## CONSTRUCTION WORK DONE

## Value of construction work done

Chain Volume Measures


Mar Mar Mar Mar Mar
20092011201320152017

Value of building work done
Chain Volume Measures
Trend estimates


Mar Mar Mar Mar Mar 20092011201320152017

I NQUIRIES
For further information about these and related statistics, contact the National Information and Referral Service on 1300135070.

## EMBARGO: 11.30AM (CANBERRA TIME) WED 24 MAY 2017

## KEY FIGURES

|  | Mar qtr 17 | Dec qtr 16 to Mar qtr 17 | Mar qtr 16 to Mar qtr 17 |
| :---: | :---: | :---: | :---: |
|  | \$m | \% change | \% change |
| TREND ESTIMATES ${ }_{\text {(a) }}$ |  |  |  |
| Value of work done |  |  |  |
| Building | 26343.4 | -1.1 | -1.9 |
| Residential | 17471.9 | -1.7 | -1.0 |
| Non-residential | 8877.2 | - | -3.5 |
| Engineering | 19894.8 | 0.1 | -12.4 |
| Total construction | 46223.4 | -0.6 | -6.8 |

SEASONALLY ADJUSTED ESTIMATES (a)
Value of work done

| Building | 26227.2 | -2.8 | -2.1 |
| :--- | ---: | ---: | ---: |
| $\quad$ Residential | 17219.2 | -4.7 | -3.1 |
| $\quad$ Non-residential | 9008.0 | 1.0 | -0.1 |
| Engineering | 20189.7 | 2.2 | -13.0 |
| Total construction | $\mathbf{4 6} 416.9$ | $\mathbf{- 0 . 7}$ | $\mathbf{- 7 . 2}$ |

- nil or rounded to zero (including null cells)
(a) Reference year for Chain Volume Measures is 2014-15.


## KEY POINTS

## VALUE OF WORK DONE, CHAIN VOLUME MEASURES

TOTAL CONSTRUCTION

- The trend estimate for total construction work done fell $0.6 \%$ in the March quarter 2017.
- The seasonally adjusted estimate for total construction work done fell $0.7 \%$ to $\$ 46,416.9 \mathrm{~m}$ in the March quarter.


## BUILDING WORK DONE

- The trend estimate for total building work done fell $1.1 \%$ in the March quarter.
- The trend estimate for non-residential building work was flat and residential building work fell $1.7 \%$.
- The seasonally adjusted estimate of total building work done fell $2.8 \%$ to $\$ 26,227.2 \mathrm{~m}$ in the March quarter.

ENGINEERING WORK DONE

- The trend estimate for engineering work done rose $0.1 \%$ in the March quarter.
- The seasonally adjusted estimate for engineering work done rose $2.2 \%$ to $\$ 20,189.7 \mathrm{~m}$ in the March quarter.

FORTHCOMING ISSUES

ABOUT THIS ISSUE

CHANGES THIS ISSUE

DATA NOTES

| ISSUE (Quarter) | RELEASE DATE |
| :--- | :--- |
| June 2017 | 30 August 2017 |
| September 2017 | 22 November 2017 |
| December 2017 | 21 February 2018 |
| March 2018 | 23 May 2018 |

This publication provides an early indication of trends in building and engineering construction activity. The data are estimates based on a response rate of approximately $85 \%$ of the value of both building and engineering work done during the quarter. More comprehensive and updated results will be released in Engineering Construction Activity, Australia (cat. no. 8762.0) on 28 June 2017 and in Building Activity, Australia (cat.no. 8752.0) on 12 July 2017.

The methodology used for the modelled component of residential building work has been updated this quarter. This has resulted in a downwards revision to alterations and additions to residential buildings from September 2012.

This quarter there have also been improvements made to the imputation methodology used in the Engineering Construction Survey. This has resulted in minor revisions to the Engineering Construction estimates from June 2015.

This release includes revisions to both the Building Activity and Engineering Construction Survey. Building Activity data have been revised back to September 2012 and Engineering Construction data have been revised back to June 2013.

The revisions to Building Activity data and Engineering Construction data will subsequently cause revisions in the Private Gross Fixed Capital Formation series of the National Accounts. The first publication in which the data will appear is the 2016-17 annual edition of the Australian System of National Accounts (cat no. 5204.0), before being updated in the September 2017 edition of the Australian National Accounts: National Income, Expenditure and Product (cat no. 5206.0).

Trend estimates should be used with caution due to the volatility caused by large engineering projects. For more details on trend estimates, please see paragraphs 24 to 26 of the explanatory notes.

