extended its scope to Australian participants in the travel and tourist industry and the *Export Expansions Grant* specifically excludes certain products from its application. The administration of these Acts, which are operative until 30 June 1982, are the responsibility of the Export Development Grants Board.

Export Finance and Insurance Corporation

The Export Finance and Insurance Corporation is a statutory Corporation established by the Commonwealth Government to provide Australian exporters with a specialised range of insurance, guarantee indemnity and finance facilities not normally available from commercial sources.

Since its inception, the Corporation has progressively expanded the range of facilities it offers exporters, and has assumed an increasingly important role in the development of Australian exports. The Corporation's facilities support approximately ten per cent of

Australian exports and have proved a most valuable aid to Australia's export industries and companies investing overseas.

South Australian Trade Representatives

One of the functions of the Agent-General for South Australia, located in London, is to foster trade with the United Kingdom and other countries. There are also agencies in Djakarta, Hong Kong, Kuala Lumpur, Moscow, Singapore and Tokyo to investigate trade opportunities in these areas.

TRADE AGREEMENTS

The General Agreement on Tariffs and Trade (GATT), of which Australia is an original member, is an international trade agreement which has been in operation since 1 January 1948. The objectives of the GATT include the expansion of world trade and the raising of living standards throughout the world. The essential features of the GATT are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiation with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Six series of tariff negotiations have been conducted. As a result of the first five, Australia obtained tariff concessions on almost all the principal products of which it is an actual or potential exporter to the individual countries concerned.

The sixth series of tariff negotiations, the Kennedy Round, was based on a plan for linear tariff cuts by industrial countries on all industrial products, with a minimum of exceptions, and on the reduction of non-tariff barriers to trade and the creation of acceptable conditions of access to world markets for agricultural products. It began in May 1964 and concluded in May 1967. The average reduction in tariffs on industrial goods was approximately one-third, while in agriculture the most important item was the agreement reached on the basis for a world grains agreement.

A seventh round of negotiations, held under the auspices of GATT, was inaugurated at a meeting of Ministers from over one hundred countries in Tokyo, Japan in September 1973. The current round is concerned with further reductions in tariffs on industrial goods and aims to lower tariff and non-tariff barriers to trade in manufactures and primary products, with particular emphasis on products important to the trade of developing countries.

Australia is a party to bilateral trade agreements with a number of individual countries. Agreements relating to the development of trade between Australia and the country concerned in accordance with the most-favoured-nation principle are currently in force with Japan (1964), Philippines (1975), Republic of Korea (1975), USSR (1973), Bulgaria (1974), Poland (1974), Hungary (1974), Romania (1975), Yugoslavia (1970), Czechoslovakia (1972), Indonesia (1972), China (excluding Taiwan Province) (1973), Democratic Republic of Vietnam (1974), Iran (1974), India (1976), German Democratic Republic (1977), Poland (1978), and Brazil (1978).

Preferential agreements are currently operative with Canada, Malaysia and New Zealand. In general these agreements provide for the exchange of preferential rates of duty on a range of commodities traded between Australia and the countries concerned.

There are also agreements establishing free trade areas between Australia and New Zealand (NAFTA) and between Australia and Papua New Guinea (PATCRA).

Details of these agreements are contained in various issues of the *Year Book Australia*.

METHOD OF RECORDING IMPORTS AND EXPORTS

Overseas trade statistics are compiled from documents obtained under the *Customs Act 1901*. Statistics for South Australia apply to the imports into and exports from Australia which are documented (entered or cleared) at Customs recording points in South Australia.

Imports do not provide a record of the overseas goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and some goods imported through other States pass into South Australia. Similarly, exports include some products of other States documented in South Australia, but exclude products of South Australia documented in other States. Commodities transported by sea, air or parcels post are included.

Since the introduction of container shipping early in 1969 containerised goods may be documented as South Australian exports or imports even though loaded or unloaded at ports in other States, particularly Melbourne. The interstate movement of the goods is predominantly by rail.

The procedure adopted to value exports and imports is as follows:

Exports:

- (a) Goods sold to overseas buyers before export are valued at the Australian f.o.b. port of shipment equivalent of the actual price at which the goods were sold;
- (b) Goods shipped on consignment are valued at the Australian f.o.b. port of shipment equivalent of the price paid for similar goods of Australian origin in the principal markets of the country to which they are dispatched for sale.

Imports:

For imports the recorded value is the value for duty for Customs purposes which, from 1 July 1976 has been based on the internationally recognised Brussels Definition of Value. The value for duty is based on the normal price, *i.e.* the price the goods would fetch at the time when the duty becomes payable on a sale in the open market between a buyer and a seller independent of each other. The goods are valued in the country of exportation, that is, freight and insurances are excluded.

Inclusions and Exclusions

Export tabulations do not include the value of stores loaded on foreign operated aircraft and ships (*e.g.* aircraft fuel, bunker oil, food and drink for passengers and crew, and ship's fittings installed on overseas-owned ships in Australian ports). The value of stores loaded on overseas operated vessels and aircraft in South Australia amounted to \$11.21 million in 1977-78. From 1 July 1976, for both imports and exports, the value recorded for each item includes the value of the outside package (containers, crates, etc.). Particulars of direct transit trade through Australia are not recorded.

Countries

'Country of origin' appearing in import tables should be taken to mean the country of production. 'Country of consignment' appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export. Where the country of consignment is not determined at the time of export, goods are shown as exported 'For orders'.

OVERSEAS TRADE OF SOUTH AUSTRALIA

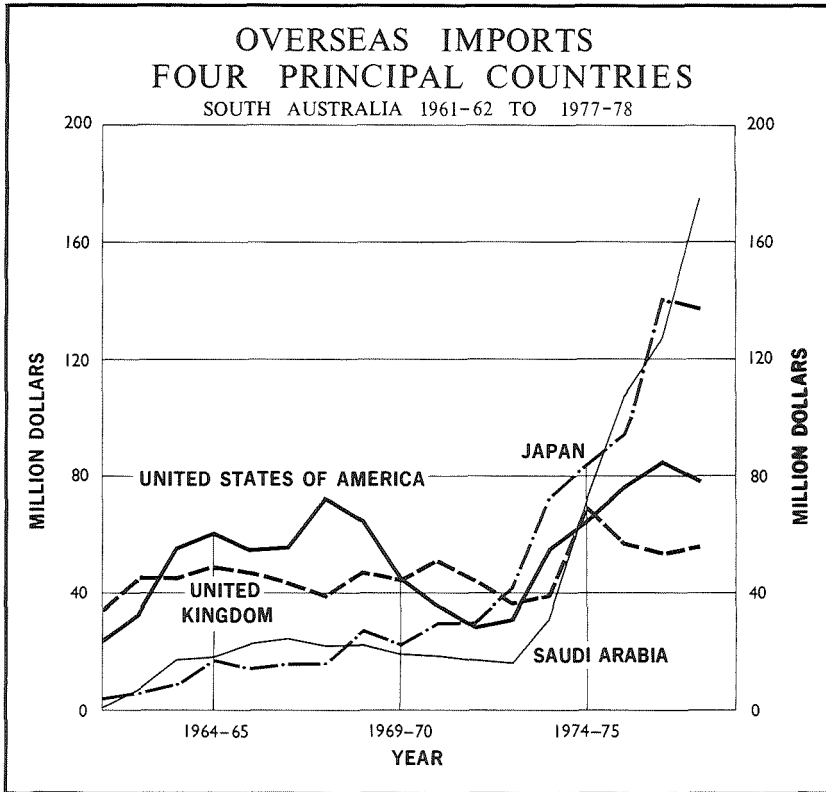
IMPORTS

The total value of overseas imports into South Australia during 1977-78, \$628.6 million, was \$0.7 million less than the level of 1976-77.

The most significant increases in the value of imports were recorded in the commodity groups fuels and lubricants (petroleum products) and machinery (other than electric); significant decreases were recorded for commodity groups wood and timber, electrical machinery and appliances, and transport equipment (motor vehicles),

Overseas Imports to South Australia, Principal Commodity Groups

Commodity Group	1974-75	1975-76	1976-77	1977-78
			\$'000	
Food and live animals	12 799	10 189	17 778	18 207
Beverages and tobacco	1 750	1 860	2 675	2 533
Crude materials, inedible:				
Crude rubber	1 577	1 711	2 412	2 675
Wood, timber and cork	14 270	16 773	24 433	16 379
Textile fibres and waste	542	789	867	1 279
Crude fertilisers, crude minerals	14 189	10 699	14 937	12 819
Other	1 481	1 161	1 671	1 896
Mineral fuels, lubricants	94 691	126 894	155 077	181 455
Animal and vegetable oils and fats	905	1 555	1 016	1 166
Chemicals:				
Chemical elements and compounds	4 621	4 220	7 148	9 234
Plastics and artificial resins	6 511	5 947	7 820	7 707
Other	7 249	6 376	8 846	10 223
Manufactured goods:				
Paper and paperboard manufactures	12 035	10 251	17 019	16 177
Textile yarn, fabrics and made-up articles	19 736	20 156	25 440	23 770
Non-metallic mineral manufactures, n.e.s.	11 840	14 721	18 854	11 701
Iron and steel	21 809	10 266	18 755	19 726
Non-ferrous metals	2 494	1 848	2 759	2 043
Manufactures of metal, n.e.s.	9 371	8 600	10 747	10 484
Other	12 979	13 275	16 728	15 023
Machinery and transport equipment:				
Machinery, other than electric	69 001	78 480	82 321	87 844
Electrical machinery and appliances	33 404	37 547	45 649	37 942
Transport equipment	80 276	66 667	99 464	90 197
Miscellaneous manufactured articles	39 820	37 086	41 704	43 674
Commodities and transactions not classified to kind	8 730	14 406	5 190	4 413
Total	482 077	501 476	629 309	628 568



The proportions of imports obtained from the major sources have changed considerably in the years since the 1939-45 War *e.g.* in 1953-54 Japan supplied only 0.46 per cent of the total value of imports into South Australia but in 1977-78 accounted for 21.8 per cent; United Kingdom which supplied over half the imports in 1953-54 accounted for only 8.8 per cent in 1977-78, and imports from the United States of America which accounted for 8.9 per cent of total imports into South Australia in 1953-54, and 32.7 per cent in 1967-68, have declined to 12.5 per cent in 1977-78. The proportions of imports from the countries belonging to the European Economic Community (EEC) have generally increased over the above period.

Saudi Arabia was the major source of imports into South Australia in 1977-78 with \$174.7 million, representing 27.8 per cent of the total value of imports. This largely reflects the rises in the price of oil.

The following table shows, by commodity groups, the imports from principal countries during the year 1977-8.

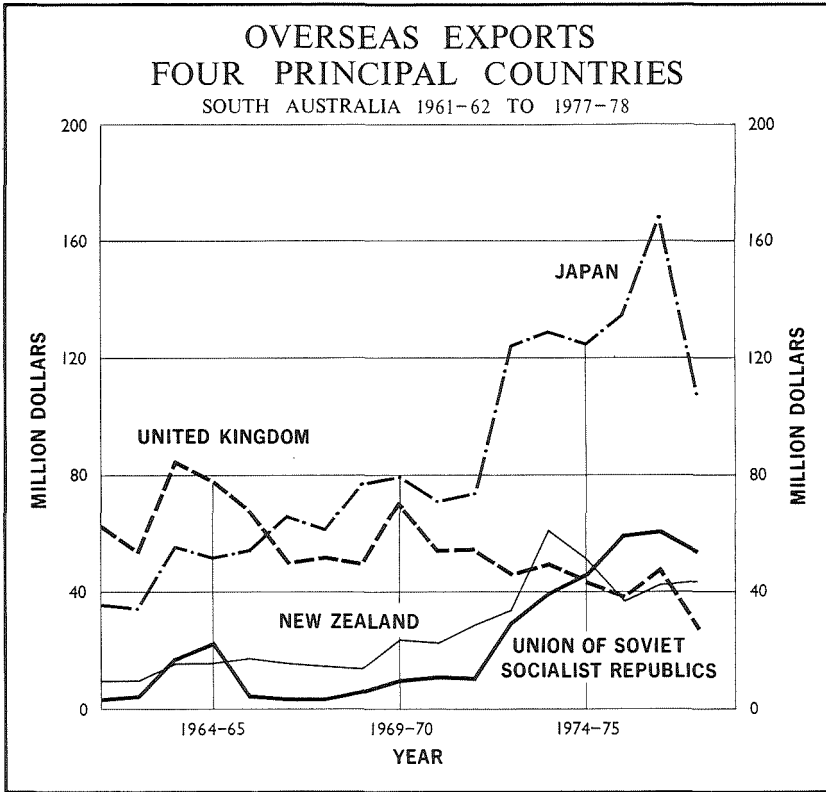
**Overseas Imports to South Australia from Principal Countries
Commodity Groups, 1977-78**

Commodity Group	Germany, Federal Republic of	Japan	Saudi Arabia	United Kingdom	USA	Total (a)
				\$'000		
Food and live animals:						
Fish and fish preparations	64	832	—	586	532	4 361
Coffee, tea, cocoa, spices	20	—	—	159	10	6 952
Other	294	144	—	1 095	259	6 894
Beverages and tobacco	121	—	—	1 014	2	2 533
Crude materials, inedible:						
Crude rubber	6	27	—	212	485	2 675
Wood, timber and cork	22	—	—	5	3 628	16 379
Textile fibres and waste	577	85	—	17	354	1 279
Crude fertilisers and crude minerals	22	440	—	1 483	237	12 819
Other	67	17	—	46	505	1 896
Minerals, fuels, lubricants	89	7	174 679	128	333	181 455
Animal and vegetable oils and fats	—	—	—	30	570	1 166
Chemicals:						
Chemical elements and compounds	705	1 314	—	1 070	3 013	9 234
Plastic materials and artificial resins	781	1 711	—	1 057	2 031	7 707
Other	1 424	452	—	3 430	2 691	10 223
Manufactured goods:						
Rubber manufactures	474	2 619	—	2 112	1 258	9 011
Paper, paperboard and manufactures	805	1 441	—	695	1 613	16 177
Textile yarn, fabrics, made-up articles	551	2 682	—	2 281	4 803	23 770
Non-metallic mineral manufactures, n.e.s.	764	3 769	—	1 196	1 163	11 701
Iron and steel	415	14 971	—	1 264	477	19 726
Non-ferrous metals	336	111	—	192	524	2 043
Manufactures of metal, n.e.s.	1 052	2 252	—	1 713	1 766	10 484
Other	142	61	—	372	254	6 012
Machinery and transport equipment:						
Machinery, other than electric	12 318	15 085	—	14 127	28 865	87 844
Electrical machinery and appliances	3 163	12 981	—	6 159	6 021	37 942
Transport equipment	5 697	69 340	—	2 330	8 550	90 197
Miscellaneous manufactured articles	2 557	6 518	—	12 375	7 612	43 674
Commodities and transactions not classified to kind	286	126	—	489	825	4 413
Total	32 751	136 985	174 679	55 637	78 382	628 568

(a) From all sources.

Overseas Imports to South Australia, Principal Countries

Country of Origin	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Canada	11 047	15 752	11 237	19 690	17 714
China:					
Excluding Taiwan Province	1 965	2 181	1 882	2 888	2 940
Taiwan Province only	4 634	6 180	5 787	8 856	8 737
France	5 389	10 861	9 816	9 858	7 528
Germany, Federal Republic of	19 005	31 304	23 509	32 118	32 751
Italy	6 273	13 879	9 872	25 935	13 930
Japan	70 852	92 430	93 097	139 884	136 985
Netherlands	6 836	9 296	10 359	12 570	9 181
New Zealand	5 638	6 787	8 815	14 888	13 988
Saudi Arabia	30 245	70 514	105 758	126 123	174 679
United Kingdom	37 781	68 479	55 843	53 599	55 637
United States of America	53 087	63 140	74 430	84 208	78 382
Other	61 163	91 274	91 071	98 692	76 116
Total	313 915	482 077	501 476	629 309	628 568



EXPORTS

The total value of overseas exports from South Australia during 1977-78 was \$661.9 million, \$128 million below the level of 1976-77. Decreases in the quantity of wool, wheat and barley shipped contributed significantly to the decrease in the value of exports. The export of live sheep and lambs increased significantly in 1977-78.

Overseas Exports from South Australia, Principal Commodities

Commodity	1973-74	1974-75	1975-76	1976-77	1977-78
	QUANTITY				
Live sheep and lambs ('000)	308	275	430	853	1 957
Beef, lamb and mutton ('000 kg)	23 635	24 693	34 261	47 545	34 992
Wheat (tonnes)	996 944	1 190 166	810 603	636 769	470 148
Barley (tonnes)	469 072	922 053	922 220	835 401	423 452
Wool:					
Greasy ('000 kg)	65 030	62 120	73 437	84 892	52 175
Other ('000 kg)	4 956	4 586	7 304	6 081	3 059
Ores and concentrates:					
Iron ('000 tonnes)	1 087	930	1 119	809	344
Lead and lead alloys, unworked (tonnes)	138 069	116 063	146 634	137 228	141 409
Iron and steel; blooms, billets etc. (tonnes)	369 672	547 303	466 123	535 816	336 951
Passenger motor cars, assembled (No.)	1 579	591	69	93	167

Overseas Exports from South Australia, Principal Commodities (continued)

Commodity	1973-74	1974-75	1975-76	1976-77	1977-78
	VALUE (\$'000)				
Live sheep and lambs	5 581	3 354	3 873	12 178	39 380
Beef, lamb and mutton	25 495	16 347	22 477	34 274	34 676
Wheat	98 674	163 411	98 978	77 900	48 361
Barley	40 790	99 517	90 290	88 072	39 512
Wool:					
Greasy	138 895	84 744	99 438	154 752	104 628
Other	14 307	8 528	16 122	17 786	9 889
Ores and concentrates:					
Iron	10 394	11 695	15 165	13 562	7 010
Lead and lead alloys, unworked	46 556	44 212	37 112	58 063	73 894
Iron and steel; blooms, billets etc.	32 176	73 658	46 081	55 612	39 211
Passenger motor cars:					
Unassembled	31 247	23 410	14 185	8 483	6 745
Assembled	4 499	1 653	311	497	700

Although exports of manufactured goods have generally been increasing, the bulk of exports is still of goods usually classified as primary products. In 1977-78 the 'Crude materials, inedible' group accounted for \$203.6 million, or 30.8 per cent of exports (including wool \$114.6 million, 17.3 per cent), and the 'Food and live animals' group accounted for \$211.4 million.

Overseas Exports from South Australia, Principal Commodity Groups

Commodity	Group	1973-74	1974-75	1975-76	1976-77	1977-78
		\$'000				
Food and live animals:						
Live animals		5 937	5 389	3 927	12 844	40 272
Meat and meat preparations		28 311	17 800	25 357	36 486	38 734
Fish and fish preparations		8 890	8 214	11 639	20 662	14 212
Cereal grains and cereal preparations		147 027	276 412	205 551	178 260	96 878
Other		19 488	16 594	16 351	18 721	18 629
Beverages and tobacco		3 575	2 933	3 206	3 044	2 642
Crude materials, inedible (except fuels):						
Hides and skins		11 679	7 127	10 707	19 196	13 817
Textile fibres and their waste		153 133	93 487	115 735	172 670	114 630
Metalliferous ores and metal scrap		74 009	87 437	101 780	82 557	69 039
Other		3 664	5 029	4 237	5 791	6 151
Mineral fuels and lubricants		1 529	4 129	7 859	17 779	28 014
Animal and vegetable oils and fats		3 941	4 228	4 960	6 103	8 446
Chemicals		2 402	4 735	2 275	679	1 049
Manufactured goods:						
Iron and steel		39 624	80 548	50 391	61 078	46 811
Non-ferrous metals		59 124	71 296	52 656	84 602	97 103
Manufacturers of metals, n.e.s.		3 990	9 348	4 109	7 758	12 142
Other		8 569	9 756	11 134	13 906	7 815
Machinery and transport equipment		80 759	53 010	40 893	34 797	37 649
Miscellaneous manufactured articles		6 020	5 850	7 767	10 839	6 530
Commodities and transactions not classified to kind		1 207	1 086	4 496	2 099	1 324
Total		662 881	764 410	685 029	789 872	661 887

The following table shows the value of exports by commodity groups to principal countries for the year 1977-78.

Overseas Exports from South Australia to Principal Countries
Commodity Groups, 1977-78

Commodity Group	Germany, Federal Republic of	Japan	New Zealand	United Kingdom	USA	USSR	Total (a)
				\$'000			
Food and live animals:							
Meat and meat preparations	63	3 041	—	937	10 840	2 128	38 734
Dairy products and eggs	—	4 305	—	4	422	—	5 479
Fish and fish preparations	8	8 236	4	44	4 546	—	14 212
Cereal grains and cereal prepara- tions	2 248	30 542	4	—	409	3 312	96 878
Fruit and vegetables	492	770	598	278	961	—	8 113
Other	—	885	—	11	8	—	45 309
Beverages and tobacco	3	47	207	253	138	4	2 642
Crude materials, inedible:							
Hides and skins	363	580	2	398	—	39	13 817
Textile fibres and their waste	7 179	15 393	—	2 103	3 600	43 886	114 630
Metaliferous ores and metal scrap	4 258	25 639	7	4 312	807	4 443	69 039
Other	108	131	1 288	297	223	—	6 151
Mineral fuels and lubricants	—	1	10 869	7	—	—	28 014
Animal and vegetable oils and fats	—	1 330	—	18	—	—	8 446
Chemicals	2	9	253	10	80	—	1 049
Manufactured goods:							
Iron and steel	5 875	5 288	2 980	11	307	—	46 811
Non-ferrous metals	1	10 236	9 599	13 695	13 262	—	97 103
Other	650	230	1 180	704	2 339	—	19 957
Machinery and transport equipment:							
Machinery, other than electric Electrical machinery and appliances	58	42	3 272	209	1 970	1	14 093
Transport equipment	202	119	1 511	583	427	—	7 493
Miscellaneous manufactured articles	41	33	10 404	702	230	—	16 063
Commodities and transactions not classified to kind	90	237	662	2 428	748	—	6 530
Commodities and transactions not classified to kind	10	213	178	156	40	56	1 324
Total	21 653	107 307	43 020	27 160	41 360	53 870	661 887

(a) To all countries.

The following table shows the value of exports to principal countries during each of the years 1973-74 to 1977-78. Japan replaced United Kingdom as South Australia's principal export market in 1966-67 and has retained that position. In 1977-78 Japan took goods valued at \$107.3 million, 16.2 per cent of total exports, compared with \$168.3 million (21.3 per cent) in 1976-77. USSR (\$53.9 million, 8.1 per cent) was the second largest market in 1977-78.

Overseas Exports from South Australia, Principal Countries

Country of Consignment	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Arab Republic of Egypt	9 845	16 403	19 477	7 481	14 352
Belgium-Luxembourg	8 602	11 983	28 856	21 371	3 488
China:					
Excluding Taiwan Province	10 633	15 675	8 784	7 277	16 764
Taiwan Province only	9 720	9 729	15 212	17 988	15 330
France	19 410	15 741	14 694	19 797	15 733
Germany, Federal Republic of	23 320	47 219	33 114	51 474	21 653
Hong Kong	8 428	7 721	14 746	19 662	10 321
India	17 882	20 039	15 689	16 705	22 985
Indonesia	14 419	13 416	12 062	9 334	11 322
Iran	12 019	18 190	15 736	33 704	53 024
Iraq	11 725	41 532	13 967	15 582	7 047
Italy	15 210	8 736	15 026	28 600	13 132
Japan	129 074	125 042	134 881	168 293	107 307
Netherlands	12 739	21 739	26 586	17 337	13 922

Overseas Exports from South Australia, Principal Countries (continued)

Country of Consignment	1974-75	1977-78	1975-76	1976-77	1977-78
			\$'000		
New Zealand	60 822	51 429	37 050	42 145	43 020
Saudi Arabia	12 063	445	389	5 966	18 221
Sri Lanka	8 417	15 233	12 749	12 043	8 498
South Africa, Republic of	27 828	19 084	15 946	11 240	7 776
United Kingdom	49 346	43 650	38 728	47 348	27 160
United States of America	28 027	19 932	24 351	32 963	41 360
USSR	39 084	45 533	58 959	60 627	53 870
Other	134 268	195 939	128 027	142 935	135 602
Total	662 881	764 410	685 029	789 872	661 887

Exports of Wool

In 1977-78 the major export markets for South Australian wool were USSR (\$43.9 million, 38.3 per cent) and Japan (\$15.4 million, 13.4 per cent).

Overseas Exports of Wool from South Australia

Country of Consignment	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Belgium-Luxembourg	4 162	2 165	2 124	3 206	2 228
France	10 821	9 594	7 230	8 807	4 315
Germany, Federal Republic of	5 263	9 671	7 487	13 925	7 179
Italy	6 889	4 017	8 869	9 250	2 657
Japan	37 002	18 108	30 635	30 460	15 392
Netherlands	5 236	3 602	2 837	3 820	683
Poland	7 744	2 734	3 908	6 623	2 617
United Kingdom	6 080	3 348	4 144	10 522	2 104
USSR	39 084	18 650	21 532	47 538	43 886
Yugoslavia	7 022	3 650	2 016	4 403	5 595
Other	23 900	17 735	24 778	33 984	27 861
Total	153 202	93 273	115 560	172 538	114 517

Exports of Wheat

The total value of wheat exported from South Australia in 1977-78, \$48.4 million, was \$29.5 million below 1976-77 and \$115.0 million below the record of \$163.4 million in 1974-75.

The relative importance of countries of consignment fluctuates from year to year. Major buyers in 1977-78 were China taking \$10.9 million and Sri Lanka with \$7.5 million. Previously large markets such as USSR, New Zealand and Egypt, have declined markedly since 1975-76.

Overseas Exports of Wheat from South Australia

Country of Consignment	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Arab Republic of Egypt	8 688	13 094	16 495	1 485	2 801
China:					
Excl. Taiwan Province ...	9 551	15 323	7 868	3 605	10 879
Taiwan Province only	—	—	—	—	—

Overseas Exports of Wheat from South Australia (continued)

Country of Consignment	1973-74	1974-75	1976-77	1977-78	Sales Per Head
			\$'000		
Iraq	11 265	41 303	13 891	14 983	4 562
Korea, Democratic People's Republic of	—	—	2 119	6 184	6 294
New Zealand	5 116	12 819	8 110	—	—
Sri Lanka	7 232	11 549	10 299	11 429	7 518
USSR	—	22 149	13 193	4 007	3 312
Vietnam	—	—	4 663	6 615	—
Yemen, Arab Republic of ..	5 071	1 169	3 377	4 043	—
Yemen, Democratic Republic of	—	—	—	8 444	3 172
Zambia	4 197	2 876	3 535	5 559	4 373
Other	47 554	43 129	15 428	11 546	5 450
Total	98 674	163 411	98 978	77 900	48 361

TRADE AT PRINCIPAL PORTS

Over 98 per cent of imports are unloaded at Port Adelaide and Port Stanvac but the proportion of exports loaded there is much lower—in 1977-78 it was approximately 65 per cent. Exports from Port Pirie principally comprise pig-lead, concentrates and ores (the produce of Broken Hill), wheat and barley. Shipments of wheat and barley constitute the major part of exports from Port Lincoln, Wallaroo, Ardrossan, Thevenard and Port Giles.

Value of Overseas Trade: Principal Ports, South Australia

Port	1973-74	1974-75	1975-76	1976-77	1977-78
			IMPORTS (\$'000)		
Port Adelaide (a)	270 252	382 742	365 785	484 642	446 018
Port Lincoln	1 455	3 398	3 739	3 490	1 993
Port Pirie	1 037	3 059	2 274	691	9
Port Stanvac	36 871	84 490	111 100	129 014	174 679
Thevenard	1	—	—	—	—
Wallaroo	979	1 080	—	4 442	2 096
Whyalla	3 320	7 309	18 578	7 030	3 771
Total	313 915	482 077	501 476	629 309	628 568
			EXPORTS (\$'000)		
Ardrossan	14 807	15 751	2 539	10 428	6 873
Port Adelaide (a)	405 920	357 929	372 564	467 363	403 918
Port Augusta	1 394	1 940	—	—	444
Port Giles	8 571	5 506	3 082	10 282	4 311

Value of Overseas Trade: Principal Ports, South Australia (continued)

Port	1973-74	1974-75	1975-76	1976-77	1977-78
	EXPORTS (\$'000) (continued)				
Port Lincoln	42 103	91 230	58 120	54 236	28 997
Port Pirie	98 224	115 587	109 370	112 416	118 049
Port Stanvac	549	1 276	7 374	15 738	25 736
Thevenard	24 193	35 967	17 160	7 514	7 498
Walleroo	19 763	46 920	51 292	37 764	12 193
Whyalla	47 357	92 304	63 528	74 131	53 868
Total	662 881	764 410	685 029	789 872	661 887

(a) Includes 'Parcels Post, Adelaide'; 'Adelaide City (including Adelaide Airport)'; Stenhouse Bay and Woomera.

CUSTOMS AND EXCISE DUTY

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. The following table gives details of the value of customs duty and excise duty collected in South Australia during the years 1974-75 to 1976-77.

Customs and Excise: Net Revenue, South Australia

Customs Tariff and Excise Tariff Item	1974-75	1975-76	1976-77
CUSTOMS			\$'000
Live animals; animal products	43	62	48
Vegetable products	64	26	27
Animal and vegetable oils and fats	15	144	76
Prepared foodstuffs; beverages; vinegar; tobacco:			
Spirituos and alcoholic preparations	6 181	7 138	8 161
Tobacco, cigarettes, etc.	770	1 052	1 061
Other	647	574	616
Automotive spirit and other mineral products	2 065	4 918	(a)
Chemicals and products thereof	248	307	350
Plastics, resins, rubber and manufactures thereof	2 023	2 388	2 967
Hides, skins, leather and articles thereof	213	286	384
Wood and wicker	1 530	2 019	2 597
Paper-making material; paper and paper manufactures	639	509	763
Textiles	4 494	4 847	5 769
Footwear, sunshades, whips, artificial flowers, etc.	381	283	629
Earthenware, cement, china, etc.	845	1 052	1 339
Pearls, precious stones and metals, imitation jewellery, coin, etc.	198	315	454
Base metals and articles thereof	1 695	2 422	3 211
Electrical and mechanical machines and machinery ...	12 747	12 926	13 060
Transport equipment and parts thereof	18 315	16 634	20 730
Optical, surgical and scientific instruments, etc.	838	853	1 073

Customs and Excise: Net Revenue, South Australia (continued)

Customs Tariff and Excise Tariff Item	1974-75	1975-76	1976-77
CUSTOMS (cont.)			
		\$'000	
Arms and ammunition and parts thereof	25	20	23
Miscellaneous manufactured articles	977	1 143	1 470
Works of art, antiques, etc.	4	7	14
Other customs revenue	9	7	—13
Primage	—14	298	334
Total net customs and primage duties	54 951	60 229	(a)
EXCISE			
Petroleum products	61 100	57 435	(a)
Spirits	12 264	13 086	13 152
Tobacco, cigars and cigarettes	44 585	51 717	54 396
Other	36 087	53 940	(a)
Total net excise duties	154 036	176 178	(a)
Total net customs, primage and excise revenue	208 988	236 407	(a)

(a) Statistics of the value of duty included in the price of petroleum purchased by Commonwealth Government departments and subsequently credited to those Departments by the Department of Finance are not available. Details are not available, therefore, on the value of Net Revenue collected.

10.3 PRICES

MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are recorded at regular intervals by the Australian Statistician for the purpose of compiling various price indexes or for publication of series showing actual price levels.

Price indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate price, of specified quantities and qualities of a list of selected items. These indexes measure changes through time and it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average aggregate price (of the list of items) in that year to 100 or some other suitable number, and to adjust other years on a proportionate basis.

When index numbers for different places are compared (*e.g.* Consumer Price Index, Capital Cities) the only legitimate comparison is the relative change *i.e.* that prices increased or decreased more in one place than another; even when a common base year is used the actual levels of prices, equated to 100 in each case, may differ substantially from place to place; in addition, selected items, qualities or weights may differ from place to place.

In constructing a price index it is necessary to limit attention to a selected list of items because it would clearly be impossible to determine at regular intervals the price of all items entering into a given field of expenditure (*e.g.* household expenditure in the case of the Consumer Price Index). The list of items selected must be as representative as possible of the field to be covered and consist of items for which price variations can be ascertained accurately at regular intervals. Each item must be assigned a relative importance (weight) in approximate proportion to actual expenditures on that item within the total field of expenditure being considered. Particular care must be taken to detect, assess, and make allowance for changes in quality of selected items.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep an index representative of current patterns of expenditure. These substitutions can normally be achieved without invalidating the index. From time to time major changes in the overall pattern of expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which were more representative of expenditure at that time.

RETAIL PRICE INDEXES

A brief historical review of early price indexes was included on page 494 of the *South Australian Year Book* 1970. Details of movements in the 'C' Series Index from 1901 to 1959 are shown in the Statistical Summary Appendix A.

Consumer Price Index

The Consumer Price Index (CPI) is a chain of 'fixed weight aggregative' linked indexes with significant changes in composition and weighting effected at regular short intervals. Links have previously been effected at June quarter 1952, June quarter 1956, March quarter 1960, December quarter 1963, December quarter 1968 and December quarter 1973 with a minor link at September quarter 1974. A further link in the series was made at September quarter 1976.

During each period between links the weighting pattern remains unchanged. At times of linking the weighting pattern is brought up-to-date and the content of the Index is reviewed. Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new combinations and lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the Index.

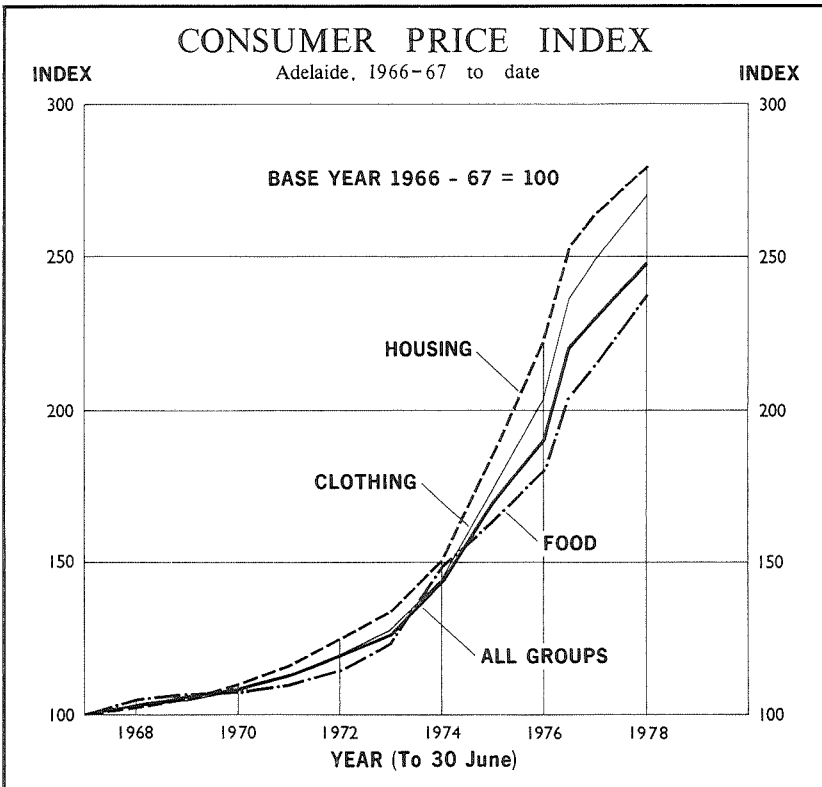
There are no ideal points of time for linking the various series since, particularly in times of disparate and large price movements, the application of different weights to the same price series over the same periods of time would cause differences in aggregative changes. The ninth series was introduced from September quarter 1976, the earliest possible stage following availability of detailed data from the Household Expenditure Survey 1974-75.

The structure of the new series is derived from this survey which was the first survey of this type conducted by the Australian Bureau of Statistics. This enables the Index to be related more specifically to a 'target group' of the population (see next paragraph) and to have appropriate separate weighting patterns for each of the seven cities for which index numbers are compiled. The ninth series measures variations in retail prices for goods and services representing more than 90 per cent of defined household expenditure by the target group.

The target group for the ninth CPI series comprises metropolitan wage and salary earner households with total income of more than the minimum adult wage but excluding the top ten per cent of such households. 'Metropolitan wage and salary earner households' are those households (as defined in the Household Expenditure Survey) which derive at least seventy-five per cent of total income from wages and salaries. The minimum adult wage is that for each capital city separately. The 'top ten per cent' of households excluded were those whose incomes are more than the ninth decile of the population of wage and salary earner households in all metropolitan areas combined.

This target group was determined as a suitable current basis which was also in keeping with the past general description of the CPI as a measure of variations in prices of goods and services as affecting a high proportion of the expenditure of wage earner households in the aggregate. A special tabulation from the Household Expenditure Survey 1974-75 for households within this target group supplied the basic weighting pattern for the Index. The households included had average weekly total household incomes which ranged from approximately \$60 to \$370 in 1974-75.

The structure of the Index after the eighth link is shown in the table below which describes the weights of the groups into which the Index has been subdivided in the form of percentages contributed by each group to the total Index aggregate for September quarter 1976. These percentages indicate the relative influence given to the various components in measuring the degree of price change from September quarter 1976 (*i.e.* from the beginning of the new linked series). These proportions represent the amounts of expenditure shown by the 1974-75 Household Expenditure Survey (for the target group) revalued at the price levels of March quarter 1978.



Consumer Price Index: Six State Capital Cities Combined Composition
March Quarter 1978

Group	Percentage Contribution to Total Index Aggregate (a)
Food	20.839
Clothing	10.280
Housing	13.258
Household equipment and operation	14.170
Transportation	17.761
Health and personal care	6.625
Recreation	7.719
Tobacco and alcohol	9.348
All Groups	100.000

(a) Percentage contributions shown are in proportion to expenditure in 1974-75 valued at relevant prices of March quarter 1978.

The wide range of commodities and services in the Consumer Price Index are arranged in eight major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for 'All Groups' are recorded in the next table.

Consumer Price Index, Adelaide (a)
Base Year: 1966-67 = 100.0

Quarter	Food	Clothing	Housing	Household Equipment and Operation	Trans- portation	Tobacco and Alcohol	Health and Personal Care	Recrea- tion	All Groups
1976:									
March	185.9	205.0	228.0	177.2	198.7	214.2	145.2	<i>n.a.</i>	194.6
June	189.0	217.4	235.0	181.4	203.1	219.2	153.4	<i>n.a.</i>	200.4
September	197.4	220.7	241.3	184.2	207.6	220.7	156.7	100.0	205.5
December	203.8	235.8	252.5	187.0	213.5	224.7	(b) 310.2	101.0	(b) 220.0
1977:									
March	207.6	240.7	258.1	192.7	217.7	225.5	313.9	105.0	224.7
June	214.4	248.6	263.3	196.2	223.0	227.6	318.0	109.0	230.1
September	224.3	252.0	268.0	201.0	228.4	231.4	320.8	109.7	235.6
December	228.0	260.2	275.7	206.8	234.2	233.1	324.1	112.6	241.0
1978:									
March	229.7	262.6	277.4	208.1	236.4	234.7	328.2	114.9	243.1
June	236.9	269.9	279.1	211.9	240.3	236.1	332.3	116.6	247.6
September	242.7	273.2	279.6	214.4	246.5	237.6	354.7	118.6	252.6

(a) For 'Health and Personal Care' group index, base period December quarter 1968 = 100.0 and for 'Recreation' group index, base period September quarter 1976 = 100.0.

(b) Affected by Medibank changes.

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other capital cities. It is emphasised that these numbers reflect changes in prices within each individual city, but they do *not* measure differences in the level of prices between cities, and the Consumer Price Index should *not* be regarded as a 'cost of living' index.

Consumer Price Index, Adelaide and Other Capital Cities^(a)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Six State Capital Cities	Canberra
1966-67	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	103.2	103.7	103.3	102.9	102.9	104.6	103.3	102.6
1968-69	106.2	106.2	105.5	105.3	105.5	106.1	106.0	104.4
1969-70	110.6	108.7	108.4	108.2	109.4	108.5	109.4	107.4
1970-71	116.8	113.1	114.2	112.5	114.1	112.6	114.6	113.0
1971-72	126.3	119.7	121.6	119.2	120.7	119.9	122.4	119.4
1972-73	133.9	127.2	128.6	126.5	127.3	126.7	129.8	126.3
1973-74	151.3	144.0	146.1	143.9	140.6	142.6	146.6	142.8
1974-75	176.1	167.9	168.7	169.7	166.1	166.7	171.1	164.9
1975-76	199.0	189.5	190.9	190.5	189.6	190.0	193.3	187.3
1976-77	223.4	216.6	218.0	220.1	219.4	217.7	220.0	212.9
1977-78	243.2	238.2	238.4	241.8	243.1	239.1	241.0	232.3

(a) Base year 1966-67 = 100.0.

The quarterly information discussed above was supplemented in April 1973 by the release of monthly Consumer Price Index numbers for the food group and its component sub-groups for the period March 1972 to March 1973.

Further details and a continuation of the series may be obtained from the bulletin *Consumer Price Index: Monthly Food Group Index* (Catalogue No. 6402.0) published by the Australian Statistician.

Household Expenditure Surveys

During the financial years 1974-75 and 1975-76, the Australian Bureau of Statistics conducted two surveys in order to obtain information about the expenditure patterns of private households. Apart from limited attempts in 1910-11 and 1913 to assess the spending patterns of Australian households, these surveys were the first official collections of household expenditure statistics conducted in this country.

The collection of data relating to expenditure at the household level is important in providing information for use in improving the representativeness of the items and the weighting pattern used to compile the Consumer Price Index.

The 1975-76 survey sampled 5 869 households in all regions of Australia. Only private dwellings were sampled, including houses, home units, flats, caravans, tents and any other structures being used as private places of residence at the time of the survey. Hotels, boarding houses, institutions, etc. were defined as special dwellings outside the scope of the survey.

Information was collected on a household basis rather than for selected individuals in the population, because many items of expenditure such as food, accommodation and household goods and appliances relate to the household as a unit.

All categories of households (or persons) in selected private dwellings were included in the survey except: (a) foreign diplomats and their staff; (b) foreign servicemen and their families stationed in Australia; (c) persons from overseas countries touring or holidaying in Australia; (d) visitors staying with the household for less than six weeks after the initial interview (four weeks in the 1974-75 survey); (e) usual residents absent at the time of the initial interview and not returning within seven days; and (f) usual residents who were going away during the first half of the diary keeping and not returning before the end of diary keeping.

Each household was asked for details of large or infrequent items of expenditure (e.g. purchase of vehicles and property, and the payment of household bills such as electricity and gas) and for details of income from all sources. In addition, a diary was provided to each household member aged 15 years or more, in which they were requested to record, on a daily basis, a description and value of all items purchased over the following two weeks. (Because of anticipated differences in spending patterns in rural areas compared with metropolitan and other urban areas, members of rural households selected in the 1975-76 survey were issued with four-week diaries.)

Further details on methodology and definitions may be obtained from the bulletin *Household Expenditure Survey 1974-75*, Bulletin 1, 'An Outline of Concepts, Methodology and Procedures' (Catalogue No. 6507.0).

Household Expenditure by Household Income, South Australia, 1975-76

Particulars	Weekly Household Income						All Households
	Under \$80	\$80-\$139	\$140-\$199	\$200-\$259	\$260-\$339	\$340 or more	
Number of households in sample ...	104	85	107	96	81	77	550
Estimated total number of households in population ('000)	64.3	53.3	71.0	69.6	58.8	57.6	374.6
Average number of persons per household	1.64	2.23	3.16	3.01	3.36	3.75	2.86
Average age of household head (yrs)	62.32	49.38	41.01	40.83	38.42	43.61	45.82
Average weekly household income (\$)	54.16	112.05	168.24	227.50	291.79	468.62	217.27
Commodity or service:	Average Weekly Household Expenditure (\$)						
Current housing cost(a)	7.51	13.15	17.58	22.37	26.60	32.38	19.80
Fuel and power	2.15	2.53	4.69	3.63	3.02	4.32	3.43
Food	17.06	21.36	32.02	33.74	38.84	48.97	31.93
Bread, cakes and cereals	2.44	2.45	4.03	3.80	4.26	4.65	3.62
Meat and fish	4.45	5.14	7.29	7.51	7.96	10.88	7.20
Dairy products, oils and fats	2.81	3.56	5.08	4.70	4.68	6.30	4.53
Fruit and vegetables	2.68	2.89	4.38	4.27	4.55	6.57	4.22
Other food	4.68	7.32	11.24	13.47	17.38	20.58	12.37
Alcohol and tobacco	1.86	7.96	7.87	9.06	12.20	17.01	9.16
Clothing and footwear	4.74	7.02	10.25	15.91	18.90	29.60	14.23
Household equipment and operation	6.07	9.13	11.96	21.69	30.64	24.70	17.25
Medical care and health expenses	2.14	4.73	5.93	5.48	5.23	8.84	5.36
Transport and communication	14.19	26.08	27.67	31.68	48.61	48.84	32.42
Recreation and education	3.65	8.19	13.82	20.61	30.32	27.70	17.26
Miscellaneous goods and services	5.48	9.13	10.16	16.02	17.36	27.07	14.03
Total expenditure	64.84	109.29	141.94	180.20	231.73	269.43	164.87
Selected other payments(b)	8.64	14.96	26.22	49.52	56.69	97.54	41.68

(a) Included in current housing costs are both principal and interest components of any housing loan repayments.

Excluded are outright purchase of, or deposit on, dwellings or land, and other payments of a capital nature.

(b) The main components of this item are income tax, superannuation contributions, life insurance premiums, purchases of and deposits on dwellings and land, and gambling payments. Receipts from sales of dwellings and land, and gambling winnings, are offset against payments.

In the lower income ranges, average expenditure exceeded average income as defined (this does not imply that all households in the lower income ranges have expenditure which exceeds income), while in the higher income ranges average income substantially exceeded average expenditure (see below). It should be noted that some households will have financed some items of expenditure from savings and from other sources such as loans, receipts of maturing insurance policies, gifts, windfall gains and profits from the sale of assets which are not included as income as defined for the survey. In addition, some households classified to the lower income ranges may have had lower than usual income during the data reference period, while still maintaining their normal level of expenditure. For the medium and higher income ranges, income tax payments (included in other payments) are a large part of the difference between income and expenditure as defined.

The larger items of average weekly household expenditure in 1975-76 were transport and communication (\$32.42), food (\$31.93), and current housing costs (\$19.80).

OTHER PRICE INDEXES

At December 1978 the following indexes covering non-retail sectors of the economy had been prepared and published by the Australian Statistician:

Export Price Index,

Price Index of Electrical Installation Materials,

Price Index of Metallic Materials Used in the Manufacture of Fabricated Metal Products,

Price Index of Copper Materials Used in the Manufacture of Electrical Equipment,

Price Index of Materials Used in Manufacturing Industry,

Price Index of Articles Produced by Manufacturing Industry,

Price Index of Materials Used in House Building,

Price Index of Materials Used in Building Other than House Building.

Separate State figures are published for the latter two indexes, and these are further explained below. Details of the other indexes are available in bulletins published by the Australian Statistician and, in addition, a brief explanation of the Price Index of Articles Produced by Manufacturing Industry was included in the *South Australian Year Book* 1977.

Price Index of Materials Used in House Building

This Index was introduced in November 1970. It measures changes in prices selected materials used in the construction of houses. It is a fixed weights index, the composition of which is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The Index does not purport to represent buildings of any kind other than houses.

In the interests of uniformity and ease of use the reference base of the Index is the year 1966-67 = 100.0 the same as that used for the Price Index of Materials Used in Building Other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely the year 1968-69. Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities.

Prices are collected at the mid-point of the month to which the Index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in house building.

Further information concerning the method of compiling the Index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities may be found in the publication *Price Index of Materials Used in House Building* (Catalogue No. 6408.0). A full description of the Index is also given in the *Labour Report* No. 58, 1973, and the *Year Book Australia*.

The following table shows, for separate groups of items and all groups combined, the index numbers for Adelaide and the weighted average index numbers for the six State capital cities.

Price Index of Materials Used in House Building
(Base of each Index: 1966-67 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Concrete, etc.	193.2	218.3	245.5	195.1	217.8	239.0
Cement products	237.4	272.9	303.0	227.0	258.9	284.6
Clay bricks, tiles, etc.	209.1	229.3	251.0	205.1	227.8	245.8
Timber, board, etc.	255.9	292.1	314.2	226.2	254.1	275.0
Steel products	232.5	264.1	284.2	229.3	263.2	287.7
Other metal products	188.2	210.5	212.0	187.1	207.9	220.1
Plumbing fixtures, etc.	207.1	225.3	237.3	201.5	224.3	239.1
Electrical installation materials	174.6	188.6	203.7	183.5	201.8	215.5
Installed appliances	169.2	190.6	204.4	165.9	181.9	193.3
Plaster and plaster products	178.4	188.5	201.7	167.7	178.8	191.8
Miscellaneous materials	203.0	229.5	248.4	187.9	210.7	230.4
All Groups	222.5	250.7	270.7	208.1	232.9	252.0

The 'All Groups' index for Adelaide and each of the other State capitals is shown in the following table. It is emphasised that these numbers reflect price changes within each individual city and that they do not measure differences in the level of prices between cities.

Price Index of Materials Used in House Building
All Groups, State Capital Cities
(Base of each Index: 1966-67 = 100.0)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1973-74	158.0	147.8	152.2	157.2	141.8	145.5	151.3
1974-75	189.4	178.4	187.0	195.4	172.4	179.1	183.4
1975-76	211.1	200.1	218.5	222.5	201.9	209.2	208.1
1976-77	234.5	223.6	243.5	250.7	229.8	235.1	232.9
1977-78	254.0	238.6	265.1	270.7	253.4	256.7	252.0

Price Index of Materials Used in Building Other than House Building

This Index was introduced in April 1969. It measures changes in prices of selected materials used in the construction of buildings other than houses and low-rise flats. It is a fixed weights index, the composition of which is in accordance with the materials usage in building projects selected as representative for the purpose: such usage was derived from reported values of each material used in selected representative buildings constructed in or about 1966-67. Thus the reference base of the Index is the year 1966-67 = 100.0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

Prices are collected at the mid-point of the month to which the Index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building.

Further information concerning the method of compiling the Index may be found in the publication *Price Index of Materials Used in Building Other than House Building* (Catalogue No. 6407.0). A full description of the Index is also given in *Labour Report* No. 58, 1973.

Price Index of Materials Used in Building Other than House Building
(Base of each Index: 1966-67 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Concrete, etc.	185.7	209.0	232.2	193.0	215.6	235.3
Cement products	233.8	259.0	291.8	220.0	244.7	268.4
Bricks, stone, etc.	221.1	242.7	264.3	202.7	224.0	241.0
Timber, joinery, etc.	244.3	273.6	291.0	219.3	243.6	263.2
Steel and iron products	225.1	250.1	271.9	223.4	251.7	273.4
Aluminium products	185.1	206.9	223.3	193.6	213.7	230.8
Other metal products	176.6	202.2	202.4	173.3	195.0	198.1
Plumbing fixtures	235.4	254.1	270.8	232.1	251.2	263.7
Miscellaneous materials	192.3	208.7	224.4	186.8	204.2	221.9
Electrical installation materials	177.4	199.6	215.3	177.4	199.6	215.3
Mechanical services						
components	201.4	225.4	247.0	201.3	225.4	247.2
Special purpose index (a)	215.5	239.6	259.6	210.1	234.5	253.9
All Groups	210.4	234.3	254.2	206.2	230.3	249.7

(a) All groups excluding electrical installation materials and mechanical services components.

The 'All Groups' index for Adelaide and each of the other State capitals is shown in the following table. It is emphasised that these numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

Price Index of Materials Used in Building Other than House Building
All Groups, State Capital Cities
(Base of each Index: 1966-67 = 100.0)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1973-74	144.1	148.0	149.0	145.8	142.9	143.8	145.8
1974-75	176.0	180.6	186.6	181.0	176.7	179.3	179.2
1975-76	199.0	209.4	216.3	210.4	208.3	210.4	206.2
1976-77	221.5	234.8	241.2	234.3	235.4	234.8	230.3
1977-78	239.9	254.4	260.9	254.2	258.3	253.7	249.7

COMMODITY PRICES

Retail Prices of Food

The next table shows the average retail prices of selected food items in Adelaide during recent years. Items included are those which are considered identical or sufficiently comparable from place to place to warrant publication of comparative prices.

Average Retail Prices of Selected Food and Grocery Items, Adelaide

Item	Unit	1975	1976	1977	1978
			Cents		
Bread, milk loaf, sliced (a)	680 g	<i>n.a.</i>	49.7	54.0	55.0
Self-raising flour	1 kg	29.5	35.1	38.8	41.8
Rice	500 g	24.9	30.2	33.4	36.3
Breakfast cereal, corn based	500 g	55.6	59.7	64.1	68.8
Biscuits, dry	225 g	31.7	34.9	38.3	41.5
Peaches, canned	825 g	47.5	57.8	60.9	63.3
Peas, frozen	500 g	<i>n.a.</i>	56.5	61.0	61.0
Potatoes	1 kg	19.5	34.3	29.4	37.0
Onions	1 kg	35.6	43.4	41.0	45.8
Butter	500 g	73.1	81.8	86.4	90.0
Cheese, processed	250 g	44.2	47.1	50.1	55.8
Margarine, table, poly-unsaturated	500 g	77.0	76.7	86.2	79.0
Eggs (55 grams)	doz.	88.7	101.2	113.6	118.8
Milk; fresh bottled (a)	600 ml	17.0	18.7	20.4	22.4
Bacon rashers, pre-packed	250 g	92.5	107.0	113.9	122.5
Chicken, frozen	1 kg	<i>n.a.</i>	161.7	184.3	196.0
Sausages	1 kg	98.1	106.6	113.3	126.8
Tea	250 g	44.6	45.6	81.9	82.5
Coffee, instant, jar	150 g	<i>n.a.</i>	153.8	277.4	285.3
Sugar	2 kg	48.9	53.0	59.6	67.5
Salmon, imported pink	220 g	73.1	79.9	97.4	97.3
Tomato sauce	300 ml	33.4	35.3	36.1	38.8
Prepared baby food	125 g	13.3	15.5	16.7	18.8
Beef:					
Rib (without bone)	1 kg	168.5	188.3	211.4	251.5
Rump steak	1 kg	266.9	307.9	351.0	406.0
Corned silverside	1 kg	173.7	195.5	221.0	268.5
Lamb:					
Leg	1 kg	177.7	198.7	237.2	270.0
Loin chops	1 kg	198.4	228.1	280.2	325.0
Forequarter chops	1 kg	172.1	197.4	240.8	283.0
Pork:					
Leg	1 kg	275.9	321.5	339.7	358.8
Chops	1 kg	277.5	325.4	345.3	359.8

(a) Delivered.

Other Commodity Prices

South Australian prices of agricultural products are shown in the table on page 408, and separate details of wheat, barley, wool and livestock are given under the appropriate headings in Part 9.1.

PRICE CONTROL

Following the outbreak of the 1939-45 War the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the regulation of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price control until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary administrative structure was established by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth Government price regulation orders altered in accordance with the State Act.

Under the provisions of the Prices Act, 1948-1978 the South Australian Department of Public and Consumer Affairs determines maximum prices for controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not.

The Commonwealth Government held a further referendum in December 1973 seeking power to control the level of prices and incomes, but, as was the case in 1948, the proposal was rejected.

The Prices Justification Tribunal was established in August 1973 under the provisions of the *Prices Justification Act* 1973. The Tribunal is a fully discretionary body appointed under the Act to consider the justification for proposed price increases put to it by companies subject to the Act. It is not a price regulating authority.

The Tribunal consists of a Chairman and such number of other members as are from time to time appointed in accordance with the Act. The Office of the Prices Justification Tribunal comprises the staff required to assist the Tribunal in the performance of its functions, and consists of persons appointed or employed under the *Public Service Act* 1922.

Further information on the Prices Justification Tribunal is contained in its Annual Reports to Parliament and pages 312-13 of the *Year Book Australia*, No. 61, 1975-76.

RENT CONTROL

Rent control was introduced in South Australia at the beginning of the 1939-45 War, with the passing of the Increase in Rent (War Restrictions) Act, 1939, which pegged rents at the level prevailing at 1 September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, upon application by either the landlord or tenant, or in certain cases on its own initiative. An appeal against such a determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60 180 applications for rent determinations were dealt with by the Trust, of which 29 were varied by a Local Court.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which in turn has been repealed and incorporated into the Residential Tenancies Act, which came into operation on 1st December 1978. A tenant under a residential tenancy agreement entered into, renewed, assigned or otherwise

transferred after the commencement of the Act may apply to the Residential Tenancies Tribunal for an order declaring that the rent payable in respect of the premises is excessive. The Tribunal must have regard to criteria contained in the Act when determining if rent is excessive.

Sub-standard Housing

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1977 vests in the South Australian Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

The Act provides that before the Trust declares any house to be sub-standard, it must notify the owner of its intention to do so and then allow a period of time for the necessary improvements to be made. If the house is subsequently found to remain in a sub-standard condition, a maximum rent fixation is made and then strictly controlled for such time as the house remains in a sub-standard classification.

In 1977-78 the Trust inspected 2307 houses, commenced proceedings under the Housing Improvement Act on 660 of these properties, and fixed maximum rents on 382 houses.

10.4 TRANSPORT

A network of sea, rail, road and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made *via* South Australian services. Distances between Adelaide and other Australian capital cities, and Darwin, are shown in the following table.

Distances Between Adelaide and Other Capital Cities

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
				Kilometres			
Road (a)	1 203	1 418	746	2 136	2 721	..	3 224
Rail	1 620	1 656	777	2 643	2 655	..	..
Sea .....	..	1 833	949	2 761	(b) 2 509	1 436	(c) 5 799
Air	988	1 196	660	1 967	2 216	1 283	2 766

(a) In some cases shorter but less popular routes are available.