Mining projects tend to be complex in structure and comprise a number of different investment activities including exploration, engineering construction, plant and equipment and buildings. A feature article released in the March 2012 issue of Private New Capital Expenditure and Expected Expenditure, Australia (cat. no. 5625.0) provides a summary of the conceptual basis of the relevant ABS publications that measure investment in Australia, using a hypothetical mining project to illustrate how this investment is reflected in ABS data.

David W. Kalisch<br>Australian Statistician

## TREND PERCENTAGE CHANGE

TOTAL CONSTRUCTION


ENGINEERING


BUILDING

RESIDENTIAL


NON-RESIDENTIAL


The trend estimate for total construction work done fell $0.6 \%$ this quarter and has fallen for seven quarters.

The trend estimate for engineering construction work done rose $0.1 \%$ this quarter.

The trend estimate for total building work done fell $1.1 \%$ this quarter and has fallen for three quarters.

The trend estimate for residential building work done fell $1.7 \%$ this quarter and has fallen for three quarters

The trend estimate for non-residential building work done was flat this quarter.

## CHAIN VOLUME MEASURES—TREND ESTIMATES

NEW SOUTH WALES
VICTORIA

QUEENSLAND
WESTERN AUSTRALIA

SOUTH AUSTRALIA
NORTHERN TERRITORY

## TASMANIA

AUSTRALIAN CAPITAL
TERRITORY


Construction work done in New South Wales has risen for ten quarters.

Construction work done in Victoria has risen for 11 quarters.

Construction work done in
Queensland has fallen for two quarters.
Construction work done in Western Australia has fallen for seven quarters.

Construction work done in South Australia has risen for two quarters.

Construction work done in the
Northern Territory has risen for three quarters.

Construction work done in Tasmania has risen for three quarters.

Construction work done in the Australian Capital Territory has risen for six quarters.

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|  | BUILDING WORK DONE |  |  | ENGINEERING WORK DONE |  |  | CONSTRUCTION WORK DONE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Private | Public | Total | Private | Public | Total | Private | Public | Total |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
|  | ORIGINAL |  |  |  |  |  |  |  |  |
| 2013-14 | 81396.6 | 11651.1 | 93079.3 | 103538.7 | 29292.6 | 132837.7 | 185331.3 | 40931.7 | 226284.8 |
| 2014-15 | 89753.0 | 9380.7 | 99133.7 | 86442.7 | 25972.2 | 112414.9 | 176195.7 | 35352.9 | 211548.6 |
| 2015-16 | 97666.9 | 8618.1 | 106285.0 | 67055.1 | 27637.0 | 94692.1 | 164722.0 | 36255.1 | 200977.1 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 25063.0 | 2097.6 | 27160.6 | 18126.6 | 6836.1 | 24962.8 | 43189.6 | 8933.8 | 52123.4 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 22705.7 | 1930.2 | 24635.9 | 15176.6 | 6766.6 | 21943.2 | 37882.3 | 8696.8 | 46579.1 |
| Jun Qtr | 25402.5 | 2405.5 | 27808.0 | 13613.0 | 8136.4 | 21749.4 | 39015.5 | 10541.9 | 49557.4 |
| Sep Qtr | 24885.3 | 2485.2 | 27370.5 | 13032.4 | 6572.8 | 19605.2 | 37917.7 | 9058.0 | 46975.7 |
| Dec Qtr | 25539.2 | 2370.2 | 27909.4 | 12630.6 | 7572.8 | 20203.4 | 38169.8 | 9943.0 | 48112.8 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 21938.9 | 2224.0 | 24162.8 | 11673.3 | 7522.0 | 19195.3 | 33612.2 | 9746.0 | 43358.2 |
|  | SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 24228.2 | 2044.2 | 26271.7 | 17408.6 | 6851.3 | 24259.9 | 41636.8 | 8895.5 | 50531.6 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 24700.5 | 2084.9 | 26784.6 | 16158.5 | 7052.0 | 23210.4 | 40858.9 | 9136.8 | 49995.0 |
| Jun Qtr | 25136.1 | 2408.5 | 27544.3 | 13680.1 | 7188.5 | 20868.7 | 38816.3 | 9597.1 | 48412.9 |
| Sep Qtr | 24009.2 | 2377.7 | 26385.7 | 12825.5 | 7236.8 | 20062.3 | 36834.6 | 9614.5 | 46448.0 |
| Dec Qtr | 24676.8 | 2317.0 | 26992.9 | 12178.8 | 7577.8 | 19756.6 | 36855.6 | 9894.8 | 46749.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 23826.7 | 2401.6 | 26227.2 | 12395.3 | 7794.4 | 20189.7 | 36222.0 | 10196.0 | 46416.9 |
| TREND |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 24228.3 | 2060.8 | 26288.4 | 17943.8 | 6797.5 | 24741.5 | 42174.4 | 8850.7 | 51031.8 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 24678.2 | 2171.5 | 26849.2 | 15697.3 | 7024.7 | 22722.0 | 40375.6 | 9198.7 | 49571.2 |
| Jun Qtr | 24765.0 | 2296.7 | 27061.0 | 14003.4 | 7167.9 | 21171.2 | 38768.4 | 9464.6 | 48232.3 |
| Sep Qtr | 24546.9 | 2365.4 | 26910.9 | 12921.4 | 7331.2 | 20251.0 | 37475.6 | 9695.0 | 47168.0 |
| Dec Qtr | 24269.0 | 2375.8 | 26643.6 | 12334.4 | 7540.1 | 19873.8 | 36606.2 | 9915.2 | 46519.7 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 23982.0 | 2363.0 | 26343.4 | 12143.5 | 7736.3 | 19894.8 | 36097.2 | 10114.2 | 46223.4 |