(b) Fremantle.

(c) *Via* Fremantle.

TRANSPORT CONTROL AND OPERATIONS

STATE TRANSPORT AUTHORITY

The State Transport Authority is constituted under the State Transport Authority Act, 1974-78. The concept underlying the establishment of the Authority is that all Government owned public transport services throughout the State should be operated by a single authority.

The State Transport Authority Act, 1974 vested in the Authority power to co-ordinate all systems of public transport and powers of direction in respect of the South Australian Railways Commissioner, the Municipal Tramways Trust and the Transport Control Board. Provisions of the Act also requires the Authority to recommend to the Minister the manner and means by which the Authority could assume and exercise the powers and functions of the above authorities.

The State Transport Authority Act Amendment Act was passed in November 1975, and provided for the dissolution of the statutory entity of the three authorities, and the assumption of their powers and functions by the State Transport Authority. The Act was proclaimed on 8 December 1975 at which time the functions of the Transport Control Board, South Australian Railways Commissioner and the Municipal Tramways Trust were assumed by the Authority.

ROAD PASSENGER TRANSPORT CONTROL

The Transport Control Board, constituted under the Road and Railway Transport Act, 1930-1971, was concerned with the regulation and rationalisation of passenger transport services and in particular the co-ordination of road and railway passenger services.

The powers under that Act have been assumed by the State Transport Authority and the regulatory functions previously carried out by the Transport Control Board are administered by the Regulation Division of the Authority.

Route service licences issued by the Authority specify the route or routes over which the licensee is permitted to operate vehicles. Route service licences have a currency of seven years, but many special licences are issued for periods up to twelve months.

In October 1977, a new scheme of charter licensing was introduced by the Authority. Each approved operator is granted a licence which authorises charter operations within the whole of the State, excluding Kangaroo Island while specific licences are issued to operators authorising operations on Kangaroo Island. The licences carry a tenure of twelve months. The new system provides for the registration of charter operators, and eliminates the necessity for operators to apply for 'single trip' licences.

At 30 June 1978, current route service licences numbered twenty-eight. During the year ended 30 June 1978, 107 charter licences, 215 schoolchildren and handicapped children licences, 10 workmen's licences, 20 special tourist licences and 3 regular tourist licences were issued. In addition, four interstate services are licensed to carry intrastate passengers in remote areas, were licensed to carry intrastate passengers in remote areas, where alternative services are not available. Before the introduction of the new charter licensing scheme, short-term charter licences issued during the year totalled 963. Other licences issued during the period (*viz.* authorising shoppers services, airline ground services, community services, town services and miscellaneous operations) totalled 18.

RAILWAYS

In Part 8.4, railways in South Australia were discussed under the headings of ownership and control, and standardisation of railway gauges. It was mentioned that both the South Australian and Commonwealth Governments operate railways in this State and that there are two privately-owned railways, from Iron Knob and Iron Baron to Whyalla, and from Coffin Bay to Port Lincoln; this section deals with the rail operations of the State Transport Authority.

Transfer of Non-metropolitan Railways

As from 1 July 1975, by virtue of the Railways (Transfer Agreement) Act, 1975 and the *Railways Agreement (South Australia) Act 1975*, the Australian National Railways Commission became entitled to a transfer of the State's non-metropolitan railways and services. In the interim period, up to and including 28 February 1978, the State Transport

Authority—Rail Division administered, maintained and operated the non-metropolitan railways and services subject to compliance with any directions from the Commission. The railways transferred were generally those outside the Adelaide metropolitan area. However, some facilities (principally freight yards and workshops) within the Adelaide metropolitan area were also transferred.

The transfer agreement provided for trains operated by the State and National systems respectively, to operate as may be necessary on lines of the other system by a 'running rights' agreement, and the two Governments acknowledged a long-term goal of physical separation of the two systems in the metropolitan area.

The transfer agreement also provided a number of safeguards aimed at ensuring that rail services throughout the State are maintained generally at a level acceptable to the State Government.

STATE TRANSPORT AUTHORITY—RAIL

Financial Summary

In this section financial details of all rail operations during 1977-78 relate to the 8 months to 28 February 1978 only. Comparable data for the rail operations of the State Transport Authority and of the Australian National Railways Commission for the 4 months to 30 June 1978 are not available. Future editions of the *South Australian Year Book* will show details of the rail operations of the State Transport Authority only for periods after 1977-78.

Capital indebtedness of the rail operations (Metrorail) at 28 February 1978 totalled \$31 793 000. Total rail operations for the 8 months to 28 February 1978 resulted in a deficit of \$41 625 000. Under the terms of the Railways Transfer Agreement, the State recouped from the Australian National Railways Commission \$26 179 000 on account of the estimated non-metropolitan railways deficit for that period.

The following summary shows details of capital indebtedness, working expenses, and revenue for the three years to 1976-77 and 8 months to 28 February 1978.

State Transport Authority—Rail Operations: Capital Indebtedness, Working Expenses and Revenue

Particulars	1974-75	1975-76	1976-77	Eight months to 28 February 1978
				\$'000
Capital indebtedness	159 428	(a) 21 736	28 969	31 793
Working expenses	80 980	91 955	104 279	76 480
Revenue	48 315	50 099	54 685	35 982
Deficit on operating	32 665	41 856	49 594	40 498
Debt charges	9 092	1 284	1 519	1 127
Total deficit for year	41 758	43 140	51 113	41 625
Less contributions from Consolidated Revenue	40 000	—	—	—
Net surplus (+) or deficit (-)	-1 758	-43 140	-51 113	-41 625

(a) Reduction due to the Commonwealth Government discharging or meeting liabilities of \$146 489 892 (including transfer of rollingstock) pending takeover of non-metropolitan assets.

Working Expenses

The cost of rail operations during the eight months to 28 February 1978 was \$76 480 000 plus debt charges which amounted to \$1 127 000. The working expenses include the cost of administration, maintenance of permanent way, rollingstock maintenance and operation costs, salaries and wages of station staff, guards and conductors. A comparison of working expenses for the three years to 1976-77 and eight months to 28 February 1978 is given in the following table.

State Transport Authority—Rail Operations, Working Expenses

Expenses	1974-75	1975-76	1976-77	Eight months to 28 February 1978
				\$'000
Administration:				
Salaries, wages, expenses, etc.	2 888	3 256	3 748	2 882
Payroll tax	2 559	2 810	3 115	2 430
Superannuation Act—Pensions	2 824	3 865	5 346	4 062
Way and works:				
Maintenance and superintendence of permanent way, etc.	17 324	19 612	23 641	16 779
Rollingstock:				
General superintendence	568	635	735	504
Maintenance of rollingstock ...	11 347	12 856	13 540	10 489
Motive power, lubrication, etc.	11 300	13 326	14 933	11 080
Transportation and traffic:				
General superintendence, station staff, guards, etc.	24 424	27 382	30 111	21 915
Miscellaneous:				
Refreshment services, road motors, etc.	3 099	3 459	3 827	2 509
Stores:				
Salaries, wages, expenses	1 582	1 563	1 737	1 315
Depreciation (a)	3 065	3 190	3 546	2 515
Total	80 980	91 955	104 279	76 480

(a) Additional depreciation is included in 'Maintenance of rollingstock' and other accounts to cover depreciation of workshop machinery. The amount for 1976-77 was \$34 860 and nil for the eight months to 28 February 1978.

Debt Charges

These charges to rail operations have reduced considerably following the takeover of the capital indebtedness of non-metropolitan assets by the Commonwealth Government. Net funds provided from State Loan Fund were \$29 895 000 at 28 February 1978 as against \$27 059 000 at 30 June 1977 and \$143 040 000 at 30 June 1975.

Sources of Revenue

For the five year period ending 30 June 1977 approximately 75 per cent of railways operational revenue was derived from carriage of freight and about 12 per cent from passenger traffic. Sources of revenue and the amounts received for the three years to 1976-77 and eight months to 28 February 1978 are shown in the following table.

State Transport Authority—Rail Operations, Sources of Revenue

Source	1973-74	1974-75	1975-76	1976-77	Eight months to 28 February 1978
	\$'000				
Country passengers	2 550	2 902	3 198	3 138	1 953
Suburban passengers	2 417	2 736	2 960	3 207	2 190
Parcels, mails, etc.	836	1 018	1 189	1 193	685
General merchandise and miscellaneous freight	17 226	18 455	20 968	25 233	16 672
Wool	146	186	245	265	211
Wheat	3 546	5 596	2 799	3 040	1 357
Barley and other grains	1 136	2 224	2 407	2 094	1 084
Livestock	1 013	1 284	1 689	2 704	2 382
Minerals	6 751	8 389	8 181	8 220	5 865
Rents and miscellaneous	2 398	3 324	3 972	2 970	1 868
Catering and trading services	1 809	2 201	2 491	2 621	1 717
Total	39 827	48 315	50 099	54 685	35 982

TRAMWAY AND BUS SERVICES

The Municipal Tramways Trust was incorporated by Act of Parliament in 1906. The Trust's activities were regulated by the Municipal Tramways Trust Act, 1935-1975. The exclusive powers given to the Trust were assumed by the State Transport Authority (STA) under revisions to the Act which has been retitled Bus and Tramway Act, 1935-1978.

Under the Act the State Treasurer is empowered to make grants to the Authority to enable it to meet the expenses incurred in the exercise of its functions. In March 1974, STA commenced acquiring the assets and liabilities of the licensed private bus operators in the metropolitan area.

Historical Survey

A brief historical summary of tramways and bus services was included on pages 512-4 of the *South Australian Year Book 1970* under the headings 'Historical Survey' and 'Route Miles, Mileage Run and Passengers Carried'.

Recent Developments

Several initiatives affecting the metropolitan bus and tram services have been taken in recent years. They included development of a new regional bus depot at Morphettville (officially opened in February 1977); placing of an order for 310 Volvo bus chassis and bodies—the first of these, featuring air cooling and turbo-charged engines for reduced noise and pollution was delivered in March 1977; integration of former private bus services with other Authority services; a program of erection of passenger shelters at bus stops and establishment of a new suburban ring route; new regional bus depots at Aldgate (officially opened in January 1978) and Lonsdale and a 1 000 vehicle workshop at Regency Park.

In December 1973, a free bus service, the 'Bee-Line' Service was introduced and operates within city limits to improve distribution from existing transport terminals.

In October 1977 the 'Circle-Line' Service was introduced; it operates on a ring route on a radius of approximately five kilometres from the city centre.

Route Length, Kilometres Run and Passengers Carried

The following two tables show the details of route length, kilometres run and passengers carried for the years 1973-74 to 1977-78. The details for electric trams refer to the Adelaide-Glenelg service, the only remaining tram service in this State.

**State Transport Authority—Bus and Tram Operations
Route Length and Traffic Kilometres**

Year	Route Length at End of Year			Kilometres Run During Year		
	Electric Trams	Motor Buses	Total	Electric Trams	Motor Buses	Total
		Kilometres			'000	
1973-74 (a)	11	719	730	673	21 799	22 471
1974-75	11	754	765	676	30 819	31 495
1975-76 (b)	11	820	832	710	32 513	33 223
1976-77	11	830	841	775	33 772	34 547
1977-78	11	868	879	770	35 075	35 845

(a) Includes details of licensed private services taken over in March 1974.

(b) Not comparable with previous years: includes details of licensed private services taken over in December 1975 and April 1976.

State Transport Authority—Bus and Tram Operations: Passengers, Traffic Kilometres and Revenue

Year	Passengers Carried	Traffic Revenue	Traffic Kilometres	Average Fare	Traffic Revenue per Traffic Kilometre
	'000	\$'000	'000	Cents	Cents
1973-74 (a)	47 533	9 615	22 471	20.12	42.79
1974-75	58 298	12 711	31 495	21.29	40.36
1975-76 (b)	58 336	13 459	33 223	22.27	40.51
1976-77	58 129	13 646	34 547	22.53	39.50
1977-78	57 354	13 426	35 845	22.33	37.46

(a) Includes details of licensed private services taken over in March 1974.

(b) Not comparable with previous years: includes details of licensed private services taken over in December 1975 and April 1976.

Income and Expenditure

A table showing capital indebtedness, income and working expenses, etc. for the last five years is given in Part 11.4 Public Finance—Public Corporations. Selected details for the five years to 1977-78 are shown in the following table.

State Transport Authority—Bus and Tram Operations, Income and Expenditure

Year	Traffic Receipts	Sundry Receipts	Government Grants	Working Expenses	Interest on Loans	Net Deficit
				\$'000		
1973-74 (a)	9 615	343	2 250	11 735	469	—4
1974-75	12 711	716	5 900	18 951	874	(b) 10
1975-76 (c)	13 459	995	8 800	22 446	1 230	(d) —74
1976-77	13 646	3 135	12 040	27 711	1 781	(e) 268
1977-78	13 426	2 647	18 413	33 280	1 886	(f) 78

(a) Includes details of licensed private services taken over in March 1974.

(b) After receipt of Commonwealth Government grant of \$488 000.

(c) Not comparable with previous years; includes details of licensed private services taken over in December 1975 and April 1976.

(d) After receipt of Commonwealth Government grant of \$394 000 and State Department of Transport contribution for revenue projects of \$102 000.

(e) After receipt of Commonwealth Government grant of \$402 000.

(f) After receipt of Commonwealth Government grant of \$133 000 and after allowing for Treasury Debt Remission of \$1 479 000.

At 30 June 1978 loan indebtedness amounted to \$21 278 000; these loans are secured by debentures issued to the Treasurer of South Australia.

Working Expenses

The following table shows the working expenses for the five years to 1977-78.

State Transport Authority—Bus and Tram Operations, Working Expenses

Working Expenses	1973-74(a)	1974-75	1975-76(b)	1976-77	1977-78
				\$'000	
Traffic operations	6 398	10 759	12 677	15 085	17 821
Maintenance	1 903	3 103	4 090	6 016	7 369
Power for traffic	37	40	47	58	63
Fuel and oil for traffic	630	1 036	1 226	1 308	1 644
Highways contribution	171	274	307	320	350
Depreciation	862	1 146	1 221	1 292	1 801
Other expenses	1 734	2 593	2 878	3 631	4 232
Total	11 735	18 951	22 446	27 711	33 280
				Cents	
Working expenses per traffic kilometre	52.22	60.17	67.56	80.21	92.84

(a) Includes details of licensed private services taken over in March 1974.

(b) Not comparable with previous years; includes details of licensed private services taken over in December 1975 and April 1976.

The average number of persons employed on Bus and Tram operations during 1977-78 was 2 075 (310 salaried and 1 765 wages staff); salaries and wages paid amounted to \$22 950 000 or 69 per cent of total working expenses.

Accident Casualties

The following casualties resulted from accidents which occurred during the last five years.

State Transport Authority—Bus and Tram Operations, Accident Casualties

Year	Passengers		Employees		Total (Including Other)	
	Killed	Injured	Killed	Injured	Killed	Injured
1973-74 (a)	—	120	—	111	—	265
1974-75	—	167	—	209	—	413
1975-76 (b)	—	239	—	332	—	646
1976-77	—	170	—	393	3	599
1977-78	—	243	—	420	2	n.a.

(a) Includes details of licensed private services taken over in March 1974.

(b) Not comparable with previous years: includes details of licensed private services taken over in December 1975 and April 1976.

Rollingstock

The change from electric traction to diesel operation is reflected in the following table which shows details of rollingstock in selected years.

State Transport Authority—Bus and Tram Operations, Rollingstock and Seating Capacity At 30 June

Particulars	1950 (a)	1955	1960	1965	1970	1978 (b)
Rollingstock:						
Electric trams	279	178	30	30	26	26
Motor buses	81	140	364	353	344	817
Trolley buses	61	91	56	—	—	—
Total vehicles	421	409	450	383	370	843
Seating capacity:						
Electric trams	14 280	10 147	1 908	1 908	1 664	1 664
Motor buses	3 998	5 268	14 428	14 112	14 234	38 146
Trolley buses	2 984	4 184	2 006	—	—	—
Total seating	21 262	19 599	18 342	16 020	15 898	39 810

(a) At 31 January.

(b) Not comparable with previous years: includes details of licensed private services taken over in March 1974, December 1975 and April 1976.

Under a three year program, completed late in 1972 at a cost of \$5.2 million, the bus fleet was replaced with vehicles designed for one-man operation. These vehicles have rear mounted engines, lower step height and two-way radio contact with the depot.

The vehicles obtained through takeover of the licensed private operators will be gradually replaced with the standard types.

METROPOLITAN PRIVATE MOTOR BUS SERVICES

Before 1974 there were several bus services licensed to operate in the metropolitan area. In 1972-73 they carried 16.6 million passengers. The transfer of these services to the State Transport Authority commenced in March 1974 and at 30 June 1978 only one such service was still operating in the metropolitan area.

COUNTRY TOWN BUS SERVICES

Commencing in May 1975, the State Government offered financial assistance, through local government, to urban bus services outside of the metropolitan area. Under the new arrangement, financial responsibility for the provision of bus services is vested in the local government authority, but the State Government contributes two-thirds of the operating loss.

Councils have the option of acquiring local bus fleets, or arranging for a local bus proprietor to provide the bus service under contract. In the case of the contract system, the fare revenue is retained by the local government authority and the contractor is paid an agreed sum per kilometre to operate buses on routes and timetables determined by a three-man management committee. The committee consists in each case of an elected council representative, the Town Clerk or his deputy, and a representative of the State Government.

Contract services are operated in Port Pirie, Port Augusta, Port Lincoln and Mount Gambier. In Whyalla, the City Council has purchased the assets of the former bus proprietor, and since 13 October 1975 the bus service has been municipally owned and operated.

INTERSTATE AND COUNTRY SERVICES

Regular interstate coach services and special tours operate to all States. In addition, a network of bus route services operates on radial routes from Adelaide to all parts of the State. These services are provided by twelve private companies, under licence to the State Transport Authority and are operated from two adjacent terminals situated in Franklin Street, Adelaide. The services operate over a total route length of 7 007 kilometres.

Passenger services on all roads within the State are controlled by the State Transport Authority. Generally, pick-up and set-down rights on the routes are non-competitive with rail services or with other route service operations. The Authority also issues licences for coach tour and charter operations within the State.

TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956-1978, administered by the Metropolitan Taxi-Cab Board, is the governing legislation providing for the control of taxi-cabs within the Metropolitan Planning Area as defined by Section 5(1) of the Planning and Development Act, 1966-1975, together with the whole of the Municipality of Gawler. The Board is responsible for the granting of licences or permits to operate taxi-cabs, the allotment of vehicles to stands and the charging of permit fees.

Regulations under the Act provide for the examination of taxi-cabs: all taxi-cabs are examined for roadworthiness, and all meters are checked and tested twice a year on the Board's premises by mechanics employed by the Board. It is compulsory for taxis to be fitted with meters which record progressively the cost of each journey at rates prescribed from time to time. At December 1978 the rates were 55 cents for 'flag fall' and the first 145 metres, then 5 cents each additional 145 metres. The area in which these metered charges apply is determined by the Board and is known as the 'metered area'. Outside of this zone but within a radius of 40 kilometres from the GPO Adelaide, a 50 per cent loading applies. For journeys which extend beyond the 40-kilometre radius contract rates not to exceed 23 cents per outward and return kilometre are charged. From 8 p.m. to 6 a.m. Monday to Friday and from 8 p.m. Saturday to 6 a.m. Monday and on public holidays there is a 20 cent surcharge per journey.

Licences issued at 30 June 1978 include taxi-cabs, white plates (*i.e.* restricted) 250; green plates 594; hire cars 46; and funeral cars 11. Drivers' licences current totalled 3 213.

Taxi licence fees are \$50 a year and private hire licence fees are \$35. Revenue received by the Board during 1977-78 was \$42 179 from taxi licences, \$1 778 from hire car licences and \$14 129 from drivers' licences. Total revenue from all sources was \$198 028, and expenditure was \$194 763.

In areas not under the control of the Metropolitan Taxi-Cab Board, taxi licences are issued by local government authorities under the provisions of the Local Government Act.

MOTOR VEHICLES

Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers and third party insurance in South Australia is contained in the Motor Vehicles Act, 1959-1978.

The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1976 and the Motor Vehicles Act, 1959-1978.

Registration of Motor Vehicles

Under the provisions of the Motor Vehicles Act, 1959-1978 all motor vehicles, unless specifically exempted, must be registered with the Registrar of Motor Vehicles at the Motor Registration Division of the Department of Transport before being driven on any road.

The Motor Vehicles Act defines a motor vehicle as:

- (a) a vehicle, tractor or mobile machine driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal; or
- (b) a caravan or a trailer;

but does not include a vehicle run upon a railway or tramway or a mobile machine controlled and guided by a person walking.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A 14-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the police force stationed at a police station more than 40 kilometres from the GPO, Adelaide, except in those places where a branch of the Motor Registration Division is in operation.

Registration fees vary according to the power-mass (PM) of the vehicle; this is calculated by a formula which takes into account the diameter and number of the cylinders and the vehicle's mass in kilograms. A special formula applies for vehicles fitted with non-piston engines. Fees for trailers and caravans are based on unladen mass and vehicles fitted with solid rubber or metal tyres are subject to higher rates.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other firefighting organisations, ambulances (for the use of which no charge is made), council vehicles used solely or mainly for the collection and transport of household refuse, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles and for vehicles used wholly or mainly in outer areas. Reduced rates are available to incapacitated ex-servicemen also, and to some persons who, as holders of State Concession Cards or pensioner entitlement cards, are entitled to travel on public transport in South Australia at reduced fares. Vehicles used solely for interstate trade can be registered for \$5 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders plates and limited traders plates.

Motor Vehicles on Register

The following table shows the number of motor vehicles on the register at 30 June from 1974 to 1978.

Motor vehicles on Register, South Australia^(a) At 30 June

Type of Vehicle	1974	1975	1976	1977	1978
			'000		
Cars	382.8	413.3	429.3	447.5	458.5
Station wagons	66.5	70.0	71.8	74.4	75.5
Commercial vehicles	97.6	101.5	107.3	114.9	116.9
Motor cycles	30.7	32.5	32.6	31.2	30.5
Total on register	577.6	617.3	641.0	668.0	681.3
			Persons		
Population per vehicle	2.14	2.03	1.97	1.91	1.89
			'000		
Tractors, plant, equipment	7.7	7.7	7.8	7.8	7.6
Trailers and caravans	120.0	128.0	138.3	148.6	151.8
Traders plates	2.7	2.8	3.1	3.2	3.5

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

New Motor Vehicle Registration

New motor vehicle registrations during the financial years 1973-74 to 1977-78 are shown in the following table.

New Motor Vehicle Registrations, South Australia^(a)

Type of Vehicle	1973-74	1974-75	1975-76	1976-77	1977-78
Cars	38 330	45 538	40 485	37 230	32 976
Station wagons	4 929	6 353	6 571	7 317	5 998
Utilities (b)	3 581	4 390	4 074	3 638	2 916
Panel vans (c)	1 749	2 684	3 204	3 156	2 917
Trucks (d)	2 721	3 201	3 695	4 148	3 643
Other truck type vehicles (e)	45	22	36	366	282
Buses	221	237	342	315	434
Motor cycles	10 960	8 256	7 052	6 081	4 313
Total	62 536	70 681	65 459	62 251	53 479

(a) Includes Commonwealth Government owned vehicles except defence services vehicles. (b) Includes utilities and trucks with carrying capacity under 1 tonne. From 1 July 1976 includes only vehicles described as utilities on registration documents. (c) Includes panel vans and trucks with carrying capacity under 1 tonne and ambulances and hearses. From 1 July 1976 includes only vehicles described as panel vans on registration documents; ambulances and hearses are included with other truck type vehicles. (d) Includes utilities, panel vans and trucks with carrying capacity over 1 tonne. From 1 July 1976 includes only vehicles described as trucks on registration documents. (e) Includes those truck type vehicles not designed for freight carrying e.g. tow trucks and fire engines. From 1 July 1976 includes ambulances and hearses.

Drivers' Licences

From 19 March 1979, the following classes of drivers' licences have applied in South Australia:

- Class 1: to drive (a) any motor car or (b) any motor vehicle, the mass of which (excluding the mass of any trailer) does not exceed 3 000 kilograms, except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 2: to drive any motor vehicle except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 3: to drive any motor vehicle except a motor cycle or a motor omnibus;
- Class 4: to drive a motor cycle;
- Class 4A: to ride motor cycles up to 250 cubic centimetres engine capacity;
- Class 5: to drive a motor omnibus.

A licence may be endorsed with more than one class number.

The Motor Vehicles Act provides that an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learner's permit once he has passed a written examination on the rules of the road. The permit is for a period not exceeding three months during which time the holder is expected to undergo a practical test conducted by a Motor Registration Division examiner. If he passes the test he will be issued with a certificate stating the type and make of vehicle used and that he was capable of driving this class of motor vehicle. He may then apply to the Registrar for the appropriate licence.

Provision is also made for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail the test. Persons who will reach the age of 70 years during the currency of their next licence are tested before that licence is issued. Optical tests also are imposed at age 75 years.

Before July 1976, licences were issued for a period of one year: from July 1976 three-year licences were introduced initially on a staggered basis so that some drivers were issued with one-year licences (\$6), some with two-year licences (\$12) and some with three-year licences (\$18). From July 1977 all drivers were issued with three-year licences except those aged 70 years and over who will have to continue renewing their licences annually subject to passing the required tests. The fee for a learner's permit is \$3. Licences and permits are not issued to persons under sixteen years of age.

In 1961 licences for motor driving instructors were introduced and are compulsory where instruction is given for reward. The licence fee is \$20 for a period of three years.

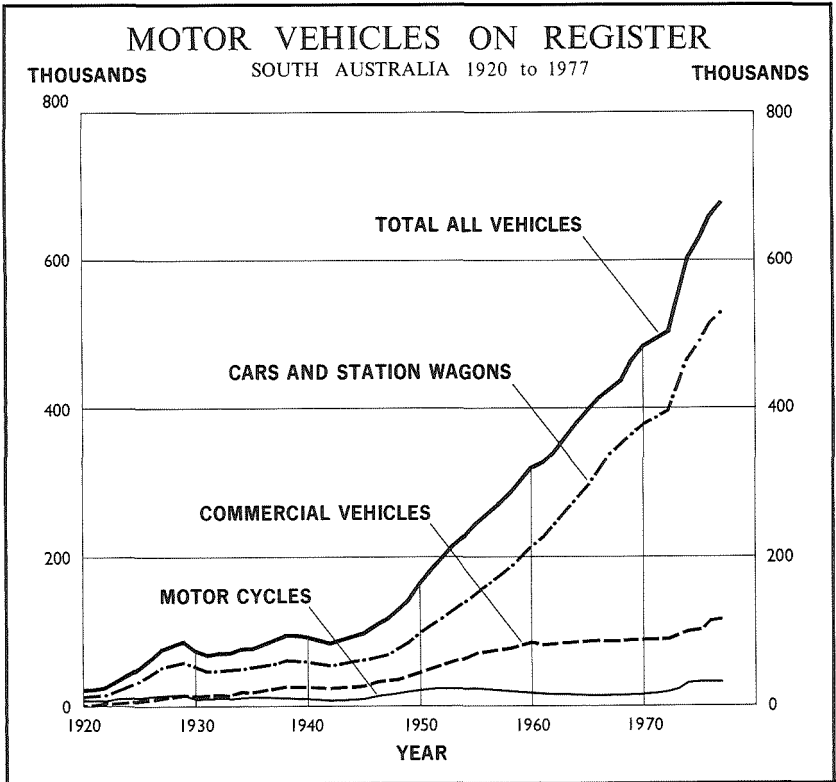
Drivers' and riders' licences current at 31 December 1978 totalled 716 991. The number in force first exceeded 100 000 in 1931, totalled 215 157 by 1951, 315 044 by 1957, and had risen to 447 985 at December 1965.

Revenue from Registrations and Licences

Revenue from registration fees and drivers' and riders' licence fees totalled \$46 591 000 in 1977-78. These fees are paid into Consolidated Revenue Account; but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways Department and Motor Registration Division of the Department of Transport, the balance is paid into the Highways Fund.

Third Party Insurance

Under the Motor Vehicles Act, 1959-1978 every motor vehicle driven on a road, unless specifically exempted, must be covered by an insurance policy. This policy insures the



owner of the motor vehicle and any other person who at any time drives the vehicle in respect of all liability that may be incurred in respect of the death of, or bodily injury to, any person caused by, or arising out of the use of the vehicle in any part of Australia.

Insurance must be effected with the State Government Insurance Commission, which is now the only approved third party insurer. Liabilities of the insurer, set out in the Motor Vehicles Act, include the liability to pay for emergency treatment and hospital treatment to a person injured (including fatally injured) by or arising out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may recover by action against a nominal defendant appointed by the Minister of Transport and published in the Government Gazette. Payment by the nominal defendant is out of money contributed by the Commission.

A person claiming damages in respect of death or bodily injury caused by negligence in the use of an uninsured motor vehicle on a road may bring an action for the recovery of those damages against the nominal defendant. Payments made by the nominal

defendant are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

An injured person may claim against his or her spouse where the spouse is an insured person and has caused that person bodily injury in the use of a motor vehicle.

A committee appointed by the Governor on the recommendation of the Minister of Transport having all the powers of a royal commission periodically inquires into and determines what premiums for third party insurance are fair and reasonable.

From 31 May 1978, premiums for private and business cars in metropolitan and country areas were increased by \$9 to \$98. Premiums for goods-carrying vehicles in the metropolitan area were increased by \$11 to \$117 while those in country areas were increased by \$7 to \$76. Premiums for primary producers' trucks in the metropolitan area were increased by \$4 to \$42 and those in country areas were increased by \$2 to \$21. Premiums for taxis in the metropolitan area were increased by \$34 to \$378. Premiums for omnibuses in the metropolitan area were increased by \$31 to \$344 while those in country areas were increased by \$6 to \$62. Premiums for omnibuses not used for hire, fare or reward, in the metropolitan area were increased by \$9 to \$103 while those in country areas were increased by \$5 to \$55. Premiums for other miscellaneous vehicles such as ambulances, tow trucks, mobile cranes, hearses etc., in the metropolitan area were increased by \$6 to \$69 and those in country areas were increased by \$3 to \$28. Premiums for motor cycles with an engine capacity exceeding 250 cc in the metropolitan area were increased by \$12 to \$131 and those in the country areas were increased by \$6 to \$61. Premiums for motor cycles with an engine capacity not exceeding 250 cc in the metropolitan area were increased by \$4 to \$48 while those in the country areas were increased by \$2 to \$17.

Census of Motor Vehicles

A census of motor vehicles on the register in Australia at 30 September 1976 was completed during 1977: details relating to South Australia are shown in the bulletin *Motor Vehicle Census, 30 September 1976* (Catalogue No. 9301.4).

The following table classifies motor vehicles on register by type of vehicle and year of model at 30 September 1976.

**Motor Vehicles on Register: Type of Vehicle and Year of Model, South Australia
30 September 1976^(a)**

Year of Model	Type of Vehicle							
	Motor Cars	Station Wagons	Utilities	Panel Vans	Trucks	Other Truck Type Vehicles	Buses	Total (b)
	'000							
Before 1955	4.6	(c)	1.0	0.1	3.4	0.3	(c)	9.4
1955-1959	13.8	1.1	2.0	0.6	3.3	0.3	0.2	21.3
1960-1964	55.2	14.3	5.9	2.2	6.3	0.5	0.4	84.9
1965	19.9	4.7	2.0	0.7	1.8	0.1	0.1	29.4
1966	19.0	4.0	2.2	0.7	1.7	0.1	0.1	27.8
1967	23.1	4.8	2.5	0.9	1.6	0.1	0.1	33.1
1968	27.1	4.4	2.5	0.9	2.0	0.2	0.1	37.1
1969	30.1	4.6	2.7	0.9	2.4	0.2	0.3	41.2
1970	32.4	4.6	2.8	1.1	2.4	0.2	0.2	43.6

**Motor Vehicles on Register: Type of Vehicle and Year of Model, South Australia
30 September 1976^(a) (continued)**

Year of Model	Type of Vehicle							
	Motor Cars	Station Wagons	Utilities	Panel Vans	Trucks	Other Truck Type Vehicles	Buses	Total (b)
	'000							
1971	32.2	4.3	2.3	1.2	2.1	0.2	0.3	42.7
1972	31.0	4.2	2.7	1.3	2.2	0.3	0.3	41.8
1973	37.0	4.8	3.2	1.7	3.0	0.3	0.2	50.2
1974	39.6	5.7	3.7	2.1	3.0	0.4	0.3	54.9
1975	41.1	6.0	3.3	2.7	3.2	0.5	0.3	57.3
1976	30.4	5.4	2.8	2.4	3.0	0.3	0.3	44.5
Total (d) ..	436.5	72.7	41.4	19.6	41.4	4.1	3.2	650.7

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

(b) Includes 31 750 motor cycles.

(c) Less than 100.

(d) Includes vehicles for which year of model is unknown.

Motor Vehicle Usage

In September 1976 a sample survey of motor vehicle usage during the year ended 30 September 1976 was conducted throughout Australia.

The survey population (motor vehicles on the register), from which the sample was drawn, was extracted from the registration systems of the Commonwealth Government and State motor vehicle registration authorities; it was then stratified on the basis of vehicle type, trucks being further stratified by tare weight and number of axles.

Of the vehicles selected for the sample, approximately 75 per cent, apart from buses, were trucks and other 'commercial' vehicle types, although this group made up only 16 per cent of the total number of vehicles registered. This emphasis in the sample was considered necessary because of the diversity of the truck sector.

Questionnaires were dispatched in September 1976 to the registered owners of the vehicles selected in the sample survey asking for details of vehicle usage. It should be noted that information about vehicle usage has generally been based on the recollection of respondents rather than reference to precise records.

Motor Vehicle Usage: Average Annual Distance Travelled, South Australia, 1976

Type of Vehicle	Average Annual Distance Travelled	SE %	Average Annual Distance Travelled for Business Purposes	SE %
Cars and station wagons	'000 km		'000 km	
Utilities and panel vans	15.0	(1.9)	11.7	(5.5)
Trucks:	15.0	(5.4)	13.2	(7.1)
Rigid:				
Tare weight:				
Under 3 tonnes	12.6	(3.5)	12.1	(3.6)
3 and under 4 tonnes	10.7	(3.9)	10.5	(3.8)
4 tonnes and over	19.8	(3.2)	19.5	(3.2)

Motor Vehicle Usage: Average Annual Distance Travelled, South Australia, 1976
(continued)

Type of Vehicle	Average Annual Distance Travelled		Average Annual Distance Travelled for Business Purposes	
	'000 km	SE%	'000 km	SE %
Trucks (continued):				
Articulated:				
Tare weight,				
Under 9 tonnes	25.8	(2.8)	25.6	(2.8)
9 and under 11 tonnes	55.4	(3.7)	55.0	(3.7)
11 tonnes and over	94.3	(2.2)	93.9	(2.2)
Other truck type vehicles	11.6	(9.5)	6.7	(17.4)
Motor cycles	6.1	(11.5)	3.5	(22.0)

Being based on a sample, these statistics may differ from the figures which would have been obtained from a complete census using the same questionnaires and procedures. Measure of such imprecision, standard errors (SE), are shown in the table as a percentage of the associated figure.

The following table shows details of average annual fuel consumption for South Australia.

Motor Vehicle Usage: Average Rate of Fuel Consumption, South Australia, 1976.

Type of Vehicle	Average Rate of Fuel Consumption			
	Petrol		Diesel	
	litres per 100 km	SE %	litres per 100 km	SE %
Cars and station wagons	12.3	(1.0)	..	..
Utilities and panel vans	14.7	(2.4)	..	..
Trucks:				
Rigid:				
2 axles	25.7	(1.2)	28.1	(2.0)
3 axles	48.2	(6.7)	35.8	(2.9)
More than 3 axles	35.2	(6.8)	39.0	(7.6)
Axles not stated	16.3	(17.6)	14.2	..
Articulated:				
Less than 5 axles	51.6	(2.2)	47.0	(1.1)
5 axles	57.0	(4.5)	53.9	(1.1)
6 axles	42.0	(2.1)	63.6	(1.1)
More than 6 axles .....	..	..	68.4	(10.4)
Axles not stated .....	..	..	61.1	(5.6)
Motor cycles	5.7	(7.0)	..	..

Additional details relating to South Australia and Australia are shown in the bulletin *Survey of Motor Vehicle Usage, Twelve Months Ended 30 September 1976* (Catalogue No. 9208.0).

Road Traffic Board

The Road Traffic Board of South Australia, set up in 1960 under the provisions of the Road Traffic Board Act, 1960, is now constituted under the Road Traffic Act, 1961-1976; its functions are to:

- (1) make recommendations to the Minister on roads and traffic generally, on the use of traffic control devices and other measures to be taken to prevent road traffic accidents;

- (2) promote uniformity in the design and use of traffic control devices;
- (3) conduct research and collect statistics relating to road traffic accidents and other traffic problems;
- (4) disseminate information and advice on road safety and traffic laws and regulations;
- (5) investigate and report on proposals for alterations of and additions to traffic laws and regulations.

Road Safety

Some recent moves towards greater road safety were detailed on pages 514-5 of the *South Australian Year Book 1973*. These mainly related to the operations of the new Road Safety Instruction Centre and the points demerit scheme.

The latter scheme has been in operation since 29 April 1971. In 1977 warning notices were sent to 16 296 drivers who had accumulated six or more demerit points and 3 010 drivers with twelve or more demerit points had their driving licences suspended.

Regulations under the Road Traffic Act require that any modification to a motor vehicle with a gross vehicle mass less than 4.5 tonnes (motor cycles excepted) must meet certain standards and that approval of the Road Traffic Board is necessary before certain types of modifications can be made.

All motor vehicles manufactured on or after 1 May 1971, must have affixed a compliance plate showing that the vehicle has been approved by the Australian Motor Vehicle Certification Board in regard to compliance with Australian Design Rules for Motor Vehicle Safety applicable to the year of manufacture. Road Traffic Board exemption from this requirement is limited to immigrants or local residents returning from overseas with a vehicle they wish to register privately in this State.

Following an amendment to the Road Traffic Act, a different interpretation of 'STOP' signs became operative on 1 March 1975. Under this legislation, a driver facing a 'STOP' sign must give way to all traffic whether it is coming from the left or from the right. Previously, drivers had to give way only to the traffic from the right. The legislation conforms with the National Traffic Code. Similar legislation is in force in most States.

In July 1975, a system of 'priority' roads was introduced in the State. Initially the main arterial roads in the Metropolitan area were proclaimed 'priority' roads; this will be progressively extended to national highways and rural arterial traffic routes.

'STOP' and 'GIVE WAY' signs are used to control side street traffic. A heavy broken white line across the mouth of the side street warns the motorists that the arterial road traffic has priority over traffic entering from the left or right.

The Road Traffic Act now requires a seat belt to be worn by the driver and passenger of a motor vehicle where seat belts are fitted irrespective of the year of manufacture of the vehicle. An amendment to the Act, which came into operation on 1 March 1977, greatly strengthened the penalty provisions of the Act. The penalties are classified into (a) general penalty offences which included the majority of offences and carry a maximum penalty of \$300 and (b) special penalty offences which deal with the more serious offences e.g. a driver convicted on a drink-driving offence for the first time can face the following charges (i) disqualification from holding a driver's licence for not less than six months and (ii) a fine of not less than \$300 and not more than \$600 or imprisonment for not more than three months.

Road Traffic Accidents

Statistics of road traffic accidents are compiled from reports made to members of the South Australian Police Department by persons involved in such accidents. Section 43 of the Road Traffic Act sets out the obligations of the driver of a vehicle involved in an accident—he must stop his vehicle at once, render any assistance of which he is capable to anyone injured in the accident, state his name and address if requested to any person having reasonable grounds for such request, and report the accident to the Police as soon as possible, or at least within twenty-four hours of the accident. However, it is a defence against a charge relating to non-reporting of an accident if a defendant can prove either that he did not know that an accident occurred or that the only damage or injury resulting from the accident was to property and that a fair estimate of the damage did not exceed \$100.

For the purpose of these statistics, a road traffic accident is defined as an accident which occurs because of the presence of a vehicle on a road (or other public thoroughfare, e.g. public car park, beach) and which involves property damage exceeding \$100 or casualty; a casualty occurring if the accident resulted in:

- (1) the death of any person within a period of thirty days of the accident, or
- (2) bodily injury to any person to an extent requiring surgical or medical treatment.

With the introduction of a more comprehensive accident report form on 1 October 1967, statistics have become available as a result of a joint effort by the South Australian Police Department, the Road Traffic Board of South Australia and the Australian Bureau of Statistics. Before this date, the South Australian Police Department was the sole authority preparing statistics of road traffic accidents.

The following table shows summary details of road traffic accidents for the years 1973 to 1977. During 1977 the total number of recorded road traffic accidents increased by 6.8 per cent (from 46 041 in 1976 to 49 168 in 1977). The number of accidents which resulted in casualties decreased by about 2 per cent (from 8 090 in 1976 to 7 922 in 1977).

Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 100 000 Motor Vehicles on Register (a)			Rate per 100 000 of Mean Population		
					Total Accidents Recorded	Persons Killed	Persons Injured	Total Accidents Recorded	Persons Killed	Persons Injured
1973	33 960	9 267	329	12 625	6 167	60	2 293	2 824	27	1 050
1974	39 633	9 469	382	12 725	6 808	66	2 186	3 208	31	1 030
1975	44 964	8 793	339	12 020	7 297	55	1 951	3 589	27	959
1976	46 041	8 090	307	11 082	7 169	48	1 726	3 649	24	878
1977	49 168	7 922	306	10 781	7 362	46	1 614	3 606	24	868

(a) 'Motor vehicles on register' is the mean number for each year; includes Commonwealth Government owned vehicles except defence services vehicles; excludes road tractors and trailers.

The likelihood of sustaining serious injury when involved in an accident is more than eleven times higher for motor cycle riders than for drivers of motor vehicles: 58 per cent of motor cycle riders involved in accidents received medical or hospital treatment compared with 5 per cent of drivers of other vehicles.

The following table shows casualties by type of road user for each of the last five years. In each of these years more motor vehicle drivers were killed or injured than any other type of road user.

Road Traffic Accidents: Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Pass- engers	Pedes- trians	All Other	Total
PERSONS KILLED							
1973	135	23	9	99	63	—	329
1974	151	46	17	110	58	—	382
1975	136	30	14	98	61	—	339
1976	116	41	9	86	55	—	307
1977	108	42	9	96	51	—	306
PERSONS INJURED							
1973	4 906	1 736	564	4 499	914	6	12 625
1974	4 946	1 820	541	4 392	1 021	5	12 725
1975	4 663	1 738	529	4 209	876	5	12 020
1976	4 249	1 622	566	3 846	792	7	11 082
1977	4 140	1 625	554	3 646	810	6	10 781

In the following table, the types of road users killed and injured are shown according to age groups for 1977.

Road Traffic Accidents: Age Groups of Casualties, South Australia 1977

Age Group of Casualty (years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Pass- engers	Pedes- trians	All Other	Total
PERSONS KILLED							
Under 5	—	—	—	7	3	—	10
5-16	4	3	5	20	9	—	41
17-20	29	22	1	25	1	—	78
21-29	30	17	—	20	4	—	71
30-39	14	—	—	6	1	—	21
40-49	6	—	—	4	6	—	16
50-59	10	—	1	5	6	—	22
60 and over	15	—	2	9	21	—	47
Total	108	42	9	96	51	—	306
PERSONS INJURED							
Under 5	—	—	1	179	60	—	240
5-16	163	190	309	835	268	3	1 768
17-20	1 006	736	47	752	66	1	2 608
21-29	1 061	454	50	512	63	1	2 141
30-39	625	88	33	201	50	—	997
40-49	419	30	20	148	51	—	668
50-59	329	21	33	183	57	—	623
60 and over	266	10	29	216	109	—	630
Not stated	271	96	32	620	86	1	1 106
Total	4 140	1 625	554	3 646	810	6	10 781

Drivers (including motor cyclists) under twenty-one years of age, representing only 12 per cent of licence holders at 30 June 1977, accounted for 21 per cent of drivers involved in accidents, 39 per cent of drivers killed and 36 per cent of drivers injured during 1977.

For drivers aged twenty-one to twenty-four years involvements were 12 per cent, deaths 19 per cent and injuries 15 per cent while their representation in the driving population was 11 per cent.

Pedestrians sixty years and over accounted for 15 per cent of pedestrians involved, 13 per cent of pedestrians injured and 41 per cent of pedestrians killed.

Details of road traffic accidents for 1977 according to time and day of occurrence are shown in the next table. More accidents occurred on Fridays (9 031 accidents) and Saturdays (7 734) than on other days of the week and more accidents occurred between 4 p.m. and 6 p.m. than during any other two-hour period. More accidents occurred between 4 p.m. and 6 p.m. on Fridays than on other days in that period and more deaths resulted from accidents occurring on Fridays (50) and Saturdays (79).

Road Traffic Accidents: Day of Week and Time of Occurrence, South Australia 1977

Time of Occurrence	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
TOTAL ACCIDENTS								
After: Until:								
Midnight 2 a.m.	80	78	136	130	224	636	683	1 967
2 a.m. 4 a.m.	28	25	32	46	46	195	192	564
4 a.m. 6 a.m.	38	19	28	21	37	78	60	281
6 a.m. 8 a.m.	495	490	470	449	479	158	74	2 615
8 a.m. 10 a.m.	787	833	864	835	842	659	184	5 004
10 a.m. 12 noon	705	652	683	759	886	1 255	544	5 484
12 noon 2 p.m.	737	704	789	797	867	834	622	5 350
2 p.m. 4 p.m.	910	890	1 048	1 015	1 256	758	833	6 710
4 p.m. 6 p.m.	1 421	1 534	1 653	1 750	2 038	1 071	932	10 399
6 p.m. 8 p.m.	565	615	661	814	1 078	989	601	5 323
8 p.m. 10 p.m.	291	374	361	461	655	513	335	2 990
10 p.m. Midnight	201	238	277	367	623	588	187	2 481
Total	6 258	6 452	7 002	7 444	9 031	7 734	5 247	49 168

PERSONS KILLED								
After: Until:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight 2 a.m.	2	—	3	3	6	7	4	25
2 a.m. 4 a.m.	1	1	—	4	1	6	4	17
4 a.m. 6 a.m.	—	—	—	—	2	6	1	9
6 a.m. 8 a.m.	3	2	4	2	2	7	4	24
8 a.m. 10 a.m.	1	2	1	1	1	3	3	12
10 a.m. 12 noon	4	2	6	6	8	1	2	29
12 noon 2 p.m.	1	1	2	1	2	1	3	11
2 p.m. 4 p.m.	3	4	5	4	4	6	8	34
4 p.m. 6 p.m.	3	7	4	7	2	11	7	41
6 p.m. 8 p.m.	4	3	6	10	5	13	3	44
8 p.m. 10 p.m.	3	4	4	3	10	8	1	33
10 p.m. Midnight	1	—	1	5	7	10	3	27
Total	26	26	36	46	50	79	43	306

PERSONS INJURED								
After: Until:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight 2 a.m.	54	26	52	37	84	244	239	736
2 a.m. 4 a.m.	8	10	6	23	21	80	84	232
4 a.m. 6 a.m.	16	6	11	4	14	39	22	112
6 a.m. 8 a.m.	108	105	123	93	108	45	24	606
8 a.m. 10 a.m.	110	129	159	118	153	127	62	858
10 a.m. 12 noon	90	95	112	95	113	205	149	859
12 noon 2 p.m.	115	116	139	151	146	224	161	1 052
2 p.m. 4 p.m.	173	163	173	156	226	213	227	1 331
4 p.m. 6 p.m.	256	283	295	346	293	279	292	2 044
6 p.m. 8 p.m.	146	171	134	190	217	259	216	1 333
8 p.m. 10 p.m.	90	93	101	124	196	155	92	851
10 p.m. Midnight	55	86	78	129	193	162	64	767
Total	1 221	1 283	1 383	1 466	1 764	2 032	1 632	10 781

Although more than two-thirds of all accidents occurred between 6 a.m. and 6 p.m. the severity of accidents, judged on the basis of death and injury rates, was considerably greater during the 'night hours', as can be seen from the following table.

**Accidents and Casualties: Time of Day, Fatality and Injury Rates
South Australia, 1977**

Time of Occurrence	Accidents Occurring	Persons Killed	Persons Injured	Persons Killed Per 100 Accidents Occurring	Persons Injured Per 100 Accidents Occurring
After: Until:					
Midnight 2 a.m.	1 967	25	736	1.3	37
2 a.m. 4 a.m.	564	17	232	3.0	41
4 a.m. 6 a.m.	281	9	112	3.2	40
6 a.m. 8 a.m.	2 615	24	606	0.9	23
8 a.m. 10 a.m.	5 004	12	858	0.2	17
10 a.m. 12 noon ...	5 484	29	859	0.5	16
12 noon 2 p.m.	5 350	11	1 052	0.2	20
2 p.m. 4 p.m.	6 710	34	1 331	0.5	20
4 p.m. 6 p.m.	10 399	41	2 044	0.4	20
6 p.m. 8 p.m.	5 323	44	1 333	0.8	25
8 p.m. 10 p.m.	2 990	33	851	1.1	28
10 p.m. Midnight ..	2 481	27	767	1.1	31
Total	49 168	306	10 781	0.6	22

During 1977 there were 23 287 accidents at intersections (47 per cent of accidents reported) and approximately one-half of the total number of injuries occurred at intersections. However, of the 306 road deaths, 44 per cent were on straight roads compared with 29 per cent at intersections: a further 19 per cent of deaths occurred on bends or curves.

**Road Traffic Accidents: Features of Roadways on which Accidents Occurred
South Australia, 1977**

Features of Roadway	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
Intersection:				
Controlled	12 223	1 643	39	2 370
Uncontrolled	11 064	2 047	49	2 844
Other than intersections:				
Straight road	18 893	3 060	136	3 932
Bend or curve	2 712	806	58	1 140
Railway level crossing;				
Controlled	125	20	1	25
Uncontrolled	75	27	2	39
Other location	4 076	319	21	431
Total	49 168	7 922	306	10 781

The following table shows the nature of accidents which occurred in 1977. Collisions between vehicles accounted for 73 per cent of all accidents and 43 per cent of deaths, while vehicles overturning or leaving the road and vehicles colliding with pedestrians accounted for 4 per cent and 2 per cent of all accidents respectively, and 15 per cent and 16 per cent of deaths.

Road Traffic Accidents: Nature, South Australia, 1977

Nature of Accidents	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
Collisions between vehicles (a):				
Head on	871	362	43	708
Rear end	14 005	1 236	12	1 641
Right angles	14 066	2 487	63	3 626
Other	6 876	561	14	722
Vehicles:				
Overturning or leaving road (b)	2 013	986	47	1 362
Colliding with;				
Fixed object	4 058	1 046	67	1 392
Parked vehicle	5 759	276	7	344
Pedestrian	808	792	48	783
Other	482	74	2	93
Passenger accidents	80	80	2	84
Other	150	22	1	26
Total	49 168	7 922	306	10 781

(a) 'Vehicles' includes motor vehicles, motor cycles, pedal cycles, trains, trams, etc.

(b) Vehicles leaving road and then colliding are shown in the four categories below.

The following table shows the age group and sex of persons holding drivers' licences and permits at 30 June 1977 and involvements in accidents during 1977 of drivers and riders within the same classifications. In this table figures for involvements relate to accidents occurring in South Australia whereas licence and permit holders are those licences, etc., issued in South Australia, and the licences on issue at 30 June are only an approximation of the average for the year.

It should be noted in particular that these figures do not measure exposure to risk: for example they take no account of distances driven, times of day into which driving may be concentrated or traffic conditions during those times.

The following additional limitations should be observed when interpreting the figures:

- (i) All figures include permit holders; the accident involvement of permit holders, who are permitted to drive a vehicle only when accompanied by a fully licensed driver, appears, from an examination of the relevant data, to be significantly lower than that of fully licensed drivers. At 1 July 1977, there were 12 570 permit holders; of these 4 904 or approximately one-third were aged 16 years and 9 092 or just over two-thirds of the total were aged 20 years or less: thus if permit holders and their involvements in accidents were excluded from the table, it could be expected that the involvement rates in the lower age groups would be higher than those shown.
- (ii) The number of involvements with ages not stated is high; and their age distribution, if known, might be different from that of known cases.

Road Traffic Accidents: Age and Sex of Licensed Drivers and of Drivers and Riders Involved in Accidents, South Australia^(a) 1977

Age (Years)	Licensed Drivers Riders and Permit Holders at 30 June 1977		Accident Involvement of Drivers and Riders (b)		Accident Involvement Rate per 100 Licensed Drivers and Riders	
	Males	Females	Males	Females	Males	Females
Under 20	40 212	25 858	12 611	3 160	31.4	12.2
20-24	53 383	40 833	11 402	3 771	21.4	9.2
25-29	51 820	41 234	7 729	2 907	14.9	7.1
30-34	45 510	35 824	5 546	2 376	12.2	6.6
35-39	36 411	26 839	4 350	1 909	11.9	7.1
40-44	32 644	21 984	3 936	1 394	12.1	6.3
45-49	34 486	21 041	3 918	1 244	11.4	5.9
50-54	34 025	20 018	3 626	1 141	10.7	5.7
55-59	28 093	15 835	2 881	777	10.3	4.9
60-64	23 221	11 694	2 222	550	9.6	4.7
65-69	16 593	7 484	1 263	376	7.6	5.0
70-74	9 579	3 379	719	201	7.5	5.9
75-79	4 531	1 484	362	103	8.0	6.9
80 and over	2 124	548	174	41	8.2	7.5
Not stated	—	—	10 326	2 217	—	—
Total	412 632	274 055	71 065	22 167	17.2	8.1

(a) Includes both licensed riders and permit holders.

(b) Drivers and riders involved in more than one accident during the year are included once for each accident.

SHIPPING

Control of Shipping

The Commonwealth Parliament is empowered under the Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the *Navigation Act 1912* and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within Australia. Other shipping Acts under the trade and commerce power are the *Sea-Carriage of Goods Act 1924*, the *Seamen's Compensation Act 1911*, the *Seamen's War Pensions and Allowance Act 1940*, the *Australian Coastal Shipping Commission Act 1966*, the *Australian Coastal Shipping Agreement Act 1956* and the *Stevedoring Industry Act 1956*.

Shipping in South Australia is controlled by the *Navigation Act 1912* and, where this does not apply, by the *Harbors Act, 1936-1978* and the *Marine Act, 1936-1976*. Both of the State Acts are administered by the Department of Marine and Harbors.

Registration of Ships

Registration of ships in Australia is in accordance with the *Merchant Shipping Act 1894* of the Imperial Parliament, under sections which apply to the United Kingdom and all British dominions. Registration is not compulsory for vessels of less than 15 net tons engaged in river or coastal trade or for larger vessels not engaged in trade. Yachts and small trading vessels may be registered at the request of the owners as registration facilitates the sale or mortgage of these vessels. An annual review of the register is

carried out but some vessels whose present ownership or use cannot be traced, are retained on the register in the absence of any positive justification for their removal.

Four different measures of tonnage (gross, net, displacement, or deadweight) may be applied to a vessel. Gross tonnage is the total enclosed cubic capacity of the ship on a basis of 2.83 cubic metres a ton; net tonnage is the cubic capacity available for cargo in terms of 2.83 cubic metres a ton; displacement tonnage is the weight of water displaced by a ship; deadweight tonnage is the total weight of fuel, water, stores and cargo that a ship will carry. Passenger ships are commonly rated by the gross tonnage, cargo ships by their net tonnage, warships by their displacement tonnage and oil tankers by their deadweight tonnage.

The following table shows the number of vessels on the South Australian Register at 31 December 1978.

**Shipping, Vessels on South Australian Register
At 31 December 1978**

Net Tonnage	Steam and Motor			Sailing (Including Fitted with Auxiliary Power)			Barges, Hulks, Dredges, Etc. Not Self-propelled		
	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage
Under 50	103	5 086	2 157	124	2 058	1 710	—	—	—
50-99	36	3 866	2 598	4	601	171	1	83	75
100-199	7	1 691	1 118	2	678	313	1	179	179
200-499	—	—	—	—	—	—	1	319	319
500-999	4	5 539	2 666	—	—	—	1	762	760
1 000-2 999	1	4 174	1 327	—	—	—	—	—	—
3 000 and over	1	7 357	4 518	—	—	—	—	—	—
Total	152	27 713	14 384	130	3 337	2 194	4	1 343	1 333

Registration of Motor Boats

The Boating Act, 1974-1978 gives power to the South Australian Minister of Marine to regulate boating and other activities within South Australian waters. The main provisions of the Act refer to the registration of motor boats and the licensing of motor boat operators.

Any boat that is propelled by an engine, whether or not that engine is the main means of propulsion, must be registered and have its registration number displayed on the hull. The registration number consists of two letters followed by two digits and the letter 'S' denoting South Australia. From 1 November 1977 the annual registration fee is \$7.00. A registration must be renewed annually, but, for a boat that is less than 3.048 metres in length and powered with an engine that develops less than 5 horsepower, a renewal fee is not required. At 30 June 1978 there were 36 363 motor boats registered.

Only persons, sixteen years of age or older, may be issued with a motor boat operator's licence which remains in force without renewal unless cancelled or suspended under the Act or voluntarily surrendered. A person aged between twelve and sixteen years may be issued a permit to operate a motor boat subject to certain restrictions. At 30 June 1978 there were 52 580 motor boat operator's licence holders. The other provisions of the Act deal with unseaworthy boats, wrecks, and abandoned boats, speed restrictions, rules for water ski-ing, reckless and dangerous operation, the reporting of accidents, etc.

Details of the minimum safety equipment required to be carried in a motor boat are listed in the Act's Regulations; these vary according to the length of the motor boat and whether it operates in in-shore or off-shore waters.