(a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.

(a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.

|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL |  |  |  |  |  |  |  |  |  |
| 2013-14 | 44804.6 | 36250.2 | 63712.0 | 10532.6 | 57824.0 | 2334.6 | 7872.5 | 2950.9 | 226284.8 |
| 2014-15 | 44921.3 | 38072.5 | 48558.8 | 9658.9 | 55404.3 | 2491.0 | 9579.3 | 2862.4 | 211548.6 |
| 2015-16 | 49088.6 | 41395.7 | 38660.6 | 9524.7 | 49401.5 | 2418.3 | 7643.2 | 2844.7 | 200977.1 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 12264.9 | 10518.5 | 10252.1 | 2556.7 | 13340.9 | 611.9 | 1888.1 | 690.2 | 52123.4 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12118.6 | 9477.4 | 8495.9 | 2127.0 | 11390.1 | 560.5 | 1720.7 | 688.9 | 46579.1 |
| Jun Qtr | 13426.3 | 11181.0 | 9666.8 | 2348.4 | 9823.0 | 645.3 | 1680.0 | 786.5 | 49557.4 |
| Sep Qtr | 12476.7 | 10521.1 | 10107.4 | 2238.2 | 8547.9 | 608.7 | 1699.6 | 776.3 | 46975.7 |
| Dec Qtr | 13530.2 | 11070.0 | 10124.1 | 2315.3 | 7829.8 | 591.2 | 1728.3 | 923.9 | 48112.8 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12243.4 | 10363.6 | 8392.0 | 2221.8 | 7114.0 | 602.3 | 1652.7 | 768.3 | 43358.2 |
| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 11868.6 | 10282.9 | 9678.6 | 2418.1 | 13221.3 | 607.2 | 1876.3 | 681.0 | 50531.6 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12779.1 | 10229.6 | 9486.8 | 2307.2 | 11773.7 | 597.7 | 1757.1 | 727.6 | 49995.0 |
| Jun Qtr | 12942.9 | 10887.0 | 9578.2 | 2274.1 | 9857.5 | 590.1 | 1675.3 | 755.2 | 48412.9 |
| Sep Qtr | 12743.8 | 10346.8 | 9745.7 | 2259.2 | 8356.1 | 625.2 | 1683.1 | 779.0 | 46448.0 |
| Dec Qtr | 13099.5 | 10803.5 | 9575.3 | 2190.1 | 7741.0 | 590.4 | 1716.6 | 923.0 | 46749.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12879.5 | 11174.0 | 9390.4 | 2405.4 | 7369.2 | 642.1 | 1681.0 | 809.5 | 46416.9 |
| TREND |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 12057.4 | 10204.2 | 9592.3 | 2409.3 | 13482.2 | 605.3 | 1977.8 | 689.4 | 51031.8 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12540.8 | 10421.3 | 9557.7 | 2348.3 | 11569.7 | 600.8 | 1772.1 | 714.1 | 49571.2 |
| Jun Qtr | 12871.0 | 10530.3 | 9597.4 | 2260.5 | 9923.2 | 598.7 | 1676.8 | 760.7 | 48232.3 |
| Sep Qtr | 12937.6 | 10637.9 | 9630.0 | 2244.7 | 8629.8 | 605.1 | 1686.6 | 812.6 | 47168.0 |
| Dec Qtr | 12938.2 | 10807.3 | 9577.5 | 2271.1 | 7757.6 | 614.9 | 1692.0 | 847.5 | 46519.7 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12952.4 | 10997.0 | 9463.0 | 2320.8 | 7227.6 | 626.0 | 1698.4 | 859.1 | 46223.4 |

(a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.