Shipping Search and Rescue

The Shipping Search and Rescue organisation (SAR), administered by the Department of Transport, co-ordinates the marine search and rescue operations for which the Commonwealth Government is responsible. The SAR also co-operates with the appropriate authorities in other marine emergencies.

Shipping Arrivals at South Australian Ports

Shipping figures are based on returns rendered to the Collector of Customs by shipping companies, or their agents, in respect of trading vessels exceeding 200 net tons: each arrival at and departure from a South Australian port is recorded. In the following tables the column headings, coastal and overseas, indicate the classification of vessels regardless of the division of trade on which the vessels were engaged at any particular time.

The two tables below show arrivals of coastal and overseas vessels at individual Customs ports and at all ports in South Australia respectively.

Shipping: Vessels Entered at Customs Ports, South Australia, 1977-78

Port	Coastal				Overseas		Total	
	Intrastate		Interstate		Number	Net Tonnage	Number	Net Tonnage
	Number	Net Tonnage	Number	Net Tonnage				
Ardrossan	26	'000 136	23	'000 99	21	'000 82	70	'000 317
Ballast Head	6	19	7	24	8	29	21	72
Port Adelaide (a)	429	380	183	608	537	3 084	1 149	4 072
Port Giles	—	—	—	—	6	49	6	49
Port Lincoln	54	69	11	107	56	422	121	598
Port Pirie	9	86	42	286	96	585	147	956
Port Stanvac	21	219	19	222	55	1 296	95	1 737
Rapid Bay	39	58	9	46	11	25	59	128
Thevenard	9	40	31	133	16	96	56	268
Wallaroo	—	—	1	1	20	150	21	150
Whyalla	16	79	93	531	72	636	181	1 246

(a) Inner and outer harbour.

Shipping, Vessels Entered at South Australian Ports

Year	Coastal				Overseas		Total	
	Intrastate		Interstate		Number	Net Tonnage	Number	Net Tonnage
	Number	Net Tonnage	Number	Net Tonnage				
1973-74	915	'000 1 422	542	'000 3 226	1 005	'000 6 413	2 462	'000 11 061
1974-75	912	1 233	522	2 982	1 024	6 760	2 458	10 975
1975-76	963	1 360	434	2 427	1 041	6 960	2 438	10 746
1976-77	672	1 005	429	2 343	852	5 700	1 953	9 048
1977-78	1 014	1 399	419	2 056	898	6 452	2 331	9 907

The next table shows arrivals of vessels exceeding 200 net tons at selected Customs ports, according to country of registration of the vessels.

Shipping: Country of Registration, Vessels Entered at Selected Customs Ports South Australia

Customs Port	Country of Registration	Vessels		Net Tonnage	
		1976-77	1977-78	1976-77	1977-78
Ardrossan	Australia	49	58	216 927	252 794
	Other countries	16	12	90 342	64 541
	Total	65	70	307 269	317 335
Port Adelaide	Australia	390	571	808 708	1 008 638
	Greece	38	20	263 709	149 760
	India	20	19	104 142	92 444
	Japan	55	56	279 842	288 872
	Liberia	60	56	424 732	389 712
	Norway	23	16	211 294	156 124
	Panama	51	73	253 337	348 354
	Singapore	44	53	167 827	232 301
	United Kingdom	96	101	383 751	394 451
	USSR	68	43	226 071	153 851
	Other countries	97	141	504 139	855 900
	Total	942	1 149	3 627 552	4 072 407
Port Lincoln	Australia	70	68	140 994	199 125
	Greece	7	3	59 680	23 057
	Liberia	5	4	45 402	19 325
	United Kingdom	10	10	90 444	95 152
	Other countries	26	36	188 743	261 110
Total	118	121	525 263	597 769	
Port Pirie	Australia	53	51	382 775	371 192
	Greece	9	8	73 130	67 768
	India	10	19	48 382	90 246
	United Kingdom	16	17	123 139	115 496
	USSR	13	7	39 889	27 053
	Other countries	32	45	163 801	284 283
Total	133	147	831 116	956 038	
Port Stanvac	Australia	56	44	649 199	484 304
	Liberia	8	16	263 702	529 702
	United Kingdom	4	3	38 329	27 753
	Other countries	28	32	687 820	695 464
Total	96	95	1 639 050	1 737 223	
Thevenard	Australia	39	41	159 982	177 170
	Panama	6	4	17 311	11 060
	United Kingdom	9	7	65 970	62 250
	Other countries	9	4	34 558	17 870
Total	63	56	277 821	268 350	
Whyalla	Australia	132	121	747 874	621 828
	Liberia	11	7	132 213	80 452
	United Kingdom	17	15	169 977	119 609
	Other countries	44	38	507 937	424 271
Total	204	181	1 558 001	1 246 160	

Cargo Handled at Major Ports

The South Australian Department of Marine and Harbors records details of cargo handled at major ports in this State and the following table shows details for each of the last five years.

Cargo Handled: Major Ports, South Australia

Port	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 tonnes				
American River	46	37	41	45	32
Ardrossan	522	541	744	596	653
Ballast Head	200	192	193	174	153
Kingscote	209	176	188	97	114
Klein Point	559	550	605	643	736
Port Adelaide	4 357	3 862	3 640	3 123	3 176
Port Augusta	31	11	—	—	—
Port Giles	99	119	145	102	40
Port Lincoln	739	970	783	617	491
Port Pirie	1 324	1 272	1 318	1 082	1 147
Port Stanvac	2 964	2 816	3 719	2 953	3 185
Proper Bay	102	48	33	23	19
Rapid Bay	243	229	228	267	309
Stenhouse Bay	14	5	—	—	—
Thevenard	975	924	630	609	589
Wallaroo	303	362	385	127	151
Whyalla	6 930	6 520	5 538	4 027	3 108
Other ports	1	—	—	—	—
Total	19 618	18 634	18 190	14 483	13 904

Total cargo handled at major ports in South Australia declined from 14 483 000 tonnes in 1976-77 to 13 904 000 tonnes in 1977-78, a decrease of 579 000 tonnes (4 per cent). Almost all South Australian ports handled more cargo during 1977-78. The main decrease occurred at Whyalla but this and other smaller decreases were compensated by marginal increases at eight other ports.

Overseas Shipping Cargo

Overseas shipping cargo statistics are compiled from returns submitted by shipping companies, or their representatives, to Customs Houses at each port in South Australia. A return is required for each movement of a vessel into and out of a port except for naval vessels, yachts and other craft used for pleasure, foreign fishing vessels that neither load nor discharge cargo and vessels not exceeding 200 net tons.

Cargo is recorded in terms of either units of weight or units of volume depending on the basis on which freight is charged. The statistics show separate figures for cargo recorded in tonnes weight and cargo recorded in cubic metres. The aggregates for weight and volume cargo are not added to a figure for total cargo because they are unlike quantities, and comparisons of total cargo between ports, trade routes or periods of time could be affected by variations in the cargo mix and in the basis on which freight is charged.

The following figures show, for the years 1976-77 and 1977-78, particulars of cargo loaded in South Australia for discharge overseas, and of cargo discharged in South Australia from overseas, classified according to major trade areas.

Shipping: Cargo Loaded in South Australia, Trade Area of Destination

Cargo Loaded for Ports in—	1976-77		1977-78	
	Tonnes Weight	Cubic Metres	Tonnes Weight	Cubic Metres
North America and Hawaiian Islands:				
Northern Area;				
USA	70 679	1 819	41 311	5 197
Canada	331	2 315	179	2 429
Central America	—	—	59	15
Bermuda and Caribbean Area	—	4	5	10
South America	6 700	—	—	—
Europe (excluding USSR):				
North-western, Central and Baltic;				
United Kingdom	56 457	30	65 900	—
Other	531 172	4 272	254 150	1 706
Southern Area	30 130	10 321	54 068	435
USSR (in Europe and Asia)	37 168	4 971	91 035	150
Africa	112 900	14 049	129 050	21 875
Asia (excluding USSR)	2 408 627	225 199	2 101 204	553 040
Papua and New Guinea, New Zealand and Pacific Islands	253 322	43 861	174 267	33 589
Indian Ocean Islands and Antarctica	11 332	118	1 459	—
Total cargo loaded	3 518 818	306 959	2 912 687	618 446

Shipping: Cargo Discharged in South Australia, Trade Area of Origin

Cargo Discharged from Ports in—	1976-77		1977-78	
	Tonnes Weight	Cubic Metres	Tonnes Weight	Cubic Metres
North America and Hawaiian Islands:				
Northern Area;				
USA	35 158	36 808	21 586	15 502
Canada	61 475	64 639	65 846	39 981
Central America	—	—	—	—
Bermuda and Caribbean Area	—	—	300	—
South America	13 600	—	—	—
Europe (excluding USSR):				
North-western, Central and Baltic;				
United Kingdom	12 977	986	4 732	1 987
Other	22 230	37 571	17 340	34 277
Southern Area	94 969	8 280	7 169	6 381
USSR (in Europe and Asia)	326	172	—	13
Africa	15 122	1 230	33 048	1 574
Asia (excluding USSR)	1 935 090	236 713	2 288 643	196 581
Papua and New Guinea, New Zealand and Pacific Islands	107 178	30 158	127 679	18 913
Indian Ocean Islands and Antarctica	46 144	—	120 809	237
Total cargo discharged	2 344 269	416 557	2 687 152	315 446

Distances to Overseas Ports

Distances in kilometres from Port Adelaide to principal overseas ports are shown in the following table. Distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 506.

Distances from Port Adelaide to Principal Overseas Ports

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
<i>Africa;</i>		<i>North America;</i>	
Cape Town	10 377	<i>East Coast,</i>	
<i>Asia;</i>		Baltimore	(a) 23 135
Colombo	7 982	(c) 19 059	
Djakarta	5 643	Montreal	(a) 23 541
Hong Kong	8 856	(c) 21 368	
Singapore	6 510	New York	(a) 22 961
Yokohama	9 780	(c) 19 200	
<i>Europe;</i>		<i>West Coast,</i>	
Liverpool	(a) 21 630	San Francisco	13 653
(b) 19 774		Vancouver	14 357
London	(a) 21 705		
(b) 19 839		<i>Central America;</i>	
Marseilles	(a) 21 144	Panama	15 385
(b) 16 688		<i>South America;</i>	
Naples	(a) 21 663	<i>East Coast,</i>	
(b) 15 940		Buenos Aires	(d) 14 388
<i>New Zealand;</i>		Rio De Janeiro	(d) 15 901
Auckland	3 769	<i>West Coast</i>	
Wellington	3 482	Valparaiso	12 353

(a) Via Cape Town. (b) Via Suez Canal. (c) Via Panama Canal. (d) Via Cape Horn.

CIVIL AVIATION

Control of Civil Aviation

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act 1920* and to regulations made under the Act. The South Australian *Air Navigation Act, 1937* provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'. The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago Convention on Civil Aviation. Regulations based on the resolutions of the Paris Convention in 1919 were no longer adequate in the years after the 1939-45 War because of the immense wartime development of aerial transport.

The present regulations, administered by the Department of Transport, cover the registration of aircraft and the issue of certificates of airworthiness; the licensing of aircraft services, aircraft operating crews, aerodromes, and flying training schools, and the rules of the air. The Department is responsible for the operation of Air Traffic Control and has assumed responsibility for co-ordination of search and rescue operations.

Under the *Australian National Airlines Act 1945* the Australian National Airlines Commission was established and empowered to operate Commonwealth Government owned air services. The Commission operates under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act 1952* ratified an agreement between the Commonwealth Government and Australian National Airways Pty Ltd to ensure the efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalise the services of both airlines. The *Civil Aviation Agreement Act 1957* was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty Ltd by Ansett Transport Industries Ltd. The Commonwealth Parliament passed the *Airlines Equipment Act 1958* and this provided for further financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth Government to limit the aircraft capacity being provided on competitive routes by these two operators.

The Airlines Agreement approved by the *Airlines Agreement Act 1961* consolidated all the arrangements and principles developed by the Government over the past decade for maintaining and securing the competitive airline system and made important arrangements affecting the introduction of new aircraft on Australian domestic routes. The *Civil Aviation Agreement Act 1952*, amended by the 1961 Act, is now cited as the *Airlines Agreement Act 1952*.

For reference to international agreements on civil aviation see the *Year Book Australia* No. 48, and for references to international organisations see *Year Book* No. 37.

Aircraft on Register

The total number of aircraft listed at 30 June 1978 on the Australian register was 5 156. The following table shows figures for registered aircraft based in the South Australia-Northern Territory Region, classified by type of operation.

Aircraft Based in South Australia-Northern Territory Region
Type of Operation

Type of Operation	At 30 June				
	1974	1975	1976	1977	1978
Regular public transport (a)	11	11	9	9	9
Private	227	247	272	327	370
Charter	121	130	123	131	151
Other (b)	107	116	114	127	133
Total	466	504	518	594	663

(a) Excludes major airlines servicing interstate routes.

(b) Includes agricultural work, ambulance, survey and pilot training functions.

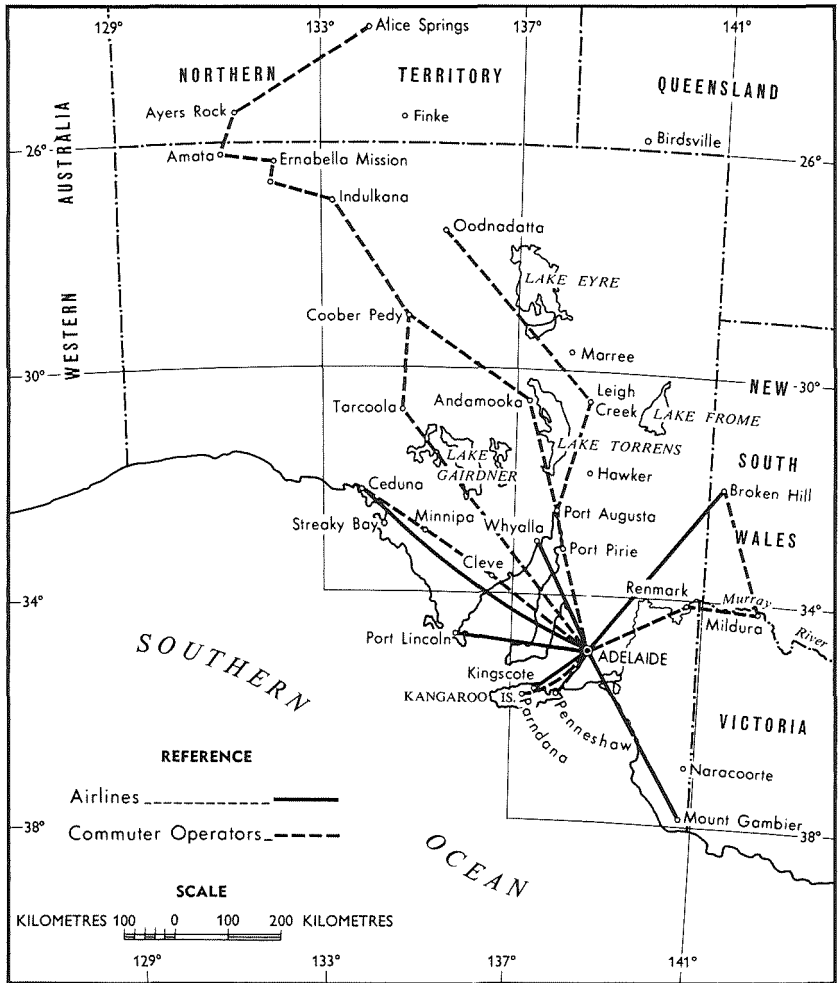
General Air Services

Adelaide has no direct links by air with overseas: these are provided through Sydney, Melbourne, and Perth. However, it is on the scheduled flights of regular interstate services from Sydney, Melbourne, Perth, Canberra and Darwin.

Adelaide is also the terminus for intrastate services. Regular connections to Ceduna, Kingscote, Mount Gambier, Port Lincoln and Whyalla are provided by Ansett Airlines of South Australia.

Since 1966-67, when the Commonwealth Government approved introduction of commuter services in country areas, there has been a significant increase in regular air services between country towns and areas which are either not served by the major airlines or had no direct air service with Adelaide or the nearest major provincial city.

SOUTH AUSTRALIA AIR SERVICES



Such services usually utilise single or twin engine aircraft and operate to fixed and published time-tables.

The first commuter service in Australia, between Adelaide and opal fields at Andamooka and Coober Pedy, commenced during 1966-67. This service was later extended to Ayers Rock, and now also services a number of remote localities *en route*.

Passengers and Freight Carried

The number of passengers and the tonnage of freight carried on civil airlines in South Australia are shown in the following table.

**Principal Airports, South Australia
Passengers, Freight and Aircraft Movements**

Airport	1973-74	1974-75	1975-76	1976-77	1977-78
PASSENGERS (a)					
Adelaide (b) (c)	1 376 891	1 425 860	1 454 917	1 607 238	1 761 932
Kingscote	59 107	61 121	58 887	51 963	65 072
Port Lincoln	60 956	61 737	65 498	63 628	69 731
Woomera	14 209	14 032	8 876	5 872	4 777
Whyalla	39 454	41 267	42 939	37 173	42 621
Mount Gambier	29 464	30 148	33 748	33 620	31 433
FREIGHT—TONNES (d)					
Adelaide (b) (c)	18 549	18 957	16 390	18 849	19 841
Kingscote	151	142	133	117	142
Port Lincoln	124	121	130	134	144
Woomera	99	90	64	35	20
Whyalla	129	133	108	95	86
Mount Gambier	101	98	102	100	90
AIRCRAFT MOVEMENTS (e)					
Adelaide (c)	24 351	24 225	23 978	24 354	32 288
Kingscote	1 992	2 081	2 239	1 898	2 108
Port Lincoln	2 234	2 325	2 332	2 220	2 374
Woomera	474	458	361	<i>n.a.</i>	188
Whyalla	1 378	1 432	1 540	1 396	1 496
Mount Gambier	1 398	1 567	1 753	1 592	1 300

(a) Total of embarkations and disembarkations. (b) Figures of passengers and freight movements are overstated to the extent of through traffic transferring between flights. (c) Includes Edinburgh Airfield. (d) Total of freight loaded and unloaded. (e) Total of arrivals and departures.

Civil Aviation Accidents

During 1977-78 there were two civil aviation accidents involving casualties in South Australia and these resulted in the death of three persons.

The table below shows the details of civil aviation accidents involving casualties during the ten year period 1968-69 to 1977-78. There were no accidents involving regular public transport during this period.

**Civil Aviation Accidents Involving Casualties, South Australia
1968-69 to 1977-78(a)**

Class of operation	No. of Accidents	Persons Killed	Persons Injured
Charter	4	15	2
Training	3	—	3
Private	24	57	7
Gliding	7	3	4
Other	1	—	1
Total	39	75	17

(a) Excludes parachutists killed or injured on contact with earth after an uninterrupted fall.

10.5 COMMUNICATION

As a result of Federation all the former colonial post and telegraph services were taken over by the Commonwealth Government on 1 March 1901 and until 1 July 1975 were controlled, pursuant to the provisions of the *Post and Telegraph Act 1901*, by the Postmaster-General through the Postmaster-General's Department. A detailed history of Posts, Telegraphs and Telephones was included on pages 469-70 of the *South Australian Year Book 1967*.

In February 1973 a Commission was established to conduct an inquiry into what changes, if any, should be made in the organisation, administration and operations of postal and telecommunication services. In their Report, presented in April 1974, the Commissioners recommended establishment of separate postal and telecommunication corporations independent of the jurisdiction of the Public Service Board.

As a result of the Government's acceptance of this recommendation the Australian Telecommunications Commission and the Australian Postal Commission took over from the Australian Post Office on 1 July 1975 under the provisions of the *Telecommunications Act 1975*, the *Postal Services Act 1975*, and the *Postal and Telecommunications Commissions (Transitional Provisions) Act 1975*.

POSTAL SERVICES

The Australian Postal Commission, trading as Australia Post, was formed on 1 July 1975, to provide Australia's postal services.

Major extensions to Australia Post Courier, already operating in all Australian capital cities, were made in South Australian country areas and the Northern Territory in 1978. Thirteen major centres, Murray Bridge, Mount Gambier, Millicent, Naracoorte, Bordertown, Port Lincoln, Whyalla, Port Augusta, Port Pirie, Kadina, Berri, Loxton and Renmark, began a reciprocal courier service with Adelaide. An Adelaide-Alice Springs courier service was introduced in April 1978 and the service was extended during the year to cover connections between Adelaide, Alice Springs, Darwin, Katherine and Tennant Creek. In July 1978 an overnight courier service connecting Darwin with all Australian capital cities was introduced, followed by the introduction of a courier service in Darwin and its metropolitan area.

A new road mail service was introduced in July 1978 between Adelaide, Alice Springs and Darwin, resulting in improved services to centres on that route including increased frequency of despatches and a faster mail flow.

Philatelic facilities were made available through several centres in 1978 including full facilities at Port Lincoln, Murray Bridge, Morphett Vale and Alice Springs and limited facilities at Victor Harbor and Salisbury.

Details of post offices for the years 1974 to 1978 are given in the following table.

Post Offices: South Australia and Northern Territory
Number at 30 June

Particulars	1974	1975	1976	1977	1978
Post Offices:					
Official	171	171	171	171	169
Non-official	615	590	569	556	552
Total	786	761	740	727	721

Non-official post offices are conducted by persons who are not employed under the *Postal Services Act 1975* and who receive an allowance based on business transacted—in many instances this type of business is conducted in conjunction with some other business activity.

At 30 June 1978, there were 3 779 persons employed in postal services in South Australia and Northern Territory including 3 077 official staff employed under the *Postal Services Act 1975* and 702 non-official staff. In addition there were 266 mail contractors who held mail service contracts with Australia Post.

The Australia Post financial statements are prepared on an accrual accounting basis and in accordance with accounting principles generally applied in commercial practice. Gross postage receipts collected in South Australia and Northern Territory by Australia Post during 1977-78 totalled \$38.1 million including \$20.5 million from postage stamps, \$9.6 million from postal debtors and \$4.7 million from franking machines.

Postal Articles Handled

Details of articles handled by post offices in South Australia and the Northern Territory during the years 1973-74 to 1977-78 are shown in the following table.

Postal Articles Handled, South Australia and Northern Territory

Year	Standard Articles (a) (b)	Non-standard Articles (a) (c)	Parcels (d)	Registered Articles	All Articles
'000					
Posted for delivery:					
Within Australia:					
1973-74	209 303	21 095	1 884	579	232 860
1974-75	186 909	25 967	1 642	589	215 107
1975-76	156 073	20 989	1 362	438	178 862
1976-77	150 738	18 873	1 322	363	171 296
1977-78	156 052	17 517	1 784	412	175 765
Beyond Australia:					
1973-74	4 517	318	85	79	4 999
1974-75	4 453	316	82	89	4 940
1975-76	8 408	365	68	67	8 908
1976-77	9 688	370	73	62	10 193
1977-78	6 497	398	73	56	7 024
Received from beyond Australia:					
1973-74	5 405	1 876	98	32	7 411
1974-75	6 569	2 288	110	36	9 003
1975-76	5 975	1 840	224	33	8 072
1976-77	6 582	1 679	225	35	8 521
1977-78	5 802	1 634	95	34	7 565

(a) Includes Certified and Messenger Delivery mail. (b) Before 1974-75 includes all letter form articles. (c) Before 1974-75 includes only newspapers and packets. (d) Includes registered parcels.

Postal Money Orders

In November 1977 a new money transfer service called Postal Money Orders was introduced. This service replaced the Money Order and Postal Order services previously operated by Australia Post.

The combined value of money orders and postal orders issued in 1944-45 amounted to \$4 929 000; in 1977-78 the combined value of money orders, postal orders and postal money orders issued was \$30 138 000.

The combined value of money orders and postal orders paid in 1944-45 amounted to \$4 067 000; in 1977-78 the combined value of money orders, postal orders and postal money orders paid was \$27 350 000.

Money Orders Issued and Paid
South Australia and Northern Territory

Year	Money Order Offices	Issued		Paid	
		Number	Value	Number	Value
	Number	'000	\$'000	'000	\$'000
1973-74	534	394	13 864	335	12 622
1974-75	529	377	18 302	323	15 844
1975-76	517	372	20 024	308	17 252
1976-77	512	359	20 747	309	18 976
1977-78 (a)	508	724	28 878	542	26 211

(a) Includes all Postal Money Orders issued since the introduction of the new money transfer service.

Postal Orders Issued and Paid
South Australia and Northern Territory

Year	Postal Order Offices	Postal Orders Issued		Postal Orders Paid	
		Number	Value	Number	Value
	Number	'000	\$'000	'000	\$'000
1973-74	814	2 305	9 660	1 869	8 075
1974-75	762	2 026	8 933	1 647	7 457
1975-76	740	1 220	5 597	960	4 457
1976-77	727	851	4 448	622	3 111
1977-78 (a)	721	257	1 260	224	1 139

(a) The issue of Postal Orders ceased in November 1977 following the introduction of the new money transfer service.

TELECOMMUNICATION SERVICES

The Australian Telecommunications Commission (Telecom Australia) has responsibility for telecommunication services within Australia. On commencement the Commission had approximately 3.5 million telephone subscribers, net assets of \$4 000 million, a staff of 88 600 and a projected budget for 1975-76 of \$1 900 million.

During 1977-78 there was a considerable growth in the provision of services e.g. the telephone network increased by seven per cent, telex by sixteen per cent and 'Datel' by forty per cent; the Commission in conjunction with Overseas Telecommunications

Commission provided a new service, International Subscriber Dialling (ISD), to seventy countries. In addition, existing services are being improved *e.g.* modernisation of public telephone services including the provision of Subscriber Trunk Dialling (STD) from public telephones.

Cash receipts of Telecom Australia in South Australia and Northern Territory amounted to \$169.1 million during 1977-78 including \$158.1 million from telephone services, and \$6.7 million from telegraph services. Cash payments for the same period amounted to \$172.3 million including \$102.4 million for salaries and wages.

At 30 June 1978 there were 9 335 staff employed by Telecom Australia in South Australia and the Northern Territory including 6 940 permanent officers *i.e.* those employees whose employment is governed by the *Telecommunications Services Act 1975*. In addition there were 106 contract staff.

Telegraph System

Australia's telegraph service, known as TRESS (Teleprinter Reperforator Switching System) was first introduced in South Australia in 1959, before being extended to the other States. This system, using teleprinters and automatic switching apparatus, has eliminated the intermediate handling of telegraph traffic, resulting in greater speed and economy.

Another telegraph service known as TELEX has been available in South Australia since 1957. TELEX is a telecommunications system, similar to the telephone network, using teleprinter machines and providing a printed record of every message. Subscribers are provided with a teleprinter in their own premises and may be connected through the teleprinter exchange with other subscribers anywhere in Australia and in more than 100 overseas countries. At 30 June 1978 there were 2 479 subscribers in South Australia.

The number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1973-74 to 1977-78, are shown below.

Telegraph Services, South Australia and Northern Territory

Year	Telegrams		Teleprinter Exchange	
	Dispatched within Australia	Dispatched beyond Australia	Subscribers	Number of Calls (a)
	'000	'000	Number	'000
1973-74	1 968	160	1 438	2 909
1974-75	1 751	159	1 657	3 639
1975-76	1 420	146	1 890	3 682
1976-77	1 158	137	2 157	3 879
1977-78	970	127	2 479	4 178

(a) Includes official Post Office traffic.

The Telecom Australia picturegram service is used to send and receive photographs to and from other parts of Australia and overseas. Photographs of documents, X-rays, and other matter capable of being photographed can be transmitted by this service.

Telecom Australia also provides a Datel service for the transmission of digital data between computer systems over private lines or the ordinary telephone network. The data are converted into a form suitable for transmission over a telephone type circuit by a 'modulator/demodulator' unit known as a 'Modem'. Before data are presented to the computer or terminal they are restored to their original form.

Telephone Services

Telecom Australia provides subscriber services, trunk line circuits and automatic telephone exchanges. There has been a continuous growth in these facilities and at 30 June 1978 there were 3 586 trunk line channels and 386 country automatic telephone exchanges in the State. There are sixty automatic exchanges in the Adelaide Telephone District. From 1 September 1978 the normal charges for selected telephone services are as follows:

Installation charge for a new telephone service is \$120 reduced to \$60 where an existing subscriber moves to other premises anywhere in Australia. If a telephone instrument and line are already *in situ* at the new address, the connection fee is further reduced to \$10. Annual rental charges are based on the facilities provided; where continuous exchange facilities exist the charge for a non-business service is \$85 or in the case of pensioners \$56-67, paid half-yearly in advance. The corresponding rental charges to subscribers with non-continuous exchanges are \$40 and \$26-66 respectively. Annual rental charges for continuous exchange and non-continuous exchange business services are \$120 and \$50 respectively. Approximately 99 per cent of subscribers now have continuous service.

Private calls between subscribers within a single telephone zone, and between subscribers in adjoining zones, are charged at a 'local call' rate of 9 cents per call. The corresponding charge for calls from public telephones is 10 cents. Trunk call rates, which vary according to duration and distances, are charged for calls between non-adjoining telephone zones: lower rates are charged for calls between 6 p.m. and 9 p.m.; between 9 p.m. and 8 a.m.; and in addition between 8 a.m. and 6 p.m. on Sundays.

Telephone Services, South Australia and Northern Territory

At 30 June	Telephone Exchanges	Telephone Services						Trunk Line Channels in Service (a)
		Ordinary Exchange	Duplex	Party Line	Private Branch Exchange	Public Telephones	Total	
1974	674	257 146	2	915	37 140	3 097	298 300	2 726
1975	670	270 036	2	870	37 818	3 078	311 804	2 829
1976	667	289 875	2	804	41 128	3 139	334 948	3 031
1977	667	317 270	2	714	40 184	3 164	361 334	3 367
1978	664	346 211	—	642	40 875	3 124	390 852	3 586

(a) Excludes trunk junctions.

A Telecom Australia objective is the establishment of a nationwide subscriber to subscriber direct trunk calling system known as subscriber trunk dialling (STD). The provision of STD facilities at telephone exchanges in South Australia has increased rapidly since its introduction in January 1967 and at 30 June 1978 STD facilities were available to approximately 284 000 subscribers in the Adelaide Telephone District and about 76 500 country subscribers for two-way contact with selected exchanges in New South Wales, Victoria, Queensland, Western Australia and Tasmania.

All metropolitan and outer metropolitan services are operated through automatic exchanges, whereas at 30 June 1978, 85 000 country and Northern Territory services were automatic and 13 100 services were manually operated. Metropolitan and outer metropolitan services totalled approximately 292 700 and of these 221 400 were non-business. In the country, business telephone services accounted for a larger share (about forty-seven per cent) of services.

RADIO AND TELEVISION SERVICES

On 1 July 1975 Telecom Australia took over certain broadcasting responsibilities which had been vested in the former Postmaster-General's Department, under the *Broadcasting and Television Act 1942*. Telecom Australia is now required to provide and operate for the purposes of broadcasting and televising programs of the Australian Broadcasting Commission (ABC) the following:

- (1) transmitting stations (including translator stations) for the National and Radio Australia services;
- (2) interconnection facilities to connect each studio of the ABC to its appropriate local transmitting station;
- (3) technical equipment for the reception of broadcasting transmissions from other countries for re-broadcast by the ABC.

Telecom Australia is currently operating all transmitting station and program link facilities associated with the ABC's broadcasting services *viz*, medium frequency, high frequency inland, frequency modulation (FM), Television and Radio Australia (International). In addition, Telecom Australia is the construction authority for all new transmitting facilities required for these services.

Details of radio and television stations licensed in South Australia at 30 June in the years 1974 to 1978 are shown in the following table.

Radio and Television Stations, South Australia
At 30 June ^(a)

Radio Communication Stations	1974	1975	1976	1977	1978
Broadcasting:					
National	10	10	10	11	11
Commercial	8	8	9	9	9
Public (b)	1	1	1	1	1
Television:					
National	6	6	6	8	8
Commercial	5	5	5	6	6
Transmitting and receiving:					
Fixed;					
Outpost	185	190	218	223	208
Other	153	174	196	219	300
Land;					
Aeronautical	38	40	39	42	50
Base stations for mobile services	1 448	1 521	1 632	1 819	1 912
Coast	25	25	26	26	26
Experimental	72	78	79	82	110
Repeater	—	—	1	1	1
Mobile	17 332	19 219	20 922	23 413	43 777
Space services	1	1	1	1	1
Amateur	778	789	795	874	1 054
Receiving only:					
Fixed	20	21	22	22	22
Mobile	10	24	24	31	33
Total stations	20 092	22 112	23 986	26 788	47 529

(a) Excludes stations in Northern Territory.

(b) University of Adelaide station 3UV.

A fixed station is established at a fixed location for the exchange of radio messages with other fixed stations whereas a land station is established at a fixed location for the exchange of radio messages with mobile stations. An outpost station is established in an outback area and communicates with control stations operated by such organisations as the Royal Flying Doctor Service. A space service is a radiocommunication service between earth stations and space stations, between space stations, or between earth stations when signals are retransmitted by space stations, or transmitted by reflection from objects in space.

The latest commercial television station, based at Loxton, was opened on 27 November 1976.

The first four stations of the National FM broadcasting network began transmission on 24 January 1976. The high power stereo transmissions which serve Sydney, Melbourne, Canberra and Adelaide originate from the Australian Broadcasting Commission's Adelaide studios and are relayed over specially prepared lines.

Further information on radio and television services is contained in Part 6.4 Culture and Recreation.

OVERSEAS TELECOMMUNICATIONS SERVICES

The Overseas Telecommunications Commission (Australia) was established under the *Overseas Telecommunications Act 1946*. The Commission, in association with the Australian Telecommunications Commission in Australia and with telecommunication authorities in overseas countries, provides telecommunication services between Australia and other countries. These services are provided through high-frequency radio, coaxial submarine cable, and satellite communication systems, and include international public message telegraph, telephone (including International Subscriber Dialling), telex, phototelegraph and leased teleprint and telephone-type services. A service providing computer to computer high-speed data transfer is also available to some countries, while international television programs are provided by means of satellite communication facilities. In addition, the Commission operates the Australian coastal radio services for communication with ships at sea in Australian waters, and high-frequency radio services for communication with ships in any part of the world.

The Commission owns three satellite earth stations in Australia. The stations at Carnarvon in Western Australia and Moree in New South Wales operate through the INTELSAT Pacific Ocean communications satellite to the countries of the Pacific Region. The station at Carnarvon is also one of the few which provide satellite tracking, telemetry, command and communications monitoring for the system of INTELSAT satellites. The satellite earth station at Ceduna in South Australia operates through the Indian Ocean INTELSAT communications satellite to Asia, Africa and Europe.

Details of the overseas telecommunications services and traffic are published in various issues of the *Year Book Australia*, e.g. No. 62, 1977-1978, page 532.

PART 11

PUBLIC FINANCE

11.1 STRUCTURE OF PUBLIC FINANCE

The collection of public revenue and the expenditure of public money in South Australia are the responsibility of four groups of authorities: (i) Commonwealth government; (ii) South Australian Government; (iii) State public corporations; and (iv) local government.

The power to raise revenue from taxation is vested in the various governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other governments and authorities. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government authorities and some public corporations is derived from grants from other levels of government. A further source of funds is the loan market; government securities are issued for loan raisings in Australia and overseas.

Authorisation for expenditure by Commonwealth and State Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State public corporation derives its authority for expenditure from the provisions of the specific Act under which it has been established. The Local Government Act, 1934-1979 contains sections relating to local government expenditure. The following sections of this part provide some details of the financial transactions of the government sector in South Australia. Special attention is given to transactions within the State Government budget, transactions of a number of public corporations and transactions of all local government authorities. In addition, details of some Commonwealth Government expenditures are included.

Commonwealth Government Transactions

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. As indicated in more detail below, not all of the transactions listed relate directly to the State Budget; many of the items are negotiated wholly through State Trust Funds. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia. A more detailed analysis of Commonwealth Government finance may be obtained from the *Year Book Australia*.

State Government Accounts

Statistics relating to the State Government Budget are derived from accounts prepared by the Treasurer each year and included in the Report of the Auditor-General of South Australia. These accounts, which are on a cash basis, cover the Consolidated Revenue Account which in general terms is the current account of the Government, and the Loan Fund through which is handled all money raised by public borrowing; the receipt and disbursement of some special purpose Commonwealth Government grants are also handled through these accounts.

State Government Budget receipts include (in addition to loan raisings) taxation, proceeds of sale of goods and services by trading undertakings, some of the grants made by the Commonwealth Government, fees, rents, recoups and other sundry items. State Government disbursements are made for capital works, for provision of services (such as health, education and water supply), for general administrative expenses, and for interest and redemption payments.

The State Government Budget excludes many transactions negotiated through State Government Deposit and Suspense Accounts (including working accounts) and Trust Funds. The volume of such transactions is considerable. For example, transactions for roadworks are handled through the Highways Fund and transactions relating to forest operations are included in the Woods and Forests Working Account.

Some idea of the framework of the various funds may be obtained from the following table showing sources and disposal of funds in which the balances of Trust Funds and of Departmental Accounts appear.

Government of South Australia, Sources and Disposal of Funds at 30 June 1978

Sources and Nature of Funds	\$'000	
Public Debt:		
Securities current at 1 July 1977	1 495 737	
New Loans raised during 1977-78	288 494	
	<u>1 784 231</u>	
Less: Securities redeemed and converted	178 398	
Public Debt at 30 June 1978		1 605 834
Other interest bearing indebtedness:		
Trust Fund balances		14 038
Liabilities to Commonwealth Government;		
Housing Agreements		510 237
Other		150 790
Non-interest bearing indebtedness:		
Trust Fund balances		21 941
Departmental balances and other funds		91 919
		<u>2 394 759</u>

Government of South Australia, Sources and Disposal of Funds at 30 June 1978 (continued)

	\$'000	
Disposal of Funds		
Loan Account:		
Total of Loan Works at 1 July 1977	1 495 737	
Payments during 1977-78	253 186	
	<u>1 748 923</u>	
Less: Repayments	62 581	
Securities cancelled	19 277	
Other credits (a)	65 703	
	<u>147 561</u>	
Loan Works Account balances at 30		
June 1978	<u>1 601 363</u>	
Consolidated Revenue Account:		
Surplus at 1 July 1977	18 414	
Receipts for Year	1 167 196	
Payments for Year	<u>1 192 063</u>	
Deficit for Year	24 867	
Deficit at 30 June 1978		6 453
Rural Industry Assistance Agreement:		
Advances to primary producers		16 814
Housing Agreements:		
Advances to SA Housing Trust	293 110	
Advances to Home Builders Accounts	<u>217 127</u>	
		510 237
Water Treatment Agreement:		
Advances to Adelaide Water Treatment		
Scheme Fund		19 798
Land Acquisition:		
Advances to SA Land Commission		66 768
Other Agreements		81 146
Cash at bank and short-term deposits		<u>92 180</u>
		<u>2 394 759</u>

(a) Comprises Capital Works Grant, in lieu of loan raising (\$62 284 000) and transfer from Revenue Account (\$3 419 000).

Public Corporation Accounts

Most of the details included under this classification are based on the Auditor-General's annual reports prepared for a number of public corporation business undertakings, including those engaged in banking. Information is given from both revenue statements and balance sheets.

Local Government Accounts

Details included for local government authorities are based on annual statements prepared on an income and expenditure (accrual) basis in accordance with the 'Local Government Accounting Regulations, 1967'. Details of loan raisings are based on returns furnished separately.

Consolidated State and Local Government and Public Corporations Accounts

Any analysis of financial transactions of the Government sector would be incomplete without a comprehensive consolidation of all levels and funds of Government. Such data is released in the *Public Authority Finance* bulletin published by the Australian Statistician: this bulletin shows net receipts and outlays of the Commonwealth Government and each State separately and of the Commonwealth Government combined with all States. The figures are net and consolidated: net figures are those for which expenditures within a given classification have been reduced to the extent of any relevant receipt (and *vice versa*); and consolidated figures are those for which inter-authority, inter-level and inter-fund transactions are eliminated on consolidation of those authorities, levels and funds.

The tables which follow show figures on a consolidated net basis for State and local government and public corporations in South Australia for the four years to 1976-77.

State and Local Government Authorities and Public Corporations South Australia, Receipts and Financing Items

Particulars	1973-74	1974-75	1975-76	1976-77
	\$ million			
Receipts:				
Taxes, fees, fines, etc.	215.6	295.2	364.8	423.1
Income from public enterprises	39.7	18.2	54.6	49.5
Property income;				
Interest	26.5	33.3	40.0	51.6
Land rent, royalties	4.8	5.0	5.5	6.4
Total property income	31.3	38.3	45.5	58.0
Grants from the Commonwealth				
Government:				
For current purposes	291.5	444.8	607.3	674.5
For capital purposes	105.1	151.6	164.9	161.9
Total receipts	683.2	948.1	1 237.1	1 367.0
Financing items:				
Net borrowing;				
Local authority and public corporation securities	30.8	32.8	43.0	50.9
Other general government securities	2.0	6.7	4.9	6.5
Net advances from the Commonwealth Government;				
For loan works purposes	61.3	79.8	92.8	99.0
Other	46.2	87.2	93.7	75.6
Net receipts of private trust funds	0.5	2.5	6.3	9.9
Reduction in;				
Cash and bank balances	—32.5	—19.9	—80.6	—24.2
Security holdings	3.9	—1.9	—1.0	2.9
Other funds available (including errors and omissions)	34.9	27.6	30.9	53.6
Total financing items	147.1	214.8	190.0	274.2
Total funds available	830.3	1 162.9	1 427.1	1 641.2

State and Local Government Authorities and Public Corporations
South Australia, Outlay

Particulars	1973-74	1974-75	1975-76	1976-77
			\$ million	
Final consumption expenditure	381.3	548.9	722.1	884.8
Gross capital formation:				
Increase in stocks	1.8	3.3	1.4	3.9
Expenditure on new fixed assets	254.2	382.6	461.6	474.7
Expenditure on existing assets (net)	36.7	43.5	29.7	40.3
Total gross capital formation	292.7	429.4	492.7	518.9
Transfer payments:				
Interest	113.1	127.6	136.0	162.9
Transfer to persons	13.9	16.5	18.0	17.4
Subsidies	0.6	0.8	1.3	1.7
Grants for private capital purposes	5.6	7.1	11.8	13.0
Total transfer payments	133.2	152.1	167.1	195.0
Net advances:				
To the private sector	4.6	6.6	8.6	11.6
To public financial enterprises	18.6	25.9	36.7	30.9
Total net advances	23.1	32.5	45.2	42.5
Total outlay	830.3	1 162.9	1 427.1	1 641.2
Current outlay	508.8	693.9	877.4	1 066.8
Capital outlay	321.5	469.0	549.7	574.5

**11.2 COMMONWEALTH-STATE GOVERNMENTS
FINANCIAL RELATIONS**

The Commonwealth of Australia Constitution Act and the 1927 Financial Agreement represent significant events in Commonwealth-State financial relations. Under the former, the States surrendered the right to levy customs and excise duties which passed exclusively to the Commonwealth and under the latter, the Commonwealth became the borrowing agent for the States. Further details appear on page 537 of the *South Australian Year Book 1972*.

Since Federation the Commonwealth has made payments of various descriptions to the States. Before the 1939-45 War, Commonwealth payments were confined, for the most part, to special grants to assist the financially weaker States and to certain specific purpose grants relating to such matters as Commonwealth assistance for roads and contributions under the Financial Agreement.

Since the 1939-45 War there has been a marked increase in the amount and variety of Commonwealth assistance to the States. This has reflected, among other things, increases in the range and variety of government activities which have accompanied economic and social developments in this period of rapid growth of the Australian economy; greater participation by the Commonwealth in matters which were previously considered to be the sole responsibility of the States; and the effects of the introduction and continuation of uniform tax and of other changes on the basic allocation of financial resources between the Commonwealth and the States.

There are various ways of classifying Commonwealth payments to the States. They may be classified as 'capital' as opposed to 'current' transactions; to general purpose grants compared with payments for purposes specified by the Commonwealth; or in accordance with the constitutional authority under which the payments are made. Many of the recently introduced grants have been for specified purposes and instituted under Section 96 of the Constitution.

SPECIAL GRANTS

The Constitution provides, in Section 96, for the granting of special financial assistance to the States. Before 1933 financial assistance of varying amounts was granted to South Australia, Western Australia and Tasmania.

In 1933 the Commonwealth appointed the Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. From 1933 to 30 June 1959 applications were lodged by each of the three States already mentioned. South Australia ceased to be a claimant State from 1 July 1959; and at the Premiers' Conference in June 1968, following a request from Western Australia, it was agreed that (subject to certain considerations) claims by Western Australia would cease after payments in respect of 1967-68 leaving Tasmania as the only claimant State during 1968-69 and 1969-70. Following the Premiers' Conference in June 1970 the Government of South Australia decided to again submit a claim; it did this on 6 July 1970. On 30 September 1971 Queensland also made application for a special grant. In 1974, following the Commonwealth's agreement to provide additional financial assistance, Tasmania withdrew from the special grants system. In June 1975, as part of the agreement to transfer its non-metropolitan railway network to the Commonwealth, South Australia again withdrew from the special grants system. On 30 June 1978 Tasmania applied for a special grant in respect of 1977-78.

PERSONAL INCOME TAX SHARING ENTITLEMENT

Financial assistance grants, formerly called tax reimbursement grants, made up the bulk of the assistance provided for general revenue purposes before 1976-77 and were determined annually on the basis of an agreed formula. From 1976-77 the financial assistance grants were replaced by personal income tax sharing arrangements.

The income tax sharing arrangements with the States have been introduced in two stages. Under Stage 1, which commenced in 1976-77, the States receive a specified proportion of the net income tax collections made under the *States (Personal Income Tax Sharing) Act 1976*. Under Stage 2, in addition to the personal income tax imposed by the Commonwealth, each State has the right to impose a surcharge or grant a rebate on personal income tax in its State. The Commonwealth remains the sole collecting and administrative authority for all personal income tax. Relevant legislation is the *Income Tax (Arrangements with the States) Act 1978*.

Under the *States (Personal Income Tax Sharing) Act 1976*, the States are entitled to receive in respect of 1976-77, 33.6 per cent of net personal income tax collections in the year, in respect of 1977-78 a fixed amount of \$4 336.1 million and in respect of each subsequent year 39.87 per cent of collections in the preceding year. This is subject to the guarantee that the State's Stage 1 entitlements in any year are not less, in absolute terms, than in the previous year and that, in the years 1976-77 to 1979-80, their entitlements will not be less in a year than the amount which would have been yielded in that year by the financial assistance grant formula as laid down in the *State Grants Act 1973*.

A periodic review of relativities between all States is planned with the first review to be made before 30 June 1981: the same timing applies to the periodic review of the tax sharing arrangements as a whole.

SPECIAL REVENUE ASSISTANCE

From time to time the Commonwealth has provided general revenue assistance to the States in addition to that payable under the personal income tax sharing entitlements or by way of special grants recommended by the Grants Commission.

A Premiers' Conference was held in February 1975 to discuss special revenue assistance for 1974-75. The Commonwealth agreed to provide the States with an additional \$60 million of which South Australia received \$6.6 million. As part of arrangements for the transfer of the non-metropolitan railway system of South Australia and the railway system of Tasmania to the Commonwealth, payments classified as special revenue assistance were made to the two States during 1974-75. South Australia received \$10 million and Tasmania \$5 million. No such grants have been made since 1974-75.

CAPITAL GRANTS

At the June 1970 Premiers' Conference the Commonwealth undertook to provide a portion of the State's Loan Council programs in the form of capital grants. As a result of the *States Grants (Capital Assistance) Act 1970*, the Commonwealth distributed \$200 million to the States in 1970-71 in the same proportions as their borrowing programs.

The *States Grants (Capital Assistance) Acts* passed in 1972 provided for additional grants by way of capital assistance to the States for government primary and secondary schools during 1971-72 and 1972-73.

These grants continued in the following years but from 1975-76 the capital grants have constituted one-third of each State's total Loan Council Program. During 1977-78, the Commonwealth paid grants totalling \$478 million to the States, including \$62.3 million to South Australia.

OTHER FINANCIAL ASSISTANCE

In addition to grants under the Financial Agreement, special grants recommended by the Grants Commission, personal income tax sharing entitlements, special revenue assistance and capital grants, the Commonwealth makes payments to the States for many specific purposes, some details of which are given in this section.

Figures in the following table are those which have been published in the latest issue of the budget paper 'Payments to or for the States, the Northern Territory and Local Government Authorities' and show the general pattern of Commonwealth Government payments to or for the State of South Australia for 1977-78 and four earlier years. Some amounts shown are repayable to the Commonwealth Government but repayable advances for war service land settlement are not included.

Commonwealth Payments To or For the States, South Australia

Particulars	1967-68	1974-75	1975-76	1976-77	1977-78
	\$'000				
Personal income tax sharing entitlements (a)	102 738	261 737	363 091	433 200	507 761
Special grants	—	39 934	2 500	—	—
Special revenue assistance	1 727	16 616	—	—	—
Loan Council borrowings	71 820	99 261	112 950	118 637	124 569
Capital grants	—	46 927	56 475	59 318	62 284

Commonwealth Payments To or For the States, South Australia (continued)

Particulars	1967-68	1974-75	1975-76	1976-77	1977-78
SPECIFIC PURPOSES PAYMENTS: RECURRENT PURPOSES (\$'000)					
Sinking fund on State Debt	2 673	4 072	4 000	3 911	4 191
Debt charges assistance	—	7 478	—	—	—
Schools	—	19 017	27 452	35 038	38 566
Technical and further education	—	2 639	3 770	4 502	4 737
Universities	4 107	38 067	43 107	51 000	56 628
Colleges of advanced education	554	24 531	28 838	38 221	41 724
Pre-schools and child care	—	3 233	5 025	5 601	6 184
School dental scheme	—	1 700	2 549	3 099	3 686
Public hospitals running costs	—	—	92 367	69 394	101 659
Employment grants	—	3 600	2 400	—	—
Regional employment development scheme	—	1 113	3 294	—	—
Aboriginal advancement	—	1 500	2 165	2 515	3 045
Assistance for Local Government ...	—	4 774	6 785	11 925	14 220
Other	3 828	11 154	13 577	15 821	16 978
Total recurrent purposes ...	11 162	122 878	235 330	241 026	291 615
SPECIFIC PURPOSE PAYMENTS: CAPITAL PURPOSES (\$'000)					
Schools	1 173	19 159	11 056	14 672	17 069
Technical and further education	1 700	2 800	1 208	2 320	4 837
Colleges of advanced education	1 215	12 579	6 886	4 276	8 457
Universities	1 664	7 320	3 421	6 427	6 634
Hospitals	—	3 236	12 900	13 000	5 120
Rural adjustment scheme	—	—	—	—	6 985
Aboriginal advancement	—	4 058	3 559	3 339	1 807
Housing	21 000	56 360	56 360	56 360	58 460
Growth centres	—	5 819	1 504	980	1 088
Land acquisition	—	19 552	19 892	10 352	11 507
Sewerage	—	5 750	5 700	1 002	—
Rural reconstruction	—	2 000	5 100	2 781	400
Natural disaster relief	275	114	108	—	12 132
Urban water supply	—	4 400	8 931	9 175	6 000
Roads	18 384	31 046	40 764	38 800	40 400
Railway projects	6 628	909	4 960	700	—
Urban public transport	—	6 084	6 757	4 420	3 790
Other	490	15 509	16 365	12 681	8 636
Total capital purposes	52 529	196 695	205 471	181 285	193 322

(a) Financial assistance grants to 1975-76; personal income tax sharing entitlements from 1976-77.

Schools

The Commonwealth has been providing assistance for schools in the States since 1964-65 when it provided grants for science laboratories and equipment.

The range of assistance has been progressively extended and grants are being made for both government and non-government schools according to the following categories: general recurrent grants, general building grants, and grants for science laboratories and equipment, libraries, schools for the handicapped, disadvantaged schools, migrant children, teacher development, innovatory projects and information programs.

The Schools Commission, established by the *Schools Commission Act 1973*, administers these programs of assistance.

From 1977 the fixed triennial system of the past was converted to a three-year rolling program. Under these arrangements a total of \$646.4 million (at estimated June 1978 prices) is expected to be provided in 1979 as the base program of assistance to the States for schools.

Universities

Grants to the States for recurrent expenditure of universities commenced in 1951-52; similar grants for capital works and equipment for universities were introduced in 1958. From 1 January 1974 the Commonwealth assumed full financial responsibility for universities.

The *Tertiary Education Commission Act 1977* established the Tertiary Education Commission as a replacement for the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission. From 1977 the fixed triennial system of the past was converted to a three-year rolling program. On this basis the financial assistance to the States for universities in 1979 is \$626.7 million (at estimated June 1978 prices).

Colleges of Advanced Education

Grants to the States for colleges of advanced education commenced in March 1965. These grants were initially for capital purposes but at the start of the 1967-69 triennium were extended to cover recurrent grants. Total grants for the three calendar years 1973 to 1975 were set at \$798.7 million. This estimate took into consideration the decisions of the Commonwealth to accept full financial responsibility for tertiary education and the abolition of tuition fees from 1 January 1974.

With the replacement of the fixed triennial system by the three-year rolling program, assistance in 1979 is \$455.2 million (at estimated June 1978 prices).

State Public Hospitals

The *Health Insurance Act 1973* authorised the Commonwealth to enter into agreements with the States 'for the provision of hospital services' by the States. Payments to the States under this Act were suspended in May 1976 following legal advice that the agreements negotiated with the States were invalid. As an interim measure, until new cost-sharing arrangements were negotiated with the States, the *States Grants (Hospitals Operating Costs) Act 1976* was passed; this Act authorised payments of up to \$315 million to the States to meet 50 per cent of net operating costs of hospitals incurred before 1 October 1976.

New cost-sharing arrangements under the *Health Insurance Act 1973* became effective on 1 October 1976. The main change from the previous arrangements is that the Commonwealth now meets 50 per cent of budgets as approved by the Commonwealth and State Health Ministers. Total payments to the States in 1977-78 were \$945.7 million, of which South Australia received \$101.7 million.

School Dental Scheme

In 1973, agreement was reached between the Commonwealth and the States in respect of a program to provide an Australia-wide School Dental Service. The capital and operating costs of training facilities for dental therapists and capital costs of school dental clinics were borne in full by the Commonwealth, while operation costs of the clinics were shared between the Commonwealth and the States on a \$3 for \$1 basis.

From 1 July 1978, under the terms of a revised agreement, the Commonwealth will pay 50 per cent of the capital costs of all new facilities, 50 per cent of the operating costs of the training centres and 50 per cent of the operating costs of the school clinics.

During 1977-78 South Australia was granted \$5.3 million of a total payment to all States of \$23.7 million.

Unemployment Relief

In December 1971, the Commonwealth announced grants to be spent on activities which create employment in rural areas. The original plan, subject to later review, provided that for the first seven months South Australia would receive \$945 000.

The monthly rate was subsequently raised in February, June and December 1972. From December 1972 assistance was also provided for the relief of unemployment in metropolitan areas. Grants were phased out during the following years and by 1976-77 no assistance was made to the States under the above programs.

The Regional Employment Development Scheme was introduced during 1974-75 to create employment opportunities in areas of relatively high unemployment. Assistance was provided to local government authorities, State Government departments, public corporations and some non-government bodies. Total payments of \$184.3 million were provided to the States, South Australia receiving \$15.5 million.

Housing

Under successive Commonwealth-State Housing Agreements between 1 July 1956 and 30 June 1971, housing advances determined by the States from within their Loan Council allocations were made by the Commonwealth to the States at concessional rates of interest. A new arrangement under the *States Grants (Housing) Act 1971* applicable from 1 July 1971 provided that the interest concession be replaced by annual grants payable over a period of thirty years. Total recurrent grants paid during 1971-72 were \$4.2 million.

At the June 1973 Premiers' Conference and Loan Council Meeting, the arrangements for housing finance were again changed. Further changes were made in 1973-74 to provide for special advances to the States under a new Housing Agreement and outside the programs determined by the Loan Council. The *Housing Assistance Act 1978* provides for payments to cover the period from 1978-79 to 1980-81. Total payments made during 1977-78 were \$395.6 million with South Australia receiving \$0.9 million in the form of grants and \$58.5 million in the form of advances.

Land Acquisition

The *Land Commissions (Financial Assistance) Act 1973* authorised the provision of financial assistance to the States in respect of expenditure by approved State authorities on programs of land acquisition. South Australia was the first State to accept the principles of the Land Commission program and the South Australian Lands Commission began operating in 1973-74.

Assistance made by the Commonwealth during 1977-78 was \$26.3 million, including \$11.5 million to South Australia in the form of loans.

Rural Adjustment

The *States Grants (Rural Adjustment) Act 1976* provides for the Commonwealth to make available assistance for the purposes of a Rural Adjustment Scheme that embraces debt reconstruction, farm build-up, farm improvement, carry-on finance, rehabilitation

and household support. The scheme replaced the Rural Reconstruction Scheme, the Dairy Adjustment Program and the program of Carry-on Assistance to the Beef Industry, all of which were terminated on 31 December 1976.

Assistance given by the Commonwealth during 1977-78 was \$40.2 million with South Australia receiving \$7.0 million including \$6.0 million in the form of loans.

Natural Disaster Relief

Before 1971 State Governments were generally expected to contribute on a \$1 for a \$1 basis in meeting relief expenditure. This was changed in 1971 so that, for major disasters, the Commonwealth met all expenditures by a State in excess of a certain base amount set for that State. During 1977-78 total assistance to the States was \$57.5 million with South Australia receiving \$12.4 million. This assistance was for drought relief and included \$12.1 million in the form of loans.

From 1978-79, above-base expenditures will be financed on a \$3 Commonwealth: \$1 State basis.