|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | \% | \% | \% | \% | \% | \% | \% | \% | \% |
| ORIGINAL |  |  |  |  |  |  |  |  |  |
| 2013-14 | -4.4 | -1.4 | 7.3 | 0.5 | 1.1 | 0.4 | 2.9 | -12.3 | 1.0 |
| 2014-15 | 0.3 | 5.0 | -23.8 | -8.3 | -4.2 | 6.7 | 21.7 | -3.0 | -6.5 |
| 2015-16 | 9.3 | 8.7 | -20.4 | -1.4 | -10.8 | -2.9 | -20.2 | -0.6 | -5.0 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 8.7 | 2.9 | 0.1 | 2.6 | -10.1 | 1.9 | -19.8 | 1.6 | -1.1 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -1.2 | -9.9 | -17.1 | -16.8 | -14.6 | -8.4 | -8.9 | -0.2 | -10.6 |
| Jun Qtr | 10.8 | 18.0 | 13.8 | 10.4 | -13.8 | 15.1 | -2.4 | 14.2 | 6.4 |
| Sep Qtr | -7.1 | -5.9 | 4.6 | -4.7 | -13.0 | -5.7 | 1.2 | -1.3 | -5.2 |
| Dec Qtr | 8.4 | 5.2 | 0.2 | 3.4 | -8.4 | -2.9 | 1.7 | 19.0 | 2.4 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -9.5 | -6.4 | -17.1 | -4.0 | -9.1 | 1.9 | -4.4 | -16.8 | -9.9 |
| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 3.2 | 2.9 | -2.4 | -4.2 | -9.1 | -2.6 | -19.6 | - | -2.9 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 7.7 | -0.5 | -2.0 | -4.6 | -10.9 | -1.6 | -6.3 | 6.8 | -1.1 |
| Jun Qtr | 1.3 | 6.4 | 1.0 | -1.4 | -16.3 | -1.3 | -4.7 | 3.8 | -3.2 |
| Sep Qtr | -1.5 | -5.0 | 1.7 | -0.7 | -15.2 | 5.9 | 0.5 | 3.1 | -4.1 |
| Dec Qtr | 2.8 | 4.4 | -1.7 | -3.1 | -7.4 | -5.6 | 2.0 | 18.5 | 0.6 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -1.7 | 3.4 | -1.9 | 9.8 | -4.8 | 8.8 | -2.1 | -12.3 | -0.7 |
| TREND |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 4.1 | 1.7 | -3.1 | -0.5 | -8.7 | -1.6 | -8.1 | 1.6 | -2.1 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 4.0 | 2.1 | -0.4 | -2.5 | -14.2 | -0.8 | -10.4 | 3.6 | -2.9 |
| Jun Qtr | 2.6 | 1.0 | 0.4 | -3.7 | -14.2 | -0.3 | -5.4 | 6.5 | -2.7 |
| Sep Qtr | 0.5 | 1.0 | 0.3 | -0.7 | -13.0 | 1.1 | 0.6 | 6.8 | -2.2 |
| Dec Qtr | - | 1.6 | -0.5 | 1.2 | -10.1 | 1.6 | 0.3 | 4.3 | -1.4 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 0.1 | 1.8 | -1.2 | 2.2 | -6.8 | 1.8 | 0.4 | 1.4 | -0.6 |
| - nil or rounded to zero (including null cells) |  |  |  |  |  |  |  |  |  |
| (a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes. |  |  |  |  |  |  |  |  |  |

CONSTRUCTION WORK DONE(a), States and territories—Chain volume measures(a):

## Original

|  | NSW | Vic. | Qld | SA | WA | Tas. | $N T$ | ACT | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |

## BUILDING WORK DONE

| $\mathbf{2 0 1 3 - 1 4}$ | 25484.7 | 25807.9 | 17675.0 | 5011.6 | 14035.3 | 1050.3 | 1954.8 | 2043.9 | 93079.3 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: |
| $\mathbf{2 0 1 4 - 1 5}$ | 28537.0 | 27863.3 | 18205.5 | 5260.6 | 14405.0 | 1224.8 | 1466.1 | 2171.4 | 99133.7 |
| $\mathbf{2 0 1 5 - 1 6}$ | 32284.2 | 30383.8 | 20265.4 | 4864.6 | 13688.7 | 1273.6 | 1385.0 | 2139.8 | 106285.0 |
| $\mathbf{2 0 1 5}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Dec Qtr | 7991.4 | 7742.9 | 5292.2 | 1273.7 | 3646.9 | 332.9 | 356.0 | 524.7 | 27160.6 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | 7947.6 | 6699.5 | 4771.2 | 1095.8 | 2967.2 | 313.9 | 321.8 | 518.9 | 24635.9 |
| Jun Qtr | 8795.3 | 8113.0 | 5199.2 | 1202.7 | 3243.1 | 318.3 | 342.3 | 594.1 | 27808.0 |
| Sep Qtr | 8527.1 | 7827.5 | 5440.6 | 1208.8 | 3140.0 | 318.2 | 328.7 | 579.4 | 27370.5 |
| $\quad$ Dec Qtr | 8891.9 | 8182.6 | 5383.3 | 1254.3 | 2878.4 | 314.4 | 302.4 | 702.2 | 27909.4 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | 7786.5 | 7529.5 | 4182.1 | 1049.6 | 2512.5 | 288.1 | 254.6 | 559.9 | 24162.8 |