Urban Water Supply

During 1974-75, an amount of \$4.4 million was advanced to South Australia under the *Urban and Regional Development (Financial Assistance) Act 1974* to assist construction associated with the Adelaide water treatment scheme. Assistance of \$6.0 million was made during 1977-78; this consisted of \$1.8 million in the form of grants and \$4.2 million as advances.

Roads

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage of Commonwealth petrol taxation. A new scheme of assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959* in which the Commonwealth undertook to provide assistance for five-year periods. As a result of further changes from 1974-75 the Commonwealth has made payments under the *National Roads Act 1974*, the *Roads Grants Act 1974* and the *Transport (Planning and Research) Act 1974*. Total payments of \$477.9 million were made in 1977-78 with South Australia receiving \$40.4 million.

Urban Public Transport

The *States Grants (Urban Public Transport) Act 1974*, and the *Urban Public Transport (Research and Planning) Act 1974* authorised the payment of grants to the States as part of a five-year program to assist in the upgrading of urban public transport (including railways).

In 1974, agreement was reached between the States and the Commonwealth for two-thirds of the costs of approved urban transport projects in the States to be met by the Commonwealth. During 1976-77 assistance of \$58.4 million was made available to the States with South Australia receiving \$4.4 million.

Assistance for Local Government

In 1973, new legislation passed by the Commonwealth Parliament laid down procedures for regional organisations of local government to apply for financial assistance from the Commonwealth. As a result of evidence placed before the Commonwealth

Grants Commission, total grants of \$56.3 million in 1974-75 were recommended to be paid to local government authorities throughout Australia. South Australian authorities received \$4.8 million.

As part of the new personal income tax sharing arrangements between the Commonwealth and the States introduced at the beginning of 1976-77, a new agreement was reached for general assistance to local government authorities; this provided that local government authorities throughout Australia would receive 1.52 per cent of net personal income tax in each year. From 1976-77 the Commonwealth Grants Commission has recommended the grant to be paid to each State for assistance to local government authorities in that State. State Grants Commissions subsequently apportion this among separate authorities with consideration to a per capita element and a needs element.

Assistance of \$165.3 million was made in 1977-78 with South Australia receiving \$14.2 million.

11.3 STATE GOVERNMENT FINANCE

State Government accounting in South Australia is on a 'cash' basis, revenue not being brought to account until received and expenditure until the actual disbursement is made. Receipts and payments fall into five main divisions, namely the Consolidated Revenue Account and Loan Fund (which together constitute the budget sector), Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from many items of State taxation, fees, licences and charges for services, recoveries of interest and sinking fund, personal income tax sharing arrangements (originally entitled financial assistance grants) and some other Commonwealth grants. The account is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of education, health, social security and welfare and other services, operation of business undertakings and development of State resources. The resultant balance represents the State's surplus or deficit for the year.

Consolidated Revenue Account, South Australia

Particulars	1939-40	1949-50	1959-60	1969-70	1977-78
			\$'000		
Receipts	25 511	58 721	160 555	338 498	1 167 196
Payments	25 837	59 100	161 177	335 578	1 192 063
Surplus (+) or deficit (—):					
Current year	—325	—379	—622	+2 920	—24 867
Cumulative	+1 999	+3 215	—3 376	—4 579	—6 453
Per Head of Population					
			Dollars		
Receipts	42.72	85.50	171.99	293.06	909.52
Payments	43.28	86.05	172.65	290.53	928.90

Receipts and Outlay

The following two tables present a summary of transactions from Consolidated Revenue Account. The purpose classification shown is based on the purposes of government recommended in the United Nations System of National Accounts. It is intended to bring together outlays with similar objectives to reveal more fully the broad purposes of public sector spending. The distinction between receipts and outlay corresponds to that embodied in the economic type classification which is designed to categorise transactions in a way which facilitates a study of the impact of government transactions on the economy. Dissections of the totals shown for education, health and social security and welfare are given in Parts 6.2, 6.5 and 6.6 of this publication. For further details of the classification see *Public Authority Finance—State and Local Authorities 1976-77* (Catalogue No. 5504.0) published by the Australian Statistician.

Consolidated Revenue Account: Receipts and Outlay, South Australia, 1977-78

Purpose	Outlay (a) (b)				Total Receipts (a)
	Purchases of Goods and Services	Current Grants to Private Non-profit Organisations	Less Charges for Goods and Services Supplied	Total (Including Other)	
			\$'000		
General public services:					
General administration <i>n.e.c.</i>	57 021	70	11 763	45 710	1 754
Law, order and public safety	85 701	880	9 169	81 313	9 390
Other general public services	—	19	—	19	—
Education	341 634	9 859	3 009	365 582	38 159
Health (c)	13 096	329	10 520	165 970	17 753
Social security and welfare	15 586	1 480	1 085	57 611	4 958
Housing and community amenities:					
Housing	633	—	1	3 411	108
Community and regional development	3 009	26	43	3 086	—
Protection of the environment	18 548	86	28 388	—9 190	—
Community amenities <i>n.e.c.</i>	217	—	20	197	—
Recreation and related cultural services	13 098	2 613	2 025	23 621	130
Economic services:					
General administration, regulation and research	14 123	17	3 166	11 239	1 274
Agriculture, forestry and fishing	24 320	74	4 032	23 969	7 594
Mining, manufacturing and construction	6 949	51	504	10 902	4 457
Electricity, gas and water	39 853	—	54 618	—13 258	—
Transport and communication:					
Rail	413	—	—	18 957	(d) 3 956
Road	573	—	—	38 799	—
Sea	12 190	—	14 363	—1 443	—
Urban transit systems	—	—	—	18 413	—
Other transport and communication	142	9	—	412	—
Other economic services	5 317	299	637	8 691	4 410
Other purposes	1	15	—	(e) 194 709	(f) 929 910
Total	652 424	15 827	143 343	1 048 720	1 023 853

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Incorporates receipts and operating expenses of public trading enterprises (business undertakings).

(c) Net cost to the State only. Excludes grants from Commonwealth Government.

(d) Recoup from Australian National Railways for country railways.

(e) Includes interest of \$137 826 000.

(f) Includes general purpose inter-authority transfers from the Commonwealth of \$509 169 000. Also includes taxation.

Space limits the information which can be given for separate receipts and outlay items. Other significant outlay items and their values for 1977-78 are: interest (\$137 826 000), repayments of Commonwealth advances (\$21 120 000), intra-sector transfers (\$24 952 000) and inter-fund transfers (\$249 268 000, including \$120 557 000 transferred to Health Commission and Hospitals Department Deposit Account). Major receipt items

and their values for 1977-78 are: general purpose inter-authority transfers (\$509 169 000), interest (\$56 381 000), taxation (\$323 524 000) and inter-fund transfers (\$79 291 000). Details for 1975-76 include the effects of the introduction of Medibank and the non-payment of a State Treasury grant to cover the deficit of railway operations.

Consolidated Revenue Account: Outlay, South Australia^(a)

Purpose	1974-75	1975-76	1976-77	1977-78
			\$'000	
General public services:				
General administration <i>n.e.c.</i>	25 997	34 573	39 806	45 710
Law, order and public safety	44 426	55 519	68 904	81 313
Other general public services	14	19	23	19
Education	212 799	272 453	329 547	365 582
Health	108 423	173 571	234 189	(b)165 970
Social security and welfare	21 326	40 793	35 371	57 611
Housing and community amenities:				
Housing	1 705	12 625	12 194	3 411
Community and regional development	1 526	1 837	2 511	3 086
Protection of the environment	-7 334	-10 432	-10 621	-9 190
Community amenities <i>n.e.c.</i>	143	185	183	197
Recreation and related cultural services	9 936	14 774	17 044	23 621
Economic services:				
General administration, regulation and research	5 724	7 056	9 688	11 239
Agriculture, forestry and fishing	11 839	14 419	21 406	23 969
Mining, manufacturing and construction	4 769	6 536	7 818	10 902
Electricity, gas and water	-8 767	-11 118	-11 572	-13 258
Transport and communication:				
Rail	67 253	9 750	48 379	18 957
Road	24 583	28 893	38 836	38 799
Sea	-3 490	-2 629	-2 536	-1 443
Urban transit systems	6 284	29 323	12 040	18 413
Other transport and communication	304	274	338	412
Other economic services	4 635	15 010	23 219	8 691
Other purposes	129 362	134 034	158 597	194 709
Total	661 457	827 465	1 035 364	1 048 720

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay. Incorporates receipts and operating expenses of public trading enterprises.

(b) Net cost to the State only. Activities of the South Australian Health Commission and the Hospitals Department are controlled through a Deposit Account at Treasury.

Taxation

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation receipts in South Australia. Receipts from this form of taxation for the years 1939-40 to 1941-42 were \$4 718 000, \$4 952 000 and \$5 638 000 respectively or 51.70 per cent, 57.02 per cent, and 59.45 per cent of total receipts from taxation. The following table shows receipts of taxation into Consolidated Revenue Account over the last five years: receipts of taxation into other accounts are shown on page 569. The major forms of taxation now left to the State are payroll tax, motor tax, succession and stamp duties, and land tax.

Consolidated Revenue Account: Receipts from Taxation, South Australia^(a)

Tax	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Land tax	10 796	12 673	19 547	18 348	19 614
Succession duty	12 598	15 635	19 077	18 905	17 166
Gift duty	1 184	1 197	1 445	1 649	1 520
Racing tax	1 643	2 130	2 735	3 051	3 225
Motor tax	22 427	29 518	32 206	45 835	46 590
Stamp duties (b)	41 899	45 499	64 459	78 391	76 224
Payroll tax	52 788	86 759	100 506	114 989	120 730
ETSA levy	3 755	4 863	5 810	6 956	8 001
Business franchises	—	8 923	11 636	8 777	9 097
Licences:					
Liquor	4 159	5 351	7 424	8 630	10 941
Other	1 790	2 231	2 534	2 894	2 884
Court fees and fines	3 613	4 135	4 940	5 481	7 148
Other	251	275	440	375	362
Total	156 903	219 190	272 760	314 280	323 502

Proportion of Total Taxation

	Per cent				
Land tax	6.88	5.78	7.17	5.84	6.06
Succession duty	8.03	7.13	6.99	6.02	5.31
Gift duty	0.75	0.55	0.53	0.52	0.47
Racing tax	1.05	0.97	1.00	0.97	1.00
Motor tax	14.30	13.47	11.81	14.59	14.40
Stamp duties (b)	26.71	20.76	23.63	24.94	23.56
Payroll tax	33.64	39.58	36.85	36.59	37.33
ETSA levy	2.39	2.22	2.13	2.21	2.47
Business franchises	—	4.07	4.27	2.79	2.81
Licences:					
Liquor	2.65	2.44	2.72	2.75	3.38
Other	1.14	1.02	0.93	0.92	0.89
Court fees and fines	2.30	1.89	1.81	1.74	2.21
Other	0.16	0.12	0.16	0.12	0.11
Total	100.00	100.00	100.00	100.00	100.00

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) Excludes stamp duty on third party insurance.

Gift duty is payable under the provisions of the Gift Duty Act, 1968-1976. Stamp duty is payable on a wide range of instalment purchase, leasing and other lending transactions.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, *e.g.* customs and excise duties and sales tax. Before 1942 the Commonwealth levied income tax in addition to that imposed by the States but since the commencement of uniform taxation the Commonwealth has been the sole levier of income tax. Commencing in 1977-78, under the new personal income tax-sharing arrangements, each State will have the right to impose a surcharge or grant a rebate on personal income tax in its State. Any State surcharges or rebates will be collected or paid by the Commonwealth on behalf of

the States. Total taxation collected by the Commonwealth in South Australia far exceeds State taxation.

Business Undertakings

Business undertakings (also titled 'public trading enterprises') supply such services as sewerage, water supply, harbour facilities, etc. The State Supply Division operated until 9 March 1977, the Port Lincoln abattoirs treating lambs, pigs and cattle for export or local consumption. On 9 March 1977 the Port Lincoln abattoirs were transferred to the South Australian Meat Corporation (SAMCOR). Receipts from business undertakings for the financial year 1977-78 were \$103 067 000. Total receipts from business undertakings during each of the last four years and their contribution to total Consolidated Revenue are shown on page 557. A dissection of receipts from business undertakings is given in the following table.

Receipts from Business Undertakings, South Australia^(a)

Undertaking	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Railways (b)	68 688	90 130	48 567	—	—
Marine and harbors	10 037	10 889	10 705	12 751	13 955
Waterworks	28 383	29 550	39 269	44 113	53 018
Sewers	15 806	17 542	22 408	25 884	27 701
Produce	743	1 438	1 530	1 480	—
Woods and forests (c)	1 920	2 500	2 616	2 500	4 000
Savings Bank of SA (c)	—	525	360	1 159	2 732
State Bank of SA (c)	542	1 012	1 462	1 096	1 661
Total	126 120	153 586	126 916	88 983	103 067

(a) Receipts into Consolidated Revenue but excluding recoveries of interest and sinking fund.

(b) Before 1975-76, included grant from State Treasury. From 1976-77 the net result of the STA is incorporated in Consolidated Revenue expenditure by way of a contribution towards deficit.

(c) Contribution to Consolidated Revenue from surplus earned.

Business Undertakings, Payments

Details of the payments of business undertakings for the years 1973-74 to 1977-78 are given in the next table. Payments in respect of interest and sinking fund have not been taken into account in deriving these figures.

Business Undertakings: Payments, South Australia^(a)

Undertaking	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Railways (b)	57 461	77 487	88 376	—	—
Marine and harbors	5 795	7 600	8 214	10 278	12 190
Waterworks	16 069	20 662	24 920	32 464	39 803
Sewers	6 689	9 192	10 675	12 869	15 726
Produce	1 190	1 776	2 101	2 029	—
Total	87 204	116 717	134 286	57 640	67 719

(a) Excludes interest and sinking fund.

(b) From 1976-77 the net result of the STA is incorporated in Consolidated Revenue expenditure by way of a contribution towards deficit.

TRUST FUNDS ACCOUNTS

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. Section 35 of the Public Finance Act also authorises the State Treasurer to credit specific purpose Commonwealth grants to a suitable trust fund. At 30 June 1978 trust fund balances represented approximately 1.6 per cent of the indebtedness of the South Australian Government. Total balances at 30 June 1976, 1977 and 1978, with many of the larger balances itemised, are shown in the following table.

Trust Funds Accounts, South Australia
Balances at 30 June

Particulars	1976	1977	1978
		\$'000	
Constitutional Museum Trust	—	—	1 000
Fire Brigades Board	2 347	5 343	5 173
Institute of Medical and Veterinary Science	506	515	819
Planning and Development Fund	2 105	784	29
Police Pensions Fund	726	160	349
South Australian Film Corporation	434	227	264
South Australian Housing Trust Fund	7 975	1 887	155
South Australian Superannuation Fund	548	2 152	454
State Bank of South Australia	250	250	250
Swine Compensation Fund	892	996	1 106
Other	3 381	4 306	4 439
Balances on which interest is paid	19 165	16 620	14 038
Beef Industry Assistance Program	1 164	1 195	96
Coast Protection Fund	815	661	837
Commonwealth Grant for Education Purposes	4 683	4 948	5 311
Crown Solicitors Trust Account	1 245	1 081	1 713
Extractive Areas Rehabilitation Fund	741	521	449
Kindergarten Union of South Australia	700	1 412	1 480
Lotteries Fund	1 099	1 192	2 305
Medibank Hospital Program	21 155	2 108	2
National Parks and Wildlife Development	—	—	1 000
Recoup from Australian National Railways	—	3 174	—
Softwood Forestry	993	993	890
Other	5 712	7 065	7 858
Balances on which no interest is paid	38 307	24 350	21 941
Total Trust Funds	57 472	40 970	35 980

LOAN FUND ACCOUNTS

These accounts record the capitalised payments for construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores; advances to public authorities; and for primary production and housing. During recent years some capital grants (e.g. for housing) have also been made from loan funds.

State borrowing programs are subject to consideration and agreement at meetings of the Australian Loan Council. Funds are raised by the sale of Commonwealth securities

on behalf of the State pursuant to the Financial Agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth Governments to the National Debt Commission. Gross payments for these accounts for the years 1973-74 to 1977-78 are shown in the next table.

Loan Fund Accounts: Gross Payments, South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Undertakings:					
Afforestation	3 300	4 700	5 797	6 643	7 990
Country water supply and sewers	11 087	16 654	25 452	21 254	21 855
Metropolitan water supply and sewers	19 078	31 816	36 724	43 083	45 704
State Transport Authority	12 350	14 383	16 292	11 508	8 540
Harbours and jetties	6 006	7 220	8 617	8 705	8 126
Loans and advances:					
Advances for housing	20	809	13 016	9 015	4 005
Advances to primary pro- ducers	2 925	3 034	2 911	2 489	2 186
Electricity Trust (a)	3 000	6 000	5 000	6 000	—
Pipelines Authority	—	5 000	—	—	—
South Australian Land Commission	4 125	—	—	1 900	—
State Bank of SA	2 000	2 000	13 500	2 800	5 000
Other loans and advances	4 901	1 939	1 696	2 096	1 877
Other purposes:					
Buildings;					
Hospitals	20 042	25 425	31 875	29 720	24 479
Schools	30 741	46 861	48 050	40 481	43 800
Other	16 418	22 246	30 076	37 677	42 435
Capital Grants (b)	20 246	6 697	11 998	12 337	9 444
Community health	—	—	2 011	919	1 099
Effluent drainage	139	839	1 300	1 450	1 724
Irrigation works	1 609	2 619	3 543	3 601	4 146
Parks and reserves	580	913	2 128	1 250	1 280
River Murray, weirs, etc.	1 033	2 575	2 923	6 751	7 814
School buses	430	801	1 144	1 579	1 771
Stormwater drainage	753	811	1 094	1 692	1 027
Other	7 745	7 859	6 446	8 175	8 884
Total	168 526	211 201	271 592	261 125	253 186

(a) From 1975-76 includes Leigh Creek Coal Fund.

(b) From 1 January 1974, following Commonwealth assumption of full financial responsibility for tertiary education, includes only non-government hospital and institution buildings.

The following table shows payments from loan fund accounts for the year ended 30 June 1978 together with credits and net balances.

Loan Fund Accounts
Gross Payments, Credits, and Net Balances, South Australia, 1977-78

Particulars	Payments	Credits			Net Aggregate Balance at 30 June
		Repay- ments, etc.	Other (a)	Total	
				\$'000	
Undertakings:					
Afforestation	7 990	5 372	96	5 468	27 589
Country water supply and sewers	21 855	2 459	2 785	5 244	238 177
Metropolitan water supply and sewers	45 705	11 970	4 199	16 170	350 618
Harbours and jetties	8 126	615	1 538	2 153	93 316
State Transport Author- ity	8 540	1 467	1 847	3 314	54 216
Loans and advances:					
Advances for housing ...	4 005	1 343	692	2 035	124 603
Advances to primary producers	2 186	2 184	—	2 184	13 472
Electricity Trust (b)	—	499	1 703	2 202	169 951
Monarto Development Commission	—	1 000	—	1 000	2 673
Pipelines Authority	—	—	—	—	10 500
State Bank of SA	5 000	—	146	146	34 176
Other loans and advances	1 877	2 534	1 377	3 911	13 857
Other purposes:					
Buildings;					
Hospitals	24 479	5 497	13 201	18 699	63 060
Schools	43 800	14 355	27 232	41 587	125 255
Other	42 435	10 701	2 480	13 181	187 816
Capital grants (c)	9 444	40	9 404	9 444	—
Community health	1 099	553	—	553	1 396
Effluent drainage	1 724	—	1 724	1 724	—
Irrigation works	4 146	142	244	386	24 930
Metropolitan floodwaters and drainage	16	452	—	452	12 591
Parks and reserves	1 280	—	1 280	1 280	—
River Murray, weirs, etc.	7 814	—	7 814	7 814	6 386
Roads and bridges	—	—	185	185	8 871
School buses	1 771	—	683	683	4 922
Stormwater drainage	1 027	2	1 025	1 027	—
Other	8 868	1 396	5 324	6 720	32 986
Total	253 186	62 581	84 980	147 561	1 601 363

(a) Includes securities redeemed and cancelled by the National Debt Commission on account of South Australia (\$19 277 000), Capital Works Grants from the Commonwealth (\$62 284 000) and transfer from Revenue Account (\$3 419 000).

(b) Includes Leigh Creek Coal Fund.

(c) Includes non-government hospital and institution buildings.

SPECIAL COMMONWEALTH ADVANCES

Pursuant to agreements with the States, the Commonwealth has made sums available to the State for various purposes. These advances are not subject to sinking fund

conditions but are repayable by annual instalments in terms of the respective agreements. Details of Commonwealth advances, repayments and interest on these advances for the years 1973-74 to 1977-78 are shown in the following table.

Commonwealth Advances to South Australia, Repayments and Interest on these Advances

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
	\$'000				
Advances:					
Housing	32 750	56 360	56 360	56 360	58 460
Housing for servicemen	—	130	1 725	2 107	1 317
Growth centres	4 059	4 978	1 399	980	1 088
Land acquisition	8 000	17 518	19 392	10 352	11 507
Sewerage	1 598	4 025	3 990	702	—
Natural Disaster relief	—	—	—	—	12 117
Rural reconstruction	3 225	1 500	3 825	2 086	300
Urban water supply	—	4 400	6 252	6 423	4 200
Rural adjustment	—	—	—	—	5 956
Other	1 356	3 683	5 773	2 220	-87
Total advances	50 988	92 594	98 716	81 229	94 858
Repayment of advances:					
Housing	2 139	2 398	2 797	3 213	3 645
Natural gas	1 875	1 875	1 875	1 875	1 875
Railway projects	365	1 022	—	2	2
Other	430	82	311	545	689
Total repayments	4 809	5 377	4 983	5 635	6 211
Interest on advances:					
Housing	11 751	13 391	15 899	18 115	20 397
Growth centres	1	447	841	980	1 088
Land acquisition	—	975	2 987	4 570	5 507
Rural reconstruction	421	565	714	875	1 013
Sewerage	—	75	647	955	985
Urban water supply	—	—	418	1 107	1 724
Other	1 797	1 723	909	1 462	1 767
Total interest	13 970	17 176	22 415	28 064	32 481

LOAN RAISINGS AND THE PUBLIC DEBT

State Debts Taken Over by the Commonwealth

Under the Financial Agreement the Commonwealth took over on 1 July 1929 State responsibilities to bond-holders in respect of State debts existing on 30 June 1927; and all debts of each State existing on 1 July 1929 for money borrowed by that State are deemed to be money borrowed by the Commonwealth for and on behalf of the State. The Commonwealth agreed to contribute one-third of sinking funds required to repay those debts over a period of fifty-eight years.

Also for a period of fifty-eight years from 1 July 1927 the Commonwealth agreed to contribute the sum of \$15 169 824 (\$1 407 632 for South Australia) each year towards the

interest payable on the State debts. The balance of the interest payable on State debts was to be paid into the National Debt Sinking Fund by the States.

The Commonwealth in 1970 passed legislation providing for its assumption of responsibility for charges on \$200 million of existing State's debt at the beginning of each of the five years commencing 1970-71.

As a result of the transfer of the South Australian non-metropolitan railway system, \$124 000 000 of State debt was taken over by the Commonwealth.

Australian Loan Council

One of the main features of the Financial Agreement was the establishment of the Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and State Governments. It consists of the Prime Minister of Australia, or another Minister nominated by him in writing, as chairman, and the State Premiers, or Ministers nominated by them in writing.

Each year, the Loan Council examines the loan programs of the Commonwealth and State Governments and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and State Governments. If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State Government may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys. However, any securities issued for moneys so borrowed or used must be Commonwealth Government securities on terms approved by the Loan Council.

Since 1936 the Australian Loan Council has, by the consent of its members, exercised substantial control over the limits of borrowing by local government and public corporations.

National Debt Commission

The National Debt Commission and the National Debt Sinking Fund, which it administers, were created under the *National Debt Sinking Fund Act* 1923. All previously existing sinking funds relating to Commonwealth debt were merged in the National Debt Sinking Fund at the time of its establishment; and under the provisions of the Financial Agreement of 1927 all relevant interest and principal contributions by both the Commonwealth and State Governments, in respect of State debts, are negotiated through the Fund.

These contributions are not accumulated but are applied by the Commission to the redemption of the public debts of the States, and the repurchase of securities issued in respect thereof. Under the provisions of the Financial Agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

Contributions by the Commonwealth on behalf of South Australia, and by the State Government to the National Debt Sinking Fund, and redemptions and repurchases of securities by payment from the Fund for the financial years 1976-77 and 1977-78 are given in the following table. Corresponding figures for all States are also stated.

National Debt Sinking Fund

Particulars	1976-77		1977-78	
	South Australia	All States	South Australia	All States
	\$'000			
Receipts:				
Contributions by Commonwealth	3 911	31 635	4 191	33 747
Contributions by State	15 717	127 651	16 920	136 703
Interest on the temporary investments of State funds during the year	18	117	88	582
Total receipts	19 646	159 404	21 199	171 032
Expenditure:				
Redemptions and repurchases;				
In Australia	16 367	117 582	11 648	99 670
In London	188	16 784	1 237	16 226
In New York	857	7 439	1 098	9 690
In Canada	22	164	86	639
In Netherlands	89	698	104	810
In Switzerland	—	—	—	—
Total expenditure	17 523	142 668	14 173	127 035

The Loan Fund

A summary of loan raisings to finance State Government loan works in South Australia during 1977-78 is given in the following statement.

The Loan Fund, South Australia

	\$'000
(1) <i>Cash operations:</i>	
Balance at 30 June 1977	—
Receipts:	
New loan raising	124 902
Repayments	62 581
Capital works grant	62 284
Transfer from Consolidated Revenue	3 419
	253 186
Payments	253 186
Balance at 30 June 1978	—

The Loan Fund, South Australia (continued)

	\$'000
(2) <i>Movement in public debt:</i>	
The public debt at 30 June 1977	1 495 737
<i>Add:</i> Face value of new loans raised;	
For cash	124 902
For conversion	163 592
	1 784 231
<i>Less:</i> Face value of securities redeemed and cancelled by	
National Debt Commission	14 806
Loans converted	163 592
	178 398
The public debt at 30 June 1978	1 605 834

The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia at 30 June 1978 and for the four previous years.

Public Debt and Total Indebtedness, South Australia

At 30 June	Public Debt—Being Interest Bearing Securities Outstanding		Other Interest Bearing Indebted- ness (a)	Non- interest Bearing Indebted- ness (a)	Total Indebtedness	
	Total	Per Head			Total	Per Head
	\$'000	\$			\$'000	\$
1974	1 481 337	1 198-30	362 977	14 830	1 859 143	1 503-92
1975	1 425 333	1 138-35	451 080	24 447	1 900 860	1 518-14
1976	1 394 702	1 105-50	523 152	38 307	1 956 161	1 550-54
1977	1 495 737	1 171-47	601 152	24 350	2 121 240	1 661-37
1978	1 605 834	1 247-15	675 065	21 941	2 302 840	1 788-47

(a) Gross less securities held on these accounts.

DEPOSIT AND SUSPENSE ACCOUNTS

Reference to these accounts was made in Part 11.1. Although the main function of many of them is to facilitate the allocation of charges and recoups to various headings of receipts and payments within the Budget sector, some contain, as already noted, substantial transactions which are not reflected in the Budget. Deposit and Suspense Accounts showed a credit balance of \$64 110 000 at 30 June 1978.

STATE TAXATION

In addition to those items received into Consolidated Revenue Account the State Government receives certain items of taxation into other accounts. These, together with similar receipts by public corporations, constitute 'total taxation to other accounts' as recorded in the following table.

State Taxation, South Australia^(a)

Tax	1973-74	1974-75	1975-76	1976-77	1977-78
To Consolidated Revenue	156 903	219 190	\$'000 272 760	314 280	323 502
To other accounts:					
Road maintenance charges	3 859	4 050	4 243	4 716	4 825
Lottery tax	2 351	3 648	4 978	5 661	7 861
Racing taxes	4 613	6 169	7 122	8 160	8 315
Stamp duty	1 251	1 643	2 072	2 101	2 162
Fire insurance contributions ^(b)	2 586	4 597	6 088	8 809	8 080
Reserves contributions ^(c)	1 010	1 109	1 165	1 169	967
Other	472	679	1 175	1 566	1 451
Total to other accounts	16 141	21 894	26 843	32 182	33 661
Total taxation	173 044	241 084	299 603	346 462	357 163
Per head of population	141.06	193.63	Dollars 238.44	273.06	278.32

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) Levy on insurance companies.

(c) Paid to State Planning Authority under Planning and Development Act and Real Property Act.

11.4 PUBLIC CORPORATION FINANCE

For the purpose of determining the scope of public corporation finance statistics, a public corporation is defined as a body (other than a local government authority) created by or under legislation to carry out an activity or activities on behalf of a government, or a body in which a government has a controlling interest.

Many public corporations produce annual reports reviewing their activities and most of them publish financial statements. In South Australia there is no consolidated tabulation of statistics covering revenue and expenditure of public corporations.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

Business Undertakings

Some public corporations are classified as business undertakings because they seek to cover a substantial part of their cost by selling goods and services to the public. The following tables show revenue and expenditure of some of those business undertakings for the financial years 1973-74 to 1977-78. Capital indebtedness refers to the amount outstanding at the end of the relevant period on indebtedness incurred initially for a period exceeding twelve months.

Electricity Trust of South Australia^(a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Income	92 178	108 492	130 401	153 950	179 682
Operating expenses	72 594	91 149	108 017	128 635	144 936
Surplus on operating	19 584	17 343	22 384	25 315	34 746
Debtenture interest	18 650	19 758	22 136	24 791	28 213
Extraordinary items	—	—	—	—	2 010
Net surplus	934	—2 415	248	524	4 523
Capital indebtedness	318 788	332 439	353 759	371 932	401 317

(a) From 1975-76 includes Leigh Creek Coal Fund which was dissolved on 1 July 1975.

State Bank of South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Income	14 783	20 055	23 166	30 200	35 369
Management expenses, etc.	2 733	3 946	5 083	5 632	6 390
Interest on customers' deposits	2 074	3 809	4 788	7 955	9 926
Interest on advances from the Treasurer of SA	7 952	9 376	11 104	13 291	15 564
Net profit	2 024	2 924	2 191	3 323	3 489
Capital indebtedness	169 469	197 236	238 066	267 588	301 222

Pipelines Authority of South Australia

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Income	7 107	17 451	24 493	34 102	43 407
Operating expenditure	4 250	15 101	19 321	28 911	36 717
Surplus on operating	2 857	2 351	5 172	5 191	6 690
Interest on loan capital	2 704	3 094	4 105	4 706	5 644
Net surplus	153	—743	1 067	486	1 046
Capital indebtedness	44 431	54 359	59 190	63 892	64 379

South Australian Housing Trust

1976-77	1977-78 Particulars		South	Australia	1977-78
			\$'000		
Income	24 820	28 617	36 897	44 836	51 938
Expenditure	12 657	16 625	19 921	26 565	34 690
Surplus on operating	12 162	11 992	16 976	18 271	17 247
Interest on loan capital	11 699	12 514	14 487	15 863	17 974
Net surplus	463	—522	2 489	2 408	—727
Capital indebtedness	317 445	353 860	407 977	452 299	495 267

Savings Bank of South Australia

1976-77	1977-78 Particulars		South	Australia	1977-78
			\$'000		
Income	40 385	53 890	68 096	78 040	87 396
Management expenses, etc.	13 556	17 523	22 859	25 301	29 707
Interest on customers' deposits	25 577	35 445	42 716	47 074	52 143
Net profit	1 252	922	2 520	5 665	5 546
Depositors' balances (a)	591 822	697 459	776 473	842 842	919 756

(a) At end of period. Figures include deposit stock.

South Australian Meat Corporation^(a)

1976-77	1977-78 Particulars		South	Australia	1977-78
			\$'000		
Income	10 633	13 757	19 495	24 521	35 905
Operating expenses	10 452	12 793	18 301	25 248	39 185
Surplus on operating	181	964	1 194	—727	—3 280
Interest	303	705	619	1 716	2 080
Net deficit	122	—259	—575	—2 443	—5 360
Capital indebtedness	6 080	12 469	16 323	18 608	21 301

(a) From 9 March 1977 includes the operations of Port Lincoln Division.

State Transport Authority—Bus and Tram Division^(a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Income	9 958	13 427	14 454	16 782	16 073
Operating expenses	11 735	18 951	22 446	27 711	33 280
Deficit on operating	1 777	5 524	7 991	10 929	17 207
Interest charges	469	874	1 230	1 781	1 886
Deficit	2 246	6 398	9 221	12 710	19 093
Grant from SA Government	2 250	5 900	8 800	12 040	18 413
Transfer from reserve	—	488	394	402	134
Other transactions (net)	—	—	102	—	468
Net deficit	—4	10	—75	268	78
Capital indebtedness	11 920	16 219	21 090	21 931	21 278

(a) Formerly the Municipal Tramways Trust.

GRANTS FROM STATE GOVERNMENT

The following table shows grants to a number of public corporations during each of the five years ended 30 June 1978.

Public Corporations: Grants From State Government, South Australia

Name	1973-74	1974-75	1975-76	1976-77	1977-78
			\$'000		
Adelaide Festival Centre Trust	812	1 126	2 608	2 624	3 627
Coast Protection Board (a)	676	281	245	272	368
Fire Brigades Board	590	872	1 194	1 760	1 619
Institute of Medical and Veterinary Science	3 342	5 392	1 010	1 120	2 306
Kindergarten Union	—	—	7 221	9 135	9 385
State Transport Authority:					
Bus and Tram Division	2 250	5 900	8 800	12 040	18 413
Rail Division (b)	—	—	—	48 377	18 542
SA Film Corporation	505	720	1 238	1 377	1 887
SA Institute of Technology	6 679	579	561	718	766
SA Theatre Company	293	466	498	660	850
State Planning Authority	300	300	300	300	—
Subsidised hospitals	2 385	4 197	9 364	8 644	10 746
Other (c)	830	11 602	19 697	4 649	8 842
Total	18 662	31 435	52 736	91 676	77 351

(a) Includes advances from State Loan Fund that are cleared of liability by allocations from Commonwealth capital works grants.

(b) Before July 1976 all transactions of the Railways were part of Consolidated Revenue Account.

(c) Includes Unemployment Relief Grants paid to various public corporations (\$2 162 000 in 1977-78). Also includes non-repayable advances made to the Housing Trust (\$10 000 000 in 1975-76) and the Pipelines Authority (\$17 000 000 in 1976-77).

Grants from Consolidated Revenue Account and from Loan Fund have been consolidated and the figures represent actual amounts paid to authorities, free of all duplication. Payments for goods and services supplied by public corporation business undertakings are not included in the table. Repayable advances from Loan Fund are also excluded. The table excludes grants to universities and hospitals other than subsidised hospitals, as for the purpose of Public Finance statistics these amounts are considered to be final expenditure. Details of grants made to colleges of advanced education before 1 January 1974 are also excluded because from that date the Commonwealth Government assumed full financial responsibility for all tertiary education.

LOAN RAISINGS AND DEBT OUTSTANDING

Details of public corporation loan raisings and debt outstanding are included in the following tables. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debts are excluded.

Debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised, and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more, have also been included. Current liabilities such as interest accrued (but not capitalised), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds, less all bank credit balances (including fixed deposits), which do not form part of a sinking fund to repay a loan.

The next two tables show, respectively, new money loan raisings and funds provided for redemption of debt for the year ended 30 June 1977 and debt outstanding at 30 June 1976 and 1977.

Public Corporations: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia, 1976-77

Activity	New Loan Raisings in Australia			Funds for Redemption of Debt (a)		
	From Government Lenders	Other	Total	To Government Lenders	Other	Total
						\$'000
Abattoirs	—	2 530	2 530	42	185	227
Banking	36 064	—	36 064	4 312	2 230	6 542
Buses and trams	1 000	—	1 000	159	—	159
Community and regional development	7 682	7 200	14 882	—	83	83
Electricity supply	6 000	15 851	21 851	2 138	2 260	4 398
Gas pipelines	—	6 875	6 875	875	299	1 174
Housing	36 885	13 230	50 115	2 639	1 154	3 793
Other	1 056	6 841	7 897	16	530	545
Total	88 687	52 527	141 214	10 181	6 739	16 920

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds.

Assessments

Assessments for property rating are based upon annual value or land value. Annual value is based on the estimated gross annual rental at which a ratable property would be let from year to year with an allowance, not exceeding one-quarter, to cover all outgoings; whereas land value is an estimate of the value of the land (regardless of structural improvements) included in a property. A council may adopt the 'annual' valuations or the 'land' valuations of the State Valuer-General or may make its own valuation of properties.

Rating of Properties

A council may declare general or differential rates on properties in its area. Special rates may be levied for street watering or other purposes.

Revenue Transactions

The following tables show revenue transactions for local government authorities for 1975-76 prepared on an accrual basis.

**Local Government Authorities
General Fund, Reserve Fund and Government Grants Fund, Income
South Australia, 1975-76**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Taxation:			
Rates:			
Declared for year	47 105	18 151	65 256
Fines on overdue rates	110	56	166
<i>Ex gratia</i> payments in lieu of rates	154	95	249
Total rates	47 369	18 301	65 670
Licences and permits:			
Building	961	182	1 143
Dog	134	74	208
Other	102	60	162
Total licences and permits	1 197	316	1 514
Total taxation	48 567	18 617	67 184
Public works:			
Reimbursements for roadworks:			
State Government (b)	1 927	1 103	3 030
Ratepayers (moieties)	755	227	982
Other	3 900	661	4 561
Sewerage and effluent drainage fees	326	544	870
Stormwater drains	771	1 100	1 871
Total public works	7 680	3 634	11 314

Local Government Authorities
General Fund, Reserve Fund and Government Grants Fund, Income
South Australia, 1975-76 (continued)

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Public services and council properties:			
Care of aged persons	820	751	1 571
Child care centres	100	318	418
Commercial properties <i>n.e.c.</i>	94	195	289
Ferries	—	702	702
Fire protection	91	166	256
Foreshore	109	112	221
Halls and theatres	666	198	863
Hospitals and health (including cemeteries)	201	171	373
Houses	502	114	616
Libraries	586	118	704
Parks, gardens, recreation, etc	2 719	2 765	5 484
Sanitary and garbage	239	168	407
Swimming pools	249	193	441
Tourism	17	192	210
Traffic and parking	3 651	25	3 676
Other (c)	2 728	3 686	6 413
Total council properties	12 773	9 871	22 644
Government grants for roadworks:			
Grants (d)	1 061	3 035	4 096
Reimbursements (e)	970	1 222	2 193
Total Government grants for road- works	2 031	4 258	6 289
Other income:			
Fines (mainly traffic and parking)	1 085	25	1 111
Grants Commission grants	3 623	3 162	6 785
Interest	1 640	299	1 939
Reimbursements for private works	788	1 079	1 867
Sale of council properties	1 437	311	1 748
Other	1 466	941	2 407
Total other income	10 040	5 818	15 857
Total income	81 090	42 197	123 287

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra. (b) Mainly reinstatements. (c) Includes income from Regional Employment Development Scheme allocated to 'Council Properties'. (d) Other grants and subsidies are included under respective functional headings above. (e) For work done on behalf of Highways Department.

Local Government Authorities
General Fund, Reserve Fund and Government Grants Fund, Expenditure
South Australia, 1975-76

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
General administration	7 051	4 402	11 453
Debt services:			
Interest;			
On loans	4 792	1 078	5 870
On overdraft	62	143	204
Principal redeemed	3 312	2 044	5 356
Total debt services	8 165	3 265	11 430
Public works:			
Roads, streets and bridges;			
Construction	11 038	7 273	18 311
Maintenance	8 237	6 300	14 537
Sewerage and effluent drains;			
Construction	197	1 201	1 398
Maintenance	5	109	115
Contributions to stormwater drainage schemes(b)	3 884	826	4 710
Net plant expenditure	66	68	134
Total public works	23 428	15 777	39 205
Public services and council properties:			
Current;			
Building Act	1 061	251	1 312
Care of aged persons	66	49	115
Commercial properties <i>n.e.c.</i>	88	339	427
Ferries	—	652	652
Fire protection	1 066	553	1 619
Halls and theatres	1 060	494	1 554
Hospitals and health (including cemeteries, etc.,)	2 820	1 387	4 206
Houses	454	120	575
Libraries	1 209	290	1 499
Markets	113	—	113
Parks, gardens, recreation, etc.	10 144	4 150	14 294
Sanitary and garbage	3 943	922	4 865
Street cleaning	651	22	673
Street lighting	1 529	413	1 942
Swimming pools	525	202	727

Local Government Authorities
General Fund, Reserve Fund and Government Grants Fund, Expenditure
South Australia, 1975-76 (continued)

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Public services and council properties:			
<i>(continued)</i>			
Tourism	47	229	277
Town planning	1 172	140	1 313
Traffic and parking	2 151	52	2 203
Vermin control	35	139	173
Weed control	199	603	802
Other	254	641	895
Capital (c);			
Land and buildings,			
Care of aged persons	856	738	1 594
Child care centres	209	138	346
Council properties and depots	721	53	774
Halls and theatres	274	78	352
Houses	787	69	857
Parks, gardens, recreation, etc.	2 477	1 127	3 603
Traffic and parking	155	—	155
Other	377	392	769
Plant and machinery,			
Roadmaking	2 019	1 125	3 144
Other	669	200	869
Other assets	859	129	988
Total public services and council properties	37 991	15 695	53 686
Other expenditure:			
Cost of private works	884	1 032	1 916
Donations to charitable organisations, clubs etc.	105	78	183
Unallocated indirect expenditure	1 903	1 617	3 520
Other	413	155	568
Total other expenditure	3 305	2 883	6 188
Total expenditure	79 940	42 022	121 962

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra.

(b) Expenditures in respect of South-Western Suburbs Drainage Scheme are included under debt services above.

(c) These values are understated to the extent that some councils report expenditures net of trade-ins.

Government Grants

Local government authorities receive general purpose and specific purpose grants from the Commonwealth and State Governments. Some Commonwealth grants are paid

direct to local government authorities while the remainder are paid to the State Government for on-passing to the relevant authorities.

The following table shows Commonwealth grants paid direct to local government authorities for the last three years.

Commonwealth Grants Paid Direct to Local Government Authorities

Grant	1975-76	1976-77	1977-78
		\$'000	
Aged or disabled persons homes	1 008	1 711	312
Child care and pre-schools	604	904	271
Aboriginal advancement	163	27	136
Aerodrome local ownership plan	41	42	37
Regional Employment Development Scheme	6 363	—	—
Community Youth Support Scheme	—	13	113
Nursing homes	—	99	318
Community arts activities	5	15	3
Total	8 184	2 811	1 190

Details of the amounts on-passed by the State Government during the last three years are given in the following table. These grants are included with the grants to State and local government authorities shown on page 552.

Commonwealth Grants On-passed by the State Government to Local Government Authorities

Grant	1975-76	1976-77	1977-78
		\$'000	
Senior citizens' centres	673	172	306
National Estate	30	45	18
Capital assistance for leisure facilities	694	393	90
Grants Commission	6 785	11 925	14 220
Regional organisations assistance	24	—	—
Area improvement	679	30	—
Tourism development	134	—	—
Total	9 019	12 565	14 634

The State Government also makes various grants to local government authorities. Details of these grants made over the last three years are shown in the following table.

State Government Grants Paid to Local Government Authorities

Grant	1975-76	1976-77	1977-78
		\$'000	
Civil defence	11	14	17
Libraries	699	534	689
Roads	4 713	5 940	6 315
Urban stormwater drainage	1 094	1 692	1 025
Urban effluent drainage	1 300	1 450	1 724
Weed control	223	248	202
Public parks and parklands maintenance	944	659	650
Fire protection	197	259	<i>n. y. a.</i>
Unemployment relief (a)	5 859	7 271	9 903
Tourism	196	355	496
Sporting and recreation facilities	556	387	490
Senior citizens' centres	86	95	22
Rundle Street Mall	202	101	18
Festival Theatre	—	—	89
Debt Servicing (Festival Theatre)	148	148	148
Provision for the arts	20	2	14
Residential rate rebate	50	60	—
Rehabilitation of land	—	240	—
Bicycle tracks	—	—	96
Vertebrate pest control	—	—	65
Total	16 298	19 455	<i>n. y. a.</i>

(a) Includes \$2 487 000 in 1975-76 from Commonwealth grants to the State for unemployment relief.

LOAN FUND INCOME AND EXPENDITURE

The following table shows the major items of loan fund income and expenditure for 1975-76 prepared on an accrual basis.

Local Government Authorities: Loan Fund Income and Expenditure
South Australia, 1975-76

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Income:			
Loans raised	11 173	5 774	16 947
Other	715	3	718
Total income	11 888	5 778	17 665

**Local Government Authorities: Loan Fund Income and Expenditure
South Australia, 1975-76 (continued)**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Expenditure:			
Public works;			
Roads, streets and bridges,			
Construction	3 660	516	4 177
Maintenance	277	59	336
Stormwater drains	1 669	256	1 925
Sewerage and effluent drains	17	491	509
Total public works	5 623	1 322	6 945
Construction or purchase of assets;			
Land and buildings,			
Development projects	1 381	—	1 381
Halls and theatres	142	183	324
Houses	170	106	277
Libraries	583	—	583
Offices and depots	552	78	630
Parks, gardens, recreation, etc.	1 298	1 044	2 343
Traffic and parking	2 274	9	2 284
Other	661	1 002	1 663
Plant and machinery,			
Roadmaking	171	1 235	1 406
Other	28	17	44
Other assets	317	85	402
Total construction or purchase of assets	7 578	3 758	11 335
Business undertakings (b)	—	476	476
Total expenditure	13 201	5 556	18 756

(a) Adjusted to include the whole of Meadows and Wilunga District Council areas and to exclude the whole of Mudla Wirra. (b) Includes land, buildings, plant, etc.

The principal source of income was from new money loan raisings (\$16 947 000), while the major expenditure items were the construction of roads, streets and bridges (\$4 177 000) and the provision of recreation facilities (\$2 343 000).

LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities loan raisings and debts outstanding are shown in the following tables. The definitions of 'new loans raised' and 'debt', given on page 573 under 'Loan Raisings and Debt Outstanding', also apply to the statistics in this section.

The table below shows new money loan raisings and funds provided for redemption of debt for the years 1967-68 to 1976-77.

**Local Government Authorities: New Money Loan Raisings and
Funds Provided for Redemption of Debt, South Australia**

Year	New Loan Raisings in Australia			Funds for Redemption of Debt (a)		
	From Govt	Other	Total	To Govt	Other	Total
				\$'000		
1967-68	1 027	7 365	8 392	1 009	1 853	2 862
1968-69	470	7 455	7 925	905	2 068	2 973
1969-70	504	9 430	9 934	822	2 481	3 303
1970-71	939	10 338	11 277	671	2 851	3 522
1971-72	328	10 111	10 439	537	3 409	3 946
1972-73	290	9 546	9 836	520	3 809	4 329
1973-74	30	10 815	10 845	367	3 971	4 338
1974-75	40	13 979	14 019	335	4 476	4 811
1975-76	140	16 807	16 947	265	5 191	5 456
1976-77	149	20 843	20 992	206	5 873	6 079

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds: both these figures are small in South Australia.

(b) Includes South-Western Suburbs Drainage Scheme.

The following table for local government authorities shows total debt outstanding and annual interest payable on this debt for the years 1967-68 to 1976-77.

**Local Government Authorities: Debt Outstanding and
Annual Interest Payable, South Australia**

Year	Debt in Australia			Annual Interest Payable		
	To Govt	Other	Total	To Govt	Other	Total
				\$'000		
1967-68	7 380	42 079	49 459	337	2 323	2 660
1968-69	6 956	47 479	54 435	316	2 645	2 961
1969-70	6 637	54 389	61 025	290	3 106	3 396
1970-71	6 914	62 198	69 112	304	3 719	4 023
1971-72	6 798	69 007	75 806	300	4 240	4 539
1972-73	6 581	74 951	81 535	289	4 627	4 915
1973-74	4 639	82 119	86 758	203	5 261	5 465
1974-75	2 652	91 953	94 605	111	6 395	6 506
1975-76	2 520	104 111	106 631	121	7 848	7 969
1976-77	2 466	119 526	121 993	133	9 711	9 845

(a) Includes South-Western Suburbs Drainage Scheme.

BUSINESS UNDERTAKINGS

Some local government authorities operate electricity undertakings and quarries. Expenditure by authorities for goods and services supplied by their business undertakings are included both in expenditures from general, etc. funds and in income of the business undertakings. Loan raisings and subsequent expenditures are included under Loan Fund income and expenditure.

**Local Government Authorities: Business Undertakings, Income and Expenditure
South Australia, 1975-76**

	\$'000	
Current account transactions (a):		
Electricity undertakings;		
Current income,		
Electricity sales	1 517	
Other	965	
Total current income	2 482	
Current expenditure,		
Generation and distribution	1 285	
Purchase of electricity	489	
Debt services,		
Interest	267	
Principal redeemed	189	
Administration and other	457	
Total current expenditure	2 686	
Deficit		204
Quarries;		
Current income	86	
Current expenditure	138	
Deficit		53
Deficit (all undertakings)		256

(a) Transactions relating to construction or purchase of capital assets are not taken into account in arriving at surplus or deficit.

11.6 AUSTRALIAN NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Concepts

The fundamental concepts of domestic product and national income and expenditure are described below.

Gross Domestic Product at Market Prices (usually referred to as Gross Domestic Product) is defined as the total market value of goods and services produced in Australia after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. It is the sum for all producers of the value of their sales (including any indirect taxes levied thereon), plus increases in their stocks, less their purchases of intermediate goods and services from other producers. For those producers, like general government, who do not generally sell their output, it includes output valued at cost instead of sales.

Gross Domestic Product at Factor Cost is that part of the cost of producing the Gross Domestic Product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to Gross Domestic Product less indirect taxes plus subsidies. Gross Farm Product at Factor Cost is that part of Gross Domestic Product at Factor Cost arising from production in rural industries.

Domestic Factor Incomes is that part of the value added within a given period by factors of production which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to Gross Domestic Product at Factor Cost less depreciation allowances.

National Income is the net income accruing within a given period to Australian residents from their services in supplying factors of production in Australia or overseas plus indirect taxes less subsidies. It is equivalent to Domestic Factor Incomes plus indirect taxes less subsidies and net income paid overseas. It is also equivalent to Gross Domestic Product less depreciation allowances and net income paid overseas.

National Disposable Income is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from re-distributive transfers. It is equivalent to National Income less net transfers overseas.

National Turnover of Goods and Services is the total flow within a given period of final goods and services (*i.e.* excluding any goods and services used up during the period in the process of production) entering the Australian economy from production and imports. This value is equivalent to Gross Domestic Product plus imports of goods and services, or, to Gross National Expenditure plus exports of goods and services.

Gross National Expenditure is the total expenditure within a given period on final goods and services (*i.e.* excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to Gross Domestic Product plus imports of goods and services less exports of goods and services.

Sectors

A brief description of the sectors into which the economy is divided for the purpose of National Accounts follows.

The *Corporate Trading Enterprise Sector* includes companies and public enterprises other than financial enterprises. It thus includes all trading enterprises other than unincorporated enterprises and dwellings owned by persons. This sector comprises only resident enterprises, but the concept of resident enterprises includes Australian subsidiaries and branches of overseas-owned companies and excludes overseas subsidiaries and branches of Australian companies. All public trading enterprises are included in this sector whether they are incorporated bodies or not.

The *Financial Enterprise Sector* includes both private and public financial enterprises. Financial enterprises are enterprises which are primarily engaged in financial trans-

actions in the market consisting of both incurring liabilities and acquiring financial assets. These are organisations which are regarded as providing the financial mechanism for the functioning of the economy. They include life insurance and general insurance offices and superannuation funds as well as other organisations mainly engaged in borrowing and lending in the market.

The *Household Sector* includes all resident persons, their unincorporated enterprises located in Australia and dwellings owned by persons, and non-profit organisations serving households, other than non-profit organisations included in the Financial Enterprises Sector.

The *General Government Sector* excludes public financial and trading enterprises, but otherwise includes the whole of the activities of the Commonwealth Government, State Governments, local authorities and public corporations.

The *Overseas Sector Account* records all transactions between Australian persons, businesses and governments and overseas residents. Australian subsidiaries and branches of overseas companies are classified as resident units, while overseas subsidiaries and branches of Australian companies are classified as non-residents.

Description of the Accounts

The *Domestic Production Account* is shown as receiving the revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees.

The *National Income and Outlay Account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the Domestic Production Account. From this income are deducted net payments of income and miscellaneous transfers to overseas, and the remainder is the National Disposable Income. The outlay side of the account shows this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The *National Income and Outlay Account* is a consolidation of the sector income and outlay accounts.

The *National Capital Account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the *Domestic Production Account* and saving transferred from the *National Income and Outlay Account* (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes the increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on the current transactions in the *Overseas Transactions Account*.

The *Overseas Transactions Account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the Overseas Sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of (Australia's) exports of goods and services, property income received from overseas and transfers from overseas. These receipts are used for (Australia's) imports of goods and services and payments of property income and transfers to overseas; and the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas and negative net lending corresponds to a deficit.

Domestic Production Account, 1976-77

	\$m		\$m
Wages, salaries and supplements	46 053	Final consumption expenditure:	
Gross operating surplus:		Private	47 814
Trading enterprises;		Government	13 249
Companies	9 920	Gross fixed capital expenditure:	
Unincorporated enterprises	9 681	Private	12 014
Dwellings owned by persons	5 099	Public enterprises	3 539
Public enterprises	1 884	General government	3 616
Financial enterprises	1 989	Increase in stocks	1 010
Less Imputed bank service		Statistical discrepancy	1 167
charge	2 154		
		Gross national expenditure	82 409
Gross Domestic Product at		Exports of goods and services ...	13 067
Factor Cost	72 472		
Indirect taxes less subsidies	9 752	National turnover of	
		goods and services	95 476
		Less Imports of goods and	
		services	13 252
Gross Domestic Product	82 224	Expenditure on Gross Domestic	
		 Product	82 224

National Income and Outlay Account, 1976-1977

	\$m		\$m
Final consumption expenditure:		Wages, salaries and supplements	46 053
Private	47 814	Net operating surplus	21 178
Government	13 249		
Saving	14 718	Domestic factor incomes	67 231
		Less Net income paid overseas	776
		Indirect taxes	10 050
		Less Subsidies	298
		National Income	76 207
		Less net transfers to overseas	427
Disposal of Income	75 781	National disposable Income	75 781

Overseas Transactions Account, 1976-1977

	\$m		\$m
Exports of goods and services ...	13 067	Imports of goods and services	13 252
Property income from overseas	287	Property income to overseas	1 063
Transfers from overseas:		Transfer to overseas:	
Personal	276	Personal	290
		General government	413
		Net lending to overseas	-1 388
Current receipts from overseas	13 630	Use of current receipts	13 630

National Capital Account, 1976-1977

	\$m		\$m
Gross fixed capital expenditure:		Depreciation allowances	5 241
Private:		Saving:	
Dwellings	4 029	Increase in income tax provisions	58
Other building and construction	1 945	Undistributed (company) income	2 131
All other	6 040	Retained income of public financial enterprises	532
Public enterprises	3 539	Household saving	9 104
General Government	3 616	General government surplus on current transactions	2 714
Increase in stocks:		General government grants for private capital purposes	179
Farm and miscellaneous	-19		
Private non-farm	1 029		
Statistical discrepancy	1 167		
Net lending to overseas	-1 388		
Gross accumulation	19 959	Finance of gross accumulation	19 959

The next three tables give details for South Australia of farm income, household income, and private final consumption expenditure respectively for the years 1972-73 to 1976-77.

Farm Income, South Australia^(a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	\$ million				
Gross value of farm production:					
Wool (including skin wool)	165	173	122	132	154
Livestock slaughtering	165	190	113	136	203
Wheat	44	196	164	118	74
Other grain crops	32	77	128	113	100
Other crops	93	121	143	144	164
Other livestock products	34	43	49	47	47
Total	533	800	719	690	742
Less Stock valuation adjustments ...	20	19	-2	-7	
Less Production costs other than wages and depreciation:					
Marketing costs	41	62	58	59	} 327
Seed and fodder	48	52	58	58	
Other costs	105	128	155	183	
Gross farm product at factor cost ...	319	539	450	397	415
Less Depreciation	51	48	55	56	
Wages, net rent and interest paid and third party insurance transfers	60	78	108	114	} 183
Farm income	208	413	287	227		232
Less Farm income of companies ...	13	18	1	7	8
Income of farm unincorporated enterprises	195	395	286	220	224

(a) Includes Northern Territory.

Household Income, South Australia^(a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
			\$ million		
Wages, salaries and supplements	2 006	2 523	3 324	3 800	4 403
Income of farm unincorporated enterprises	195	395	286	220	224
Income of other unincorporated enterprises	233	285	334	402	497
Income from dwellings	57	62	77	118	167
Transfers from general government	256	321	443	597	722
All other income	305	374	504	556	655
Total household income	3 052	3 960	4 968	5 693	6 668
<i>Less</i>					
Income tax paid	350	505	710	863	<i>n.y.a.</i>
Other direct taxes, fees, fines, etc.	42	46	50	60	<i>n.y.a.</i>
Consumer debt interest	} 49	67	82	102	<i>n.y.a.</i>
Transfers overseas					
Household disposable income	2 611	3 342	4 126	4 668	<i>n.y.a.</i>

^(a) Includes Northern Territory.Private Final Consumption Expenditure, South Australia^(a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
			\$ million		
Food	436	501	599	714	831
Cigarettes and tobacco	65	74	90	114	128
Alcoholic drinks	132	152	181	232	256
Clothing etc.	206	248	295	344	398
Health	150	171	217	247	301
Rent	257	299	370	475	606
Gas, electricity, fuel	45	50	58	71	84
Household durables	191	250	311	401	448
Newspapers, books, etc.	31	39	47	60	70
All other goods <i>n.e.i.</i>	99	112	140	173	197
Travel and communication	340	399	506	613	672
All other services	251	290	358	412	469
Total	2 203	2 585	3 172	3 856	4 460

^(a) Includes Northern Territory.

The information included in this section has been derived from the publication *Australian National Accounts, National Income and Expenditure 1976-77* (Catalogue No. 5204.0), published by the Australian Statistician, Canberra.

PRIVATE FINANCE

12.1 BANKING AND CURRENCY

BANKING

The banking system in Australia comprises a central bank (the Reserve Bank of Australia); thirteen trading banks (one owned by the Commonwealth Government, three by State Governments, and nine privately owned); the Commonwealth Development Bank and the Australian Resources Development Bank Ltd (specialist banks, owned respectively by the Commonwealth Government and a consortium of the seven major trading banks); and thirteen savings banks of which one is owned by the Commonwealth Government and three by State Governments, two are trustee savings banks, and seven are associated with privately owned trading banks.

LEGISLATION

Under Section 51 of the Constitution Act the Commonwealth Parliament has power to legislate with respect to 'Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'.

The principal Acts at present in force relating to banking are:

- (a) the *Reserve Bank Act 1959*, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;
- (b) the *Commonwealth Banks Act 1959*, providing for the constitution and management of the Commonwealth Banking Corporation; and

(c) the *Banking Act 1959*, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act 1959* applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are: (1) to provide a uniform legal framework for regulating the banking system; (2) to safeguard depositors from loss; (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (4) to control bank interest rates and the volume of credit in circulation; (5) to provide machinery for the control of foreign exchange.

State banking legislation relates to the incorporation of banks and the constitution and management of State Banks. South Australian Acts at present in force relating to banking are the State Bank Act, 1925-1978 and the Savings Bank of South Australia Act, 1929-1978.

RESERVE BANK OF AUSTRALIA

The Reserve Bank of Australia functions as a central bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States. Liabilities and assets of each department of the Reserve Bank are shown in the table below.

Reserve Bank of Australia, Liabilities and Assets at 30 June 1978

Particulars	Central Bank Department	Note Issue Department	Rural Credits Department	Total (a)
LIABILITIES (\$'000)				
Capital	40 000	—	9 428	49 428
Reserves	549 427	534 242	56 170	1 139 839
Special Reserve:				
International Monetary Fund				
Special Drawing Rights	218 271	—	—	218 271
Notes on issue	—	3 688 136	—	3 688 136
Deposits:				
Statutory reserve deposits ...	726 739	—	—	726 739
Other trading banks deposits	10 741	—	—	10 741
Savings bank deposits	1 122 649	—	—	1 122 649
Other deposits	2 557 152	—	5 470	(a) 1 552 923
Other liabilities	80 779	85 821	408 747	(a) 170 075
Total	5 305 758	4 308 199	479 815	(a) 8 678 801
ASSETS (\$'000)				
Gold and foreign exchange (b) ...	2 314 816	732 826	—	3 047 642
Australian Government securities	1 854 005	2 511 825	—	4 365 830
Other assets	1 136 937	1 063 548	479 815	(a) 1 265 329
Total	5 305 758	4 308 199	479 815	(a) 8 678 801

(a) Inter-departmental accounts totalling \$1 414 971 000 have been offset in totals.

(b) Includes IMF Special Drawing Rights.

The policy of the Reserve Bank is determined by a Board consisting of the Governor of the Reserve Bank (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

Further details of the activities of the Reserve Bank are given in the *Year Book Australia*.

COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* and commenced operations on 14 January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to trading banks and savings banks.

Commonwealth Development Bank

The Commonwealth Development Bank is a supplementary source of finance for primary production and for the establishment or development of industrial undertakings and does not compete with conventional lenders, but provides financial help when such help is thought desirable and finance is not otherwise available on suitable terms. The primary consideration of the Bank's operations in deciding whether finance should be made available is the prospect of success and not necessarily the value of security available.

In South Australia all the major private banks and the State Bank of South Australia are agents of the Commonwealth Development Bank for the receipt of loan applications. The averages of weekly figures for loans, advances and bills discounted for the month of June in the years 1975 to 1978 were \$345, \$369, \$406 and \$458 million respectively. Of the last mentioned amount, \$49.8 million was advanced in South Australia.

At 30 June 1978 the capital of the Commonwealth Development Bank was \$61.7 million.

AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED

This corporation was formed by the major trading banks with the support of the Reserve Bank and was given bank status by an amendment to the Banking Act in 1967. It provides finance for the development of Australia's natural resources mainly in the form of refinanced trading bank loans but also by direct lending and equity participation. Other services offered to intending developers include the organising of consortia financing, assessments of feasibility and independent verification of reserves. The averages of weekly figures for loans and advances outstanding (including refinanced loans) for the month of June in the years 1975 to 1978 were \$449, \$559, \$592 and \$660 million respectively. This finance is provided from the Australian capital market (mainly in the form of public issues of transferable deposits) and from subordinated loans by the

shareholding banks and the Reserve Bank of Australia. Overseas borrowing remains a minor source of funds.

Authorised capital of the Bank is \$10 million of which \$7 million (at 30 September 1978) has been issued as fully paid capital. The shareholders (the major trading banks) have approximately equal shareholdings. Although not a shareholder, the Reserve Bank of Australia initially subscribed \$2.1 million in loan capital on which interest is paid.

TRADING BANKS

For statistical purposes trading banks are often divided into two groups, 'major' and 'other'. The 'major trading banks' comprise the six private trading banks and the Commonwealth Trading Bank, all of which have interests throughout Australia: in June 1978 they accounted for approximately 88 per cent of all general trading bank assets in Australia.

The group 'other trading banks' consist of the three State Government banks (including the State Bank of South Australia) which trade mainly in their respective States, and three other banks (two of them overseas institutions) whose business is either specialised (*e.g.* financing overseas trade), or both specialised and limited to particular areas.

Banks Originating in South Australia

With a subscribed capital of \$500 000 in 50 000 shares of \$10 each, the first trading bank promoted in South Australia was The Bank of Adelaide which was opened for business on 11 December 1865 and now has branches in all States and the Australian Capital Territory.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. The State Bank Act, 1925 repealed the State Advances Act, and enlarged the scope of the activities of the Bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the following Acts on behalf of the State:

- Advances to Settlers Act, 1930-1972;
- Loans to Producers Act, 1927-1962;
- Loans for Fencing and Water Piping Act, 1938-1975;
- Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

Assets

Under the provisions of the *Banking Act* 1959 all trading banks (except State banks trading in their own State) have limitations on their portfolio of assets. These banks are required to maintain a fixed percentage of total deposits as a Statutory Reserve Deposit (SRD) with the Reserve Bank. The SRD ratio for major trading banks changed during 1978 to 5.5 per cent on 3 April, to 4.0 per cent on 3 May and 3.5 per cent on 13 September.

The major trading banks are also required by agreement to hold a certain percentage of total deposits in the form of liquid assets or government securities. This minimum LGS ratio which had remained at 18 per cent from 1962 was changed temporarily to 23 per cent in February 1976 but reverted to 18 per cent on 1 April 1977.

The following table gives some particulars of assets held by trading banks in Australia. The figures quoted are averages of assets at the close of business on each Wednesday in June 1978.

Trading Banks: Assets Within Australia, June 1978^(a)

Assets	Major Trading Banks	Other Trading Banks	All Trading Banks
		\$'000	
Gold, bullion and Australian notes	378 946	25 147	404 093
Cash with Reserve Bank	4 591	714	5 304
Commonwealth public securities:			
Commonwealth Government and State	3 379 833	327 154	3 706 988
Local authorities and public corporations	16 825	28 261	45 085
Statutory Reserve Deposit Account with Reserve Bank	722 603	11 434	734 037
Loans to authorised dealers in short-term money market	137 491	53 412	190 904
Other loans, advances and bills discounted	13 626 217	2 150 944	15 777 160
Bank premises, furniture and sites	347 082	93 585	440 667
Other assets	3 150 522	377 563	3 528 086
Total assets	21 764 110	3 068 214	24 832 324

(a) Excludes inter-branch accounts and contingencies.

Branches and Agencies

Of the thirteen trading banks which operate in Australia, the nine banks listed below conduct business in South Australia:

Government banks;

Commonwealth Trading Bank of Australia
State Bank of South Australia

Private banks;

Australia and New Zealand Banking Group Ltd
The Bank of Adelaide
Bank of New South Wales
Commercial Bank of Australia Ltd
Commercial Banking Company of Sydney Ltd
National Bank of Australasia Ltd
Banque Nationale De Paris

Trading Banks: Branches and Agencies at 30 June, South Australia

Bank	Branches			Agencies		
	1976	1977	1978	1976	1977	1978
Commonwealth Trading Bank	57	62	66	41	33	30
State Bank of South Australia	37	37	36	15	17	18
Private banks	358	359	361	95	91	86
Total—Metropolitan area (a)	250	258	262	61	53	41
Country	202	200	201	90	88	93
Total State	452	458	463	151	141	134

(a) As determined by individual banks for administrative purposes.

Deposits, Advances and Debits to Customers Accounts

Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account but most are deposits for fixed terms ranging from three months to four years and for large amounts from thirty days to four years.

Debits to customers accounts generally represent the total of all cheques drawn by customers of the banks.

Trading Banks: Balance of Deposits and Advances and Debits to Customers Accounts, South Australia^(a)

Year	Depositors Balances			Loans, Advances, and Bills Discounted (b)	Debits to Customer Accounts (e)	Proportion to Total Deposits	
	Bearing Interest	Not Bearing Interest	Total			Deposits Bearing Interest	Loans, Advances, and Bills Discounted (b)
			\$'000			Per cent	
1974	508 282	307 340	815 622	671 782	439 239	62.3	82.4
1975	634 284	339 216	973 499	748 609	494 399	65.2	76.9
1976	822 826	391 662	1 214 488	914 300	677 192	67.8	75.3
1977	886 175	414 707	1 300 883	1 149 413	790 080	68.1	88.4
1978	871 839	429 677	1 301 516	1 370 681	848 596	67.0	105.3

(a) Average of weekly figures for month of June.

(b) Excludes loans to authorised dealers in the short-term money market.

(c) Includes the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia and the Banque Nationale de Paris. Advances are classified according to type of borrower in July of each year from 1974 to 1978.

**Major Trading Banks, South Australia and Northern Territory
Advances to Resident Borrowers by Type of Borrower^(a)
(At Second Wednesday in July)**

Classification	1974	1975	1976	1977	1978
	\$ million				
Business advances:					
Agriculture, grazing and dairying (b)	86.4	91.8	108.8	122.9	157.8
Manufacturing	65.2	66.7	67.0	93.1	94.0
Transport, storage and communication	12.3	9.9	13.0	16.7	17.9
Finance	27.4	21.5	19.1	27.4	32.6
Commerce:					
Retail trade	37.3	42.1	51.9	66.1	82.3
Wholesale trade (c)	23.9	21.7	28.4	37.6	36.1
Total commerce	61.2	63.8	80.2	103.6	118.4

**Major Trading Banks, South Australia and Northern Territory
Advances to Resident Borrowers by Type of Borrower ^(a)
(At Second Wednesday in July) (continued)**

Classification	1974	1975	1976	1977	1978
	\$ million				
Business advances (continued):					
Building and construction	19.8	21.3	25.4	38.3	44.1
Other business	78.9	81.9	96.4	109.9	126.9
Unclassified	2.9	5.4	11.2	15.4	13.6
Total business advances ...	354.3	362.3	421.1	527.4	605.4
Distribution of business advances:					
To companies	195.8	199.2	225.8	298.4	319.0
Other	158.4	163.1	195.3	228.9	286.4
Advances to public authorities	1.4	1.6	3.1	2.1	4.6
Personal advances:					
Building or purchasing own home	40.4	40.7	52.8	60.8	69.6
Other	105.8	141.8	202.3	286.6	369.3
Total personal advances ...	146.1	182.5	255.1	347.4	438.9
Advances to non-profit organisations	5.4	3.8	4.5	5.6	6.9
Total advances to resident borrowers	507.2	550.2	683.7	882.5	1 055.7

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia and the Banque Nationale de Paris. 'Resident borrowers' comprise all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia.

(b) Includes farm development loan component.

(c) Includes temporary advances to woolbuyers.

Interest Rates

Bank interest rates are not formally determined under the *Banking Act*. Maximum rates are fixed after discussions between the Reserve Bank and the banks, and with the approval of the Treasurer. State Government banks, although not bound by rulings of the Reserve Bank, tend to conform to them.

SAVINGS BANKS

Development of Savings Banks

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, and deposits as small as 10 cents are still accepted. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organisations such as friendly, co-operative and charitable societies. In addition the Savings Bank of South Australia provides personal cheque account facilities for other depositors. Savings accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping these accounts or the cheque accounts of some non-profit organisations. However, early in 1970 concessions relating to charges and interest on trading accounts were withdrawn from

hospital and medical benefit organisations, building societies, credit unions and investment clubs. Savings banks may not accept deposits from a profit-making body unless it is acting as a trustee for a non-profit making beneficiary.

Post Offices in South Australia acted as agencies for the Savings Bank of South Australia until 1912 when they became agents of the Commonwealth Bank from the date of its establishment.

Savings bank business was conducted exclusively by these two government banks until 1956, when the first of the private banks entered this field. Savings bank facilities in South Australia are now provided by the eight banks listed below:

Government;

Commonwealth Savings Bank of Australia

Savings Bank of South Australia

Private;

Australia and New Zealand Savings Bank Ltd

The Bank of Adelaide Savings Bank Ltd

Bank of New South Wales Savings Bank Ltd

Commercial Savings Bank of Australia Ltd

CBC Savings Bank Ltd

National Bank Savings Bank Ltd

Savings Bank of South Australia

The Savings Bank of South Australia commenced operations on 11 March 1848 following the enactment of an ordinance in 1847. At 30 June 1978 there were 145 branches, 639 agencies and 834 school bank agencies within South Australia. The Savings Bank of South Australia does not operate branches in other Australian States but has agent banks to act for it in other States and in the United Kingdom. Since April 1974 a resident officer has been located in London.

The total of depositors balances first exceeded \$200 million in 1956, reached \$400 million in July 1969 and at 30 June 1978 amounted to more than \$919 million. During 1977-78, the Bank made loans exceeding \$111.9 million to depositors for housing, for rural development and for institutional and other purposes, and at 30 June 1978 the total of such loans outstanding was over \$414 million.

Savings Bank of South Australia, Summary of Business

Year	Operative Accounts	Cash Turnover (a)	Depositors Balances (b)	Loans (b) (c)	Government Securities Held
					(b) (d)
	No.	\$m		\$'000	
1973-74	1 007 671	2 262	591 822	341 853	157 713
1974-75	1 064 468	3 037	697 458	396 454	166 865
1975-76	1 074 646	3 821	776 473	457 096	176 578
1976-77	1 078 799	4 224	842 842	533 707	184 344
1977-78	1 078 864	5 344	919 756	614 500	184 124

(a) Sum of deposits and withdrawals; includes some duplication from amounts transferred by depositors from one type of account to another.

(b) At end of year, as published in the Bank's Annual Report.

(c) Includes loans guaranteed by South Australian Government and to statutory and local government bodies.

(d) Commonwealth Government Securities only.

Branches and Agencies

The increase in number of branches of savings banks in recent years is due mainly to the increase in branches of private banks in the metropolitan area. However, the number of agencies of savings banks has decreased each year since 1967-68.

Savings Banks: Branches and Agencies at 30 June, South Australia

Bank	Branches			Agencies		
	1976	1977	1978	1976	1977	1978
Commonwealth Savings Bank	79	81	82	642	618	617
Savings Bank of South Australia	142	143	145	686	653	639
Private banks	358	359	360	472	472	458
Total—Metropolitan area (a)	338	344	348	1 196	1 140	1 125
Country	241	239	239	604	603	589
Total State	579	583	587	1 800	1 743	1 714

(a) As determined by individual banks for administrative purposes.

School Banking

Special banking facilities for school children were introduced into South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28 April 1908. The Commonwealth Savings Bank of Australia and some private banks provide similar services at some private schools. However, the Savings Bank of South Australia has sole access to State schools, and retains a major share of school banking business. With a view to encouraging thrift in school children, deposits as small as one cent are accepted.

Details of school banking in this State are as follows:

	Agencies	Operative Accounts '000	Depositors Balances \$'000
30 June 1974	910	157	3 684
1975	902	155	3 808
1976	881	153	4 095
1977	877	149	4 366
1978	880	146	4 651

Assets

Under the provisions of the *Banking Act* 1959 all savings banks (except State banks trading in their own State) are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth Government or State securities, loans for housing, loans to authorised dealers in the short-term money market and loans to the Australian Banks Export Refinance Corporation Ltd.

A further limitation on the portfolio of assets held by savings banks is that they are required to hold in cash and other prescribed assets, funds equivalent to 45 per cent of depositors balances. Within this amount, funds equivalent to 7.5 per cent of depositors balances must be held in deposits with the Reserve Bank and in Treasury notes. The ratio

was previously 50 per cent but was varied by an amendment to the Banking (Savings Bank) Regulations on 27 May 1977.

Deposits

Until 1961, the total of depositors balances in savings banks per head of population was higher in South Australia than in any other State. Although deposits per head are now higher in Victoria than in South Australia, the figure for this State is still well above the Australian average.

Savings Banks: Accounts and Deposits, South Australia and Australia

At 30 June	South Australia			Australia		
	Accounts Operative (a)	Depositors Balances	Deposits per Head of Population	Accounts Operative (a)	Depositors Balances	Deposits per Head of Population
	'000	\$m	\$	'000	\$m	\$
1974	1 861	1 174.8	950	18 369	11 195.6	823
1975	1 991	1 394.6	1 114	19 390	12 868.5	934
1976	2 049	1 617.3	1 282	20 171	14 822.5	1 065
1977	2 108	1 780.8	1 395	20 667	16 365.3	1 163
1978	2 131	1 945.3	1 511	21 024	18 046.2	1 267

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held a very high proportion of the total of depositors balances in this State, although its share of total on deposit has dropped from about 75 per cent in 1961 to approximately 47 per cent in 1978. During that time the private banks have increased their share from less than 12 per cent to approximately 29 per cent.

Savings Bank Deposits, South Australia

At 30 June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
			\$million	
1974	276.6	591.8	306.4	1 174.8
1975	322.9	697.5	374.2	1 394.6
1976	374.4	776.5	466.5	1 617.3
1977	412.0	842.8	526.1	1 780.8
1978	452.0	919.7	573.7	1 945.3

The next table gives an indication of the amount of business conducted by savings banks during a year. It shows that in each of the last five years, both the amount deposited and the amount withdrawn during the year exceeded the total amount on deposit at the end of the year.

Movements in Savings Bank Deposits, South Australia

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Balances during Year	Amount on Deposit at End of Year
\$million						
1973-74	1 060.4	2 392.2	2 325.1	47.4	114.5	1 174.8
1974-75	1 174.8	3 135.6	2 982.0	66.2	219.8	1 394.6
1975-76	1 394.6	3 754.0	3 612.5	81.2	222.8	1 617.3
1976-77	1 617.3	4 324.9	4 254.8	93.4	163.5	1 780.8
1977-78	1 780.8	5 036.3	4 974.3	102.5	164.5	1 945.3

(a) Includes inter-branch transfers.

CURRENCY

Under the Commonwealth Constitution the control of currency, coinage and legal tender in Australia is vested in the Commonwealth.

The Commonwealth Treasurer is empowered by legislation to arrange for the making and issuing of coins of specified denominations. Australia's coin requirements are met by the Royal Australian Mint in Canberra. Australian notes are printed by the Note Printing Branch of the Reserve Bank in Melbourne, while their issue is controlled by the Note Issue Department of that bank.

Notes in circulation are of the denominations \$1, \$2, \$5, \$10, \$20, and \$50, the last mentioned becoming available to the public on 9 October 1973. Coins in circulation are 1 cent and 2 cent (bronze) and 5, 10, 20 and 50 cents (cupro-nickel).

The following table shows the value of notes in circulation in Australia for the past five years. Separate details for South Australia are not available.

Notes in Circulation, Australia

Denomination	Last Wednesday in June				
	1974	1975	1976	1977	1978
\$million					
\$1	53.2	52.7	53.6	57.4	60.8
\$2	130.2	129.1	127.8	133.0	136.0
\$5	103.5	110.2	116.4	121.8	126.7
\$10	701.1	675.2	655.2	628.8	604.5
\$20	960.6	1 186.7	1 334.6	1 489.0	1 620.5
\$50	197.5	403.2	633.8	860.8	1 121.7
Total	2 146.1	2 557.1	2 921.4	3 290.8	3 670.2
Notes held by:					
Banks	300.8	339.9	352.5	378.1	413.1
Public	1 845.3	2 217.1	2 568.9	2 912.8	3 257.1

Minting of the 50 cent coin in its original form of 80 per cent silver and 20 per cent copper, ceased in April 1968. A twelve sided version of the 50 cent coin, in cupro-nickel, was issued in September 1969. Special 50 cent coins were issued in 1970 to commemorate the two-hundredth anniversary of Captain James Cook's discovery of the east coast of Australia, and in 1977 to commemorate the twenty-fifth anniversary of Queen Elizabeth's accession to the throne.

More complete details of Australian currency, including historical references, were included on pages 552-6 of the *South Australian Year Book* 1968.

12.2 INSURANCE

LIFE INSURANCE

The activities of life insurance companies operating in South Australia have been regulated by Commonwealth legislation since 1945. Under the *Life Insurance Act* 1945, every company transacting life insurance business must be registered and must lodge a deposit of up to \$100 000, as security for policy holders, with the Commonwealth Treasurer. The Act is administered by the Insurance Commissioner who has wide powers of inquiry into the activities of any registered company.

Each company must establish at least one statutory fund and all moneys received in respect of life insurance business must be paid to, and form part of, the assets of these funds. An actuarial investigation must be conducted at least once every five years, with the distribution of shareholders dividends and policy holders bonuses subject to sufficient surplus being revealed by such investigation. All premiums must be actuarially approved and the Commissioner has powers to suppress policies or proposals which he deems misleading.

Companies are required to furnish to the Commissioner certain accounting reports and statistical returns and it is from these returns that the statistical details in this section are obtained.

The individual returns cover operations for the accounting year ending in the calendar year shown. For a majority of companies the closing date is 31 December, but a number balance earlier in the year.

During 1977, there were forty-one companies operating in South Australia. All conducted ordinary life insurance business; thirty-five also undertook superannuation business, *i.e.* the issuing of policies to the trustees of funds established for the provision of superannuation or retirement benefits, and eight recorded industrial business whereby premiums are collected at intervals of less than two months.

With the passing of the State Government Insurance Commission Act Amendment Act, 1977, the Commission, which from 1972 has been undertaking general insurance business, was empowered to enter the life insurance field and it began accepting life insurance business on 1 March 1978.

Policies Existing

There has been a rapid growth in life insurance business since the end of 1945 when, for policies existing, the sum insured plus bonus additions amounted to \$130 million; by 1956 the \$500 million mark was reached and by 1977 the figure was \$6 878 million.

The next table illustrates the growth in life insurance business over the last ten years. Although total business has been increasing, the number of industrial policies has actually declined and industrial premiums have risen only slowly. The heavy relative decline in this form of business has resulted from the high cost of collecting premiums and the development of superannuation and group schemes.

Life Insurance: Policies Existing, South Australia

Year	Ordinary			Superannuation			Industrial (a)		
	Policies	Sum Insured	Annual Premiums	Policies	Sum Insured	Annual Premiums	Policies	Sum Insured	Annual Premiums
	No.	\$'000	\$'000	No.	\$'000	\$'000	No.	\$'000	\$'000
1968	497 847	1 413 230	37 087	47 003	298 861	10 301	262 780	94 949	3 936
1969	523 417	1 588 831	41 321	48 453	341 571	11 588	257 049	101 077	4 163
1970	550 226	1 802 721	46 011	49 784	399 458	13 347	253 464	111 065	4 493
1971	580 218	2 073 174	51 801	51 275	470 677	15 882	249 993	123 800	4 894
1972	608 290	2 374 762	58 022	52 875	542 580	17 921	241 651	135 827	5 263
1973	642 956	2 757 993	63 221	52 292	658 235	20 543	237 018	149 526	5 756
1974	657 011	3 150 075	68 845	54 059	868 020	25 992	224 517	157 078	5 901
1975	667 507	3 653 848	74 707	55 320	1 112 366	33 494	210 213	161 548	5 984
1976	666 013	4 130 495	78 574	56 861	1 370 498	40 537	194 363	165 528	6 043
1977	657 077	4 582 356	80 947	61 450	1 622 228	46 679	180 003	165 752	6 003

(a) Includes industrial business for the Northern Territory.

In the following table, the distinction between endowment insurance and an endowment policy is that endowment insurance provides for the payment of the sum insured upon the insured person reaching a specified age or upon his prior death, whereas the sum insured under an endowment policy is paid only upon the insured person reaching the specified age.

Life Insurance: Policies Existing, South Australia, 1977

Type of Policy	Ordinary		Superannuation		Industrial (a)	
	Sum Insured	Annual Premiums	Sum Insured	Annual Premiums	Sum Insured	Annual Premiums
	\$'000					
Whole life insurances ...	2 733 675	48 056	209 151	5 025	10 385	377
Endowment insurances	537 394	24 195	435 166	16 445	153 220	5 520
Other insurances	1 290 473	7 166	960 684	24 284	1 350	68
Endowment	20 814	1 531	17 226	924	798	38
Total	4 582 356	80 947	1 622 228	46 679	165 752	6 003

(a) Includes industrial business for the Northern Territory.

New Policies

During 1977 a total of 62 256 new life insurance policies, with a sum insured of \$1 273 905 977, were issued in South Australia. The value, *i.e.*, sum insured, of new policies has increased continuously since 1945.

The number and value of new ordinary, superannuation, and industrial policies issued during the five years to 1977 are shown in the next table. The relative importance of industrial policies declined from approximately 25 per cent of total value in 1945 to 1 per cent in 1977. The average value of industrial policies is much lower than for ordinary and superannuation policies.

Life Insurance: New Policies Issued, South Australia

Class of Business	1973	1974	1975	1976	1977
	NUMBER				
Ordinary	60 229	58 082	55 914	52 162	47 613
Superannuation	7 020	8 706	9 858	9 904	9 565
Industrial (a)	13 629	9 210	6 874	6 129	5 078
Total (a)	80 878	75 998	72 646	68 195	62 256
	SUM INSURED (\$'000)				
Ordinary	526 639	584 349	715 427	790 057	839 046
Superannuation	173 089	300 011	359 673	390 160	416 690
Industrial (a)	28 270	24 416	20 797	20 547	18 169
Total (a)	727 998	908 775	1 095 897	1 200 765	1 273 906

(a) Includes industrial business for the Northern Territory.

Annual premiums on new policies issued in 1977 amounted to \$21 611 661 and of this amount \$5 145 960 was for endowment insurances and \$7 975 286 for whole of life insurances. Details of sum insured and premiums payable for the various types of policy issued in 1977 are shown in the following table.

Life Insurance: New Policies Issued, South Australia, 1977

Type of Policy	Ordinary		Superannuation		Industrial (a)	
	Sum Insured	Annual Premiums	Sum Insured	Annual Premiums	Sum Insured	Annual Premiums
	\$'000					
Whole life insurances	413 661	6 854	46 454	1 086	813	35
Endowment insurances	36 568	1 253	93 094	3 327	17 293	567
Other insurances	388 602	2 006	271 042	6 199	63	2
Endowment	216	-9	6 100	292	—	—
Total	839 046	10 104	416 690	10 904	18 169	604

(a) Includes industrial business for the Northern Territory.

Annuity Business

Life insurance companies also issued annuity policies but this form of business is at present a relatively minor aspect of life insurance activity. In 1977 there were 169 policies in existence with total annuities per annum of \$73 992.

Policies Discontinued

The following table gives details of policies discontinued according to reason for discontinuance. The item 'transfer' represents the net balance from the transfer of policies between the South Australian register and those of other States, Territories or overseas.

Life Insurance: Policies Discontinued or Reduced, South Australia, 1977

Cause	Ordinary		Superannuation		Industrial (a)	
	Policies	Sum Insured	Policies	Sum Insured	Policies	Sum Insured
	No.	\$'000	No.	\$'000	No.	\$'000
Death	2 320	8 317	153	2 955	1 198	391
Maturity	10 721	14 088	750	10 393	10 978	2 332
Surrender	33 949	205 635	2 336	105 590	7 002	10 107
Forfeiture	8 767	118 415	469	9 810	2 174	7 435
Transfer	-48	2 426	107	11 743	-1 950	-2 413
Other	840	38 305	1 161	24 469	—	53
Total	56 549	387 186	4 976	164 960	19 402	17 904

(a) Includes industrial business for the Northern Territory.

Premiums and Claims

Details of premium income and of cash payments made in respect of policies are shown in the following table. This table does not show investment income or management and commission expenses and accordingly is not a revenue and expenditure table.

Life Insurance: Premiums and Policy Payments, South Australia

Year	Premiums and Considerations for Annuities	Payments					Total
		Death or Disability (a)	Maturity	Surrenders	Annuities	Cash Bonuses	
				\$'000			
1973	90 332	10 387	19 681	16 380	103	185	46 735
1974	100 290	12 528	23 219	22 869	121	196	58 933
1975	114 824	14 296	24 599	27 776	86	395	67 152
1976	124 781	14 358	26 602	31 448	85	369	72 862
1977	135 553	16 368	31 627	34 992	66	539	83 592

(a) Includes 'Other'.

Loans Outstanding

In the following table details are given of mortgages on South Australian real estate, loans on policies registered in, and 'other' loans to persons resident in this State. Only those loans which form assets of the statutory funds are included.

Life Insurance: Loans Outstanding, South Australia

Loans	1973	1974	1975	1976	1977
			\$'000		
Loans on:					
Mortgage of real estate	79 671	83 150	84 969	85 926	87 581
Policies;					
Advance of premiums	4 350	4 729	5 070	5 579	5 413
Other	21 561	22 093	22 352	22 738	23 979
Other	3 009	2 618	2 209	2 231	2 125
Total	108 590	112 591	114 600	116 474	119 098

GENERAL INSURANCE

General insurance in South Australia is conducted by private organisations and the State Government Insurance Commission which commenced business in January 1972. Some Government insurance, in particular workmen's compensation, is carried by the Government Insurance Fund which is administered by the Government Insurance Office. In addition, the State Bank of South Australia insures certain properties on which it has provided mortgage finance.

A number of Commonwealth Government instrumentalities also are engaged in insurance in South Australia, notably in respect of housing loans and export payments, but these activities are not included in South Australian statistics.

Companies, persons or firms of persons carrying on general insurance business are required under the Stamp Duties Act, 1923-1978 to take out an annual licence, such licence being the authority to carry on insurance business in the State. The licence fee varies with premium income. Under the Fire Brigades Act, 1936-1976 insurance companies contribute approximately 75 per cent of the cost of maintaining the services of the Fire Brigades Board.

Insurance for workmen's compensation and motor vehicle third party risks is compulsory under State legislation. Employers, unless specifically exempted, are required under the Workmen's Compensation Act, 1971-1974 to effect an insurance cover providing compensation for workmen suffering injuries in the course of their employment. Details of workmen's compensation provisions are given in Part 7.4 pages 334-5.

Under the Motor Vehicles Act, 1959-1978 all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 10.4 pages 517-8.

Legislation affecting all insurance companies operating in Australia is embodied in the *Insurance Act 1973* which seeks to ensure the continued financial stability of these companies. This Act is concerned only with the solvency of all companies engaged in insurance business and not with contractual arrangements between policy holders and insurers or with the rate of premiums charged. It also provides for the continuation of the provisions of the State Acts referred to above. All deposits lodged with the Commonwealth Treasurer under the *Insurance (Deposits) Act 1932* will eventually be returned to insurers.

The statistics in this section are compiled from returns covering transactions of the State Government Insurance Commission, the Government Insurance Fund, State Bank and approximately 100 companies and company groups licensed to conduct general insurance business. Each return gives details of the organisation's activities during a twelve-month period ending within the year shown. Some re-insurance transactions are excluded from the returns to avoid duplication.

The following tables show some details of revenue and expenses relating to general insurance for the years 1973-74 to 1976-77. The tables contain selected items of statistics and should not be combined and construed as profit and loss statements or revenue accounts.

The first table shows premiums earned by the companies. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns, rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from 'earned premium income' for the year. Premiums have increased over the period covered by the table and hence have been greater than earned

premium income in each year. Investment income relates to interest, dividends, rents, etc. from investments made within the State.

General Insurance: Revenue, South Australia

Source of Revenue	1973-74 (a)	1974-75	1975-76	1976-77
			\$'000	
Premiums:				
Fire and sprinkler leakage	12 398	13 463	17 432	17 277
Houseowners' and householders'	10 420	12 322	16 379	18 344
Loss of profits	1 679	2 106	2 818	2 604
Crop (including hailstone)(b)	864	1 242	1 144	1 009
Marine	3 552	3 933	4 244	5 125
Motor vehicle;				
Compulsory third party	19 670	33 902	43 357	49 256
Comprehensive (including motor cycles)	28 693	38 216	52 552	62 312
Employers' liability and workmen's compensation	34 246	65 685	74 468	87 196
Personal accident	4 908	4 890	5 530	6 316
Public liability	2 607	2 904	3 370	4 286
Burglary	1 215	1 279	1 605	1 972
Other	5 505	7 374	8 749	11 943
Total premiums	125 756	187 316	231 649	267 640

(a) Includes Northern Territory.

(b) Before 1974-75 'crop' was included with 'fire and sprinkler leakage'.

Details of claims and other expenses are given in the next table. Claims include provision for outstanding claims and represent claims incurred during the year. Other expenses mainly represent payments made during the year. Before 1974-75 income tax was included in taxation, and was based on income earned in previous years.

General Insurance: Expenses, South Australia

Type of Expense	1973-74(a)	1974-75	1975-76	1976-77
			\$'000	
Claims:				
Fire and sprinkler leakage	4 696	15 701	7 957	5 429
Houseowners' and householders'	3 679	27 747	12 892	8 930
Loss of profits	783	1 894	798	83
Crop (including hailstone)(b)	1 287	395	276	1 076
Marine	2 514	3 771	3 159	3 401
Motor vehicle;				
Compulsory third party	25 645	41 304	50 334	56 831
Comprehensive (including motor cycles)	21 078	31 391	32 477	34 395

Household Income, South Australia (continued)

Type of Expense	1973-74(a)	1974-75	1975-76	1976-77
			\$'000	
Claims: (continued)				
Employers' liability and workmen's compensation	28 488	52 461	49 760	56 604
Personal accident	2 056	2 107	2 343	2 908
Public liability	1 249	2 065	2 648	2 320
Burglary	657	944	930	1 089
Other	2 501	4 968	4 937	5 224
Total claims	94 635	184 746	168 513	178 290
Selected expenses:				
Contributions to fire brigades(a)	2 437	3 424	4 919	7 302
Commission and agent charges	11 612	14 016	14 142	15 592
Management	21 465	28 296	31 215	38 123
Taxation	1 355	2 379	2 065	2 699
Other underwriting expenses(a)	<i>n.a.</i>	1 364	1 139	421
Total expenses	131 503	234 225	221 994	242 426

(a) Includes Northern Territory.

(b) Before 1974-75 'crop' was included with 'fire and sprinkler leakage'.

12.3 OTHER PRIVATE FINANCE

STOCK EXCHANGE OF ADELAIDE LIMITED

The Stock Exchange of Adelaide was formed in 1887 by the amalgamation of the Adelaide Stock Exchange and the Stock Exchange of South Australia. Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who act as agents for the investing public.

The Exchange operates under a set of rules which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a chairman, a vice-chairman and a committee of four, elected by the members.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants. A visitors gallery overlooking the trading floor enables the proceedings to be observed.

On 2 January 1972, the Member Exchanges of the Australian Associated Stock Exchanges (which includes Adelaide) adopted the policy of 'national listing'. This common listing meant that, at 30 June 1978, the Stock Exchange of Adelaide Limited had 1 102 companies on its Official List with a total equity market capitalisation (*i.e.* total market value of ordinary shares) of \$21 399 million. The face value of other listed securities at 30 June 1978 was Commonwealth Government loans \$15 335 million, public corporation loans \$1 827 million, debentures \$2 593 and unsecured notes \$219 million.

The figures in the following table have been supplied by the Stock Exchange.

It should be noted that several companies with diverse activities, including extensive

oil and/or mining interests, are classified by stock exchanges as 'industrial' and are shown in that category in the table.

Stock Exchange of Adelaide, Recorded Turnover of Securities

Particulars	Year Ended 30 June				
	1974	1975	1976	1977	1978
TRANSACTIONS ('000)					
Shares, Commonwealth Government loans, public corporation loans, debentures and unsecured notes	43	32	35	38	41
NUMBER OF SHARES ('000)					
Shares:					
Industrial	17 379	14 767	19 521	21 274	27 454
Mining and oil	14 908	9 202	11 588	12 460	22 874
Total shares	32 287	23 969	31 109	33 734	50 328
MARKET VALUE (\$'000)					
Shares:					
Industrial	23 215	12 739	21 066	22 477	30 549
Mining and oil	7 072	4 354	7 674	9 350	10 569
Total shares	30 287	17 093	28 740	31 827	41 118
\$'000					
Commonwealth Government loans, public corporation loans, debentures and unsecured notes:					
Face value	2 232	2 340	2 224	1 959	2 377
Market value	1 972	1 892	1 902	1 665	2 184

BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1975-1976 which is administered by the Registrar of Building Societies with whom all building societies must be registered. The societies fall into two categories—permanent societies and terminating (Starr-Bowkett) societies.

Permanent societies are organisations which have rules or regulations that do not specify that they are to terminate on a specific date or when a specific object is achieved. They operate on a co-operative basis by borrowing predominantly from their members and providing finance to their members and other persons principally in the form of housing loans. An additional source of funds for certain permanent societies has been provided by the Commonwealth Government through the Housing Agreements and the *States Grants (Housing) Act 1971* (see pages 374-5). Advances for the purpose of building or acquiring homes are made to members and other persons by way of mortgage. Two permanent buildings societies are approved organisations in which the trustee of an estate may legally invest funds. Detailed statistics on the operations generally of permanent building societies are available in the monthly bulletin *Housing Finance for Owner Occupation, Permanent Building Societies* (Catalogue No. 5610.0).

The statistics below summarise information collected from the ten permanent building societies balancing within the 1975-76 and 1976-77 financial years.

Permanent Building Societies: Liabilities and Assets, South Australia^(a)

Liabilities	1975-76	1976-77	Assets	1975-76	1976-77
	\$'000			\$'000	
Share capital and reserves:			Amount owing on loans	148 886	194 297
Withdrawable shares	172 336	231 184	Cash on hand	131	568
Reserves:			Deposits with:		
Statutory	—	—	Banks	34 167	32 129
Other ^(b)	2 351	2 642	Other	6 621	14 066
Deposits	8 254	8 634	Bills, bonds and other securities	12 699	13 500
Loans	25 690	18 342	Accounts receivable	1 255	946
Accounts payable	961	1 767	Physical assets	6 204	7 709
Other liabilities ^(c)	421	695	Other assets	50	49
Total liabilities	210 013	263 264	Total assets	210 013	263 264

(a) At the balance dates of societies within the financial year shown.

(b) Includes accumulated surpluses and deficits.

(c) Includes non-withdrawable shares.

Permanent Building Societies: Income and Expenditure, South Australia.

Expenditure	1975-76	1976-77	Income	1975-76	1976-77
	\$'000			\$'000	
Interest on:			Interest from:		
Shares	13 982	17 206	Loans	14 979	18 159
Deposits	754	780	Deposits	2 649	4 289
Loans	1 013	709	Income from holdings of securities	1 212	1 041
Wages and salaries	1 648	1 874	Other income	1 118	1 215
Administrative expenses ^(a)	1 055	1 246	Total income	19 958	24 704
Other expenditure	1 063	2 311			
Total expenditure	19 515	24 126			

(a) Includes Permanent Building Society Association costs, advertising, bank charges and other administrative expenses.

Terminating (Starr-Bowkett) societies have a limited life and derive their funds from regular subscription from members. These funds are used to make interest-free advances to members, with priority being determined by ballot. The statistics below summarise information collected from the fourteen terminating building societies in South Australia balancing within the 1976-77 financial year. More detailed description and dissection of these statistics may be found in the annual bulletin *Terminating Building Societies: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5633-0)

Terminating Building Societies: Liabilities and Assets, South Australia, 1976-77^(a)

Liabilities	Amount	Assets	Amount
	\$'000		
Share capital ^(b)	1 926	Amount owing on loans ^(b)	1 928
Accumulated funds ^(c)	251	Cash on hand and current accounts at banks	68
Loans from:		Deposits with:	
Banks	—	Banks	125
Commonwealth/State Home Builders' Fund ^(d)	—	Others	81
Others	—	Physical assets	1
Other liabilities	29	Other assets	2
Total liabilities	2 206	Total assets	2 206

(a) At the balance dates of societies within the financial year shown.

(b) Borrowing members' subscriptions have been offset against *Amount owing on loans*.

(c) Includes accumulated surpluses and deficits.

(d) Refers to loans made through the 1973-74 Commonwealth/State Housing Agreements.

Terminating Building Societies: Income and Expenditure, South Australia, 1976-77

Expenditure	Amount	Income	Amount
	\$'000		\$'000
Interest paid on borrowing		Interest on:	
members' subscriptions	—	Loans to members	—
Interest on loans from:		Other	—
Banks	—	Management fees	23
Other	—	Other income	24
Salaries and secretarial fees	20		
Other expenditure	52		
Total expenditure	72	Total income	47

CO-OPERATIVE SOCIETIES

For the purpose of collecting the statistics in this section co-operative societies have been defined as producing, manufacturing, marketing or distributing societies which substantially fulfil the following conditions:

- (1) the greater part of the business of such a society to be transacted with its own shareholders;
- (2) any distribution of surplus after payment of dividend on share capital to be amongst suppliers or customers in proportion to the business transacted with the society;
- (3) limitation of voting power to one vote per person;
- (4) dividend on share capital not to exceed 10 per cent.

All such societies must be registered under the Industrial and Provident Societies Act, 1923-1974. The Registrar of Industrial and Provident Societies must approve the rules of each society before it may be registered.

Co-operative societies may be classified under three broad headings—those serving producers, those serving consumers, and those fulfilling both functions. In the following table societies and members have been classified under these headings.

Co-operative Societies: Societies and Membership, South Australia

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Societies:					
Producers societies	41	43	39	39	37
Consumers societies	12	14	10	10	8
Producers and consumers societies	11	11	11	11	14
Total societies ...	64	68	60	60	59
Members:					
Producers societies	14 157	15 253	15 624	15 180	15 094
Consumers societies	103 938	103 592	103 395	105 543	105 441
Producers and consumers societies	3 798	3 717	3 682	3 783	4 613
Total members	121 893	122 562	122 701	124 506	125 148

Of the thirty-seven producers societies operating in 1976-77, seven were co-operative wineries or distilleries, four represented dairy producers, and fourteen were associated with fruit and vegetable production. Six of the remaining twelve societies were associated with other rural production. Of the eight co-operative consumers societies four were trading as general storekeepers, the remainder offering specialised products or services. Producer-consumer societies were generally associated with the fruitgrowing industry.

Details of the liabilities and assets of the societies in each category for 1976-77 are given below. The seven co-operative wineries and distilleries accounted for 61 per cent of producer society assets.

Co-operative Societies: Assets and Liabilities, South Australia, 1976-77

Particulars	Producers Societies	Consumers Societies	Producers and Consumers Societies	Total
			\$'000	
Assets (a):				
Land and buildings	14 015	3 406	3 781	21 202
Fittings, plant and machinery	15 327	777	2 167	18 271
Stock	36 705	5 238	2 357	44 299
Sundry debtors	12 856	1 299	3 128	17 283
Cash	735	573	174	1 482
Profit and loss account	1 162	107	—	1 270
Other (b)	6 322	1 781	5 975	14 078
Total	87 122	13 181	17 582	117 885
Liabilities:				
Capital	8 891	3 633	1 053	13 578
Loan capital	19 248	4 387	5 793	29 429
Bank overdraft	15 576	331	3 730	19 636
Sundry creditors	8 016	898	2 603	11 517
Accumulated profits	343	895	—	1 238
Reserves and reserve funds (c)	16 460	1 655	1 559	19 673
Other (d)	18 588	1 383	2 843	22 814
Total	87 122	13 181	17 582	117 885

(a) Assets are shown at net value after deduction of provisions.

(b) Includes investments and advances to members.

(c) Excludes provisions for depreciation and bad debts.

(d) Includes amounts due to members.

Particulars of the aggregate income and expenditure of co-operative societies for the five years to 1976-77 are given in the following table.

Co-operative Societies: Income, Expenditure and Appropriations
South Australia

Particulars	1972-73	1973-74	1974-75	1975-76
	\$'000			
Income:				
Sales	77 842	95 480	107 159	126 765
Other	6 328	7 029	10 940	10 319
Total	84 170	102 509	118 098	137 084
Expenditure:				
Purchases	54 889	63 987	71 343	80 366
Working expenses (a)	27 668	36 129	46 335	53 011
Interest on external borrowing	1 231	1 560	2 322	2 883
Total	83 788	101 675	119 999	136 260
Appropriations:				
Rebates and bonuses	2 971	2 764	2 123	3 517
Interest and dividends to shareholders	672	605	740	869
Other	1 615	1 706	3 608	1 615
Total	5 258	5 075	6 471	6 001

(a) Includes provision for depreciation and bad debts.

CO-OPERATIVE CREDIT SOCIETIES

Co-operative credit societies are registered under the Credit Unions Act, 1976 which is administered by the Registrar of Credit Unions. Before 28 April 1977, when the Credit Unions Act, 1976 was proclaimed, these societies were registered under the Industrial and Provident Societies Act, 1923-1974.

The societies included in this collection, which began in 1970-71, are mainly credit unions or savings and loan societies. A credit union is defined as an organisation that:

- (a) is registered under the Credit Unions Act, 1976; and
- (b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balance dates. The figures are aggregates of returns submitted by societies for their relevant accounting periods closing on various dates during the financial years shown.

More detailed description and dissection of these statistics may be found in the annual bulletin *Credit Unions: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5618-0)

Co-operative Credit Societies, South Australia

Particulars	1975-76	1976-77	1977-78
		Number	
Societies	32	33	32
Shareholders	67 160	70 794	78 616
Selected receipts and payments:		\$'000	
Deposits received (a)	73 563	103 436	128 202
Deposits repaid (b)	58 925	87 285	104 509
Loans paid over	44 981	59 096	64 657
Loan repayments (b)	33 118	44 947	47 257
Income:			
Interest on loans to members	5 394	7 522	9 594
Other	693	1 007	1 475
Total	6 088	8 529	11 069
Expenditure:			
Interest on deposits	3 558	4 851	6 572
Other (c)	2 327	3 156	3 748
Total	5 886	8 007	10 319
Assets:			
Loans to members	51 423	65 414	82 657
Cash in hand and at bank	790	924	3 343
Deposits with Credit Union Associations and Leagues	2 964	3 399	6 182
Investments	1 258	2 099	3 863
Other	1 193	2 145	2 362
Total	57 628	73 981	98 408
Liabilities:			
Share capital	602	668	699
Reserves and accumulated profits	-221	317	867
Deposits	53 947	70 015	93 754
Budget savings accounts	487	569	608
Bank overdraft	568		
Other borrowings (d)	1 291	1 826	1 972
Other	954	587	508
Total	57 628	73 981	98 408

(a) Includes interest accrued. (b) Includes interest. (c) Includes dividends on shares, salaries and wages, administrative expenses, and provisions for taxation, doubtful debts, and long service leave. (d) Includes Credit Union Associations and Leagues.

INSTALMENT CREDIT FOR RETAIL SALES

Instalment credit is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as time payment, budget accounts and certain personal loans. Credit schemes which do not involve repayment by regular predetermined instalments, lay-bys and all credit transactions related mainly to the financing of 'producer' type goods such as plant, machinery and motor vehicles normally used for

commercial purposes are excluded from the following statistics. Also excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Legislation controlling instalment credit schemes in South Australia is embodied in the Consumer Transactions Act, 1972-1973 and the Consumer Credit Act, 1972-1973, both effective from 1 November 1973. Since that date, it has not been possible to enter into a hire-purchase agreement in South Australia.

The Consumer Transactions Act repealed the Hire-Purchase Agreements Act, 1960-1971 and originated 'consumer contracts', 'consumer credit contracts' and 'consumer mortgages'. Generally consumer contracts and consumer credit contracts refer to the purchase by an individual of goods or services, where their price and the principal amount of credit extended does not exceed \$10 000. The Act specifies certain conditions and warranties to be implied in all consumer contracts and provides that these cannot be excluded, limited or modified by agreement between the parties to the contract. In contrast with previous legislation, under a consumer mortgage the consumer becomes the owner of the goods when they are delivered to him and the credit provider holds a mortgage over the goods as security for the amount payable. Hence goods may still be repossessed if the consumer breaches certain conditions of the agreement. However, subject to the conditions stipulated in the Act, the consumer may return the goods and rescind the consumer mortgage at any time. The Act also ensures that written contracts meet certain prescribed printing sizes to be enforceable.

The Consumer Credit Act repealed the Money-lenders Act and established a Credit Tribunal to which, in certain circumstances, consumers may apply for relief from the terms of a contract. The Tribunal also acts as licensing authority for those persons and corporations deemed to be credit providers under the Act and controls the conditions of operation of 'revolving charge accounts'. Information to be included in a credit contract, including the credit charge, is specified in detail by the Act.

Details of instalment credit provided during the years 1975-76 to 1977-78 are given in the following tables. In each of these tables the motor vehicle group includes new and used motor cars, motor cycles, caravans, motor parts and accessories. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

Instalment Credit for Retail Sales, South Australia^(a)

Year	Amount Financed (b)						Balances Outstanding at End of Period (d) (e)	
	Motor Vehicles, etc. (c)		Household and Personal Goods		Total		Finance Companies	Other Businesses
	Finance Companies	Other Businesses	Finance Companies	Other Businesses	Finance Companies	Other Businesses		
	\$ million							
1975-76	117.2	0.9	10.1	37.3	127.2	38.1	221.3	26.9
1976-77	128.9	0.4	14.5	39.4	143.4	39.8	259.2	28.7
1977-78	113.7	0.2	14.8	36.4	128.5	36.6	263.3	27.7

(a) The figures relate only to those finance companies or other businesses which (individually or as a group of related finance companies or other businesses respectively) have balances outstanding on an Australia-wide basis of \$500 000 or more on all types of finance agreements.

(b) Excludes hiring charges, interest and insurance.

(c) Excludes motor vehicles normally used for commercial purposes.

(d) Includes hiring charges, interest and insurance.

(e) Includes Northern Territory.

Instalment Credit for Retail Sales, Motor Vehicles etc., South Australia^(a)

Year	Cars and Station Wagons				Other- Amount Financed (b)
	Number Financed		Amount Financed (b)		
	New	Used	New	Used	
	'000		\$ million		
1975-76	13.9	26.5	46.7	54.6	16.7
1976-77	11.0	26.2	43.9	66.9	18.6
1977-78	7.4	24.0	33.4	66.6	13.9

(a) The figures relate only to those finance companies or other businesses which (individually or as a group of related finance companies or other businesses respectively) have balances outstanding on an Australia-wide basis of \$500 000 or more on all types of finance agreements. Excludes motor vehicles normally used for commercial purposes.

(b) Excludes hiring charges, interest and insurance.

FINANCE COMPANIES

In the following tables a finance company is defined as an incorporated company mainly engaged in providing to the general public (businesses as well as persons in their private capacity) credit facilities of the following types: instalment credit for retail sales, personal loans, wholesale finance, factoring, other consumer and commercial loans, financial leasing of business plant and equipment and bills of exchange. A company is mainly engaged in providing these credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to these types of financing, or if 50 per cent or more of its income is derived from such types of financing.

The statistics for any financial year relate only to those finance companies which individually or as a group of related finance companies had balances outstanding in the prescribed types of financial agreements of \$500 000 or more, on an Australia-wide basis, at 30 June of the previous financial year.

Comprehensive information on the transactions of finance companies is available in the monthly bulletin *Finance Companies* (Catalogue No. 5614-0)

Finance Companies: Summary, South Australia

Particulars	1975-76	1976-77	1977-78
	\$ million		
Amount financed (a)	717.2	913.4	857.1
Collections and other liquidations (b)	707.2	938.7	1 049.3
Balances outstanding at end of period (b)	696.4	930.6	969.6
Leasing of business equipment and plant (b):			
Value of goods newly leased during period	83.8	119.5	148.0
Value of all leasing agreements at end of period (c)	156.3	235.6	317.8

(a) Includes amount financed for wholesale finance and personal loans in Northern Territory.

(b) Includes Northern Territory.

(c) Basis of valuation is 'gross receivables'.

Finance agreements may be classified according to the purpose of the loan. The comments below are offered to clarify the content of various items in the tables which follow:

- (1) Instalment credit for retail sales is defined in the same way as in the previous section (see page 612-3);

- (2) Personal loans include all loans to persons in their private capacity, other than loans classified as instalment credit or finance for housing and includes loans to persons for alterations or additions to existing dwelling units estimated to cost less than \$10 000;
- (3) Wholesale finance relates mainly to the financing of motor vehicle dealers stocks held under bailment or floor-plan schemes but includes also financing of other trading stock and the factoring of trade debts;
- (4) Finance for housing includes finance for houses, flats, home units and other dwelling units (excluding hotels, hostels, etc.), loans to persons for alterations or additions to existing dwelling units estimated to cost \$10 000 or more and finance for the purchase of residential blocks of land;
- (5) Other commercial loans include loans for the purpose of developing a tract of land into residential blocks, construction other than housing and financing of sales of 'producer' type goods.

The following table shows amount financed and balances outstanding classified according to the purpose of the loan for the years 1975-76 to 1977-78.

Finance Companies: Amount Financed and Balances Outstanding Classified by Type of Finance Agreement, South Australia

Particulars	1975-76	1976-77	1977-78
	\$ million		
Amount financed during year:			
Instalment credit for retail sales and personal loans	174.2	195.9	186.6
Finance for housing	162.9	205.6	140.2
Wholesale finance (a)	323.9	434.4	448.0
Other commercial loans	56.2	77.6	82.3
Leasing of business plant and equipment (a)	83.8	119.5	148.0
Total amount financed	801.0	1 033.0	1 005.1
Balances outstanding at 30 June (a):			
Instalment credit for retail sales and personal loans	287.8	343.9	358.3
Finance for housing	246.5	345.3	330.3
Wholesale finance	56.3	87.3	94.1
Other commercial loans	105.7	154.0	186.8
Leasing of business plant and equipment	156.3	235.6	317.8
Total balances outstanding	852.6	1 166.1	1 287.3

(a) Includes Northern Territory.

FINANCIAL CORPORATIONS ACT

The *Financial Corporations Act 1974* enables the Reserve Bank to examine and regulate the business activities of non-bank financial intermediaries (finance companies, building societies, credit unions, etc.) and large retailers which finance their sales by instalment credit schemes.

In order to perform its monitoring and control function, the Reserve Bank is empowered by the Act to collect monthly information from each of the larger financial corporations (assets in excess of \$5 million) and from the larger retailers (balances outstanding in excess of \$5 million on instalment credit for retail sales agreements). Other financial corporations with total assets in excess of \$1 million are also required to submit information at less frequent intervals.

Some types of financial institutions such as banks and insurance companies are specifically excluded from the provisions of the Act.

HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and contracts of sale) approved by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. Also included is housing finance provided to employees by lenders covered in the collection.

The types of lenders included in these statistics are trading and savings banks, permanent and terminating (Starr-Bowkett) building societies, finance companies, government housing authorities and other government departments, insurance companies and credit unions. A lender is significant if over a financial year it approves loans to individuals for housing finance for owner occupation in excess of \$250 000 or if at the end of a financial year it has balances outstanding on such loans exceeding \$2 million.

Purchase of newly erected dwellings represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

Purchase of established dwellings represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of *other dwellings* are flats, home units, semi-detached cottages, villa units, town houses.)

The term *number of dwelling units* refers to the number of houses and other dwellings for which loans secured by contract of sale or first mortgage only have been approved.

Comprehensive statistics on housing finance for owner occupation are available in the monthly bulletin *Housing Finance for Owner Occupation* (Catalogue No. 5609.0).

The following tables summarise the housing finance operations of the significant lenders in South Australia.

Housing Finance for Owner Occupation, South Australia

Period	Loans Approved for		Cancellations of Loans Previously Approved	Loans Advanced (a)	Loans Approved but not Advanced (a)
	Construction of Purchase of Dwellings	Alterations and Additions			
			\$'000		
1976-77	525 249	26 021	21 640	424 668	74 160
1977-78	537 986	27 817	23 691	435 325	68 779

(a) Excludes trading banks.

Housing Finance for Owner Occupation: Number of Dwelling Units for which Loans were Approved to Individuals, by Type of Lender, South Australia

Period	Banks		Permanent Building Societies(a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS							
1976-77	1 594	1 137	198	879	104	839	4 751
1977-78	1 566	891	253	558	80	550	3 898
PURCHASE OF NEWLY ERECTED DWELLINGS							
1976-77	1 869	2 410	550	343	450	613	6 235
1977-78	1 732	2 538	717	301	651	418	6 357
PURCHASE OF ESTABLISHED DWELLINGS							
1976-77	6 833	2 313	2 233	934	342	461	13 116
1977-78	7 019	2 048	2 934	706	585	403	13 695
TOTAL							
1976-77	10 296	5 860	2 981	2 156	896	1 913	24 102
1977-78	10 317	5 477	3 904	1 565	1 316	1 371	23 950

(a) Includes terminating (Starr-Bowkett) societies.