| ENGINEERING WORK DONE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2013-14 | 19228.8 | 10427.9 | 45750.8 | 5521.8 | 43770.3 | 1282.8 | 5927.0 | 905.8 | 132837.7 |
| 2014-15 | 16384.3 | 10209.2 | 30353.2 | 4398.3 | 40999.4 | 1266.2 | 8113.2 | 691.0 | 112414.9 |
| 2015-16 | 16804.3 | 11011.9 | 18395.2 | 4660.0 | 35712.8 | 1144.7 | 6258.2 | 704.9 | 94692.1 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 4273.6 | 2775.7 | 4959.9 | 1283.0 | 9694.0 | 279.0 | 1532.1 | 165.5 | 24962.8 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 4171.0 | 2777.9 | 3724.7 | 1031.2 | 8422.9 | 246.5 | 1398.9 | 170.1 | 21943.2 |
| Jun Qtr | 4631.0 | 3068.1 | 4467.6 | 1145.7 | 6579.9 | 327.0 | 1337.8 | 192.4 | 21749.4 |
| Sep Qtr | 3949.5 | 2693.5 | 4666.7 | 1029.3 | 5407.9 | 290.5 | 1370.8 | 196.8 | 19605.2 |
| Dec Qtr | 4638.3 | 2887.4 | 4740.8 | 1060.9 | 4951.4 | 276.8 | 1425.9 | 221.8 | 20203.4 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 4456.9 | 2834.1 | 4209.9 | 1172.2 | 4601.4 | 314.2 | 1398.2 | 208.4 | 19195.3 |


| CONSTRUCTION WORK DONE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2013-14 | 44804.6 | 36250.2 | 63712.0 | 10532.6 | 57824.0 | 2334.6 | 7872.5 | 2950.9 | 226284.8 |
| 2014-15 | 44921.3 | 38072.5 | 48558.8 | 9658.9 | 55404.3 | 2491.0 | 9579.3 | 2862.4 | 211548.6 |
| 2015-16 | 49088.6 | 41395.7 | 38660.6 | 9524.7 | 49401.5 | 2418.3 | 7643.2 | 2844.7 | 200977.1 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 12264.9 | 10518.5 | 10252.1 | 2556.7 | 13340.9 | 611.9 | 1888.1 | 690.2 | 52123.4 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12118.6 | 9477.4 | 8495.9 | 2127.0 | 11390.1 | 560.5 | 1720.7 | 688.9 | 46579.1 |
| Jun Qtr | 13426.3 | 11181.0 | 9666.8 | 2348.4 | 9823.0 | 645.3 | 1680.0 | 786.5 | 49557.4 |
| Sep Qtr | 12476.7 | 10521.1 | 10107.4 | 2238.2 | 8547.9 | 608.7 | 1699.6 | 776.3 | 46975.7 |
| Dec Qtr | 13530.2 | 11070.0 | 10124.1 | 2315.3 | 7829.8 | 591.2 | 1728.3 | 923.9 | 48112.8 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12243.4 | 10363.6 | 8392.0 | 2221.8 | 7114.0 | 602.3 | 1652.7 | 768.3 | 43358.2 |

(a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.

|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Period | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ |

BUILDING WORK DONE

| 2013-14 | 11.9 | 0.8 | 6.5 | 9.5 | 7.8 | -0.7 | 11.3 | -17.4 | 5.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 12.0 | 8.0 | 3.0 | 5.0 | 2.6 | 16.6 | -25.0 | 6.2 | 6.5 |
| 2015-16 | 13.1 | 9.0 | 11.3 | -7.5 | -5.0 | 4.0 | -5.5 | -1.5 | 7.2 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 5.8 | -1.1 | 5.8 | -1.5 | -4.8 | 7.9 | -2.4 | 4.5 | 1.8 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -0.5 | -13.5 | -9.8 | -14.0 | -18.6 | -5.7 | -9.6 | -1.1 | -9.3 |
| Jun Qtr | 10.7 | 21.1 | 9.0 | 9.8 | 9.3 | 1.4 | 6.4 | 14.5 | 12.9 |
| Sep Qtr | -3.0 | -3.5 | 4.6 | 0.5 | -3.2 | - | -4.0 | -2.5 | -1.6 |
| Dec Qtr | 4.3 | 4.5 | -1.1 | 3.8 | -8.3 | -1.2 | -8.0 | 21.2 | 2.0 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -12.4 | -8.0 | -22.3 | -16.3 | -12.7 | -8.4 | -15.8 | -20.3 | -13.4 |
| ENGINEERING WORK DONE |  |  |  |  |  |  |  |  |  |
| 2013-14 | -19.3 | -6.5 | 7.6 | -6.5 | -0.8 | 1.4 | 0.4 | 1.9 | -2.0 |
| 2014-15 | -14.8 | -2.1 | -33.7 | -20.3 | -6.3 | -1.3 | 36.9 | -23.7 | -15.4 |
| 2015-16 | 2.6 | 7.9 | -39.4 | 6.0 | -12.9 | -9.6 | -22.9 | 2.0 | -15.8 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 14.6 | 16.1 | -5.4 | 6.9 | -12.0 | -4.5 | -23.0 | np | -4.1 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -2.4 | 0.1 | -24.9 | -19.6 | -13.1 | -11.6 | -8.7 | np | -12.1 |
| Jun Qtr | 11.0 | 10.4 | 19.9 | 11.1 | -21.9 | 32.6 | -4.4 | np | -0.9 |
| Sep Qtr | -14.7 | -12.2 | 4.5 | -10.2 | -17.8 | -11.2 | 2.5 | 2.3 | -9.9 |
| Dec Qtr | 17.4 | 7.2 | 1.6 | 3.1 | -8.4 | -4.7 | 4.0 | 12.7 | 3.1 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -3.9 | -1.8 | -11.2 | 10.5 | -7.1 | 13.5 | -1.9 | -6.0 | -5.0 |


|  | CONSTRUCTION |  |  |  | WORK | DONE |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2013-14 | -4.4 | -1.4 | 7.3 | 0.5 | 1.1 | 0.4 | 2.9 | -12.3 | 1.0 |
| 2014-15 | 0.3 | 5.0 | -23.8 | -8.3 | -4.2 | 6.7 | 21.7 | -3.0 | -6.5 |
| 2015-16 | 9.3 | 8.7 | -20.4 | -1.4 | -10.8 | -2.9 | -20.2 | -0.6 | -5.0 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 8.7 | 2.9 | 0.1 | 2.6 | -10.1 | 1.9 | -19.8 | 1.6 | -1.1 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -1.2 | -9.9 | -17.1 | -16.8 | -14.6 | -8.4 | -8.9 | -0.2 | -10.6 |
| Jun Qtr | 10.8 | 18.0 | 13.8 | 10.4 | -13.8 | 15.1 | -2.4 | 14.2 | 6.4 |
| Sep Qtr | -7.1 | -5.9 | 4.6 | -4.7 | -13.0 | -5.7 | 1.2 | -1.3 | -5.2 |
| Dec Qtr | 8.4 | 5.2 | 0.2 | 3.4 | -8.4 | -2.9 | 1.7 | 19.0 | 2.4 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -9.5 | -6.4 | -17.1 | -4.0 | -9.1 | 1.9 | -4.4 | -16.8 | -9.9 |

- nil or rounded to zero (including null cells)
np not available for publication but included in totals where applicable, unless otherwise indicated
(a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.

CONSTRUCTION WORK DONE, Current prices

|  | BUILDING WORK DONE |  |  | ENGINEERING WORK DONE |  |  | CONSTRUCTION WORK DONE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Private | Public | Total | Private | Public | Total | Private | Public | Total |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
|  | ORIGINAL |  |  |  |  |  |  |  |  |
| 2013-14 | 78957.9 | 11427.5 | 90385.4 | 103588.7 | 29172.0 | 132760.7 | 182546.6 | 40599.5 | 223146.0 |
| 2014-15 | 89753.0 | 9380.7 | 99133.7 | 86442.6 | 25972.2 | 112414.8 | 176195.6 | 35352.9 | 211548.5 |
| 2015-16 | 100208.5 | 8746.8 | 108955.2 | 67927.0 | 27838.6 | 95765.5 | 168135.5 | 36585.3 | 204720.8 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 25680.7 | 2125.8 | 27806.5 | 18470.5 | 6889.3 | 25359.7 | 44151.2 | 9015.0 | 53166.3 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 23341.4 | 1962.9 | 25304.3 | 15451.7 | 6812.9 | 22264.6 | 38793.0 | 8775.9 | 47568.9 |
| Jun Qtr | 26232.0 | 2453.2 | 28685.2 | 13979.4 | 8186.9 | 22166.3 | 40211.4 | 10640.2 | 50851.5 |
| Sep Qtr | 25847.3 | 2534.9 | 28382.2 | 13261.3 | 6642.2 | 19903.4 | 39108.6 | 9177.0 | 48285.6 |
| Dec Qtr | 26769.4 | 2436.6 | 29206.1 | 13069.9 | 7675.6 | 20745.5 | 39839.3 | 10112.3 | 49951.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 23107.4 | 2285.5 | 25392.8 | 12283.1 | 7720.5 | 20003.6 | 35390.4 | 10006.0 | 45396.4 |