Housing Finance for Owner Occupation: Value of Loans Approved to Individuals by Type of Lender, South Australia

Period	Banks		Permanent Building Societies(a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS							
\$'000							
1976-77	33 616	20 210	5 594	30 785	1 887	18 089	110 181
1977-78	35 156	15 965	7 954	19 652	1 294	12 471	92 492
PURCHASE OF NEWLY ERECTED DWELLINGS							
\$'000							
1976-77	37 891	38 968	13 577	29 433	11 585	13 077	144 531
1977-78	37 796	47 785	19 526	17 660	18 402	8 870	150 039
PURCHASE OF ESTABLISHED DWELLINGS							
\$'000							
1976-77	128 714	36 665	54 517	34 509	5 440	10 692	270 537
1977-78	139 131	36 184	71 988	28 349	10 072	9 731	295 455
TOTAL							
\$'000							
1976-77	200 221	95 843	73 688	94 727	18 912	41 858	525 249
1977-78	212 083	99 934	99 468	65 661	29 768	31 072	537 986

(a) Includes terminating (Starr-Bowkett) societies.

REGIONAL STUDIES

YORKE PENINSULA

Yorke Peninsula, for the purposes of this study, is defined as the Yorke Subdivision of the Yorke and Lower North Statistical Division. The location and boundaries of Yorke Subdivision are shown on the map on page 621.

Yorke Peninsula is one of the State's most important agricultural areas, a source of valuable minerals and construction materials, and a holiday area for Adelaide residents.

Yorke Peninsula comprises the municipalities of the towns of Wallaroo and Moonta, and the district councils of Bute, Central Yorke Peninsula, Clinton, Kadina, Minlaton, Port Broughton, Warooka and Yorketown. It occupies an area of 8 167 square kilometres (including Wardang Island).

At 31 December 1978 the estimated population of Yorke Peninsula was 22 200 persons.

Physical Features

Yorke Peninsula has a generally low relief with gently undulating terrain. From the coastline, the land rises to approximately 90 metres above sea level in the southern part of Yorke Peninsula and 150 metres in the north, with the South Hummock hills defining the north-east edge of the region. There are no permanent water courses in the region.

The terrain between Wallaroo and Port Broughton is distinguished by a series of alternating east-west sand ridges and flats. An extensive lake and swamp system between Yorketown and Warooka separates the cereal and grazing lands of the north from largely uncleared native vegetation at the foot of Yorke Peninsula.

A considerable variety of land forms exist along the coastal range, ranging from mangrove-fringed saline flats to cliffs with small sandy bays. Along the western coast and at the foot of the Peninsula and extensive system of mobile sand dunes restricts access to the beaches.

Climate and Meteorology

Yorke Peninsula has a temperate climate with mostly dry, mild to warm summers and wet, cool winters. The gulf waters on either side of the Peninsula have a moderating effect on the region's climate, particularly in the southern parts of the region.

Rainfall

Rainfall is mainly associated with cold fronts which move across Yorke Peninsula fairly regularly throughout the winter. During the summer, active cold fronts do not often penetrate as far north as the Peninsula. However, at this time of the year, warm moist air masses of tropical origin occasionally move south into the region and thunderstorms may develop. The heaviest rainfall recorded in South Australia for the 24 hours ending 9 a.m. was 206 mm at Ardrossan on 18 February 1946.

The average annual rainfall ranges from more than 500 mm, on the highest parts of the Peninsula around Maitland and on the toe of the Peninsula north of Marion Bay, to below 350 mm about the coast north of Ardrossan and in the far north of the region.

The monthly distribution of rainfall shown in the following table clearly illustrates the winter rainfall maximum. Only about 12 per cent of the annual average rainfall is recorded during summer compared with approximately 40 per cent in winter. Spring and autumn totals are each about 25 per cent of the annual averages.

Average Rainfall and Days of Rain: Selected Stations, Yorke Peninsula

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (MILLIMETRES)													
Ardrossan	14	18	16	31	42	44	40	43	35	32	21	17	353
Bute	17	20	17	33	47	52	49	48	40	36	23	19	401
Corny Point	13	18	15	37	55	67	66	59	42	33	23	18	446
Edithburgh	14	18	17	35	50	58	56	53	42	34	23	18	418
Kadina	15	20	20	36	49	51	49	46	37	33	22	18	396
Maitland	18	22	20	44	64	70	66	63	50	42	28	22	509
Minlaton	14	17	18	37	54	62	59	58	44	37	24	18	442
Moonta	14	19	20	36	48	49	46	42	34	31	22	17	378
Port Victoria	13	18	16	34	50	52	48	45	37	33	22	18	386
Port Broughton	16	20	16	30	43	45	40	39	36	31	21	17	354
Price	14	27	15	33	42	32	39	35	27	32	21	19	336
Wallaroo	15	18	20	33	47	48	42	40	33	30	21	16	363
Warooka	14	18	15	35	56	65	67	60	45	36	22	17	450
Yorke town	13	18	16	34	51	61	59	56	44	34	22	17	425
AVERAGE NUMBER OF DAYS OF RAIN													
Ardrossan	3	3	4	7	11	11	13	13	9	9	6	4	93
Bute	3	4	4	8	10	12	13	12	9	8	6	4	93
Corny Point	3	3	3	8	11	13	16	15	11	9	6	5	103
Edithburgh	3	3	4	8	12	13	16	14	11	9	6	4	103
Kadina	3	2	3	6	10	11	12	12	10	7	5	4	85
Maitland	4	4	4	9	12	14	15	15	12	10	6	5	110
Minlaton	3	3	4	7	12	13	15	13	12	9	5	4	100
Moonta	4	4	4	8	11	12	14	13	10	9	6	5	100
Port Victoria	3	4	3	8	11	12	14	13	9	9	6	4	96
Port Broughton	2	2	3	5	8	9	9	10	8	6	5	3	70
Price	2	3	3	5	10	9	12	10	9	7	5	4	79
Wallaroo	3	3	3	6	9	11	11	11	9	7	5	4	82
Warooka	3	3	4	8	13	14	16	16	12	9	6	4	108
Yorke town	3	4	4	9	12	14	16	15	12	9	6	5	109

For agricultural purposes rainfall received during the period November to March is normally too low to be of benefit and the growing season generally extends from April or May to October. The length of the growing season ranges from less than 5.5 months in the north to just over 6.5 months in the wetter, hilly areas.

Temperature

Mean maximum and minimum temperatures recorded at Kadina, Maitland, Price and Warooka are listed in the following table.

Mean daily maximum temperatures range from 25°C to 30°C in summer with the hottest temperatures recorded in the northern parts of the region. Extreme maximum temperatures of over 45°C have been recorded. During the winter mean maximum temperatures range from 14°C to 16°C. On occasional days, the maximum temperature may not reach 10°C.

Mean daily minimum temperatures range from 13°C to 16°C in summer and from 6°C to 8°C in winter. Extreme minimum temperatures of less than -2°C have been recorded.

Mean Maximum and Minimum Temperatures: Selected Stations, Yorke Peninsula

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	Maximum Temperature (° Celsius)												
Kadina	30.4	29.8	27.4	23.6	19.1	16.5	15.4	16.4	19.2	22.7	25.5	27.5	22.8
Maitland	28.6	28.1	25.4	22.0	17.7	15.3	14.1	14.9	17.3	20.9	23.9	25.7	21.1
Price	28.4	27.3	25.7	22.8	19.2	16.2	15.7	16.7	19.3	22.5	24.2	26.8	22.0
Warooka	27.5	27.1	25.3	22.0	18.1	15.6	14.8	15.2	17.3	20.4	22.7	25.2	20.9
	Minimum Temperature (° Celsius)												
Kadina	15.6	15.7	14.0	11.5	8.6	6.7	5.9	6.2	7.3	9.6	11.6	13.8	10.6
Maitland	15.2	15.5	14.3	12.2	9.6	7.6	6.7	6.9	8.0	9.8	11.5	13.4	10.9
Price	15.3	15.8	13.9	11.2	8.6	6.8	6.1	6.0	7.0	9.3	11.4	13.3	10.3
Warooka	14.8	15.5	14.3	12.3	9.7	7.9	7.2	7.1	8.1	9.6	10.9	13.0	10.8

The moderating influence of the sea is most noticeable in southern parts of the Peninsula. Inland parts in the north of the region are further from the sea and experience a greater range of temperature.

Frosts

Light frosts are experienced throughout the region between May and October. However, heavy frosts are generally confined to northern parts between June and September.

Winds

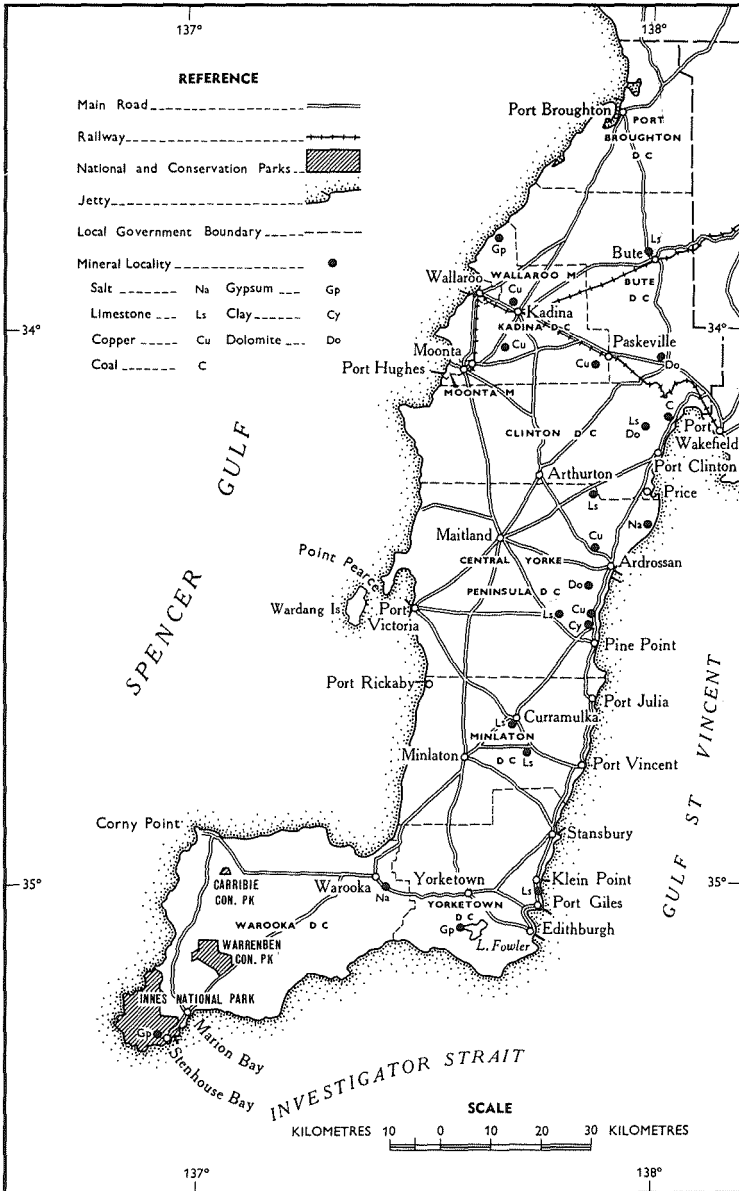
In summer the prevailing wind direction is south-easterly at 9 a.m. and from south-east to south-west at 3 p.m. Afternoon sea breezes frequently reach the centre of the Peninsula from both sides as far north as Maitland. Further north, where the Peninsula broadens out as it joins the South Australian land mass, the predominant direction of the sea breeze is from the south to south-west.

In winter the prevailing wind direction is north-east to north-westerly at 9 a.m. and 3 p.m. However, south-westerly winds are also frequent about the foot of the Peninsula.

Evaporation

Price, located at the northern end of Gulf St Vincent, is the only site in the region at which evaporation is measured. Monthly averages measured with a Class A Pan fitted with a bird guard range from 210 mm in January to 49 mm in June. An average total of 1600 mm of evaporation is recorded annually.

YORKE PENINSULA



Annual evaporation probably varies from about 1600 mm in coastal and southern parts of the Peninsula to more than 2000 mm in the northern, inland parts of the region.

Soils

The main soil types found on Yorke Peninsula are the various mallee soils, with grey calcareous sands being found at the foot of the Peninsula, south-west of Warooka.

The most extensive soils found in the region are the grey mallee soils. These soils are easily cultivated, well drained and support good pastures, but they have a rubbly sub-soil which, during the summer, prevents them from retaining moisture to the same degree as the loamy mallee soils.

Loamy mallee soils are found in the elevated central part of Yorke Peninsula. These soils are fertile, easy to cultivate and are resistant to erosion. South of Moonta and north of Tickera and Alford are large areas of sandy mallee soils; these soils occur mainly on ridges which alternate with loamy or grey mallee flats. The coarse sandy soils are deficient in nitrogen and phosphorus, have a low capacity for holding water and are liable to drift if excessively cultivated.

Shallow red earths are common in the south-eastern part of the Peninsula. These soils are generally less than 300 millimetres deep and overlie hard travertine limestone. The soils tend to be poorly drained, are deficient in nitrogen and phosphorus and often set hard on the surface.

Deep, grey calcareous sands, with limestone outcrops, are prevalent at the foot of the Peninsula, south-west of Warooka. The sand consists mainly of calcareous shell fragments and requires the addition of manganese and copper before it can be used successfully for the production of crops.

Sand over clay soils occur west of Arthurton and south-west of Port Vincent. Other soils occupy relatively small areas. Along the west and south coasts there is a series of steep irregular loose sand dunes which are yellowish-white in colour and of little value for agriculture.

Vegetation

Much of the mallee vegetation that once covered Yorke Peninsula has been cleared and the remaining stands are usually found in areas that are unsuitable for growing crops.

The mallee associations are common in the 325-450 mm rainfall zone, particularly on calcareous soils. In general, the dominant species can be related to the different types of mallee soils.

Much of the uncleared mallee scrub in the southern part of Yorke Peninsula occurs on grey calcareous sands and includes soap mallee (*Eucalyptus diversifolia*), Kingscote mallee (*Eucalyptus rugosa*), native cherry (*Exocarpus sparteus*), dwarf nealie (*Acacia wilhemiana*) and native pine (*Callitris drummondii*). On the stony mallee soils near the southern coast, black tea tree (*Melaleuca lanceolata*), sheoak (*Casuarina muelleriana*) and mallee box (*Eucalyptus porosa*) are common.

Mallee vegetation is also found on mixed sandy and loamy soils in the Cunliffe area and east of Bute on Ninnes Plain, where native pines and mallee are found in association. Mallee and sheoak occur on brown loamy mallee soils in the vicinity of Thrington and Paskeville.

Open savannah vegetation occurs in the southern half of Yorke Peninsula. The main species are black tea tree, drooping sheoak (*Casuarina stricta*) and mallee box. Savannah woodland is generally associated with red-brown earths and allied soils, and occurs in areas receiving an annual rainfall in excess of 430 millimetres. A small area of red gum (*Eucalyptus camaldulensis*) remains east of Minlaton.

Mallee-broom bush vegetation is generally associated with sand over clay soils. Mallee

box predominates on the lower foothills north of Kulpara and on the plains where annual rainfall ranges from 350-450 millimetres.

The coastal dunes carry shrubs and herbaceous species with some drooping sheoak and coastal wattle (*Acacia sophorae*).

Wildlife

The fragmentation of wildlife habitats, which followed extensive clearing of vegetation for agriculture, together with the eradication of wildlife as pests and the introduction of foreign predators such as the fox and feral cat, severely depleted the 11-16 species of terrestrial native mammals present in the region at the time of European settlement.

Only the rare or uncommon spiny ant-eater (*Tachyglossus aculeatus*), fat-tailed sminthopsis (*Sminthopsis crassicaudata*), southern pigmy possum (*Cercartetus concinnus*), brush-tailed possum (*Trichosurus vulpecula*), hairy-nosed wombat (*Lasiorhinus latifrons*), western grey kangaroo (*Macropus fuliginosus*) and euro (*Macropus robustus*) remain.

The hairy-nosed wombat, although still numerous in the far-west of the State, is now found in only a few small isolated colonies across northern and central Yorke Peninsula. There are no colonies of the hairy-nosed wombat within existing conservation parks or other reserves in the region, or in areas to which these may be enlarged.

There are two known species of bats on Yorke Peninsula, the Mastiff and the Little Brown Bat, both of which are common.

History

Matthew Flinders first sighted Yorke Peninsula in March 1802 on his voyage of circumnavigation of the Australian continent.

Flinders discovered and named Spencer Gulf and Gulf St Vincent and was the first white man to set foot on Yorke Peninsula when, on 30 March 1802, he went ashore at the top of Gulf St Vincent and trekked inland for 13 kilometres to the Hummocks. Flinders described the peninsula as 'singular in its form bearing some resemblance to an ill-shaped leg and foot' and gave it the name Yorke Peninsula after the Rt Hon. Charles Phillip Yorke, who later became Lord Hardwicke, the First Lord of the Admiralty in 1810.

The French explorer Captain Nicolas Baudin also explored this region of South Australia's coastline giving the name Cambaceres Peninsula to what is now Yorke Peninsula.

Agricultural Development

In 1838, the Adelaide Survey Association, a company whose aim was to conduct surveys of possible township settlements to enable shareholders an opportunity to invest in blocks of land, commissioned Robert Cock, the Government Auctioneer, to determine whether Yorke Peninsula was a suitable place for settlement.

In April 1839, Robert Cock and James Hughes, a surveyor, sailed to Point Pearce on the western side of Yorke Peninsula. In presenting his report to the Association, Cock stated that he had found one of the finest harbours in this part of the world (Port Victoria) and claimed that it was backed by 1 500 square kilometres of the finest land for agricultural purposes yet discovered in the Province.

A special survey of Port Victoria was conducted but presented a far less favourable impression of the area than that contained in the report of Cock. The Trustees of the Association, J. B. Hack and J. Russell prevailed upon the Governor to disregard the surveying for settlement of Yorke Peninsula in favour of a more suitable area and as a result the greater part of Yorke Peninsula remained in its natural state for another decade.

Alfred Weaver, a pastoralist, was the first person to apply for an Occupational Licence on Yorke Peninsula in 1846. Pastoralists at that time were required to pay \$0.20 per hectare annually for a licence as well as a fee of 1 cent per head per sheep, 5 cents per head for cattle and 25 cents per head for horses.

In 1851 the Government amended the laws relating to pastoral leases, making a lease tenable for a period of 14 years with a rental based on the value of total area of the run. Land was classified into three categories depending on its stock-carrying capacity, and rated accordingly. Most of the land on Yorke Peninsula fell into the third class, which was rated at \$0.39 per square kilometre, a minimum of \$10 per lease, as well as an assessment on stock outlined above.

Thousands of square kilometres of Yorke Peninsula were leased to various pastoralists after 1851 until the 1870s when the demand for agricultural land was the reason for most of the land being resumed.

The first Hundreds of Kadina, Wallaroo, Kulpara, Tiparra and Clinton were proclaimed in 1862. The Scrub Lands Act, assented to in 1866, was designed to encourage settlement of the State's mallee country but despite the Act very little mallee was cleared on Yorke Peninsula.

Agricultural development on Yorke Peninsula followed the passing of the Waste Lands Amendment Act in 1869. The Act enabled certain areas held under pastoral lease to be made available as Special Agricultural Areas for development on relatively favourable terms. Three of these areas were created in the northern, central and southern parts of the Peninsula in the period 1869-1872. Agricultural development took place in the triangle formed by Stansbury, Yorketown and Edithburgh, and in relatively small areas north of Ardrossan and Maitland. By 1871, approximately 2 800 hectares of land were under cultivation in County Fergusson.

The cultivation of mallee lands was assisted by the process of 'mullenising', developed in 1868 by a settler named Mullens from Wasleys, near Gawler. Mullens conceived the idea of rolling instead of chopping down the mallee scrub. At the close of summer, the scrub was burnt and when the practice was repeated several times, the mallee was completely eradicated although the mallee stumps still remained.

Stump eradicators, with varying degrees of success, were tried but the most effective method of dealing with this problem was the invention in 1876 of the famous stump-jump plough by the Smith brothers of Artherton. The stump-jump plough enabled the land to be tilled rapidly and effectively despite the presence of mallee roots and stumps left in the ground after mullenising. The invention also led to an amendment to the Scrub Lands Act in 1877 by which land for farming was leased on more favourable terms, with a consequent increase in the rate of development.

By far the most important step forward in cereal growing on Yorke Peninsula was made with the discovery and introduction of superphosphate. Not only did the application of this fertiliser arrest the declining yield, but it helped to increase yields to a point higher than they had ever been.

Until the 1920s, farmers grew principally wheat since the use of superphosphate ensured a good yield, providing suitable growing conditions prevailed. A certain amount of barley had been produced in the district as early as the 1880s but this was used mainly for fodder for stock, rather than as an income producer.

Barley growing increased after 1913 when farmers realised that the grain produced on Yorke Peninsula, where ideal conditions existed, was sought after on world markets for its high malting quality.

Following the 1914-18 War, the introduction of sheep farming into an economy based on cereal and leguminous pasture rotations resulted in the decline of fallowing and an

increase in fodder crops. The use of mechanised equipment enabled the cultivation of larger holdings and silos and bulk handling facilities for grain were constructed at Ardrossan in 1952, at Wallaroo in 1957 and Port Giles in 1968.

Copper Mining

In 1859 a small piece of copper carbonate was found near the present site of Kadina on grazing land held by Captain W. Hughes, a retired sea captain. A shaft was sunk by miners brought from Burra and rich copper ore was found. The shaft was given the name Wallaroo Mine after Hughes' sheep station, 'Walla-Waroo' an Aboriginal word meaning wallaby urine.

Hughes, with the help of some fellow Scots in Adelaide, formed a company to work the new deposit. In 1861 copper ore was discovered at Moonta by one of Hughes' employees and although a rival syndicate was formed as a result of the find, Hughes managed to acquire mining leases over the area.

Moonta was surveyed in 1863 and was named by the then Governor, Sir Dominick Daly, who used a corruption of the Aboriginal word 'Moonta-Moontera' meaning 'a place of impenetrable scrub'.

A smelter was built at Wallaroo in 1861, and by 1866 thirty-six furnaces were smelting the richest copper ore, the lower grade ore being shipped to Newcastle for smelting.

After the discovery of copper ore at Moonta, numerous other mineral claims were worked in the area including Wandilta, Goldsworthy, New Cornwall, Karkarilla, Yelta and Doora. Although Wallaroo and Moonta mines came to dominate mining in northern Yorke Peninsula, the 'Yorke's Peninsula Advertiser' in May 1873 noted the names, captains and secretaries of no less than fifty-four separate mines. A number of these mines were never more than small pits in the ground, while others were soon incorporated into the two large companies. Others such as Hamley and Yelta, retained their independence long after the disappearance of the smaller and more obscure workings.

The expansion of the Wallaroo and Moonta Mines was facilitated at first by Cornish miners leaving the Burra and Victorian diggings and later by hundreds of other 'Cousin Jacks' from Cornwall itself. Their migration was aided by the Sutherland Act of 1863 which reserved one-third of the annual land revenue to finance assisted immigration.

The Moonta Mines soon became established as the richest mines in the region. This prosperity continued until the late 1870s, when increasing costs and low copper prices caused the company to sustain two years of losses. Profitability was restored through good management and more favourable economic conditions, but by 1888 the Moonta Mines were again in trouble.

The Wallaroo Mines had not proved as spectacularly rich as their Moonta counterparts, but nevertheless were profitable until the late 1870s when hard times were encountered. The mines were then worked intermittently for several years and, although full-scale production was restored in the 1880s they were never, in the rest of their independent life, as great as in the former period.

The common problems of the Moonta and Wallaroo mines in the late 1880s led the directors of both companies to decide that amalgamation was necessary as it afforded various economies of scale and would enable them to withstand the pressure of adverse economic conditions. A merger was effected in 1890 forming the extensive Wallaroo and Moonta Mining and Smelting Company. The company was, at the time, the largest industrial concern in South Australia.

As a result of the amalgamation, Wallaroo mines received considerable modernisation and capital investment, and there was a marked transfer of labour and materials to Wallaroo Mines from Moonta Mines. Production from the underground workings of the

latter declined after 1890, and greater attention was focused on the re-treatment of wastes through the cementation process.

The 1914-18. War, although causing initial dislocation in the industry, increased the demand for copper, and from 1915 to 1918 both mines were working at full capacity. With the end of the War, however, came a sharp fall in the price of copper—a fall from which the mines never recovered. The company survived as a marginal concern from 1919 until 1923.

In their long existence, the Wallaroo and Moonta Mines had produced over 12 million tonnes of crude ore, worth more than \$40 million.

Population

Yorke Peninsula had a population of 20 641 at 30 June 1976, representing 1.7 per cent of the State population. On Yorke Peninsula only 40.3 per cent of the population live in urban centres compared with 84.9 per cent for the State. Major urban centres on the Peninsula include Kadina (population 2 849 at 30 June 1976), Wallaroo (2 045), Moonta (1 751) and Maitland (1 017).

The following table shows for Yorke Peninsula and the State, Census population figures since 1954.

Population, Yorke Peninsula and South Australia^(a)

Area	Census 30 June				
	1954	1961	1966	1971	1976
Bute (DC)	1 614	1 541	1 357	1 239	1 211
Central Yorke Peninsula (DC) (b)	3 918	4 099	4 185	3 866	3 879
Clinton (DC)	1 274	1 314	1 281	1 156	1 137
Kadina (DC)	3 194	2 957	2 699	2 337	2 311
Kadina (M)	1 808	1 866	1 865	1 900	1 965
Minlaton (DC)	2 470	2 608	2 504	2 298	2 208
Moonta (M)	1 220	1 151	1 122	1 120	1 379
Port Broughton (DC)	908	983	956	954	1 185
Wallaroo (M)	2 403	2 237	2 094	2 078	1 969
Warooka (DC)	947	1 060	988	909	862
Yorketown (DC)	2 266	2 916	2 734	2 502	2 535
Total Yorke Peninsula	22 022	22 732	21 785	20 359	20 641
South Australia	797 094	969 340	1 091 875	1 173 707	1 244 768

(a) Population as enumerated, not adjusted for Census underenumeration.

(b) Before 1971, consisted of Maitland (M) and Yorke Peninsula (DC).

Between 1921 and 1933, the population of Yorke Peninsula decreased, due largely to the closing of the copper mines at Kadina and Moonta. This decline accelerated between 1933 and 1947, caused by a series of events including the depression of the 1930s; low prices for farm products; the delayed effects of the drought years between 1926 and 1930; and the disruption due to the 1939-45 War. In the post-war period to 1961, the population began to increase, although at a slower rate than the rest of the State. Between 1961 and 1971, the population again decreased to about the same level as in 1947, but increased by 282 in the five years to 1976.

The following table shows the percentage birthplace figures for the population of Yorke Peninsula and South Australia.

Percentage Birthplace of Population, Yorke Peninsula and South Australia

Country of Birth	Census 30 June				
	1954	1961	1966	1971	1976
			Per cent Yorke Peninsula		
Australia	96.6	95.7	94.7	96.3	95.0
United Kingdom	2.0	2.2	2.0	2.5	3.4
Other	1.3	2.2	3.3	1.2	1.6
			South Australia		
Australia	86.1	80.8	77.5	76.1	76.4
United Kingdom	6.3	8.1	11.2	12.6	12.7
Other	7.6	11.1	11.3	11.3	10.9

The table shows that a significantly higher proportion of the population in Yorke Peninsula is Australian born than is the case for South Australia (95 per cent compared with 76.4 per cent at the 1976 Census). Although overseas migration has been an important factor of population growth for the State, the growth in the overseas-born population of Yorke Peninsula has been marginal.

The next table shows the age distribution of the population of Yorke Peninsula and the State. The table shows that the age distributions of the population of Yorke Peninsula and the State follow similar patterns, except that the population of Yorke Peninsula has a smaller proportion in the 10-29 year age group than that for the State (29.8 per cent compared with 35.4 per cent), and a higher proportion in the 60 years and over age group (19.1 per cent compared with 13.4 per cent).

Age Distribution of Population, Yorke Peninsula and South Australia, 30 June 1976

Age Group (Years)	Yorke Peninsula		South Australia	
	Persons	Per Cent	Persons	Per Cent
0-9	3 554	17.2	213 520	17.2
10-19	3 518	17.0	233 935	18.8
20-29	2 638	12.8	206 364	16.6
30-39	2 290	11.1	155 109	12.5
40-49	2 247	10.9	137 415	11.0
50-59	2 447	11.9	131 238	10.5
60-69	2 268	11.0	95 377	7.7
70 and over	1 679	8.1	71 806	5.8
Total	20 641	100.0	1 244 760	100.0

Births and Deaths

When compared with the State as a whole, Yorke Peninsula has, in recent years, a lower birth rate and a significantly higher death rate. This can be partly attributed to the age distribution of the population on Yorke Peninsula.

The masculinity rate, *i.e.* the number of male births per hundred female births, for Yorke Peninsula was 105.8 for the period 1973 to 1977 compared with 106.4 for the whole State.

Live Births: Number Registered and Rate, Yorke Peninsula and South Australia

Year	Yorke Peninsula		South Australia	
	No.	Rate (a)	No.	Rate (a)
1973	310	14.94	20 407	16.75
1974	281	13.41	20 181	16.33
1975	318	15.11	19 986	15.95
1976	310	14.80	18 947	15.02
1977	298	13.89	19 260	15.09

(a) Number of births per 1 000 mean population.

Deaths: Number Registered and Rate, Yorke Peninsula and South Australia

Year	Yorke Peninsula		South Australia	
	No.	Rate (a)	No.	Rate (a)
1973	213	10.27	9 835	8.07
1974	223	10.64	10 236	8.29
1975	240	11.40	9 947	7.94
1976	221	10.55	9 999	7.92
1977	231	10.77	9 784	7.66

(a) Number of deaths per 1 000 of mean population.

Education*Schools*

At 1 August 1978, the Education Department was responsible for two high schools, fifteen primary schools, five area schools, four rural schools and one Aboriginal school on Yorke Peninsula.

In addition to the government schools, there are two Catholic primary schools, at Wallaroo and Kadina, and a Lutheran primary school at Maitland.

Area schools, which provide education from infant through to the secondary level, are located at Ardrossan, Maitland, Moonta, Port Broughton and Yorketown. The high schools are located at Minlaton and Kadina.

Students: Category of School and Level of Study, Yorke Peninsula, 1978

Category of School	Males	Females	Total
Government:			
Primary grades	1 379	1 237	2 616
Secondary grades	739	769	1 508
Total government schools	2 118	2 006	4 124
Non-government:			
Primary grades	72	79	151
Secondary grades	—	—	—
Total non-government schools	72	79	151
Total schools	2 190	2 085	4 275

The Kindergarten Union of South Australia maintains pre-school centres at Kadina, Wallaroo, Moonta, Minlaton, Ardrossan, Maitland and Yorketown.

Libraries

There are no local public libraries on Yorke Peninsula. However, there are 16 Institute libraries located in country centres throughout the region. Borrowing facilities are available to subscribers and the general public has access to, and the use of, reading facilities in the libraries.

Museums

There are a number of historical museums located on Yorke Peninsula including the following National Trust museums:

- (a) Kadina Museum complex, consisting of Matta House (the mine manager's residence built in 1863), a display of early agricultural machinery, a printing museum, old blacksmith's shop and the old Matta mine;
- (b) the historical agricultural museum at Maitland;
- (c) the Minlaton Museum which houses many items of historical interest including photographs and relics of the famous aviator Harry Butler;
- (d) Moonta Mines Museum, located in the old Moonta Mines School building, displays exhibits depicting life in the area during the mining boom;
- (e) Miner's Cottage, an old miner's cottage furnished in period style, contains items from Moonta's mining days from 1861-1923;
- (f) the maritime history museum at Wallaroo, with extensive displays of sailing ships and Wallaroo waterfront history.

Media

The 'Yorke Peninsula Country Times', which is printed at Kadina, is the only locally produced newspaper on Yorke Peninsula.

There are no local radio or television stations on Yorke Peninsula. The region lies within a secondary area for television transmission and programs of varying technical quality, depending on local conditions, are received from transmitting stations in Adelaide.

National and Conservation Parks

There is one national park and three conservation parks on Yorke Peninsula. The largest of these, Innes National Park, is situated on the southern tip of Yorke Peninsula and encompasses an area of 6 112 hectares. It features fine coastal scenery, cliffs and dunes, mallee and tea tree scrub, gypsum and salt lakes. The area was originally set aside to preserve a population of the western Whip Bird, a bird that is relatively common in the park but with a fairly restricted distribution elsewhere in South Australia. Innes National Park also contains relics of gypsum mining begun early in the twentieth century. Other historic relics include the wrecks of the barque *Ethel*, wrecked in 1904, and the steamer *Ferret*, which went aground near the *Ethel* in 1920.

Clinton Conservation Park, situated at the head of Gulf St Vincent, encompasses an area of 1 854 hectares and features tidal flats with mangroves and saltmarsh.

Warrenben Conservation Park features undulating dune limestone with mallee and patches of native pine and tea tree. It is located 21 kilometres north of Stenhouse Bay and covers an area of 4 064 hectares.

Carribie Conservation Park occupies an area of 15 kilometres and features an area of kunkar limestone with open tea tree and mallee regenerating following clearing. It is located 15 kilometres south-east of Corny Point.

There are also a number of offshore island conservation parks around the coast of Yorke Peninsula, including Althorpe Islands, Bird Island, Goose Island and Gambier Islands.

Employment

The following table shows the industry of the employed population of Yorke Peninsula and South Australia at the 1976 Census. The rural nature of Yorke Peninsula is emphasised, with 40.5 per cent of the area's employed males in the agriculture, forestry and fishing industries, compared with 8.9 per cent for the State. Conversely, males employed in the manufacturing industry represent 25.4 per cent of the total State male employment while only 7.5 per cent of Yorke Peninsula's employed males are in this industry.

Industry of Employed Persons, Yorke Peninsula and South Australia, 30 June 1976

Industry	Yorke Peninsula		South Australia	
	Number	Per Cent	Number	Per Cent
MALES				
Agriculture, forestry, fishing etc.	2 217	40.5	31 051	8.9
Mining	107	2.0	3 123	0.9
Manufacturing	412	7.5	88 333	25.4
Electricity, gas and water	69	1.3	9 524	2.7
Construction	524	9.6	40 154	11.5
Wholesale and retail trade	868	15.9	59 120	17.0
Transport and storage	279	5.1	21 337	6.1
Communication	166	3.0	7 952	2.3
Finance, business services etc.	151	2.8	18 336	5.3
Public administration, defence	68	1.2	16 660	4.8
Community services	273	5.0	29 565	8.5
Entertainment, recreation	122	2.2	9 998	2.9
Other and not stated	215	3.9	13 174	3.8
Total employed males	5 469	100.0	348 327	100.0
FEMALES				
Agriculture, forestry, fishing etc.	1 187	36.7	16 402	8.2
Mining	2	0.1	342	0.2
Manufacturing	69	2.1	25 261	12.7
Electricity, gas and water	—	—	531	0.3
Construction	43	1.3	4 024	2.0
Wholesale and retail trade	491	15.2	41 602	20.9
Transport and storage	27	0.8	3 194	1.6
Communication	82	2.5	2 467	1.3
Finance, business services etc.	79	2.4	14 878	7.5
Public administration, defence	42	1.3	5 942	3.0
Community services	687	21.3	54 053	27.2
Entertainment, recreation	218	6.7	15 787	7.9
Other and not stated	301	9.3	14 529	7.3
Total employed females	3 230	100.0	199 008	100.0

The following table shows the occupational status of the labour force in Yorke Peninsula in comparison with that for the State.

A higher proportion of self-employed persons and employers is evident in Yorke Peninsula, with 39.3 per cent of the labour force in the category 'employer or self-employed', compared with only 14.3 per cent for the State.

Occupational Status of the Labour Force: Yorke Peninsula and South Australia, 30 June 1976

Occupational Status	Yorke Peninsula		South Australia	
	Persons	Per Cent	Persons	Per Cent
Employer, self-employed	3 508	39.3	80 878	14.3
Wage, salary earner	4 819	54.0	458 308	80.8
Unpaid helper	372	4.2	8 148	1.4
Unemployed	227	2.5	19 555	3.4
Total labour force	8 925	100.0	566 889	100.0

The following table shows the level of qualifications obtained by persons in the labour force in Yorke Peninsula in comparison with the State.

There is a lower than average proportion of academically qualified persons in the labour force in Yorke Peninsula. One factor which may account for this is the dominance of the agricultural industries in the area, as these are usually characterised by a low proportion of persons with academic qualifications.

**Level of Qualifications Obtained by Persons Aged 15 and over
Yorke Peninsula and South Australia
30 June 1976**

Qualification	Particulars		1975-76	
	1976-77	1977-78	1976-77	1977-78
Doctoral or Masters degree	2	0.0	2 652	0.3
Graduate diploma	50	0.3	4 441	0.5
Bachelor degree	99	0.7	16 250	1.8
Diploma	479	3.2	30 431	3.3
Technician's certificate	491	3.2	37 701	4.1
Trade certificate	1 010	6.7	91 934	10.1
Not classified by level	76	0.5	10 623	1.2
No qualifications	11 406	75.3	630 498	68.9
Not stated	1 543	10.2	90 160	9.9
Total population aged 15 years and over	15 155	100.0	914 690	100.0

The following table shows the annual personal income of persons aged 15 years and over in Yorke Peninsula and South Australia, as stated at the 1976 Census.

Annual Personal Income, Yorke Peninsula and South Australia, 30 June 1976

Annual Personal Income	Yorke Peninsula		South Australia	
	Persons	Per Cent	Persons	Per Cent
Nil	1 823	12.0	133 529	14.6
Less than \$1 500	1 138	7.5	67 986	7.4
\$1 500 and less than \$2 000	1 840	12.1	72 525	7.9
\$2 001 and less than \$3 000	1 924	12.7	87 203	9.5
\$3 001 and less than \$4 000	1 145	7.6	53 974	5.9
\$4 001 and less than \$5 000	1 070	7.1	55 526	6.1
\$5 001 and less than \$6 000	1 249	8.2	72 750	8.0
\$6 001 and less than \$7 000	1 125	7.4	88 096	9.6
\$7 001 and less than \$8 000	904	6.0	73 019	8.0
\$8 001 and less than \$9 000	687	4.5	52 467	5.7
\$9 001 and less than \$12 000	799	5.3	68 174	7.5
\$12 001 and less than \$15 000	331	2.2	22 306	2.4
\$15 001 and less than \$18 000	146	1.0	8 832	1.0
Over \$18 000	159	1.0	9 695	1.1
Not stated	815	5.4	48 608	5.3
Total Population aged 15 years and over	15 155	100.0	914 690	100.0

The table shows that 67.2 per cent of persons aged 15 years and over in Yorke Peninsula have an annual personal income less than \$6 000, compared with 59.4 per cent for the State as a whole.

Health Facilities

On Yorke Peninsula, recognised hospitals (under the agreement between the State Government and the Commonwealth) are located at Maitland (33 beds), Minlaton (43), Port Broughton (22), Wallaroo (79) and Yorketown (33 beds). Other hospitals are located at Ardrossan (17 beds) Kadina (23) and Moonta (21 beds).

The Wallaroo Hospital, administered by the Hospitals Department, contains an operating theatre and radiological facilities including screening.

Branches of the Mothers and Babies Health Association are situated at nine towns throughout Yorke Peninsula with intermittent visits to other communities. A Domiciliary Care Scheme is established in association with Wallaroo Hospital and the Royal District Nursing Society maintains branches at Kadina and Minlaton.

There are branches of the Red Cross Society in a number of communities and ambulances of the St John Ambulance Brigade are located at Ardrossan, Maitland, Minlaton, Moonta, Kadina, Wallaroo and Yorketown. There are Homes for the Aged at Stansbury and Maitland.

Welfare Facilities

The Department for Community Welfare provides welfare services to the region through its District Office at Kadina and Branch at Maitland. Services provided include personal and family counselling, support to voluntary groups, emergency financial assistance, youth services, adoptions and fostering.

Water Supply

Yorke Peninsula has no permanent streams and the rainfall is, in most parts, absorbed directly into the soil. The lack of surface flow makes the collection of water for storage purposes impracticable and the scarcity of suitable clays means that excavated dams are not feasible.

Initially local resources provided the basis for small water supply schemes in the area. However, the schemes were inadequate for the increasing needs of the townships and had little or no capacity to provide water for stock and other farming requirements.

The first large rural water supply scheme for the northern area was on Beetaloo Reservoir, located on Beetaloo Springs in the lower Flinders Ranges about 20 kilometres north of Crystal Brook. The reservoir was completed in 1890 and pipes were laid from Beetaloo Reservoir to serve Port Pirie and towns and farmlands in an area extending southwards to northern Yorke Peninsula.

In 1902, Bundaleer Reservoir near Spalding, was completed. This permitted reticulation to the towns and farming lands south of the reservoir and provided additional water to supplement the supplies from Beetaloo Reservoir in the areas on northern Yorke Peninsula. Water is supplied to the reservoir by concrete lined channels extended from diversion weirs on the Broughton River and Freshwater and Bundaleer Creeks.

Beetaloo and Bundaleer Reservoirs comprised the main source of supply for the northern Yorke Peninsula distribution system until the Morgan-Whyalla pipeline was completed in 1944. Water from the Morgan-Whyalla pipeline has enabled the distribution system to be considerably expanded.

In 1916 the Warren Reservoir was constructed on the South Para River to supply towns and farmlands in the Barossa Valley and the lower northern areas. From the Warren Reservoir a trunk main extends northwards to the Barossa Valley and westerly in a broad arc terminating at a service reservoir near Paskeville on northern Yorke Peninsula. The trunk main feeds a distribution system with about 1 100 kilometres of mains to the lower north and supplements supplies (most of which come from the Bundaleer trunk main) to 800 kilometres of mains on Yorke Peninsula, through the Paskeville service reservoir. It is interconnected at various points with mains in the Bundaleer Reservoir district system and can supplement this network when necessary.

The Swan Reach-Stockwell pipeline, completed in 1969, also supplements water supplies to Yorke Peninsula.

Sewerage

Under the provisions of the Local Government Act, 1934-1978, local government authorities are empowered to provide common effluent drainage schemes to collect effluent from private septic tank systems. However, within Yorke Peninsula, only the towns of Maitland, Wallaroo (part only), Tiddy Widdy Beach (near Ardrossan), and Kadina have common effluent drainage systems.

Since 1972, the State Government has provided subsidy finance for common effluent drains to offset construction and operating costs in order that persons benefiting from these schemes will not be required to pay annual rates in excess of those charged by the Engineering and Water Supply Department in areas where sewerage installations are provided.

Applications from local government authorities for assistance to install common effluent drainage schemes have been submitted for the following towns: Ardrossan, Minlaton, Yorketown, Stansbury, Wallaroo, Moonta, Edithburg, Bute and Wool Bay.

Electricity

Electricity supply was first established on Yorke Peninsula at Wallaroo in 1903. Establishment of an electricity supply in other Peninsula towns gradually followed: Kadina (1908), Maitland and Moonta (1917), Minlaton (1918), Yorketown (1919), Ardrossan (1921), Warooka (1924), Edithburgh (1925), Bute, Port Broughton and Stansbury (1926), Port Victoria (1927), Port Vincent (1928), Port Wakefield (1936), and Curramulka (1938).

Electricity supply in the smaller towns was usually a privately owned operation possessing a local government franchise. The local councils at Wallaroo, Kadina and Moonta were responsible for the supply in these towns but the town of Wallaroo was supplied in bulk by Wallaroo—Mt Lyell Fertilisers Ltd.

In 1946, the Electricity Trust was established and the extension of supply in country areas and towns was one of its immediate problems. In most instances the Trust was asked to take over these undertakings until full integration with the Trust system was possible.

By early 1950, a 33 Kv transmission line had been constructed to supply Ardrossan and Maitland. By mid-1953, the 33 Kv transmission line had been extended along the coast through Port Vincent to Stansbury and across the Hummocks to supply Kadina and Wallaroo. During the 1953-54 financial year, supply was extended to Moonta, Edithburgh and Yorketown, and arrangements were in hand to supply Warooka, Port Victoria and Curramulka.

Much work was involved in converting supply from direct to alternating current in the towns as take-overs proceeded. With high voltage lines extending to most major townships on the Peninsula, a program began in the early 1960s to supply wide-spread rural consumers mainly using low cost 'single wire earth return' (SWER) high voltage lines. These schemes were completed by the early 1970s and with further growth and additions the whole of Yorke Peninsula is now supplied by the Electricity Trust.

The major supply substations for Yorke Peninsula are at South Hummocks (near Port Wakefield) and Ardrossan, both being linked by 132 Kv lines to power stations at Port Augusta and Adelaide. Distribution of power from these substations is by 33 Kv lines to smaller substations near most major towns and large industries on the Peninsula.

The Electricity Trust has local district depots with line construction and maintenance gangs at Kadina, Maitland and Yorketown. These depots are responsible for construction and maintenance of Trust mains and supplying services to approximately 13 600 consumers.

Housing

Since 1954, the number of occupied private dwellings in Yorke Peninsula has grown by approximately 12 per cent, compared with 84 per cent for the State. The following table shows the number of occupied private dwellings for Yorke Peninsula and the State at each Census since 1954.

Occupied Private Dwellings, Yorke Peninsula and South Australia

Area	Census 30 June				
	1954	1961	1966	1971	1976
Bute (DC)	397	391	368	351	370
Central Yorke Peninsula (DC) (a) ...	996	1 087	1 113	1 089	1 156
Clinton (DC)	330	331	332	317	336
Kadina (DC)	923	866	808	737	776

Occupied Private Dwellings, Yorke Peninsula and South Australia (continued)

Area	Census 30 June				
	1954	1961	1966	1971	1976
Kadina (M)	593	633	622	654	696
Minlaton (DC)	635	691	681	679	722
Moonta (M)	385	388	414	436	554
Port Broughton (DC)	256	285	269	290	392
Wallaroo (M)	709	718	665	662	646
Warooka (DC)	252	297	270	275	272
Yorke town (DC)	599	794	753	771	854
Total Yorke Subdivision	6 075	6 481	6 295	6 261	6 774
South Australia	212 095	259 344	299 630	342 064	390 514

(a) Before 1971, consisted of Maitland (M) and Yorke Peninsula (DC).

A comparison of figures for material of outer walls of dwellings shows that stone has been the most important material for dwelling construction in Yorke Peninsula, indicative of the age of many of the dwellings. Over half (55.3 per cent) of the dwellings on Yorke Peninsula had outer walls made of stone, while only 16.8 per cent had outer walls of brick or brick veneer. The corresponding proportions for the State were 15.1 per cent and 66.1 per cent respectively.

Material of Outer Walls: Occupied Private Dwellings, Yorke Peninsula and South Australia 30 June 1976

Material of Outer Walls	Yorke Peninsula		South Australia	
	Dwellings	Per Cent	Dwellings	Per Cent
Brick, brick veneer	1 136	16.8	258 082	66.1
Stone	3 744	55.3	58 838	15.1
Concrete, cement block	388	5.7	22 114	5.7
Timber, weatherboard	132	1.9	10 842	2.8
Metal	188	2.8	6 428	1.6
Fibro, asbestos	1 106	16.3	28 490	7.3
Other	14	0.2	600	0.2
Not stated	66	1.0	5 120	1.3
Total	6 774	100.0	390 514	100.0

Rural Industries

Cereal growing and sheep raising are the main agricultural activities on Yorke Peninsula. Within the region, approximately 12 per cent of the State's wheat crop and 25 per cent of the barley crop is sown, and 6 per cent of the State's sheep are carried. The northern part of the region is one of the largest prime lamb producing areas in the State.

Depending on soil conditions and rainfall, most individual holdings range in size from 200-600 hectares. With the increase in mechanisation of farming techniques, a trend towards large holdings is evident.

Wheat

The lower rainfall areas of County Daly account for approximately 75 per cent of wheat sown for grain on Yorke Peninsula. Wheat was, until the early 1950s, the principal cereal grown in the region but since then the area sown to barley has generally been greater than that for wheat. Since the 1930s productivity has been improved by better crop rotation and the use of annual medics and grasses.

During the period 1952-61, approximately 100 000 hectares of wheat for grain was sown annually (6 per cent of the State total). From 1961, the area sown to wheat for grain increased steadily as farmers sought to offset rising costs so that by 1968-69 approximately 170 000 hectares were sown (12 per cent of State total). In recent years, however, the area sown to wheat has declined and during 1976-77 only 101 500 hectares were sown to wheat (although this still represented 12 per cent of the State total).

Most of the wheat produced in the region is exported, although a small quantity is sent to Adelaide flour mills.

The principal variety of wheat sown on Yorke Peninsula in 1976-77 was Festiguay which accounted for 25 000 hectares, or 25 per cent of all varieties sown.

Wheat for Grain, Yorke Peninsula^(a)

Particulars	Unit	1973-74	1974-75	1975-76	1976-77
Area sown	hectares	146 645	130 728	113 724	101 479
Production	tonnes	200 417	193 229	193 541	114 131
Average yield per hectare	tonnes	1.37	1.48	1.70	1.12

(a) Counties Daly and Fergusson.

Barley

Yorke Peninsula is the major barley producing district in South Australia. In the 1976-77 season, this area contributed approximately 26 per cent of the total production of barley for grain. Approximately 60 per cent of the area sown to barley in the region is in County Fergusson. The area sown to barley has since the early 1950s generally been greater than that for wheat.

In the period 1952-61, the area sown to barley increased steadily from 108 500 hectares to 162 800 hectares. In following years, up until 1968-69, the area sown to barley declined to average between 130 000-140 000 hectares, but since that date the area sown to barley has increased steadily reaching a record 208 100 hectares in 1975-76. In 1976-77, the area sown to barley was 205 200 hectares, or 24 per cent of the State total.

Of the area sown to barley on Yorke Peninsula, 98 per cent was two-row barley reflecting the suitability of the region for the production of high quality malting barley. For malting purposes a plump yellow grain with fine skin coverings is required, and this can best be obtained when the ripening period is somewhat prolonged by cool conditions. Yorke Peninsula is ideal in this regard as the moisture laden breezes off the gulfs on either side retard ripening.

The principal variety of barley grown on Yorke Peninsula is Clipper which, in 1976-77, accounted for 84 per cent of all varieties sown.

Barley for Grain, Yorke Peninsula^(a)

Particulars	Unit	1973-74	1974-75	1975-76	1976-77
Area sown	hectares	165 751	183 358	208 104	205 240
Production	tonnes	258 184	390 692	356 599	226 867
Average yield per hectare	tonnes	1.56	2.13	1.71	1.11

(a) Counties Daly and Fergusson

Oats

Oats are not grown extensively throughout the region. In 1976-77 only 4 800 hectares of oats for grain was sown and production was 3 400 tonnes (4 per cent of the State total).

Sheep

Sheep is the main livestock enterprise on Yorke Peninsula. At 31 March 1977 there were 901 400 sheep in the region representing about 6 per cent of the State total. The region's wool clip for 1977 was 5 645 tonnes which represented about 6 per cent of the State's total wool clip.

**Sheep: Numbers by Age and Sex, Yorke Peninsula
At 31 March**

Year	Rams	Ewes		Wethers	Lambs	Total
		Breeding	Other			
1973	13 704	606 490	37 057	168 836	221 410	1 047 497
1974	13 729	665 016	27 661	213 279	220 774	1 140 459
1975	13 891	658 474	40 312	227 290	257 310	1 197 277
1976	13 619	618 317	44 232	215 616	224 583	1 116 367
1977	12 619	542 894	35 508	165 489	144 844	901 354

Sheep numbers have increased steadily since the early 1930s with a resulting growth in wool production. The northern half of the region is one of the State's largest prime lamb producing areas.

Sheep and Lambs Shorn, Wool Clip and Average Weight per Fleece, Yorke Peninsula^(a)

Particulars	Unit	1973	1974	1975	1976	1977
Sheep and lambs shorn	number	1 234 479	1 150 193	1 246 796	1 246 021	1 052 619
Wool clip	kg	6 340 898	6 140 634	6 879 114	6 398 769	5 645 276
Average per fleece	kg	5.14	5.34	5.52	5.14	5.36

(a) Counties Daly and Fergusson

Cattle for Meat Production

Numbers of cattle for meat production have increased significantly on Yorke Peninsula since 1968. At 31 March 1968 there were 13 025 cattle for meat production in the region but by 1972 the number had nearly quadrupled to 51 905 as farmers sought to diversify production and maintain income levels. Cattle numbers have since increased steadily reaching a peak of 60 669 in 1975. However, in 1977 the number of cattle for meat production declined dramatically to 37 861 (3 per cent of the State total).

Cattle for Meat Production, Yorke Peninsula^(a)

Year	Bulls	Cows	Calves	Total ^(b)
1973	1 187	27 170	18 800	52 531
1974	1 275	31 332	18 929	57 623
1975	1 409	34 502	19 474	60 669
1976	1 401	33 116	20 047	59 432
1977	968	20 834	12 738	37 861

^(a) Counties Daly and Fergusson^(b) Includes Other Cattle for meat production.**Cattle for Milk Production**

Cattle for milk production on Yorke Peninsula are kept to supply whole milk for local towns such as Maitland, Minlaton, Yorketown and Warooka. At 31 March 1977 there were 2 876 cattle for milk production in the region, representing approximately 2 per cent of the State total.

Since March 1964 the total number of cattle for milk production in the region has declined by 7 839, or 73 per cent.

Cattle for Milk Production, Yorke Peninsula^(a)

Year	Bulls	Cows	Heifers (one year and over)	Calves	Total (^b)
1973	166	2 856	738	845	5 080
1974	144	2 197	715	682	4 228
1975	135	2 209	790	783	4 436
1976	127	2 343	524	515	4 004
1977	94	1 546	422	403	2 876

^(a) Counties Daly and Fergusson^(b) Includes house cows.**Pigs**

On Yorke Peninsula, pigs are normally kept as a sideline on mixed farms. There have been substantial fluctuations in the pig population from year to year influenced by the exceptional variability in prices. In recent years the numbers have generally declined.

At 31 March 1977 there were 41 639 pigs on Yorke Peninsula, 13 per cent of the State total. Approximately 65 per cent of the pig population is raised in County Daly.

Mining**Gypsum**

The important gypsum industry of South Australia was pioneered in the salt-lake district of southern Yorke Peninsula in 1874. Since recorded production commenced in 1905 about 7 million tonnes have been produced.

At first, production was from seed gypsum dunes lying on the south-east sides of salt lakes, particularly Lake Fowler, in the Yorketown district. This was used mostly for plaster manufacture and was shipped from Edithburgh. Later a company quarried rock gypsum from the lakes (especially Marion Lake) in the Stenhouse Bay district in the extreme south-west. This gypsum was found to be exceptionally pure and especially suitable for the manufacture of plaster and plaster products. The district is the main source of gypsum on Yorke Peninsula.

Gypsum production on Yorke Peninsula has declined in recent years because of a temporary closure by the company mining the Stenhouse Bay deposits.

Dolomite

Dolomitic limestone in the Ardrossan district was explored by diamond drilling in 1948 by The Broken Hill Proprietary Co. Ltd. A large quarry was developed 2 kilometres south-west of Ardrossan, and a crushing and screening plant and a 900 metre jetty with ship loading facilities were erected on the coast immediately south of the town. The crushed rock is shipped to Newcastle, Port Kembla, Whyalla and Bell Bay for use as a refractory, for fettling or fluxing.

Limestone

Tertiary limestone was originally quarried at Stansbury and Edithburgh for use in cement manufacture, the rock being shipped to Adelaide. Quarrying is now concentrated on the coast between Stansbury and Wool Bay (Klein Point), the quarry having been developed inland from the cliff face. A crushing plant delivers rock to a small quay, where it is shipped to the Birkenhead plant of the Adelaide Brighton Cement Company.

Total limestone production on Yorke Peninsula is currently about 1 million tonnes per annum.

Salt

The salt industry of Yorke Peninsula was originally the principal source of supply for South Australia, about 7 000 tonnes per annum being produced before 1891 from seasonal scraping of the floors of the salt lakes by local farmers. Production became concentrated in the Edithburgh-Yorketown district between 1891 and 1900 and rose to 40 000 tonnes per annum. This continued for many years until the establishment of salt pans at Port Price and elsewhere in South Australia.

The principal salt producing centre is now at Port Price, at the head of Gulf St Vincent, where Ocean Salt Pty Ltd established a salt works and refinery in 1930 for the production of salt by the solar evaporation of sea water. This site was selected to gain the natural benefits of low rainfall, high evaporation rate, and increased salinity of the impounded gulf waters, together with the favourable topography for the construction of level evaporation areas. Harvesting operations are fully mechanised.

Salt is also produced in the Yorketown area. Total salt production for Yorke Peninsula is currently about 85 000 tonnes per annum.

Copper

Before the closure of the Moonta Mines in 1923, the district was the most important mining area in South Australia. An estimate of the tonnage of ore extracted in the 63 years of operation is approximately 6 million tonnes, with a value of \$41 million.

A combination of poor grade, low reserves, and low copper prices with high mining costs led to the closure of the mines.

The successful development of copper mining in the north-west led to prospecting of the older rocks elsewhere, but few attempts were profitable and all were shortlived. The Parara Mine, north-west of Ardrossan, and the Hillside Mine, 15 kilometres south of Ardrossan, were among the richest.

Intermittent subsequent investigations, particularly by geophysical methods followed up by drilling, have not resulted in significant discoveries.

Other Minerals

Kunkar, a nodular variety of surface limestone, is used by local government authorities as a road surfacing material. Kunkar was used almost invariably in early housing, except locally in the north-east where some sandstone was available. The dense nodular masses provided crude but cheap block stone.

Calcareous dune sand was mined from the west side of Wardang Island and has been used in the Port Pirie smelters. The sand was shipped to Port Pirie from 1910 to 1968.

Rock phosphate was discovered in 1900 in small pockets and fissure deposits near Clinton. These were worked for artificial fertilisers, but have now become exhausted.