## SEASONALLY ADJUSTED

2015

| Dec Qtr | 24826.6 | 2070.2 | 26896.8 | 17695.9 | 6891.5 | 24587.4 | 42522.5 | 8961.8 | 51484.3 |
| :---: | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 25390.1 | 2119.1 | 27509.1 | 16412.3 | 7087.5 | 23499.8 | 41802.4 | 9206.5 | 51008.9 |
| Jun Qtr | 25952.5 | 2455.2 | 28407.7 | 14014.3 | 7220.0 | 21234.2 | 39966.7 | 9675.2 | 49642.0 |
| Sep Qtr | 24963.9 | 2419.3 | 27383.2 | 13018.5 | 7296.3 | 20314.8 | 37982.4 | 9715.7 | 47698.0 |
| Dec Qtr | 25893.1 | 2376.7 | 28269.7 | 12570.9 | 7664.2 | 20235.1 | 38464.0 | 10040.9 | 48504.8 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 25123.6 | 2462.2 | 27585.8 | 13010.1 | 7989.5 | 20999.5 | 38133.6 | 10451.7 | 48585.3 |

## TREND

| $\mathbf{2 0 1 5}$ |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Dec Qtr | 24852.2 | 2086.8 | 26939.0 | 18088.0 | 6836.9 | 24925.0 | 42940.2 | 8923.7 | 51864.0 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 25373.6 | 2206.5 | 27580.1 | 15978.2 | 7061.2 | 23039.4 | 41351.7 | 9267.7 | 50619.5 |
| Jun Qtr | 25588.7 | 2338.8 | 27927.5 | 14285.7 | 7202.2 | 21487.9 | 39874.4 | 9541.0 | 49415.3 |
| Sep Qtr | 25534.4 | 2413.9 | 27948.2 | 13224.6 | 7390.3 | 20614.9 | 38758.9 | 9804.2 | 48563.1 |
| Dec Qtr <br> $\mathbf{2 0 1 7}$ | 25430.5 | 2430.9 | 27861.4 | 12736.6 | 7647.6 | 20384.2 | 38167.1 | 10078.5 | 48245.6 |
| $\quad$ Mar Qtr | 25296.4 | 2423.8 | 27720.2 | 12652.3 | 7916.1 | 20568.4 | 37948.7 | 10339.9 | 48288.6 |



|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |

## BUILDING WORK DONE

| $\mathbf{2 0 1 3 - 1 4}$ | 24533.4 | 25194.5 | 16895.9 | 4984.3 | 13800.8 | 1036.8 | 1927.5 | 2012.2 | 90385.4 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: |
| $\mathbf{2 0 1 4 - 1 5}$ | 28537.0 | 27863.3 | 18205.5 | 5260.6 | 14405.0 | 1224.8 | 1466.1 | 2171.4 | 99 |
| $\mathbf{2 0 1 5 - 1 6}$ | 33588.3 | 30858.3 | 21004.9 | 4918.5 | 13713.4 | 1323.7 | 1381.0 | 2167.1 | 108955.2 |
| $\mathbf{2 0 1 5}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Dec Qtr | 8292.5 | 7867.4 | 5461.4 | 1284.1 | 3668.1 | 346.4 | 357.2 | 529.4 | 27806.5 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | 8263.5 | 6816.1 | 4972.1 | 1109.7 | 2968.2 | 327.6 | 321.9 | 525.2 | 25304.3 |
| Jun Qtr | 9214.0 | 8267.5 | 5472.7 | 1222.5 | 3226.7 | 335.5 | 337.3 | 609.1 | 28685.2 |
| Sep Qtr | 9017.2 | 7969.4 | 5786.2 | 1233.1 | 3118.8 | 339.1 | 322.7 | 595.6 | 28382.2 |
| $\quad$ Dec Qtr | 9536.3 | 8355.4 | 5816.1 | 1282.7 | 2856.2 | 335.3 | 297.0 | 727.0 | 29206.1 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | 8413.7 | 7715.7 | 4555.9 | 1075.0 | 2488.5 | 310.5 | 251.1 | 582.4 | 25392.8 |