Alunite occurs in clayey sands and clays forming sea-cliffs between Stansbury and Port Vincent and also to the north of Port Vincent. The deposits south of Port Vincent were developed during the potash shortage during the 1914-18 War. Peacetime development was unsuccessful.

A large deposit of tertiary lignite occurs in the northern end of Gulf St Vincent in the vicinity of Prince and Clinton. Although the deposit is attractive by virtue of heat value and location, it has the disadvantage of high sodium content which would cause boiler fouling. This problem has mitigated against its development.

Fisheries

Commercial fishing round Yorke Peninsula is undertaken for all major species. The most important species taken are prawns and whiting, although snapper and rock lobster are commercially significant in this area.

The following table shows the size and composition of the commercial fish catch landed at Yorke Peninsula ports for the past 5 years.

Fishing: Production by Species, Yorke Peninsula Estimated Landed Weight^(a)

Species	1973-74	1974-75	1975-76	1976-77	1977-78
	'000 kg				
Rock Lobster	90	63	62	52	59
Prawns	29	91	363	288	233
Shark	111	32	55	35	44
Whiting	212	268	256	180	220
Ruff	93	104	125	146	153
Snapper	175	112	113	154	154
Garfish	145	145	113	84	86
Snook	58	45	35	37	27
Squid	35	19	25	26	41
Abalone	13	29	42	33	37
Other	99	62	96	90	66
Total	1 060	970	1 285	1 125	1 120

(a) Based on fishermen's catch returns collected by the Department of Agriculture and Fisheries.

The increase in prawn landings from 1975-76 was due to increased landings at Wallaroo rather than increased catches, in fact the quantity of prawns taken in Spencer Gulf has been relatively constant in recent years. The fluctuations in landings of other species have been consistent with variations observed throughout the State. Shark landings declined after 1973-74 due to the necessity for all shark imports into Victoria to have levels less than 0.5 parts per million of mercury.

The gross value of the major species caught in 1977-78 were:

	\$'000
Prawns	736
Whiting	719
Snapper	262
Rock Lobster	225
Abalone	193
Garfish	155
Ruff	86
Squid	72
Other	108
	<hr/>
	2 556
	<hr/>

The majority of the prawn landings were made by vessels operating from Port Lincoln, although a few vessels were based at Port Pirie. Similarly the abalone landings were made by Adelaide based divers. However, the scale fishing is more localised and the fishermen tend to operate from small vessels using hand lines or nets.

In 1978-79 there were 133 Class A (full-time) fishermen and 79 Class B (part-time) fishermen licensed in Yorke Peninsula, with a total of 149 employees. Parts of the Yorke Peninsula waters are important areas for recreational fishing but no figures are available on the number of amateur fishermen or on their total catch.

Manufacturing

Manufacturing Establishments: Summary of Operations, Yorke Peninsula and South Australia, 1976-77

Particulars	Unit	Yorke Peninsula	South Australia
Number of establishments	Number	24	2 242
Employment (a):			
Males	Number	304	89 917
Females	Number	51	25 477
Persons	Number	355	115 394
Wages and Salaries (b)	\$'000	2 473	981 380
Turnover	\$'000	14 972	3 768 136
Stocks:			
Opening	\$'000	927	680 426
Closing	\$'000	893	788 916
Purchases, transfers in	\$'000	8 918	2 279 623
Value added	\$'000	6 020	1 597 007
Fixed capital expenditure	\$'000	381	153 157

(a) Includes working proprietors.

(b) Excludes drawings of working proprietors.

There is little manufacturing industry on Yorke Peninsula and the economy of the region is based on primary production. At 30 June 1977 there were 24 manufacturing establishments in the region employing 355 persons and having a turnover of \$15 million during 1976-77.

Adelaide and Wallaroo Fertilizers Limited operate a fertiliser plant at Wallaroo for the manufacture of superphosphate, and at Lochiel a salt refinery is operated by Australian

Salt Co. Ltd. Other manufacturing establishments located on Yorke Peninsula include six bakeries, one soft drink manufacturer, two printeries, one readymix concrete plant, four agricultural machinery establishments and four fabricated metal products manufacturers.

Transport

Roads

Yorke Peninsula has a comprehensive network of sealed roads that link all the major towns. There are three major routes within the region; one crosses the head of the Peninsula linking Port Wakefield to Kadina and Wallaroo, and two extend along the Peninsula, one following the eastern coastline and the other running inland along the Maitland-Minlaton-Yorketown axis. The inland route has links to Moonta, Port Victoria and Warooka.

The length of roads on Yorke Peninsula at 30 June 1972 was 6 671 kilometres, of which 1 133 kilometres were sealed.

Railways

There is no regular passenger service between Yorke Peninsula and Adelaide. Wallaroo, Moonta and Kadina are linked to the main Adelaide-Port Pirie line by branch lines from Snowtown and Port Wakefield.

Grain is transported to Wallaroo from bulk silos at towns throughout the mid-North and sulphuric acid is railed from Port Pirie to the fertiliser works in Wallaroo.

Harbours and Shipping

There are twenty government-owned and one private seaport along the coasts of the region, the most important being Wallaroo, Port Giles, Klein Point and Ardrossan.

The following table shows tonnages of exports through the four major ports on Yorke Peninsula for the period 1974-75 to 1977-78.

Exports from Yorke Peninsula Ports

Port and Commodity	1974-75	1975-76	1976-77	1977-78
	Tonnes			
Ardrossan				
Barley	151 377	176 734	107 881	50 427
Dolomite	350 895	496 123	445 243	562 451
Salt	6 552	6 928	—	—
Wheat	89 139	114 602	42 405	40 106
Klein Point				
Gypsum	—	—	28 369	10 545
Limestone	523 818	575 062	614 038	725 418
Port Giles				
Barley	112 421	121 163	94 478	34 060
Wheat	6 960	23 845	7 397	5 646
Wallaroo				
Barley	133 529	160 215	42 284	19 265
Livestock	—	—	—	13 883
Wheat	153 364	144 653	60 890	44 603
Other	—	—	—	3 369

Source: Department of Marine and Harbors

Wallaroo is one of the State's major grain export ports. The 867 metre long jetty at Wallaroo provides six shipping berths with depths ranging up to 9.5 metres at low water. A new fishing jetty 80 metres long, which provides a haven for small boats, was constructed on the northern side of the main jetty during 1973.

There are two jetties at Ardrossan, one of which is owned by Broken Hill Proprietary Co. Ltd and which has bulk handling facilities for the export of dolomite to steel plants at Whyalla and New South Wales. Bulk salt produced at Price and grain from the adjacent terminal silos are also shipped from this jetty.

Port Giles is an important grain port. Bulk grain storage silos at the port have a capacity of 130 000 tonnes of grain. The jetty, 620 metres in length, has provision for one berth with a depth of 11.6 metres at low water.

Limestone and gypsum are exported from Klein Point by Adelaide Brighton Cement Limited.

Aerodromes

Yorke town has an airfield but it is not a licensed airport and no regular services are operated from it. Private charter aircraft carry passengers to a number of localities on Yorke Peninsula on request. Because of the lack of proper landing facilities, aircraft often use paddocks adjacent to towns.

Motor Bus Services

Several privately owned bus services operate under licence from the State Transport Authority. Daily services are operated between Adelaide and most major towns on the Peninsula with local feeder services to the remaining towns.

Motor Vehicles

At 30 June 1976, motor vehicles registered with owners' addresses on Yorke Peninsula totalled 7 415 cars, 959 station wagons, 3 453 commercial vehicles, and 764 motor cycles.

The population per registered motor vehicle at 30 June 1976 was 1.56 compared with 1.94 for the whole State.

Postal and Telecommunication Services

Twenty-five towns on Yorke Peninsula are served by post offices and eighteen towns have Subscriber Trunk Dialling (STD) telephone services. The STD facilities only extend through the northern half of the Peninsula.

Retail Trade

At 30 June 1974, there were 280 retail establishments and 53 selected service establishments operating on Yorke Peninsula. The number of retail and selected service establishments on Yorke Peninsula represented 2.5 per cent of the State total but only 1.2 per cent of total retail sales.

Forty per cent of the retail establishments operating on Yorke Peninsula were food stores whose retail sales represented approximately 33 per cent of total retail sales on the Peninsula.

**Retail and Selected Service Establishments: Summary of Operations by Industry Group,
Yorke Peninsula, 1973-74**

Industry Group	Number of Establishments	Retail Sales	Turnover (a)
		\$'000	
Department, variety and general stores	23	3 103	3 282
Food stores	115	6 736	6 870
Clothing, fabric and furniture stores	23	1 842	1 853
Household appliance and hardware stores	22	972	1 329
Motor vehicle dealers, petrol and tyre retailers	67	6 653	9 117
Other retailers	30	1 189	1 202
<hr/>			
Total retail establishments	280	20 494	23 652
Restaurants, licensed hotels and clubs	33	2 534	3 239
Hairdressing and beauty salons	20	8	132
<hr/>			
Total selected service establishments	53	1 542	3 372
<hr/>			
Total retail and selected service establishments	333	23 035	27 024

(a) Sales of goods (retail and wholesale) and all other operating revenue.

Tourism

Yorke Peninsula's main tourist attraction is its coastline, with fishing, swimming, surfing and boating being major recreational activities undertaken throughout the region.

The old copper mining installations at Wallaroo and Moonta are important tourist attractions. The presence of a substantial range of historic buildings and sites in and near these towns represents a significant contribution to the overall attraction of the region to visitors.

A three day Cornish Festival, 'Kernewek Lowender', is held biennially at Kadina-Wallaroo-Moonta and it has developed to become one of the State's main cultural festivals.

An estimated 90 per cent of visitors to the region are drawn from the Adelaide metropolitan area, with only a small proportion of visitors to the region coming from interstate.

Caravan and camping parks comprise a major element of accommodation available in the region. Hotel and motel accommodation is confined to the larger centres. The coastal attractions and accessibility of the region to residents of Adelaide has led to the proliferation of privately owned holiday houses throughout the region.

The region experiences pronounced seasonality patterns with the traditional holiday periods of January, May, September and Easter contributing a major proportion of the total annual volume of visitor activity in the region.

At 30 June 1979 there were five licensed hotels with facilities, one licensed and five unlicensed motels providing accommodation for visitors, with a total of 137 rooms. There were also 22 caravan parks.

APPENDIX A

STATISTICAL SUMMARY

In the next 21 pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State, with details being given (wherever they are available) for every fifth year for the period 1836-1956, and for each single year thereafter. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period in excess of 140 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes (page 648) where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

<i>n.a.</i>	not collected, not available for publication
—	nil
<i>p</i>	preliminary information subject to revision
<i>n.y.a.</i>	not yet available
———	break in continuity of figures

POPULATION^(a)

Year	Population Estimate at 31 Dec.			Annual Population Growth			
	Males	Females	Persons	Recorded Natural Increase (b)	Rate of Natural Increase (c)	Total Increase	Rate of Population Growth
							Per cent
1836	309	237	546			546	
1841	8 755	6 730	15 485			855	5.84
1846	14 711	11 182	25 893	577	22.29	3 433	15.29
1851	37 321	29 217	66 538	1 786	26.85	2 838	4.46
1856	56 264	51 622	107 886	3 341	30.97	10 499	10.78
1861	67 409	63 403	130 812	3 589	28.00	5 230	4.17
1866	88 024	80 883	168 907	4 029	24.39	7 430	4.60
1871	97 019	91 625	188 644	4 704	25.21	4 098	2.22
1876	116 894	107 666	224 560	4 674	21.51	14 484	6.89
1881	152 453	133 518	285 971	6 696	23.81	9 578	3.47
1886	160 814	145 896	306 710	6 943	22.54	-2 603	-0.84
1891	168 826	155 895	324 721	6 526	20.23	5 774	1.81
1896	179 024	173 043	352 067	5 974	16.95	99	0.03
1901	(d)180 440	(d)178 890	(d)359 330	(d)5 105	14.29	(d)2 080	0.58
1906	184 803	181 710	366 513	5 049	13.90	3 892	1.07
1911	214 061	205 331	419 392	7 019	17.05	12 530	3.08
1916(e)	212 585	229 253	441 838	6 780	15.35	-4 147	-0.93
1921	251 170	250 572	501 742	6 992	14.07	10 736	2.11
1926	285 013	275 912	560 925	6 606	11.92	13 877	2.54
1931	289 397	287 682	577 079	4 191	7.28	2 612	0.45
1936	294 835	294 935	589 770	3 447	5.86	3 008	0.51
1941(e)	301 645	304 721	606 366	4 677	7.78	7 310	1.22
1946(e)	317 238	323 180	640 418	9 352	14.72	9 536	1.51
1951	375 188	368 597	743 785	10 279	14.03	20 942	2.90
1956	436 807	425 145	861 952	11 371	13.40	27 291	3.27
1957	448 411	437 841	886 252	11 960	13.68	24 300	2.82
1958	458 401	449 652	908 053	12 304	13.72	21 801	2.46
1959	471 868	462 629	934 497	12 429	13.49	26 444	2.91
1960	483 802	473 220	957 022	13 162	13.93	22 525	2.41
1961	494 600	484 800	979 400	14 584	15.03	22 400	2.68
1962	503 200	495 000	998 200	13 149	13.31	18 800	1.93
1963	514 700	507 700	1 022 400	13 185	13.05	24 200	2.42
1964	529 100	522 900	1 052 000	12 002	11.57	29 600	2.89
1965	544 300	538 700	1 083 000	12 146	11.38	31 000	2.95
1966	554 000	549 800	1 103 700	11 017	10.07	20 700	1.92
1967	559 300	556 700	1 115 900	11 315	10.19	12 200	1.10
1968	566 700	565 400	1 132 100	11 291	10.06	16 200	1.45
1969	574 700	574 700	1 149 400	12 640	11.09	17 200	1.52
1970	584 400	585 900	1 170 200	12 479	10.77	20 900	1.81
1971	597 100	598 300	1 195 400	13 310	11.32	25 200	1.63
1972	603 800	605 700	1 209 500	12 080	10.05	14 100	1.18
1973	612 800	614 500	1 227 200	10 572	8.68	17 700	1.46
1974	625 700	627 900	1 253 600	9 945	8.04	26 300	2.15
1975	628 000	629 300	1 257 300	10 039	8.01	3 700	0.30
1976	633 400	635 300	1 268 800	8 948	7.09	11 500	0.91
1977	640 800	643 000	1 283 800	9 476	7.38	15 000	1.18

(a) Figures before January 1962 exclude full-blood Aborigines. Figures from 1971 have been adjusted to take account of underenumeration and a conceptual change in the measure of residency. (b) Births and deaths of full-blood Aborigines, where identified in registration, have been excluded from natural increase figures before 1 January 1962. (c) Excess of births over deaths per 1 000 of mean population. (d) Northern Territory included before 1901, but subsequently excluded. (e) During the 1914-18 War, defence personnel leaving the State were treated as departures, but during the 1939-45 War they were retained in the population and troops of other States and countries were excluded.

DEMOGRAPHY

Year	Live Births		Infant Deaths (a)		Deaths		Rates from Principal Causes (b)		
	Number	Rate (b)	Number	Rate (c)	Number	Rate (b)	Rates from Principal Causes (b)		
							Diseases of the Heart	Cancer	Tuberculosis
1846	937	36.19			360	14.02			
1851	2 759	41.47	539	195.36	973	14.62			
1856	4 488	41.60	610	135.92	1 147	10.63		0.05	0.98
1861	5 551	43.30	1 064	191.68	1 962	15.30		0.08	1.25
1866	6 782	41.06	1 385	204.22	2 753	16.67		0.16	1.25
1871	7 082	37.95	851	120.16	2 378	12.74		0.18	1.05
1876	8 224	37.84	1 228	149.32	3 550	16.34		0.35	1.22
1881	10 708	38.08	1 364	127.38	4 012	14.27		0.32	1.16
1886	11 177	36.29	1 409	126.06	4 234	13.75		0.34	1.34
1891	10 737	33.36	976	90.77	4 211	13.08		0.49	1.31
1896	10 012	28.44	1 015	101.02	4 038	11.47		0.53	1.17
1901	9 079	25.41	909	100.12	3 974	11.12		0.60	1.06
1906	8 921	24.57	675	75.66	3 872	10.66		0.77	1.08
1911	11 057	28.86	670	60.60	4 038	9.81	1.04	0.74	0.85
1916	11 857	26.85	868	73.21	5 077	11.50	1.29	0.81	0.93
1921	11 974	24.09	784	65.48	4 982	10.02	1.13	0.92	0.80
1926	11 483	20.73	509	44.33	4 877	8.81	1.00	0.96	0.71
1931	9 079	15.77	330	36.35	4 888	8.49	1.39	1.20	0.58
1936	8 911	15.16	277	31.09	5 464	9.29	1.87	1.26	0.40
1941	10 965	18.24	356	32.47	6 288	10.46	2.62	1.26	0.37
1942	11 278	18.51	448	39.72	6 712	11.02	2.73	1.25	0.41
1943	13 145	21.43	482	36.67	6 482	10.57	2.82	1.31	0.35
1944	13 311	21.49	387	29.07	5 984	9.66	2.64	1.27	0.30
1945	14 033	22.38	394	28.08	6 049	9.65	2.87	1.23	0.32
1946	15 813	24.90	428	27.07	6 461	10.17	3.03	1.29	0.29
1947	16 317	25.23	396	24.27	6 215	9.61	2.86	1.28	0.30
1948	15 870	24.00	472	29.74	6 748	10.20	3.08	1.42	0.28
1949	16 042	23.58	444	27.68	6 373	9.37	2.90	1.23	0.21
1950	17 306	24.39	416	24.04	6 740	9.50	3.05	1.24	0.19
1951	17 463	23.84	428	24.51	7 184	9.81	3.24	1.24	0.15
1952	17 884	23.69	413	23.09	7 050	9.34	3.10	1.29	0.12
1953	18 156	23.39	375	20.65	6 962	8.97	3.00	1.27	0.06
1954	18 227	22.89	388	21.29	7 179	9.01	3.11	1.22	0.08
1955	18 494	22.55	431	23.30	7 536	9.19	3.12	1.28	0.06
1956	18 964	22.35	377	19.88	7 593	8.95	3.24	1.16	0.05
1957	19 536	22.35	403	20.63	7 576	8.67	2.91	1.29	0.05
1958	20 047	22.35	449	22.40	7 743	8.63	2.93	1.26	0.07
1959	20 372	22.12	422	20.71	7 943	8.62	2.89	1.22	0.05
1960	20 966	22.19	397	18.94	7 804	8.26	3.06	1.21	0.04
1961	22 399	23.09	448	20.00	7 815	8.06	2.92	1.26	0.06
1962	21 361	21.67	409	19.15	8 232	8.35	3.06	1.37	0.03
1963	21 367	21.20	399	18.67	8 201	8.14	2.99	1.27	0.04
1964	20 866	20.16	397	19.03	8 906	8.61	3.24	1.32	0.01
1965	20 891	19.63	385	18.43	8 788	8.26	3.11	1.30	0.03
1966(d)	20 362	18.61	364	17.88	9 345	8.54	3.22	1.32	0.02
1967	20 386	18.37	346	16.97	9 071	8.17	3.09	1.35	0.02
1968	21 207	18.89	345	16.27	9 916	8.83	3.29	1.41	0.02
1969	21 977	19.28	347	15.79	9 337	8.19	2.96	1.47	0.02
1970	22 617	19.52	367	16.23	10 138	8.75	3.20	1.43	0.01
1971	22 996	19.39	366	15.92	9 686	8.17	2.89	1.40	0.02
1972	21 844	18.17	367	16.80	9 764	8.12	2.94	1.46	0.01
1973	20 407	16.75	276	13.52	9 835	8.07	2.95	1.47	0.01
1974	20 181	16.33	312	15.46	10 236	8.29	2.96	1.49	0.01
1975	19 986	15.95	222	11.11	9 947	7.94	2.85	1.52	0.01
1976	18 947	15.02	276	14.57	9 999	7.92	2.91	1.45	0.00
1977	19 260	15.08	221	11.47	9 784	7.66	2.80	1.50	0.00
1978	18 558	14.41	227	12.23	9 763	7.58	2.80	1.54	0.00

(a) Under one year of age from 1871, under two years of age in prior years.

(b) Rate per 1 000 of mean population. (c) Rate per 1 000 live births registered.

(d) Vital events of full-blood Aborigines, where identified in registrations, were excluded before 1966.

SOCIAL DEVELOPMENT

Marriages and Divorces; Law and Order

Year	Marriages		Divorces (b)	Bank- ruptcies	Court Convictions		Police	
	Total	Rate (a)			Higher Courts (c)	Courts of Summary Juris- diction (d)	Active Strength	Net Expen- diture
1841				36	37			\$'000
1846	220	8.50		16	40			
1851	189	2.84		106	103		127	
1856	1 171	10.85		88	85	2 919	174	
1861	1 158	9.03		115	62	3 025	151	
1866	1 299	7.86		252	107	4 341	208	90
1871	1 250	6.70		247	91	4 864	187	74
1876	1 852	8.52		200	129	7 905	257	108
1881	2 308	8.21		696	213	13 231	371	164
1886	1 976	6.42	10	535	121	6 808	401	178
1891	2 315	7.21	5	142	85	6 918	388	172
1896	2 183	6.20	6	240	110	5 149	347	150
1901	2 304	6.45	6	165	98	4 968	359	152
1906	2 679	7.38	3	172	92	5 249	373	153
1911	4 036	9.80	20	190	74	7 303	423	183
1916	3 602	8.16	14	324	52	7 145	541	262
1921	4 383	8.82	88	155	97	8 968	566	391
1926	4 503	8.13	71	439	174	21 417	633	499
1931	3 069	5.33	138	996	274	14 760	763	641
1936	5 182	8.81	213	551	171	14 920	701	570
1941	6 855	11.40	273	284	177	21 990	707	689
1946	6 700	10.55	654	23	231	(e) 20 585	(e) 830	(e) 819
1947	6 668	10.31	695	32	246	24 491	833	888
1948	6 704	10.14	630	32	185	24 164	869	1 052
1949	6 247	9.18	590	52	205	22 834	928	1 208
1950	6 585	9.28	661	44	207	25 496	942	1 398
1951	6 646	9.07	637	53	307	28 675	913	1 647
1952	6 241	8.27	581	76	328	27 432	952	2 073
1953	6 149	7.92	628	91	330	30 229	982	2 429
1954	6 190	7.77	594	89	312	25 482	986	2 617
1955	6 226	7.59	624	106	340	29 264	969	2 517
1956	6 277	7.40	567	150	362	28 221	1 018	3 060
1957	6 581	7.53	529	244	459	30 658	1 143	3 303
1958	6 505	7.25	483	278	457	32 621	1 183	3 677
1959	6 614	7.18	503	366	499	34 203	1 243	4 084
1960	6 607	6.99	610	368	580	42 531	1 301	4 499
1961	6 804	7.01	718	561	606	52 155	1 376	5 043
1962	7 021	7.12	685	620	718	53 531	1 466	5 651
1963	7 302	7.24	765	584	745	57 189	1 441	5 825
1964	7 765	7.50	887	675	629	55 408	1 496	6 245
1965	8 680	8.16	852	582	713	62 238	1 558	6 912
1966	9 051	8.27	1 069	648	738	71 694	1 595	7 319
1967	9 434	8.50	929	660	707	87 110	1 660	8 417
1968	9 652	8.60	915	759	692	105 027	1 777	9 137
1969	10 599	9.30	963	659	712	105 966	1 845	9 568
1970	10 864	9.38	939	611	(f) 694	114 499	1 881	10 621
1971	10 833	9.21	1 264	(f) 626	931	110 543	1 971	12 181
1972	10 829	9.10	1 235	643	964	123 063	2 063	12 961
1973	10 806	9.01	1 582	554	982	(g) 94 068	2 167	15 107
1974	10 769	8.84	1 561	373	906	93 037	2 264	19 334
1975	9 843	7.95	1 812	437	989	104 402	2 461	28 035
1976	10 902	8.64	6 142	351	1 080	95 758	2 548	37 488
1977	10 126	7.93	n. y. a.	456	1 075	105 224	2 718	44 669
1978	9 800	7.61	n. y. a.	673	n. y. a.	n. y. a.	2 879	53 456

(a) Rate per 1 000 of mean population. (b) Dissolutions made absolute. (c) Distinct persons only. (d) Each type of offence counted separately when there are multiple charges against an individual. (e) Year ended 30 June from 1943. (f) Year ended 30 June from 1971. (g) Excludes juvenile offenders from 1973.

SOCIAL DEVELOPMENT

Education

Year	Primary and Secondary					Tertiary		Further Student Enrol- ments
	Government Schools (a)		Non-government Schools			Uni- versities Students (b)	Colleges of Advanced Education Students	
	Students		Students					
	No.	Primary	Secondary	No.	Primary	Secondary		
1851	115	3 031						
1856	147	6 516						
1861	219	10 711			236			
1866	292	14 690			<i>n.a.</i>			
1871	307	15 791			<i>n.a.</i>			
1876	281	25 889			326		58	
1881	405	36 888			363		74	
1886	504	44 405			<i>n.a.</i>		197	
1891	552	47 094			285		246	
1896	639	59 944			232		320	
1901	706	63 183			230		591	
1906	708	57 270			215	(c) 9 753	626	
1911	743	53 494			179	(c) 11 121	641	
1916	857	63 935	1 800		218	(d) 12 785	491	
1921	973	77 111	3 067		171	13 951	1 338	
1926	1 019	79 204	6 527		188	16 139	1 575	
1931	1 075	81 218	10 503		186	14 310	2 092	
1936	1 100	75 411	9 280		174	13 993	2 025	
1941	1 006	63 303	10 761		167	13 915	2 211	
1946	811	61 242	11 870		145	16 310	3 723	
1947	782	63 853	11 723		143	16 468	4 045	
1948	773	66 653	11 550		142	17 169	4 266	
1949	759	71 337	11 922		146	18 426	4 126	
1950	743	76 369	12 732		148	19 655	4 069	
1951	728	81 642	14 106		146	20 677	3 720	
1952	716	89 630	15 121		146	22 393	3 612	
1953	723	97 262	16 933		148	23 631	3 565	
1954	716	105 022	17 972		157	24 949	3 555	
1955	701	111 909	19 485		157	26 840	3 617	
1956	699	118 365	22 134		163	29 050	3 828	
1957	694	123 132	24 734		163	30 504	4 424	
1958	674	125 678	28 189		161	32 425	4 816	
1959	668	129 850	33 042		162	33 896	5 300	
1960	681	132 372	37 901		163	35 370	5 723	
1961	688	135 274	41 889		165	35 652	6 250	
1962	682	136 924	46 499		164	(e) 24 962 (e) 11 440	6 824	
1963	682	140 520	49 637		166	24 677	7 416	
1964	685	145 042	54 026		170	24 761	8 203	
1965	700	150 809	57 811		172	24 605	8 658	
1966	700	154 253	60 834		172	24 188	12 999	9 364
1967	674	157 424	65 630		173	23 533	13 469	9 658
1968	683	157 997	68 814		171	22 814	13 599	9 803
1969	676	159 682	71 599		171	22 257	14 203	10 128
1970	681	156 922	71 866		170	22 464	14 642	10 176
1971	662	156 458	74 982		169	22 669	15 018	10 682
1972	(f) 615	154 886	77 926		163	22 232	15 233	11 124
1973	614	152 698	79 088		163	21 929	15 806	11 497
1974	613	152 901	79 578		157	22 399	16 494	12 264
1975	619	151 975	82 737		151	22 479	16 818	12 876
1976	625	151 499	82 115		147	22 177	17 122	13 493
1977	626	152 079	81 131		145	22 361	17 085	13 390
1978	628	150 567	79 888		151	22 353	17 088	12 904

(a) Net enrolment to 1969, thereafter at census date (at or about 1 August). Includes Northern Territory before 1958. (b) Excludes students at Conservatorium of Music not also enrolled for degree or diploma subject. (c) On last school day. (d) Non-government schools compulsorily registered, previous years incomplete. From 1916 to 1961 net enrolment including Northern Territory. (e) From 1962 at census date (at or about 1 August). Excludes Northern Territory. (f) From 1972 includes only primary and secondary, before 1972 included technical institutions. (g) In approved courses at colleges of advanced education.

SOCIAL DEVELOPMENT

Social Welfare

Year	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
	Age and Invalid Pensions	Disability and Service Pensions (a)	Family Allowance (b)	National Health Services	Total (Includes Other)	Age and Invalid	Disability and Service (a)
						Number	
			\$'000				
1915-16	544	20				10 993	794
1920-21	910	1 028			2 060	12 320	14 663
1925-26	1 404	978			2 496	14 098	16 144
1930-31	1 982	994			3 074	20 602	16 653
1931-32	1 878	908			2 848	21 897	15 801
1932-33	1 826	844			2 726	21 461	15 517
1933-34	1 896	854			2 804	22 805	15 352
1934-35	2 068	892			3 016	24 517	15 248
1935-36	2 298	942			3 298	26 134	15 997
1936-37	2 522	1 036			3 622	27 308	16 340
1937-38	2 868	1 076			4 010	28 039	16 865
1938-39	2 836	1 098			4 008	28 857	16 680
1939-40	2 908	1 104			4 086	29 521	16 145
1940-41	3 032	1 088			4 192	29 642	15 424
1941-42	3 274	1 108	1 720		6 162	28 422	15 296
1942-43	3 628	1 274	1 810		7 076	27 423	16 333
1943-44	3 688	1 654	1 908		8 076	27 580	18 472
1944-45	3 624	1 838	1 870		8 276	27 507	22 071
1945-46	4 670	2 272	2 854	244	11 262	29 512	30 687
1946-47	5 102	2 692	3 196	856	13 212	32 387	35 117
1947-48	6 284	3 046	3 212	770	14 708	34 229	38 505
1948-49	7 170	3 718	4 024	1 054	17 442	35 470	42 931
1949-50	7 888	4 178	4 938	1 220	19 966	36 524	47 303
1950-51	8 600	5 214	7 564	2 122	25 216	36 582	51 589
1951-52	10 360	6 442	8 298	3 554	30 532	37 363	54 758
1952-53	12 616	7 130	9 540	4 154	25 878	39 700	58 591
1953-54	14 150	7 686	9 154	4 880	38 202	42 216	61 039
1954-55	15 310	8 778	9 428	5 824	41 560	45 147	63 767
1955-56	17 718	9 074	10 998	6 140	46 322	47 754	66 535
1956-57	19 244	9 575	10 500	6 710	48 926	50 209	68 291
1957-58	21 432	10 664	10 860	7 704	54 256	52 699	69 852
1958-59	23 150	10 860	12 618	9 868	60 460	55 181	71 331
1959-60	26 366	12 697	11 794	11 977	66 157	57 336	72 013
1960-61	28 537	13 722	14 092	12 811	73 594	60 483	72 695
1961-62	32 844	14 241	12 671	14 567	80 283	64 374	74 454
1962-63	33 951	14 867	12 861	16 066	83 393	64 156	73 239
1963-64	36 120	16 224	15 916	17 080	91 514	65 573	72 518
1964-65	38 509	16 006	16 563	18 948	96 362	66 798	70 678
1965-66	39 691	17 692	16 988	21 254	102 661	67 999	68 439
1966-67	43 720	16 776	19 063	23 100	111 394	70 521	66 624
1967-68	46 711	17 252	17 835	25 448	116 625	74 016	65 078
1968-69	50 828	19 065	18 162	28 411	128 940	76 616	62 986
1969-70	58 720	19 435	20 287	33 476	145 857	85 076	61 923
1970-71	64 714	20 405	18 284	41 773	161 687	88 936	60 406
1971-72	76 545	22 493	19 766	50 587	189 255	92 771	58 682
1972-73	101 625	25 917	22 780	57 851	236 747	104 350	59 707
1973-74	131 771	31 350	20 098	66 005	291 823	116 117	59 522
1974-75	184 218	41 774	20 237	82 399	400 590	123 627	59 130
1975-76	234 266	49 377	22 896	223 151	632 412	130 229	59 536
1976-77	273 814	59 709	87 491	117 894	722 242	136 473	60 492
1977-78	333 579	72 018	90 483	204 412	871 650	141 941	61 692

(a) From 1974-75, war pensions called disability pensions.

(b) Family allowance known as child endowment before 1975-76.

EMPLOYMENT AND UNEMPLOYMENT

Year	Total Wage and Salary Earners (a)		Factory Employment (b)		Rural Employment (c)		Unemployment Benefits		Unemployed Registered (End June) (d)
	Males	Females	Males	Females	Males	Females	Average No. on Benefit	Amount Paid	
			'000					\$'000	
1911			22.6	5.3					
1925-26			33.1	6.9	38.8	3.2			1 391
1930-31			19.3	4.6	38.9	2.6			23 588
1935-36			31.4	7.1	41.7	2.6			10 970
1936-37			33.4	7.3	42.3	3.0			8 033
1937-38			36.3	7.8	41.4	2.9			7 737
1938-39			35.4	8.0	41.3	2.5			8 574
1939-40			36.3	8.7	38.7	2.8			5 978
1940-41			40.1	10.8	<i>n.a.</i>	<i>n.a.</i>			1 745
1941-42			49.9	15.3	<i>n.a.</i>	<i>n.a.</i>			—
1942-43			52.8	20.0	29.6	5.1			—
1943-44			50.7	18.9	32.9	6.5			—
1944-45			49.1	16.4	33.6	6.2			—
1945-46			49.5	13.7	35.7	5.5	778	146.4	3 147
1946-47			56.7	14.0	38.1	5.0	200	40.2	1 310
1947-48			59.1	14.3	38.1	5.8	51	8.0	778
1948-49			60.9	14.9	38.1	5.5	14	1.2	654
1949-50			63.1	15.3	38.6	7.0	326	66.2	431
1950-51			66.8	16.2	36.9	6.1	6	0.8	406
1951-52			68.0	15.9	37.4	4.7	17	2.0	1 613
1952-53			67.1	13.4	38.3	5.0	841	264.0	2 343
1953-54	178.6	55.7	70.7	14.8	37.8	5.6	270	100.4	964
1954-55	183.9	60.1	73.7	15.9	37.6	5.0	66	24.8	1 207
1955-56	194.0	64.0	76.1	16.4	37.3	4.7	77	22.2	1 948
1956-57	193.3	64.1	75.5	16.4	36.4	3.9	681	227.4	3 363
1957-58	194.4	65.9	75.9	16.6	35.2	2.7	1 534	611.0	5 001
1958-59	201.1	68.4	77.4	16.7	35.0	3.6	1 641	724.8	3 898
1959-60	206.4	72.6	81.3	17.7	33.8	2.6	1 223	498.2	4 450
1960-61	207.5	72.3	81.9	18.1	34.0	2.3	1 610	685.6	8 881
1961-62	211.2	76.7	81.8	17.3	33.7	2.1	3 643	1 785.6	6 753
1962-63	219.6	80.9	86.7	18.6	33.3	1.9	2 244	1 184.7	6 352
1963-64	229.4	86.0	90.9	19.9	33.2	1.4	1 513	751.1	4 196
1964-65	239.9	93.4	94.7	21.5	32.6	1.3	800	390.4	3 413
1965-66	(e) 242.8	(e) 106.1	96.2	22.1	32.1	1.0	1 306	708.9	7 156
1966-67	245.7	109.8	96.1	22.1	31.3	0.8	3 094	1 653.2	8 193
1967-68	254.0	116.2	98.9	22.5	29.7	0.7	3 299	1 637.4	8 025
1968-69	261.6	121.4	(f) 91.0	(f) 22.1	29.4	0.6	2 576	1 286.1	5 610
1969-70	266.6	129.9	94.6	23.8	28.9	0.6	1 636	1 008.4	5 658
1970-71	(g) 263.6	(g) 133.5	<i>n.a.</i>	<i>n.a.</i>	28.2	0.5	2 043	1 378.3	7 325
1971-72	263.4	136.8	96.2	25.4	27.3	0.5	3 564	2 930.1	11 514
1972-73	270.5	145.9	95.6	25.8	27.1	0.4	4 350	5 106.9	8 599
1973-74	278.4	161.0	98.7	29.4	26.6	0.4	3 246	6 142.9	(h) 7 128
1974-75	278.3	159.5	(i) 94.3	(i) 27.0	26.6	0.3	10 941	20 474.8	19 119
1975-76	278.5	166.5	90.3	25.8	<i>n.a.</i>	<i>n.a.</i>	15 118	36 002.0	17 593
1976-77	275.5	168.8	89.2	25.0	<i>n.a.</i>	<i>n.a.</i>	16 314	48 096.7	27 590
1977-78	266.0	168.5	87.3	24.6	<i>n.a.</i>	<i>n.a.</i>	26 345	82 264.4	40 491

(a) At June; includes all industries except rural, defence forces and private domestic service. (b) Average employment including working proprietors during the year. (c) Permanent employees only. (d) Prior to 1957-58 included Northern Territory registrations. (e) From June 1966 a new definition of Labour Force (affecting mainly females) was adopted. (f) Direct comparisons with figures for previous years are not possible because of changes in the scope of the census and in the census units. (g) From June 1971 excludes trainee teachers, some of whom were classified as wage earners for earlier periods. (h) From July 1973 the definition of school leavers was changed. (i) From 1974-75 excludes single establishment enterprises employing fewer than four persons.

WAGES

Year	State Living Wage (a)		Federal Basic and Minimum Wage Rates (a) (d)		Minimum Weekly Wage Rates (b)	
	Males	Females	Males	Females	Males	Females
	Dollars					
1911			5-10			
1916	5-40		6-15		5-90	2-48
1921	7-95	3-50	7-95		8-94	4-52
1926	8-55	3-95	8-55		9-57	5-00
1931	6-30	3-15	5-81		7-50	4-39
1932	6-30	3-15	5-72		7-26	4-09
1933	6-30	3-15	5-96		7-34	4-10
1934	6-30	3-15	6-30		7-55	4-19
1935	6-60	3-15	6-70		7-79	4-24
1936	6-60	3-30	6-90		7-95	4-33
1937	7-40	3-65	7-40		8-58	4-68
1938	7-40	3-65	7-60		8-71	4-78
1939	7-80	3-80	7-70		9-41	4-96
1940	8-40	4-10	8-00		9-85	5-21
1941	8-70	4-35	8-40		10-58	5-54
1942	9-40	4-62	9-30		11-50	6-02
1943	9-40	4-62	9-40		11-61	6-12
1944	9-40	4-62	9-30		11-58	6-53
1945	9-40	4-62	9-30		11-60	6-72
1946	9-85	5-50	10-20		12-41	7-60
1947	10-60	5-90	10-60		13-78	8-80
1948	11-70	6-65	11-60		15-22	9-51
1949	12-50	6-85	12-60		16-44	10-10
1950	15-80	11-85	15-80	11-85	19-79	14-21
1951	19-50	14-60	19-50	14-60	23-60	17-02
1952	22-90	17-15	22-90	17-15	27-08	19-68
1953	23-10	17-30	23-10	17-30	27-35	19-91
1954	23-10	17-30	23-10	17-30	28-16	19-99
1955	23-10	17-30	23-10	17-30	28-50	20-18
1956	24-10	18-05	24-10	18-05	29-63	20-92
1957	25-10	18-80	25-10	18-80	30-69	21-95
1958	25-60	19-20	25-60	19-20	31-24	22-38
1959	27-10	20-30	27-10	20-30	33-99	23-92
1960	27-10	20-30	27-10	20-30	34-22	24-29
1961	28-30	21-20	28-30	21-20	35-46	25-20
1962	28-30	21-20	28-30	21-20	35-65	25-23
1963	28-30	21-20	28-30	21-20	36-40	25-52
1964	30-30	22-70	30-30	22-70	38-69	27-29
1965	30-30	22-70	30-30	22-70	39-48	27-75
1966	32-30	24-20	32-30	24-20	41-75	29-42
1967	33-30	25-20	(c) 37-05		43-79	31-32
1968	34-65	26-55	38-40		48-23	33-60
1969	(d) 34-65	(d) 26-55	41-90		50-76	35-94
1970	(d) 34-65	(d) 26-55	41-90		52-12	37-51
1971	37-85	29-00	45-90		59-38	44-16
1972	39-85	31-00	50-60		65-82	50-50
1973	43-15	34-10	59-60		75-20	62-11
1974	46-50	37-30	67-60	(e) 60-80	103-32	91-47
1975	(f)	(f)	82-40		115-13	103-34
1976	(f)	(f)	100-20		132-20	125-62
1977	(f)	(f)	111-80		145-69	139-06
1978	(f)	(f)	119-60		156-96	148-99

(a) At end of year. (b) Adult rates, at end of year, for all industries excluding rural. (c) Provisions for minimum wages (for adult males only) were inserted in Federal Awards in July 1966 and basic wages were replaced by the total wage concept in July 1967. (d) An economic loading of 3 per cent of the sum of the living wage plus margin was added to all award rates of pay from December 1969 to January 1971. (e) Between May 1974 and June 1975 the minimum wage for adult males was extended to adult females in three steps. (f) Increased to \$48.20 and \$38.60 for males and females respectively from May 1975 and abolished in September 1975, award rates thereafter being specified as total wages.

PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	'C' Series (a)			Consumer (b)			Wheat (per tonne) (c)	Barley (per tonne)	Wool (per kg)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
							\$		Cents
1901	575								
1906	549								
1911	570						12.71	16.53	15.59
1916	835	573	798				17.45	14.33	19.78
1921	941	819	989				29.39	19.49	24.74
1926	1 045	927	1 026				22.82	17.64	27.45
1931	789	755	837				8.41	9.92	12.52
1932	761	691	802				11.65	13.05	12.63
1933	731	694	789				10.33	9.83	13.45
1934	767	700	806				9.66	10.67	25.07
1935	780	736	820				11.17	11.95	15.04
1936	798	795	839				14.07	9.83	21.89
1937	826	832	859				18.92	17.90	25.09
1938	861	868	888				13.08	15.52	20.72
1939	897	888	906				8.34	11.95	16.71
1940	900	892	936				14.92	15.61	21.94
1941	905	893	988				16.42	21.43	21.76
1942	1 046	893	1 075				16.76	14.64	21.58
1943	1 003	893	1 102				19.51	19.84	25.07
1944	993	892	1 098				22.71	19.05	24.96
1945	1 002	892	1 102				20.69	24.07	24.71
1946	1 006	894	1 120				29.47	27.91	24.78
1947	1 067	897	1 165				36.49	39.33	40.50
1948	1 230	903	1 277				56.70	74.30	65.92
1949	1 351	912	1 393	38.6	38.4	45.0	45.64	36.95	81.09
1950	1 494	929	1 521	41.7	40.0	48.4	52.98	49.69	106.13
1951	1 931	949	1 833	48.2	42.5	54.6	53.76	51.54	237.28
1952	2 380	1 055	2 159	62.5	47.6	66.8	60.63	71.74	118.54
1953	2 444	1 155	2 246	68.7	55.9	73.1	61.77	71.12	137.74
1954	2 525	1 174	2 277	71.2	61.5	74.7	53.35	44.84	138.18
1955	2 657	1 247	2 354	72.9	63.2	75.6	49.05	59.97	120.66
1956	2 871	1 358	2 466	76.2	67.6	78.1	49.60	46.74	103.57
1957	2 710	1 468	2 463	78.9	72.3	81.2	53.28	48.50	135.63
1958	2 768	1 592	2 536	76.9	74.9	81.8	53.50	52.38	103.09
1959	2 998	1 674	2 647	80.7	76.7	83.6	51.51	49.43	83.84
1960				84.6	78.3	86.2	53.83	44.53	98.88
1961				90.9	83.2	89.8	55.37	40.39	88.49
1962				87.7	85.9	89.5	55.70	49.43	91.69
1963				86.6	86.7	89.1	53.94	48.94	98.92
1964				88.8	88.7	90.2	52.65	49.12	119.53
1965				93.9	92.1	93.9	51.88	50.84	97.31
1966				97.1	95.7	97.0	55.15	51.85	102.98
1967				100.0	100.0	100.0	54.67	52.56	99.69
1968	Not calculated			104.7	102.1	102.9	58.86	52.47	82.87
1969				106.4	104.7	105.3	50.01	41.09	91.76
1970				107.1	109.3	108.2	51.88	36.82	75.02
1971				109.5	115.9	112.5	52.98	49.21	59.74
1972				113.6	124.4	119.2	55.26	40.96	72.21
1973				123.1	133.3	126.5	56.09	59.30	178.07
1974				148.3	150.6	143.9	103.20	87.59	176.54
1975				163.7	185.3	169.7	111.21	106.11	120.12
1976				180.6	222.1	190.5	104.46	98.14	134.46
1977				205.8	253.8	220.1	90.36	106.52	173.39
1978				229.7	275.1	241.8	100.91	90.06	179.03

(a) Base: Average all groups six capital cities 1923 to 1927 = 1 000.

(b) Base of each group 1966-67 = 100.0. Index numbers are for year ended 30 June in the year stated.

(c) Bulk wheat from 1962, previously bagged.

METEOROLOGY, ADELAIDE

Year	Rainfall		Evapora- tion	Sunshine	Temperature		
	Days of Rain	Total	Total	Total	Extreme Maximum	Extreme Minimum	Mean
	Days	mm	mm	Hours	°C		
1841	93	456					
1846	114	683					
1851	128	786					
1856	118	633					
1861	147	611			42.8	1.7	17.4
1866	116	511			43.1	2.9	17.7
1871	137	591	1 345		44.1	3.0	17.8
1876	110	341	1 548		45.7	0.3	16.9
1881	135	458	1 422		41.0	1.8	16.7
1886	141	366	1 421	2 588.0	44.7	2.0	17.1
1891	113	356	1 322	2 752.7	39.3	2.3	16.8
1896	121	385	1 337	2 643.9	44.0	1.3	17.4
1901	124	457	1 494	2 522.6	43.3	1.8	17.5
1906	127	674	1 400	2 366.4	45.1	2.3	17.6
1911	127	407	1 233	2 415.0	39.3	1.6	17.2
1916	142	715	1 411	2 511.9	41.9	3.5	16.7
1921	100	575	1 478	2 658.0	43.1	2.8	18.2
1926	116	564	1 473	2 688.6	40.1	3.0	17.3
1931	145	565	1 517	2 534.5	45.9	3.1	16.8
1936	123	491	1 525	2 430.8	39.8	2.8	17.1
1941	126	573	1 604	2 471.8	43.3	3.3	16.9
1942	133	646	1 674	2 422.2	44.7	3.4	17.3
1943	135	453	1 595	2 416.7	44.6	2.7	16.4
1944	114	435	1 633	2 333.7	39.7	0.3	16.8
1945	105	453	1 523	2 431.2	41.7	1.1	16.7
1946	135	574	1 385	2 301.0	41.3	2.0	16.3
1947	145	556	1 573	2 311.3	40.7	3.3	16.9
1948	122	544	1 622	2 401.7	43.4	2.9	16.3
1949	119	463	1 492	2 317.7	38.0	2.6	15.8
1950	91	408	1 657	2 677.5	40.0	3.6	17.0
1951	135	646	1 645	2 338.7	40.5	2.6	16.9
1952	128	508	1 523	2 459.2	40.8	1.6	15.8
1953	121	508	1 712	2 584.7	41.3	3.9	16.6
1954	109	425	1 680	2 502.6	39.4	3.4	16.7
1955	134	624	1 677	2 396.1	42.8	3.6	16.7
1956	154	692	1 638	2 378.6	38.3	4.1	16.4
1957	110	424	1 736	2 672.5	40.9	3.4	16.8
1958	121	446	1 672	2 454.7	39.0	1.2	16.4
1959	88	288	1 750	2 591.9	43.3	3.1	17.3
1960	129	586	1 606	2 355.6	41.8	2.4	16.3
1961	122	379	<i>n. a.</i>	2 586.3	40.8	2.9	17.8
1962	125	456	<i>n. a.</i>	2 559.1	42.7	4.2	17.2
1963	118	621	1 620	2 369.1	39.9	3.3	17.0
1964	135	556	1 507	2 199.5	40.3	2.3	16.3
1965	111	339	1 648	2 439.1	38.8	2.6	17.3
1966	123	495	1 612	2 431.6	40.7	3.3	16.9
1967	89	257	1 939	2 841.3	39.0	3.9	17.3
1968	141	653	1 870	2 409.7	43.1	2.2	17.0
1969	112	525	1 783	2 664.7	41.1	3.9	16.7
1970	149	483	1 866	2 657.8	40.5	2.9	16.6
1971	147	672	1 813	2 624.4	39.6	4.2	17.1
1972	106	446	1 947	2 966.8	39.6	2.3	17.3
1973	129	675	1 740	2 686.4	40.5	3.7	17.7
1974	136	639	1 561	2 584.3	36.9	3.6	17.2
1975	142	522	1 635	2 596.2	41.2	3.8	17.4
1976	110	366	1 636	2 831.0	40.5	3.3	16.7
1977	117	400	1 665	2 876.1	40.3	3.6	17.2
1978	122	574	1 556	(a) 2 722.9	38.5	3.4	16.6

(a) Recorded at Bureau of Meteorology, Kent Town.

RURAL PRODUCTION

Land Cultivation

Year	Rural Holdings	Area of Rural Holdings	Area under Crop		Area of Pastures Top-dressed	Area Under Irrigation
			Fertilised	Total		
	No.		'000 hectares			
1841-42				3		
1846-47				14		
1851-52				33		
1856-57				82		
1861-62				162		
1866-67				245		
1871-72				339		
1876-77				497		
1881-82				873		
1886-87				925		
1891-92				780		
1896-97				830		
1901-02			335	905		
1906-07			629	873		
1911-12	27 120	47 012	1 010	1 200		
1916-17	29 278	52 475	1 156	1 468		
1921-22	29 693	54 311	1 197	1 367		
1926-27	29 654	54 867	1 430	1 572	66	9-1
1931-32	30 648	52 354	1 705	2 112	56	14-3
1936-37	31 321	55 433	1 619	1 853	366	17-1
1941-42	30 565	58 936	1 409	1 609	427	18-5
1942-43	27 934	58 859	1 062	1 391	382	n.a.
1943-44	27 826	58 488	789	1 117	285	n.a.
1944-45	27 867	55 639	926	1 287	293	n.a.
1945-46	27 635	57 670	1 228	1 548	346	17-1
1946-47	28 040	59 154	1 366	1 572	450	18-7
1947-48	27 597	57 624	1 367	1 559	563	17-2
1948-49	28 110	59 377	1 327	1 521	705	19-5
1949-50	27 900	59 312	1 263	1 464	725	19-9
1950-51	28 248	61 403	1 316	1 488	753	32-0
1951-52	28 698	61 425	1 284	1 496	870	23-6
1952-53	28 860	61 791	1 270	1 449	940	23-1
1953-54	29 220	60 830	1 350	1 529	1 144	25-1
1954-55	28 092	60 452	1 404	1 576	1 272	28-1
1955-56	28 585	60 689	1 378	1 607	1 416	28-7
1956-57	27 936	60 675	1 376	1 610	1 488	26-7
1957-58	27 971	61 530	1 401	1 581	1 621	32-9
1958-59	28 105	61 639	1 494	1 679	1 504	34-4
1959-60	28 527	62 903	1 489	1 643	1 405	40-8
1960-61	28 711	63 316	1 751	2 010	1 335	41-3
1961-62	28 886	63 494	1 644	1 825	1 450	43-9
1962-63	28 922	63 413	1 787	1 996	1 518	45-6
1963-64	28 711	64 307	1 938	2 177	1 616	47-7
1964-65	28 754	63 517	1 932	2 141	1 908	49-8
1965-66	28 759	64 505	1 971	2 142	2 061	52-1
1966-67	28 957	65 361	2 073	2 322	2 119	56-2
1967-68	29 058	65 059	2 037	2 270	2 076	70-1
1968-69	29 137	65 603	2 431	2 783	1 728	70-4
1969-70	29 035	65 839	2 138	2 407	2 008	75-3
1970-71	29 087	65 795	1 884	2 141	1 938	77-3
1971-72	29 095	65 146	2 113	2 478	1 822	76-1
1972-73	29 001	65 372	1 864	2 084	2 033	83-1
1973-74	28 738	64 843	2 146	2 451	2 425	80-2
1974-75	28 185	63 825	1 986	2 257	2 138	78-9
1975-76	(a) 25 143	63 577	1 821	2 116	1 133	77-9
1976-77	(a) 21 597	63 052	1 785	2 036	1 408	n.a.
1977-78	(a) 21 909	62 494	2 309	2 565	1 607	n.a.

(a) Change in scope of the Agricultural Census. See Part 9.1.

RURAL PRODUCTION

Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area	Yield per Hectare	Area	Yield per Hectare	Area	Yield per Hectare			
	'000 hectares	Tonnes	'000 hectares	Tonnes	'000 hectares	Tonnes				'000 hectares
1841-42	2	1.40		1.12		1.12			
1846-47	11	1.34	1	1.68	1	0.90			
1851-52	22	0.85	2	0.92	1	0.98			
1856-57	66	1.68	3	1.19	1	0.90	9	0.4	0.3
1861-62	126	0.74	4	0.89	1	0.91	25	0.7	1.6
1866-67	186	0.96	5	1.13	2	1.00	45	0.9	2.6
1871-72	280	0.39	7	0.53	2	0.49	40	1.1	2.2
1876-77	439	0.36	4	0.60	1	0.48	37	1.3	1.8
1881-82	716	0.31	5	0.64	1	0.48	135	1.8	1.7
1886-87 (d)	797	0.37	7	0.73	3	0.56	128	n.a.	2.1
1891-92	628	0.28	5	0.52	5	0.29	123	3.6	5.0
1896-97	685	0.11	6	0.42	16	0.21	137	4.8	7.4
1901-02	706	0.31	6	0.88	14	0.61	150	6.6	8.4
1906-07	683	0.70	11	0.98	23	0.70	121	7.4	9.1
1911-12	887	0.62	17	0.97	44	0.56	211	9.4	9.7
1916-17	1 124	1.11	42	0.94	61	0.54	196	11.7	11.8
1921-22	965	0.70	69	1.08	51	0.46	226	13.1	16.8
1926-27	1 120	0.86	104	1.01	62	0.50	201	12.8	20.3
1931-32	1 648	0.79	98	1.06	84	0.50	218	11.8	21.2
1936-37	1 238	0.63	123	0.78	168	0.26	218	12.0	22.7
1941-42	941	0.88	194	1.37	118	0.58	226	12.0	23.5
1946-47	1 019	0.75	203	0.94	102	0.49	133	11.4	23.6
1947-48	961	0.92	228	1.53	125	0.78	120	11.5	23.8
1948-49	835	0.85	282	0.97	116	0.41	95	12.0	24.2
1949-50	767	1.01	281	1.03	106	0.59	119	10.9	24.4
1950-51	748	1.13	310	1.23	110	0.58	106	11.6	25.1
1951-52	653	1.14	337	1.13	157	0.63	104	11.9	24.8
1952-53	648	1.48	379	1.48	150	0.81	87	11.6	24.5
1953-54	619	1.34	454	1.42	113	0.69	106	12.0	25.1
1954-55	687	1.25	413	1.01	138	0.60	104	12.3	24.5
1955-56	651	1.21	422	1.32	172	0.77	132	13.4	24.2
1956-57	582	1.47	494	1.56	173	0.87	121	13.8	23.2
1957-58	539	0.75	490	0.81	173	0.36	118	14.3	23.2
1958-59	570	1.53	539	1.58	195	1.12	170	15.1	23.0
1959-60	627	0.52	522	0.52	205	0.22	99	15.1	23.0
1960-61	797	1.58	630	1.52	207	1.00	159	15.3	23.0
1961-62	902	1.02	514	0.94	131	0.61	84	15.6	23.4
1962-63	1 050	0.99	426	0.96	168	0.62	116	16.4	23.6
1963-64	1 134	1.30	455	1.21	203	0.82	145	16.9	23.7
1964-65	1 104	1.30	443	1.38	180	0.91	127	17.4	23.8
1965-66	1 111	0.98	444	0.94	184	0.55	121	17.8	23.8
1966-67	1 198	1.22	448	1.20	206	0.91	195	17.9	23.1
1967-68	1 159	0.63	468	0.60	212	0.28	174	18.3	23.5
1968-69	1 517	1.49	572	1.17	209	1.03	249	18.0	24.5
1969-70	1 299	1.24	560	1.23	150	0.80	155	18.1	26.2
1970-71	802	0.98	693	1.07	195	0.78	196	18.3	27.7
1971-72	1 069	1.32	784	1.34	169	0.98	245	17.2	28.8
1972-73	986	0.83	692	0.74	142	0.52	210	16.7	29.5
1973-74	1 432	1.25	627	1.26	152	0.93	268	16.9	29.6
1974-75	1 220	1.22	701	1.62	135	0.83	190	16.6	30.4
1975-76	958	1.19	832	1.32	119	0.90	159	16.5	31.2
1976-77	839	0.99	855	1.04	117	0.77	164	15.8	31.2
1977-78	1 090	0.47	1 073	0.55	130	0.43	138	15.7	31.5

(a) Wheat only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1949-50, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

RURAL PRODUCTION

Livestock and Associated Produce; Farm Machinery

Year	Livestock Numbers		Wool Production	Milk Production	Slaughtering		Farm Machinery		
	Sheep	Cattle			Sheep and Lambs	Cattle and Calves	Tractors	Shearing Machines	Milking Machines
		Total	Dairy Cows						
		'000	'000 kg	'000/l	'000			No.	
1841-42	250	21							
1846-47	681	57							
1851-52	1 250	100							
1856-57	1 962	273							
1861-62	3 038	265	5 791						
1866-67	3 912	124	8 954						
1871-72	4 412	143	11 752						
1876-77	6 133	219	19 253						
1881-82	6 804	294	22 118						
1886-87	6 542	285	22 934						
1891-92	7 646	399	26 133						
1896-97	6 324	337	23 558						
1901-02	5 012	225	20 209						
1906-07	6 625	326	22 193						
1911-12	6 172	394	27 372	127 077	1 276	87			
1916-17	5 091	289	17 025	136 174	686	62			
1921-22	6 257	419	26 202	188 199	1 208	95			
1926-27	7 284	340	32 824	183 817	1 091	143	1 820		420
1931-32	6 609	265	30 400	227 309	1 379	81	3 992		380
1936-37	7 905	328	34 747	289 581	1 697	166	4 563		409
1941-42	10 246	399	47 683	358 687	2 070	154	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
1942-43	10 371	424	49 277	357 323	2 272	171	6 705	2 976	1 659
1943-44	10 360	415	52 374	355 504	2 480	189	7 064	3 297	1 963
1944-45	8 474	391	48 402	328 228	3 065	175	8 044	3 770	2 206
1945-46	6 787	374	33 386	360 732	2 017	148	9 211	3 978	2 349
1946-47	7 959	424	42 193	426 878	1 662	146	9 456	4 306	2 839
1947-48	9 055	445	52 821	420 513	1 665	148	9 664	4 932	3 238
1948-49	9 366	461	52 120	415 058	2 011	189	11 271	5 817	3 665
1949-50	9 477	464	54 997	406 420	2 317	201	13 709	6 846	4 198
1950-51	10 167	433	56 873	379 826	2 022	218	16 128	8 134	4 590
1951-52	11 470	437	61 454	393 237	1 547	216	18 184	9 054	4 909
1952-53	12 037	483	71 966	382 781	2 353	187	19 750	9 733	5 418
1953-54	11 838	491	66 002	386 418	2 637	220	20 842	10 302	5 876
1954-55	12 817	524	70 652	412 330	2 799	233	23 110	11 452	6 363
1955-56	13 585	566	78 788	410 739	2 358	227	24 345	12 134	6 920
1956-57	14 984	622	85 642	408 694	2 329	252	26 012	12 690	7 208
1957-58	15 237	597	84 297	366 415	3 278	283	27 288	13 280	7 344
1958-59	15 634	576	84 750	373 234	3 145	287	28 532	13 778	7 537
1959-60	14 025	500	89 942	357 323	3 899	238	28 965	13 973	7 575
1960-61	14 952	561	80 473	395 510	2 784	174	30 674	14 317	7 589
1961-62	16 415	659	93 886	434 152	3 140	201	31 788	14 532	7 707
1962-63	15 737	679	94 050	433 697	3 467	254	31 671	14 595	7 553
1963-64	16 402	694	85 951	433 244	2 996	279	33 231	14 885	7 438
1964-65	17 289	697	97 856	465 065	3 100	275	34 164	15 172	7 328
1965-66	17 993	690	104 160	447 325	3 474	277	33 998	15 386	7 040
1966-67	17 864	687	107 725	448 699	3 358	265	35 829	15 392	6 634
1967-68	16 405	695	101 000	403 693	4 019	245	36 590	15 758	6 645
1968-69	18 392	865	105 714	467 377	2 977	220	36 574	15 693	6 263
1969-70	19 747	1 026	124 529	482 959	4 232	249	37 264	15 746	5 947
1970-71	19 166	1 196	117 258	469 773	5 101	264	37 023	15 852	5 571
1971-72	17 970	1 495	117 922	457 732	5 144	290	37 197	<i>n.a.</i>	<i>n.a.</i>
1972-73	15 651	1 583	106 006	424 265	4 549	384	37 258	<i>n.a.</i>	<i>n.a.</i>
1973-74	16 431	1 692	100 131	434 107	2 595	359	37 588	<i>n.a.</i>	<i>n.a.</i>
1974-75	17 621	1 869	107 452	426 371	2 984	465	38 355	<i>n.a.</i>	<i>n.a.</i>
1975-76	17 279	1 891	101 912	397 500	3 561	549	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
1976-77	15 132	1 608	98 442	354 912	3 426	656	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
1977-78	14 073	1 242	87 092	316 681	3 240	744	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

MINING AND MANUFACTURING PRODUCTION

Year	Mining			Manufacturing (a)		
	Principal Minerals Produced			Value of Production (b)	Number of Establishments	Value Added
	Copper Ore and Concentrate	Coal	Iron Ore			
	Tonnes	'000 tonnes	'000 tonnes	\$'000	\$'000	
1846	6 565			285		
1851	7 841			622		
1856	11 980			825		
1861	11 440			920		
1866	23 661			1 657		
1871	26 948			1 347		
1876	28 597			1 205		
1881	25 871			842		
1886	18 713			554		
1891	16 894		7	551		
1896	5 030		—	496		
1901	8 743		—	1 079		
1906	8 340		76	1 652		
1911	6 017		43	900	1 314	
1916	7 396		191	2 504	1 266	
1921	1 557		515	2 086	1 438	
1926	235		593	2 924	1 791	
1931	22		293	1 297	1 644	
1936	458		1 918	5 241	1 895	
1941	615		2 276	7 074	2 230	
1946	—	138	1 847	6 101	2 395	
1947	—	196	2 180	7 253	2 707	
1948	4	243	2 067	7 514	2 865	
1949	3	350	1 471	6 236	2 927	
1950	—	266	2 388	8 857	3 046	
1951	2	395	2 439	9 875	3 141	
1952	5	424	2 727	12 094	3 245	
1953	2	456	2 633	12 406	3 339	
1954	3	503	2 913	17 160	3 577	
1955	—	463	3 093	(c) 41 419	3 750	
1956	12	489	3 645	47 853	3 908	
1957	40	619	3 444	46 352	4 063	
1958	53	767	3 406	47 076	4 168	
1959	67	701	3 478	49 332	4 235	
1960	30	899	3 492	50 870	4 684	
1961	8	1 133	4 055	58 242	5 042	
1962	4	1 414	3 567	53 958	5 519	
1963	16	1 536	4 310	62 431	5 766	
1964	55	1 764	4 437	67 597	5 826	
1965	116	2 048	4 463	67 863	5 887	
1966	143	2 053	4 876	72 342	6 065	
1967	1 470	2 077	4 645	69 345	6 222	
1968	518	2 112	5 566	77 398	6 255	
1969	3 666	2 246	7 042	98 526	(d) 2 994	
1970 (e)	(f) 249	2 155	7 425	104 195	2 977	
1971	2 287	1 626	7 400	112 276	n.a.	
1972	2 819	1 536	6 301	111 623	2 979	
1973	9 662	1 571	6 874	134 274	2 914	
1974	8 830	1 494	6 065	131 446	2 984	
1975	10 037	1 798	5 448	125 978	(g) 2 131	
1976	18 433	1 819	4 479	131 903	2 287	
1977	16 390	1 920	3 450	153 135	2 242	

(a) Year ended 30 June. (b) Value at site of production. Quarries included from 1916. (c) Comparability affected by revaluation of iron ore. (d) For a description of the changes in definitions see page 462. (e) Year ended 30 June from 1970. (f) Metallic content from 1969-70. (g) From 1974-75 excludes single establishment enterprises employing fewer than four persons.

GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural			Total	Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit		Wool (a)	Total		
					\$'000			
1916-17	21 729	599	1 653	27 677	4 274	11 200	2 759	42 909
1921-22	12 577	1 227	3 491	23 221	5 752	8 296	3 678	37 273
1925-26	17 979	1 656	3 352	28 307	8 591	12 930	4 171	47 629
1926-27	19 052	1 685	4 082	30 181	8 937	12 140	3 895	48 357
1927-28	13 247	1 497	3 394	23 257	11 338	14 584	4 125	44 464
1928-29	12 845	1 737	3 909	23 880	9 308	12 472	3 810	42 375
1929-30	10 243	1 448	3 819	21 059	5 098	8 183	3 892	35 055
1930-31	8 091	893	3 241	15 708	3 608	5 801	3 121	26 335
1931-32	17 163	1 363	3 442	25 291	3 843	5 452	3 140	35 444
1932-33	13 097	1 371	3 463	20 921	4 619	5 834	3 654	32 030
1933-34	10 933	1 280	3 618	19 533	9 013	10 608	3 108	34 776
1934-35	10 318	1 553	3 882	19 965	5 309	7 706	3 091	32 489
1935-36	13 135	1 457	3 953	22 863	8 116	10 885	3 797	39 126
1936-37	14 955	1 766	4 191	26 044	8 720	12 315	4 310	44 366
1937-38	15 665	3 040	4 964	29 453	8 141	11 443	5 291	48 241
1938-39	8 580	2 046	4 056	20 008	7 802	12 327	5 171	39 613
1939-40	16 692	3 524	4 637	30 132	10 470	14 792	5 585	52 487
1940-41	8 379	2 321	4 873	20 167	10 532	14 757	6 079	43 134
1941-42	13 913	4 490	4 725	30 142	10 294	13 875	6 735	53 016
1942-43	19 399	2 709	6 481	35 423	12 359	16 917	7 917	63 091
1943-44	12 765	2 188	9 159	32 088	13 067	18 277	8 807	63 003
1944-45	6 065	1 931	6 283	23 548	11 963	17 928	8 880	54 810
1945-46	17 490	4 956	7 729	40 434	8 275	14 535	9 959	69 399
1946-47	27 685	7 598	8 283	51 209	17 092	22 602	10 950	90 106
1947-48	50 154	26 228	9 677	99 477	32 606	37 487	12 525	155 615
1948-49	32 450	10 242	10 087	64 138	40 268	47 636	13 440	131 527
1949-50	40 834	14 524	10 616	81 707	56 268	63 058	16 148	167 594
1950-51	45 587	19 803	13 720	97 871	132 494	139 895	15 500	259 627
1951-52	45 288	27 706	20 382	120 507	72 394	86 034	21 145	234 587
1952-53	57 302	42 128	19 161	139 160	97 158	109 154	23 527	279 982
1953-54	43 939	28 804	20 788	115 744	88 866	105 950	24 238	254 537
1954-55	41 591	23 243	17 426	104 914	83 204	101 059	25 037	239 022
1955-56	38 514	25 227	20 335	110 570	79 822	100 882	30 826	250 685
1956-57	44 846	34 022	23 265	129 994	114 578	138 118	29 003	305 365
1957-58	20 970	19 573	24 435	90 089	84 708	111 027	26 384	235 337
1958-59	43 791	39 889	23 984	140 858	67 595	99 135	32 103	280 007
1959-60	16 495	10 999	21 394	71 092	85 382	123 351	29 454	231 751
1960-61	68 001	37 977	24 525	161 437	70 484	94 451	30 306	294 087
1961-62	51 515	22 952	27 051	124 022	85 801	111 850	29 848	273 451
1962-63	56 285	19 152	25 857	128 417	92 514	127 386	31 968	295 043
1963-64	77 660	26 399	29 567	165 634	113 409	150 466	34 267	358 802
1964-65	74 550	30 135	36 200	178 132	94 328	135 916	37 533	360 507
1965-66	59 559	20 234	31 411	144 017	103 635	152 224	39 293	345 015
1966-67	79 612	26 912	36 779	184 090	104 588	169 226	40 303	404 864
1967-68	42 183	12 818	32 423	127 288	79 925	129 504	37 163	306 222
1968-69	112 551	25 657	37 815	221 097	92 932	136 070	39 016	408 842
1969-70	82 332	23 724	43 330	184 284	91 348	148 939	40 834	386 041
1970-71	40 562	34 902	45 991	164 895	67 029	123 858	43 918	347 038
1971-72	76 381	40 295	49 753	213 206	70 093	153 068	47 262	430 704
1972-73	44 588	27 506	54 415	177 768	141 713	261 753	47 808	503 315
1973-74	196 444	68 276	52 347	393 618	183 277	n.a.	n.a.	773 394
1974-75	163 922	119 305	77 719	434 707	125 044	n.a.	n.a.	707 436
1975-76	118 063	105 865	77 401	374 750	119 179	n.a.	n.a.	678 561
1976-77	73 726	93 807	90 318	332 411	153 550	n.a.	n.a.	711 616
1977-78 p	50 468	50 553	99 747	292 781	145 277	n.a.	n.a.	701 590

(a) Shares of profits from sale of wool under war-time disposal schemes excluded.

TRADE

Overseas Exports

Year	Value of Exports				Proportion of Total Exports Classified by Principal Countries of Destination				
	Total	Wheat and Flour	Barley	Wool	Japan	New Zealand	UK	USA	Other Countries
		\$'000					Per cent		
1861	1 837	76		1 302		3.42	89.46		7.12
1866	2 837	146		1 518		4.62	81.48	2.44	11.46
1871	3 630	578		1 948		4.00	89.62	n.a.	6.38
1876	5 928	2 146		2 884		1.96	89.58	0.07	8.39
1881	6 311	1 846		3 496		0.71	82.03	—	17.26
1886	5 877	420		3 508		0.69	86.90	0.04	12.37
1891	11 197	2 728		3 776	0.01	0.29	80.82	0.90	17.98
1896	8 111	222		3 038	1.38	0.48	56.39	0.28	41.47
1901	8 866	2 232		2 208	0.07	0.65	51.62	0.10	47.56
1906	13 742	4 780		3 360	—	0.26	51.68	0.24	47.82
1911	20 350	7 671	2	4 007	0.04	0.17	45.96	0.13	53.70
1915-16	12 272	3 511	19	2 824	—	1.01	42.92	21.15	34.92
1920-21	35 339	28 675	1 175	6 035	—	1.11	59.40	1.16	38.33
1925-26	38 900	14 825	275	8 865	6.88	1.70	51.94	1.16	38.32
1930-31	20 123	6 078	685	3 006	2.38	0.81	54.11	0.79	41.91
1935-36	30 762	9 020	707	7 561	6.66	2.05	67.44	1.11	22.74
1940-41	26 393	8 617	226	6 656	5.29	3.46	50.46	15.48	25.31
1941-42	29 624	3 863	338	11 596	1.01	3.39	32.02	34.14	29.44
1942-43	18 847	4 085	122	6 843	—	10.61	45.27	15.12	29.00
1943-44	31 170	10 504	410	8 509	—	9.18	40.36	8.61	41.85
1944-45	38 334	13 175	115	8 376	—	6.30	42.34	13.18	38.18
1945-46	40 307	7 407	718	14 917	—	4.95	25.45	26.43	43.17
1946-47	65 023	12 304	2 998	16 095	0.01	5.37	39.47	8.86	46.29
1947-48	105 805	24 507	16 030	25 608	—	4.44	39.01	8.51	48.04
1948-49	138 866	38 990	11 952	40 619	0.07	2.31	44.37	8.04	45.21
1949-50	127 864	23 227	10 564	49 621	2.95	6.38	42.42	7.63	40.62
1950-51	215 348	36 852	14 662	109 900	5.90	2.39	39.58	14.41	37.72
1951-52	194 501	42 155	18 035	65 806	4.60	7.26	39.36	14.65	34.13
1952-53	245 897	36 062	30 975	87 135	8.17	3.32	45.12	12.93	30.46
1953-54	220 498	30 518	24 465	78 817	6.35	5.80	41.66	10.57	35.62
1954-55	190 158	24 075	15 794	69 195	5.05	6.59	40.78	11.57	36.01
1955-56	195 332	26 266	14 069	70 063	6.71	7.47	38.70	10.71	36.41
1956-57	245 848	32 558	18 535	98 924	13.62	7.40	31.73	13.09	34.16
1957-58	199 764	24 868	17 183	73 082	11.23	7.85	31.50	9.32	40.10
1958-59	181 831	23 656	20 404	63 208	13.25	7.86	34.81	8.50	35.58
1959-60	181 652	19 028	12 251	74 830	12.91	4.30	32.08	7.91	42.80
1960-61	198 557	36 598	19 219	64 328	18.11	5.60	27.55	4.71	44.03
1961-62	243 975	47 819	23 422	83 107	14.80	4.14	25.83	8.56	46.67
1962-63	212 945	32 603	6 968	83 400	16.45	4.57	25.87	8.69	44.42
1963-64	322 159	76 337	13 828	107 398	17.59	4.83	26.63	5.99	44.96
1964-65	302 242	53 256	15 247	92 535	17.22	5.06	25.82	7.49	44.41
1965-66	296 276	45 864	7 050	94 486	18.38	5.89	22.81	10.37	42.55
1966-67	325 170	55 675	13 056	98 013	20.43	4.69	15.46	8.85	50.57
1967-68	282 767	31 432	2 321	77 008	21.81	5.05	18.20	11.03	43.91
1968-69	300 934	27 421	11 683	84 747	25.52	4.55	16.46	9.78	43.69
1969-70	417 030	59 457	16 133	81 797	19.02	5.58	17.03	9.41	48.96
1970-71	393 737	83 629	23 670	62 828	18.07	5.66	13.70	6.39	56.18
1971-72	394 064	64 599	35 652	68 189	18.64	7.21	13.83	5.84	54.48
1972-73	521 720	48 684	17 250	149 956	23.89	6.41	8.84	7.47	53.39
1973-74	662 881	103 168	40 790	153 202	19.47	9.18	7.44	4.23	59.68
1974-75	764 410	174 405	99 517	93 273	16.35	6.73	5.71	2.61	68.60
1975-76	685 029	109 526	90 290	115 560	19.69	5.41	5.65	3.55	65.70
1976-77	789 872	84 884	88 072	172 538	21.31	5.33	5.99	4.17	63.20
1977-78	661 887	51 915	39 512	114 517	16.21	6.50	4.10	6.25	66.94

TRADE

Overseas Imports; Retail Sales

Year	Value of Imports		Proportion of Total Imports Classified by Principal Countries of Origin				Value of Retail Sales of Goods	
	Total	Metals, Metal Manufactures, and Machinery (a)	Japan	UK	USA	Other	Total Excluding Motor Vehicles Etc.	Motor Vehicles Etc.
	\$'000		Per cent				\$ million	
1861	2 756	310		80.14	0.32	19.54		
1866	4 193	570		89.69	1.80	8.51		
1871	2 891	342		81.85	1.45	16.70		
1876	6 428	1 084		81.30	1.44	17.26		
1881	7 133	1 022		79.06	3.80	17.14		
1886	5 003	770	0.01	78.90	6.82	14.27		
1891	8 063	1 644	0.02	71.36	7.91	20.71		
1896	6 475	1 198	0.18	68.59	7.82	23.41		
1901	7 854	1 432	0.38	56.91	14.17	28.54		
1906	7 965	2 104	0.64	63.10	10.17	26.09		
1911	12 492	4 132	1.31	58.60	12.81	27.28		
1915-16	10 304	2 816	3.12	47.68	19.81	29.39		
1920-21	24 764	6 558	1.55	42.07	21.25	35.13		
1925-26	28 160	10 602	1.13	43.30	27.84	27.73		
1930-31	7 833	1 802	1.14	36.96	16.66	45.24		
1935-36	10 839	3 616	2.24	38.65	21.16	37.95		
1940-41	10 924	3 158	1.56	38.09	12.01	48.34		
1945-46	17 556	3 622	—	62.28	10.13	27.59		
1946-47	23 875	6 788	0.03	35.25	13.79	50.93		
1947-48	45 908	12 740	—	37.96	15.45	46.59		
1948-49	60 914	21 678	0.12	49.33	9.02	41.53		
1949-50	91 509	44 334	1.77	52.15	8.81	37.27		
1950-51	112 002	50 446	1.98	48.31	8.42	41.29		
1951-52	186 062	80 450	5.16	39.99	9.37	45.48		
1952-53	86 549	41 456	1.14	43.53	11.71	43.62	271.7	84.3
1953-54	102 945	47 142	0.46	50.63	8.93	39.98	294.4	97.6
1954-55	129 607	63 144	1.28	49.18	13.28	36.26	324.4	113.4
1955-56	125 504	64 656	3.18	49.17	11.70	35.95	347.8	123.6
1956-57	90 813	40 536	1.39	44.01	12.26	42.34	362.3	124.7
1957-58	94 205	40 792	1.85	46.37	11.91	39.87	367.2	125.4
1958-59	90 693	40 534	2.56	42.08	11.50	43.86	387.2	138.0
1959-60	119 493	57 962	2.69	43.89	12.15	41.27	436.6	160.2
1960-61	142 764	72 570	5.37	32.66	17.61	44.36	448.9	156.1
1961-62	103 386	46 774	3.28	31.95	21.87	42.90	451.6	143.1
1962-63	139 826	71 820	4.08	31.83	22.92	41.17	479.9	180.5
1963-64	179 651	94 302	4.72	24.75	30.63	39.90	525.3	212.5
1964-65	204 856	108 243	8.01	23.72	29.11	39.16	574.5	238.0
1965-66	198 156	103 032	6.84	23.32	27.25	42.59	602.0	220.4
1966-67	196 771	97 861	7.69	21.64	27.72	42.95	627.1	214.7
1967-68	215 619	113 215	7.16	17.29	32.71	42.84	663.6	242.0
1968-69	231 956	134 222	11.19	19.82	27.35	41.64	706.9	261.1
1969-70	201 223	98 204	10.77	21.49	21.50	46.23	762.3	285.7
1970-71	198 358	98 358	14.44	25.10	17.32	43.14	818.8	297.6
1971-72	189 748	83 083	15.08	22.83	14.48	47.61	890.9	322.5
1972-73	199 978	88 271	20.48	17.49	15.08	46.95	1 037.1	n.a.
1973-74	313 915	142 187	22.57	12.03	16.91	48.49	1 237.3	457.9
1974-75	482 077	216 355	19.17	14.20	13.10	53.53	1 503.3	n.a.
1975-76	501 476	203 407	18.57	11.14	14.84	55.45	1 775.1	n.a.
1976-77	629 309	259 695	22.23	8.52	13.38	55.87	2 023.0	n.a.
1977-78	628 568	248 236	21.79	8.85	12.47	56.89	2 158.4	n.a.

(a) Includes motor vehicles and other transport equipment.

TRANSPORT AND COMMUNICATION

Public Transport

Year	Railways			Buses and Trams (a)		Shipping (Entering SA) (b)
	Passengers Carried	Goods Carried	Revenue	Passengers Carried	Revenue	
	'000	'000 tonnes	\$'000	'000	\$'000	'000 net tonnes
1841						18
1846						25
1851						75
1856	248	32	44			114
1861	310	145	185			103
1866	425	171	236			169
1871	394	228	235			187
1876	1 400	387	402			347
1880-81	2 902	683	837			641
1885-86	3 962	779	1 098			771
1890-91	5 296	1 427	2 448			1 288
1895-96	5 436	1 057	1 973			1 661
1900-01	8 864	1 628	2 473			1 967
1905-06	10 715	1 732	2 700			2 785
1910-11	16 620	2 731	4 030	34 013	480	3 625
1915-16	20 513	2 397	3 931	43 372	649	2 566
1920-21	23 788	2 682	5 884	55 324	1 111	2 887
1925-26	25 752	3 563	8 524	66 207	1 322	4 526
1930-31	15 453	2 175	5 201	52 756	1 444	4 166
1935-36	17 431	2 482	5 781	50 625	1 347	5 318
1940-41	20 360	2 770	7 060	56 518	1 537	3 047
1945-46	23 119	2 997	9 794	90 239	2 469	1 733
1950-51	17 178	3 519	(c) 14 715	78 141	3 238	5 283
1951-52	18 269	4 966	19 022	75 436	3 684	5 529
1952-53	17 565	4 172	24 976	66 571	(d) 4 232	5 900
1953-54	17 605	4 457	25 848	66 972	4 145	6 108
1954-55	16 849	4 497	26 522	66 446	4 267	6 123
1955-56	16 434	4 436	26 662	63 515	4 668	6 282
1956-57	17 406	4 518	28 132	62 190	4 578	6 360
1957-58	17 564	4 166	27 033	60 083	4 988	6 369
1958-59	16 805	4 227	26 179	59 613	5 056	6 744
1959-60	17 038	4 059	25 652	58 168	5 641	6 745
1960-61	15 574	4 537	27 883	58 912	5 515	7 613
1961-62	15 176	4 638	27 984	57 950	5 430	7 646
1962-63	14 922	4 530	27 826	58 039	5 436	7 886
1963-64	15 227	5 213	29 673	58 571	5 473	9 486
1964-65	15 196	5 131	29 960	56 434	5 899	9 697
1965-66	15 511	4 823	29 137	53 112	6 049	9 517
1966-67	15 432	4 909	30 417	49 735	6 270	10 220
1967-68	15 242	4 401	28 244	47 813	6 225	10 028
1968-69	14 423	5 037	30 522	45 393	6 472	10 345
1969-70	13 990	5 922	33 566	43 345	6 696	12 213
1970-71	13 946	6 025	34 635	41 259	6 881	11 303
1971-72	13 433	5 948	35 603	40 842	6 978	10 533
1972-73	13 320	5 820	35 332	41 680	7 304	9 957
1973-74	13 597	6 655	39 827	(e) 47 533	(e) 9 958	9 639
1974-75	12 697	6 783	48 315	58 298	13 427	9 743
1975-76 (f)	12 672	6 184	50 099	58 336	14 454	9 386
1976-77 (f)	12 866	6 442	54 685	58 129	16 782	8 043
1977-78	n.a.	n.a.	n.a.	57 354	16 073	n.a.

(a) Buses and trams operated by Bus and Tram Division of the State Transport Authority. Years ended 31 July from 1912 to 1939, 31 January from 1940 to 1952, and 30 June from 1953.

(b) Years ended 31 December to 1913; thereafter year ended 30 June.

(c) Excludes Treasury grant from 1949-50.

(d) Excludes Government grant from 1952-53.

(e) From March 1974 includes details of licensed private services taken over by the Bus and Tram Division.

(f) Includes country railways operated on behalf of the Commonwealth.

TRANSPORT AND COMMUNICATION

Year	Motor Vehicles on Register			Drivers and Riders Licences in Force	Telephone Services in Operation (a)	Radio Licences in Force (b)	Post Office Revenue		
	Cars and Station Wagons	Utilities, Vans, Trucks, Buses	Total (incl. Cycles, Scooters)				Postal, Etc. (c)	Telegraph (c)	Telephone
	'000			Number		\$'000			
1851							14		
1856							18		
1861							33	15	
1866							56	24	
1871							58	22	
1876							114	64	
1881							166	123	
1886							214	160	
1891							227	201	
1896							250	242	
1901					1 831		282	263	
1906					2 510		342	182	
1911					6 086		490	233	61 93
1916					10 184		484	277	212
1921	13.2		21.4		15 984		762	420	468
1926	42.5	8.2	62.5	79 659	33 547	12 105	867	402	903
1931	(d) 45.1	(d) 12.1	(d) 67.3	106 053	39 552	32 075	879	282	1 168
1936	53.7	19.4	84.3	92 227	39 911	93 881	1 017	327	1 197
1941	54.5	24.4	86.2	122 280	47 962	136 457	1 252	458	1 522
1946	64.4	31.4	107.2	137 979	53 126	164 497	1 921	815	2 170
1947	67.4	34.7	115.2	149 304	56 449	180 371	1 989	875	2 345
1948	75.7	36.4	127.5	159 814	60 249	196 336	2 190	946	2 507
1949	84.3	40.7	143.5	172 063	64 008	211 436	2 345	848	2 761
1950	97.5	46.0	163.9	192 469	69 907	226 723	2 546	1 169	3 536
1951	108.9	51.2	183.6	215 157	74 457	243 019	2 938	1 550	4 271
1952	120.5	55.9	200.4	232 119	80 919 (e)	207 527	3 872	1 818	5 588
1953	129.7	61.2	214.3	252 216	86 977	210 808	4 086	1 916	6 070
1954	139.7	64.6	226.9	265 727	93 104	218 745	4311	1 112	6 728
1955	150.5	70.2	244.4	281 091	100 171	221 118	4 670	1 028	7 266
1956	161.4	73.2	257.5	299 158	107 649	228 625	5 033	1 075	8 067
1957	171.9	75.7	269.3	315 044	114 390	234 120	5 579	1 358	8 993
1958	184.3	77.8	283.0	328 833	122 311	238 916	5 877	1 385	9 950
1959	200.3	81.0	301.5	340 973	131 060	247 468	6 247	1 421	10 524
1960	214.9	84.1	318.3	369 584	138 019	249 148	7 359	1 487	12 793
1961	224.5	82.5	325.2	393 869	144 502	249 475	7 729	1 643	14 544
1962	238.9	82.5	338.1	397 803	152 785	249 673	7 761	1 434	15 604
1963	258.8	83.9	358.2	414 656	162 012	256 741	8 322	1 592	16 508
1964	280.1	86.3	380.5	427 717	173 314	266 027	8 709	1 852	19 181
1965	298.1	86.4	397.4	447 985	182 249 (f)	269 040	9 312	2 187	23 038
1966	314.0	87.3	413.5	464 778	192 922	281 747	9 759	2 398	24 757
1967	327.7	87.1	427.6	481 496	203 191	278 069	10 117	2 521	26 990
1968	342.9	87.6	443.9	491 765	212 842	290 051	11 378	2 688	30 124
1969	364.7	89.6	468.2	513 687	224 174	297 877 (g)	13 211 (g)	1 606 (g)	34 523
1970	384.0	90.7	490.1	535 184	239 452	302 519	13 885	1 918	38 465
1971	400.8	91.5	510.3	550 745	251 330	310 485	15 847	1 988	43 333
1972	420.4	92.8	536.0	570 562	261 608	315 612	18 309	2 342	50 820
1973	445.4	97.9	572.4	592 481	278 687	332 411	19 227	2 569	58 306
1974	468.6	100.6	601.3	612 693	298 300	339 516	21 298	2 963	68 208
1975	491.5	104.0	628.9	637 248	311 804	(h)	25 128	3 581	83 406
1976	513.0	112.7	657.9	658 671	334 948	(h)	n.a.	n.a.	n.a.
1977	528.8	116.9	677.5	690 663	361 334	(h)	n.a.	n.a.	n.a.
1978	542.9	119.7	693.3	716 991	390 852	(h)	n.a.	n.a.	n.a.

(a) At 30 June from 1916; at 31 December in earlier years. (b) At 31 December from 1931 to 1943; otherwise at 30 June in years shown. (c) Years ended 30 June from 1886; earlier years ended 31 December. Telegraph includes telephone to 1901 and radio to 1948, from which time radio etc. licence fees have been excluded from Post Office revenue. (d) Vehicles in actual use on roads from 1930. (e) All receivers at the one address covered by one licence from 1952. (f) Combined radio and television licences included since 1 April 1965. (g) From 1968-69 content not comparable with previous years. (h) Abolished from 17 September 1974.

PUBLIC FINANCE

Year	State Government					Local Government Revenue			
	Total Revenue	Expenditure		Public Debt		State Taxation (a)	From Rates	Government Grants	Total
		From Revenue	From Loan (Net)	Total	Per Head				
	\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$'000
1840-41	51	180							
1845-46	95	77							
1850-51	445	367				202			
1855-56	960	1 160		590	5-50	326		54	114
1860-61	1 117	966		1 733	13-30	282	46	40	114
1865-66	1 900	2 130		1 551	9-20	478	60	60	162
1870-71	1 556	1 519		4 335	23-00	498	80	74	194
1875-76	2 640	2 647		7 674	34-20	920	118	80	286
1880-81	4 344	4 108		22 394	78-30	1 168	188	136	488
1885-86	4 558	4 767	2 800	36 680	118-60	1 603	208	108	502
1890-91	5 464	5 207	968	43 315	135-80	1 655	276	254	702
1895-96	5 043	5 019	886	48 433	137-60	1 600	264	194	652
1900-01	5 648	5 693	845	52 129	146-40	1 203	302	222	738
1905-06	5 612	5 437	900	60 165	165-80	1 735	348	198	740
1910-11	8 363	7 929	3 752 (b)	56 065	136-50	1 092	481	336	1 004
1915-16	8 714	9 483	4 371	79 049	179-40	1 403	652	302	1 150
1920-21	14 303	15 087	9 351	104 725	210-70	3 244	986	580	1 936
1925-26	20 948	20 922	12 860	160 521	290-10	5 428	1 640	942	3 441
1930-31	21 452	25 079	6 581	199 055	345-70	6 800	1 672	397	2 612
1935-36	22 819	22 521	2 502	211 397	359-70	6 409	1 665	509	2 824
1940-41	25 849	26 015	2 548	219 599	365-30	8 683	1 851	577	3 170
1945-46	32 687	32 687	3 419	221 498	348-80 (c)	4 036	2 040	451	3 474
1950-51	67 344	66 885	33 871	296 776	405-20	8 104	3 830	1 963	7 579
1951-52	85 276	85 098	52 875	346 872	459-40	9 586	4 686	2 578	9 548
1952-53	98 203	98 153	40 885	389 706	502-30	9 983	5 761	2 306	10 800
1953-54	104 751	101 132	39 879	429 446	538-80	13 073	6 524	3 867	13 416
1954-55	103 768	108 236	42 912	427 925	577-10	15 092	7 041	3 836	14 213
1955-56	118 805	121 665	42 666	512 179	603-60	16 150	8 162	4 381	16 310
1956-57	131 522	131 619	43 793	552 880	663-20	18 620	9 563	4 733	18 436
1957-58	141 285	142 083	37 153	593 628	662-00	19 541	10 333	4 848	19 721
1958-59	145 360	147 414	41 442	635 404	690-00	20 435	11 060	4 948	21 080
1959-60	160 555	161 177	43 432	678 210	717-50	22 297	11 971	5 478	22 535
1960-61	172 559	170 182	44 739	722 038	743-20	23 425	13 076 (d)	3 524	25 034
1961-62	186 405	185 392	43 773	763 399	773-10	25 150	14 887	2 984	27 969
1962-63	195 168	194 589	42 047	807 044	798-50	26 940	15 943	3 215	29 094
1963-64	211 006	207 755	44 218	853 553	822-30	29 825	16 968	4 317	33 725
1964-65	222 181	224 803	53 100	902 823	845-70	34 901	18 625	3 804	33 952
1965-66	236 816	243 650	55 089	955 128	872-30	37 636	20 412	4 106	38 020
1966-67	258 823	258 717	57 016	1 013 060	913-00	44 708	22 875	4 244	42 319
1967-68	274 544	277 404	55 382	1 074 959	958-30	48 255	24 369	4 493	42 813
1968-69	298 355	297 958	61 390	1 143 954	1 004-10	53 351	26 276	4 505	45 263
1969-70	338 498	335 578	67 469	1 210 489	1 045-30	59 840	27 596	4 988	48 556
1970-71	386 859	386 838	71 491	1 256 337	1 070-40	62 745	29 118	4 758	49 589
1971-72	455 245	456 312	111 740	1 333 720	1 124-10	97 476	32 224	7 653	54 886
1972-73	520 866	524 777	117 411	1 415 129	1 161-94	120 474	35 874	15 025	65 917
1973-74	641 967	645 368	107 566	1 481 337	1 198-30	156 903	42 202	10 508	67 682
1974-75	828 985	820 601	123 854	1 425 332	1 138-35	219 190	53 804	19 118	96 000
1975-76	1 036 985	1 034 698	160 602	1 349 702	1 105-50	272 760	65 670	33 551	99 221
1976-77	1 174 025	1 183 180	175 552	1 495 737	1 171-47	n. y. a.	314 280	n. y. a.	34 881
1977-78	1 167 196	1 192 063	171 329	1 605 834	1 247-15	323 502	n. y. a.	38 052	n. y. a.

(a) Excludes all taxation paid to Special Funds. From 1966-67 the coverage of this item does not completely coincide with SA Treasury classifications. (b) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government. (c) Uniform taxation in force from 1941-42. (d) Excludes reimbursement for work done on behalf of Highways Department from 1961.

PRIVATE FINANCE

Year	Banking		Life Insurance		General Insurance Revenue (b)	Co-operative Societies (b)	Friendly Societies	Building Societies (b)	
	Trading Banks		Savings Bank Deposits at 30 June	New Policies Issued Sum Assured					Policies in Existence Sum Assured
	Advances (a)	Deposits (a)							
				\$'000			No. of Members		
1846		183							
1851		426	29						
1856		1 419	106						
1861	2 864	1 480	243						
1866	6 240	2 803	499						
1871	5 715	3 043	982						
1876	9 449	6 632	1 703						
1881	13 483	9 885	2 499						
1886	19 226	9 924	3 306						
1891	16 297	15 550	4 316						
1896	9 470	15 343	5 673						
1901	8 546	13 437	7 591						
1906	10 612	15 598	9 534						
1911	16 970	22 257	14 872			10 248		9 572	
1916	20 325	27 264	20 070			13 270	65 540	8 962	
1921	27 296	44 199	32 635	6 000	40 272	1 305	28 762	70 155	10 621
1926	31 672	51 574	43 558	9 341	60 244	2 045	41 539	77 791	17 011
1931	44 119	44 956	42 844	6 266	65 016	1 627	45 791 (c)		14 081
1936	43 760	52 399	50 617	10 791	75 984	1 859	45 592	71 658	9 257
1941	39 547	64 182	55 019	11 416	101 825	2 643	n.a.	76 357	n.a.
1946	31 560	93 397	131 729	22 805	147 230	2 705	70 620	80 419	18 665
1951	62 109	206 743	195 698	44 899	261 931	9 298	92 424	71 591	22 782
1952	89 163	214 630	207 452	48 475	298 494	12 370	96 134	67 563	25 016
1953	79 574	247 260	227 750	51 671	335 457	14 393	100 323	63 922	23 801
1954	95 968	250 802	245 898	59 540	377 093	16 165	107 069	61 345	23 814
1955	106 740	250 795	263 384	70 458	426 881	18 321	109 667	59 149	24 397
1956	108 515	241 044	271 512	75 301	477 554	20 590	114 018	57 216	24 266
1957	105 618	266 877	284 802	89 470	539 120	23 835	109 636	55 499 (d)	
1958	125 971	262 700	297 716	94 137	599 723	24 656	(d)	54 181	24 321
1959	124 924	272 599	314 304	111 440	676 406	26 223	112 844	53 114	24 665
1960	149 172	265 498	331 996	131 951	756 581	27 975	116 645	52 239	24 847
1961	147 348	269 848	333 485	143 628	841 563	32 363	111 031	51 551	24 835
1962	164 936	276 750	361 980	157 636	955 426	33 740	116 405	51 198	21 854
1963	182 370	285 318	416 155	165 183	1 056 390	37 499	108 283	50 765	21 260
1964	202 360	323 858	475 803	197 790	1 161 986	41 695	113 224	50 946	22 348
1965	243 866	347 780	519 268	215 946	1 294 450	45 433	115 828	51 258	22 746
1966	273 916	365 466	558 857	239 250	1 439 083	50 121 (e)	116 615	51 109	23 611
1967	298 981	368 851	605 167	279 996	1 618 112	56 114	125 638	51 001	23 722
1968	345 315	388 772	643 690	301 602	1 807 040	59 981	125 385	51 070	22 458
1969	362 967	408 903	691 778	347 048	2 031 479	65 354	126 529	50 880	26 373
1970	390 932	423 410	733 100	437 699	2 313 244	70 640	123 263	50 796	33 863
1971	411 180	436 297	787 901	525 879	2 667 651	76 020	124 021	50 488	41 670
1972	448 164	474 192	874 138	586 663	3 053 169	89 173	123 755	50 077	49 804
1973	516 424	619 958	1 060 425	727 998	3 565 754	98 678	121 893	50 664	66 853
1974	671 782	815 622	1 174 813	908 775	4 175 174	127 473	122 562	50 779	99 043
1975	748 609	973 499	1 394 585	1 095 897	4 927 762 (f)	187 316	122 701	49 888	131 049
1976	914 300	1 214 488	1 617 336	1 200 765	5 666 521	231 649	124 506	48 057	n.a.
1977	1 149 413	1 300 883	1 780 841	1 273 906	6 370 336	267 640	125 148	45 815	n.a.
1978	1 370 681	1 301 516	1 945 344	n.y.a.	n.y.a.	n.y.a.	125 235	n.y.a.	n.a.

(a) Until 1961, average of balances at close of business on Wednesdays during the June quarter of the year stated. From 1962, average of weekly figures for the month of June of the year stated. (b) Year ended 30 June. (c) Membership at 30 June from 1932; previously 31 December. (d) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30 June. (e) Figures from 1966 have been revised because of a redefinition of Co-operative Societies, and details for years before 1966 are not comparable. (f) From 1974-75 premium income only; details of interest, dividends and rent no longer available.

APPENDIX B

PRINCIPAL EVENTS

CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—First migrants landed at Kangaroo Island on 20 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Col. Light arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in HMS *Buffalo* and proclaimed South Australia a Province on 28 December.
- 1837**—Col. Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened in North Terrace, Adelaide.
- 1838**—First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. First German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839**—Col. Light died at Thebarton and buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.

- 1840—Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.
- 1841—First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.
- 1842—Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.
- 1843—Stripper invented by Ridley. A flour mill built at Hindmarsh.
- 1844—First Colonial Census held, and showed a population of 17 366.
- 1845—Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.
- 1846—First pastoral leases granted.
- 1847—First winery in the Barossa Valley commenced operation. St Peters College established.
- 1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849—The Central Board of Main Roads established.
- 1850—An Act granting representative government to South Australia passed by the British Parliament.
- 1851—The Central Board of Education established.
- 1852—First overland gold escort arrived in Adelaide.
- 1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the River Murray.
- 1854—State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855—First South Australian postage stamps issued.
- 1856—First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100 000.
- 1857—Railway to Smithfield and Gawler opened.
- 1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operations. First telegraph line to Melbourne opened.
- 1859—A jetty over 350 metres in length constructed at Glenelg. Copper discovered at Wallaroo.

- 1860—Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chambers Bay on the coast of the Northern Territory.
- 1863—Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.
- 1865—Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.
- 1866—Camels for the purpose of exploration introduced by Sir Thomas Elder. The Adelaide Town Hall opened.
- 1867—Visit of Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869—Foundation stone of St Peters Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufacturers founded.
- 1870—Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.
- 1872—Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.
- 1873—Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed.
- 1874—The University of Adelaide founded.
- 1875—The State Education Act passed. First Forestry Board established.
- 1876—Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.
- 1877—Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.
- 1878—Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide. The State's population passed 250 000.
- 1879—Foundation stone of the Adelaide University laid. First bridge across River Murray in South Australia opened at Murray Bridge.
- 1881—First reclamation of swamp areas of River Murray. Art Gallery opened by His Royal Highness Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.
- 1882—Fire Brigades Board established.

- 1883—The Telephone Exchange commenced operations. Roseworthy Agricultural College opened to students.
- 1884—Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.
- 1885—Broken Hill silver mines opened. Column erected on Mount Lofty summit as a prominent landmark for mariners.
- 1887—Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. First express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.
- 1888—Totalisator legally authorised by an Act of Parliament.
- 1889—The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890—First South Australian built locomotive completed.
- 1892—Education made free to the compulsory age, and standard.
- 1894—Act granting the franchise to women passed. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896—State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.
- 1899—Second referendum concerning the establishment of Federation held. In South Australia, 65 990 electors voted for Federation and 17 053 against. First military contingent left South Australia for the Boer War.
- 1900—Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from 1 January 1901. Conservatorium of Music opened. First Workmen's Compensation Act passed.
- 1901—Early closing of shops introduced. First Commonwealth Parliament elected. The Duke and Duchess of York arrived in the *Ophir*. The *Customs Act* came into force. The Electric Light Works was opened. Iron Knob connected to Whyalla by railway.
- 1902—Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.
- 1905—First kindergarten in South Australia opened.
- 1906—Military cadet system inaugurated.
- 1907—High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Federal basic wage judgement—the 'Harvester' award—made.
- 1908—Penny savings bank accounts for children established. The Outer Harbor opened. Adelaide High School established.

- 1909—Adelaide electric tramways commenced operations. Payment of age pensions by the Commonwealth Government commenced.
- 1910—Payment of invalid pensions by the Commonwealth Government commenced. First recorded monoplane flight in Australia made by F. C. Custance at Bolivar.
- 1911—‘Penny Postage’ to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth Government.
- 1913—Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.
- 1914—First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915—Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.
- 1916—Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.
- 1917—German private schools in South Australia were closed. East-West transcontinental railway completed and the first train ran to Perth. Mr R. G. Carey, in a Bleriot 60, made the State’s first airmail flight from Enfield to Gawler.
- 1919—Captain Butler flew from Adelaide across Gulf St Vincent carrying air mail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.
- 1920—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition buildings. The Prince of Wales visited South Australia.
- 1921—The State’s population passed 500 000.
- 1922—First lock on the River Murray completed and opened at Blanchetown.
- 1923—The Government approved an extensive re-organisation of the railway system.
- 1924—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.
- 1925—Showgrounds at Wayville opened. The first Federal election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.
- 1926—The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a narrow gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth Government writ against the State.

- 1927—Extension of the North-South railway commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.
- 1929—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.
- 1930—All officers of the South Australian Public Service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 a day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.
- 1931—City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Federal basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 a day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 a week.
- 1932—Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.
- 1933—The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.
- 1934—Water restrictions in force from May until the following January.
- 1935—The Nomenclature Act of 1935 restored the former German names to a number of towns, the names of which had been changed in 1917.
- 1936—Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.
- 1937—South Australian Housing Trust established. New Federal basic wage of \$7.40 per week, which incorporated a 'prosperity' loading, declared. First trolley bus service inaugurated. Mount Bold Reservoir with a capacity of 30 000 megalitres filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.
- 1938—First South Australian Housing Trust dwelling completed.
- 1939—State's worst heat wave and disastrous bush fires experienced during the first two months of the year. Record high temperature of 47.6°C recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.
- 1940—Goolwa Barrage completed at a cost of \$1 400 000. Birkenhead Bridge opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941—Scriptural instruction in State schools commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Payroll tax commenced.

- 1942—Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea and clothing commenced. Widows pension instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.
- 1943—Price Stabilisation legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing resumed but betting shops remained closed.
- 1944—Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.
- 1945—Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946—Commonwealth Government munition factories leased to various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The Electricity Trust of South Australia took over the property and functions of the Adelaide Electric Supply Co.
- 1947—Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Federal Conciliation and Arbitration Act. Severe restrictions imposed on imports from North America.
- 1948—Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty-hour working week introduced by Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. The free medicine scheme came into operation. Clothing and meat rationing abolished. Full scale production of the 'Holden' car commenced.
- 1949—Petrol rationing by the Commonwealth Government declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.
- 1950—Petrol, butter and tea rationing discontinued. Federal free drugs scheme came into operation. Water restrictions imposed in December and remained in force until June 1951.
- 1951—Serious bush fires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.
- 1952—The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory chest X-rays introduced.

- 1953—Remaining controls on building removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage discontinued. Size of the State Cabinet increased from six to eight Ministers.
- 1954—A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Water from the River Murray pumped into metropolitan reservoirs through the Mannun pipeline.
- 1955—Adelaide Airport at West Beach opened. The new satellite town at Elizabeth officially opened.
- 1956—River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Atomic device exploded at Maralinga. Salk Poliomyelitis vaccination program commenced.
- 1957—Centenary of responsible government in South Australia celebrated. Long service leave legislation passed by the South Australian Parliament.
- 1958—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para Reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.
- 1959—South Australia ceased to be a claimant State for special grants from Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford created record term as Premier in a British country (26 years 125 days). Aborigines became eligible for age, invalid and widows pensions.
- 1960—First Adelaide Festival of Arts held (March 12-26). Completion of second unit and formal opening of Thomas Playford power station at Port Augusta.
- 1961—First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem.
- 1962—Myponga Reservoir completed and linked to Happy Valley Reservoir. Duplication of Morgan-Whyalla pipeline commenced.
- 1963—Population of the State passed 1 000 000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by her Majesty, Queen Elizabeth II.
- 1964—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (148 km/h) and all-time low barometric reading (985 mb) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.

- 1965**—Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First tenders let for Torrens Island power structure. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.
- 1966**—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Queen Elizabeth the Queen Mother. Second major natural gas strike in Gidgealpa area. New outlet tunnel 2 700 metres long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera. Industrial Commission of SA replaced the SA Board of Industry.
- 1967**—Totalizator Agency Board operated off-course in South Australia for the first time. First South Australian lottery drawn. Federal Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (257 mm). Torrens Island power station commenced operations. First off-shore drilling rig—*Ocean Digger*—constructed and launched at Whyalla.
- 1968**—State Elections held, Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, Mr. R. S. Hall sworn in. Four weeks leave for State Government employees introduced. Construction commenced on State's first satellite communications station at Ceduna. Legal drinking age lowered from twenty-one to twenty. Sealed highway from Broken Hill to Adelaide opened. Sir James Harrison first Australian-born Governor of South Australia sworn in.
- 1969**—Work begun on second major pipeline to bring River Murray water to Adelaide. Forty-first Congress of the Australian and New Zealand Association for the Advancement of Science held in Adelaide. Electricity Trust signed \$120 million contract for supply of natural gas. Natural gas flowed through completed 832 kilometre pipeline from Moomba-Gidgealpa to Adelaide.
- 1970**—Abortion law reformed in South Australia. Standard gauge working on new line between Port Pirie and Broken Hill begun. First direct telecast from England to Australia via satellite. First contracts signed for construction of \$4.8 million Adelaide Festival Theatre. Hairy-nosed wombat adopted as State's faunal emblem. South Australian Government applied to Commonwealth Grants Commission for financial assistance and received an interim grant.
- 1971**—Fluoridation of Adelaide water supply commenced. Agreement for supply of natural gas to Sydney from South Australian gas fields finalised. Points demerit scheme for drivers who commit road traffic offences introduced. Age of Majority reduced from twenty-one to eighteen. Commonwealth Government transferred power to levy payroll tax to the States. Daylight saving introduced in South Australia for the first time since the 1939-45 War. Agreement to build Dartmouth Reservoir ratified by SA Parliament. Plans announced for development of Patchawarra oil field at estimated cost of \$200 million including pipelines to Adelaide and Sydney. Death of SA Governor Sir James Harrison in office and Sir Mark Oliphant, the first SA born Governor, sworn in. Wearing of seat belts in motor vehicles made compulsory. Plans

announced by the South Australian National Football League for new headquarters at West Lakes.

- 1972**—Plans announced for creation of new city of more than 100 000 people near Murray Bridge. New Stirling to Verdun freeway opened. Plans announced for the sealing of the Eyre Highway from Penong to the WA border. New laws regulating door-to-door selling and used car dealing introduced. Plans to filter Adelaide's water supply at a cost of \$35 million announced. University of Adelaide's educational radio station VL5UV commenced broadcasting. Work begun on \$40 million Flinders Medical Centre. Weather temperature reports changed to degrees Celsius. North Haven residential project to house 4 000 people at the northern end of Le Fevre Peninsula announced. Daylight saving re-introduced for 1972-73 and subsequent summers. South Australian Film Corporation commenced operation. South Australia's first ombudsman, Mr G. D. Combe, appointed.
- 1973**—New long service leave provision for three months leave after ten years service came into force. Plans announced for the building of a new \$40 million lubrication oil refinery at Port Stanvac. Work begun on \$62 million Dartmouth dam project. New \$11 million hospital opened at Modbury. Dunstan ALP Government returned at State election to become the first ALP Government to retain office after a general election in South Australia since 1910. Cross Lotto game introduced by State Lotteries Commission. Lake Eyre filled with water for the first time since 1950 because of floodwaters in the north of the State. \$6.6 million Adelaide Festival Theatre opened by the Prime Minister. Legislation enacted for adult franchise and proportional representation for the Legislative Council. Compulsory blood tests for road accident victims introduced. \$50 note issued for the first time. Bill passed in State Parliament for extensive improvement in workers' compensation benefits. Commonwealth Government took over responsibility for Aboriginal Affairs from South Australian Government.
- 1974**—World Gliding Championships held at Waikerie. Prince Philip, the Duke of Edinburgh, visited South Australia. University of Adelaide celebrated its centenary. Prime Minister opened \$4.8 million Australian Broadcasting Commission complex at Collinswood. Police dog patrols commenced. Plans announced for building of \$2.8 million boat harbour at Taperoo. First match held at the new South Australian National Football League headquarters at West Lakes. Commonwealth Government agreed to provide \$22 million for the sealing of a new two-lane highway between Port Augusta and Alice Springs. Conversion of road signs to metric measurements undertaken. New development plan for Adelaide released. Judgement handed down making four weeks annual leave standard for workers under State awards. State primary schools began a new program of continuous admission of children on their fifth birthday. New State taxes on petrol and tobacco announced. Playhouse, Space and Amphitheatre at the Adelaide Festival Centre opened. Legislation allowing hotel trading to 12 midnight on Fridays and Saturdays came into force.
- 1975**—Phase I of \$54 million Flinders Medical Centre opened. Transmission of television in colour commenced. Work began on \$140 million Tarcoola-Alice Springs rail link. International Equestrian Exposition 1975 held in Adelaide and attended by Her Royal Highness, Princess Anne. Plans announced for the building of a

new meteorological centre at Kent Town. State Election held on 12 July, after the Legislative Council failed to pass the Railways (Transfer Agreement) Bill; the Dunstan ALP Government was returned with a reduced majority and the Bill was subsequently passed. Medibank commenced operations in South Australia. Legislation for the redistribution of House of Assembly electoral boundaries passed by the Legislative Council. Bankcard began operations in South Australia. The South Australian Industrial Commission adopted the National Wage indexation guidelines for State awards.

1976—FM radio broadcasting began in South Australia. Rail track to Christie Downs opened. \$6.25 million Regency Park centre for treatment and care of physically handicapped children opened. A new commercial radio station (5AA) went to air, Adelaide's first for forty-six years. A new political party, the New Liberal Movement formed. The State Government announced plans to establish a Youth Work Unit to help school leavers and other unemployed young people to find jobs. Sir Douglas Nicholls appointed as Governor of South Australia from 1 December 1976. Sections on the new coastal route of the Eyre Highway opened. Smoking banned on buses operated by the Bus and Tram Division of the State Transport Authority. The Australia Post began a full courier service in Adelaide. Plans announced for on-the-spot fines of \$20 for littering. Price control on petrol removed for a six-month trial period. Plans announced for abolition of South Australian succession duties on estates passing to husbands and wives. Thirty-three metropolitan and fourteen country seats formed in the redistribution of House of Assembly electorates by the Electoral Boundaries Commission. Date stamping regulations for all short-life perishable foods approved by Executive Council. Rundle Mall commissioned by the Premier on 1 September. A total eclipse of the Sun occurred in parts of South Australia on 23 October. Large deposits of copper ore discovered at Roxby Downs near Andamooka. Legislation passed making rape within marriage a criminal offence. Capital punishment abolished in South Australia.

1977—The State Government announced a \$40 million oil and gas search program in the north of the State. Her Majesty Queen Elizabeth II and the Duke of Edinburgh visited South Australia. \$5.8 million Southern Plaza at the Adelaide Festival Centre officially opened by Her Majesty Queen Elizabeth II. The German vessel *Visurgis* became the first container ship to use the new container terminal at Outer Harbor. South Australia's first million dollar lottery, the Celebration Lottery, drawn by the Lotteries Commission. Plans announced for a \$11 million gas turbine generating plant to be built at Snuggery in the South East. The State Government Insurance Commission entered the field of life insurance. A Royal Commission established to enquire into shopping hours. A major deposit of sub-bituminous coal discovered near Lock. The State's new beverage container deposit legislation came into operation. The State Government announced plans for a new hospital to be built at Christies Beach. The South Australian Health Commission came into operation. Keith Seaman sworn in as the new Governor of South Australia. Adelaide's first water filtration plant at Hope Valley commenced operations. Legislation passed for the control of domestic and industrial noise. Late night shopping in city and suburbs commenced.

- 1978**—State Government ordered a new \$17 million fleet of trains for the Adelaide commuter rail network. RAAF to spend \$300 million on new aircraft and facilities at Edinburgh. A Royal Commission held into the dismissal of Police Commissioner Salisbury. The last ship to be built at Whyalla shipyards, the *Denis O'Malley*, was launched. State Government announced details of a new \$53 million high speed tramway to link north-eastern suburbs with Adelaide. Adelaide tramways held centenary celebrations. Lotteries Commission introduced Instant Money Game with prizes of up to \$10 000. The State Government released plans for the development of the Onkaparinga estuary. Semaphore-Glanville train line closed. South Australian Heritage Committee was formed. The second section of the Heysen trail, between Mount Lofty and Mount Magnificent was opened. State Government announced plans to establish a State trading corporation.
- 1979**—SAFCOL announced plans to establish a fish-finger processing plant at Millicent. A new public transport zone-fare system introduced. Mr D. A. Dunstan, the State's second longest serving Premier resigned for health reasons. SGIC announced plans for a \$20 million head office building in Victoria Square. State Government announced plans for a \$6.7 million sewerage scheme for the Happy Valley area. Organ costing \$400 000 was commissioned at the Festival Centre. Mitsubishi group of Japan obtained approximately one third interest in Chrysler Australia Ltd. A further section of the South East freeway, including Swanport Bridge, was opened for traffic. Approval has been given for one FM commercial station in Adelaide. The State Government announced the establishment of a Motor Vehicle Industry Assistance Committee. The first State Government Cabinet meeting outside Adelaide was held in Mount Gambier. The third section of the Heysen trail from Mount Lofty to Mount Crawford was opened. State elections held; D. O. Tonkin, new Liberal Premier, sworn in.

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1302.4	Pocket Year Book of South Australia (\$1-00 plus postage) a	1979	July 1979
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1304.4	Divisional Statistics irr	1979	Oct. 1979
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2400.4	Progressive Press Releases (Preliminary), Population and Dwellings in Local Government Areas	1976	Aug. 1976
2401.4	Summary Release (Preliminary), Population and Dwellings in Local Government Areas	1976	Oct. 1976
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POPULATION AND VITAL STATISTICS			
3201.4	Population and Dwellings in Local Government Areas hy	Dec. 1978	Aug. 1979
3202.4	Population Estimates, Local Government Areas irr	June 1976	May 1978
3203.4	Projections of the Population of South Australia	1978-2011	July 1979
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4401.4	Statistics of Day Care Centres and Pre-school Centres a	1978	Nov. 1978
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7104.4	Crops and Livestock in Hundreds within Counties	1977-78	May 1979
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7501.4	Value of Agricultural Commodities Produced (First Estimates) a	1978-79	July 1979
7502.4	Value of Agricultural Commodities Produced (Second Estimates) a	1977-78	Jan. 1979
7503.4	Value of Agricultural Commodities Produced (Final Estimates) a	1977-78	Aug. 1979