| 2013-14 | 19095.0 | 10385.9 | 45847.0 | 5485.8 | 43844.8 | 1287.0 | 5917.7 | 897.5 | 132760.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 16384.3 | 10209.2 | 30353.2 | 4398.3 | 40999.4 | 1266.2 | 8113.2 | 691.0 | 112414.8 |
| 2015-16 | 16975.1 | 11115.6 | 18578.3 | 4719.2 | 36162.5 | 1151.9 | 6351.3 | 711.7 | 95765.5 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 4318.0 | 2817.8 | 5036.3 | 1302.1 | 9870.9 | 281.8 | 1565.6 | 167.2 | 25359.7 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 4209.5 | 2803.9 | 3777.3 | 1045.8 | 8578.3 | 248.8 | 1429.1 | 171.9 | 22264.6 |
| Jun Qtr | 4686.9 | 3088.1 | 4538.8 | 1166.8 | 6779.4 | 327.0 | 1385.6 | 193.8 | 22166.3 |
| Sep Qtr | 4011.7 | 2707.2 | 4724.9 | 1051.7 | 5514.7 | 291.8 | 1401.1 | 200.3 | 19903.4 |
| Dec Qtr | 4744.7 | 2903.5 | 4876.3 | 1093.9 | 5140.1 | 278.1 | 1489.4 | 226.3 | 20745.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 4604.8 | 2884.4 | 4406.2 | 1228.3 | 4854.8 | 318.8 | 1490.7 | 215.5 | 20003.6 |


| 2013-14 | 43628.3 | 35580.4 | 62742.9 | 10470.1 | 57645.6 | 2323.8 | 7845.2 | 2909.7 | 223146.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 44921.3 | 38072.5 | 48558.8 | 9658.9 | 55404.3 | 2491.0 | 9579.3 | 2862.4 | 211548.5 |
| 2015-16 | 50563.4 | 41973.9 | 39583.1 | 9637.7 | 49875.9 | 2475.7 | 7732.3 | 2878.8 | 204720.8 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 12610.6 | 10685.3 | 10497.7 | 2586.2 | 13538.9 | 628.2 | 1922.8 | 696.6 | 53166.3 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 12473.1 | 9620.0 | 8749.4 | 2155.5 | 11546.5 | 576.4 | 1751.0 | 697.0 | 47568.9 |
| Jun Qtr | 13900.9 | 11355.6 | 10011.5 | 2389.3 | 10006.1 | 662.5 | 1722.8 | 802.9 | 50851.5 |
| Sep Qtr | 13028.9 | 10676.6 | 10511.2 | 2284.8 | 8633.5 | 630.9 | 1723.8 | 796.0 | 48285.6 |
| Dec Qtr | 14281.0 | 11258.9 | 10692.5 | 2376.6 | 7996.2 | 613.5 | 1786.4 | 953.2 | 49951.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 13018.6 | 10600.2 | 8962.1 | 2303.2 | 7343.3 | 629.4 | 1741.8 | 797.9 | 45396.4 |


|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Period | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ |

## BUILDING WORK DONE

| 2013-14 | 14.5 | 2.1 | 8.3 | 10.2 | 10.4 | -1.0 | 15.6 | -16.5 | 7.8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\mathbf{2 0 1 4 - 1 5}$ | 16.3 | 10.6 | 7.8 | 5.5 | 4.4 | 18.1 | -23.9 | 7.9 | 9.7 |
| 2015-16 | 17.7 | 10.7 | 15.4 | -6.5 | -4.8 | 8.1 | -5.8 | -0.2 | 9.9 |
| 2015 |  |  |  |  |  |  |  |  |  |
| $\quad$ Dec Qtr | 6.1 | -0.5 | 7.1 | -1.4 | -4.7 | 10.2 | -2.1 | 5.2 | 2.4 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -0.3 | -13.4 | -9.0 | -13.6 | -19.1 | -5.4 | -9.9 | -0.8 | -9.0 |
| Jun Qtr | 11.5 | 21.3 | 10.1 | 10.2 | 8.7 | 2.4 | 4.8 | 16.0 | 13.4 |
| Sep Qtr | -2.1 | -3.6 | 5.7 | 0.9 | -3.3 | 1.1 | -4.3 | -2.2 | -1.1 |
| $\quad$ Dec Qtr | 5.8 | 4.8 | 0.5 | 4.0 | -8.4 | -1.1 | -8.0 | 22.0 | 2.9 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | -11.8 | -7.7 | -21.7 | -16.2 | -12.9 | -7.4 | -15.5 | -19.9 | -13.1 |


| 2013-14 | -17.8 | -4.8 | 8.9 | -4.6 | 0.1 | 1.7 | 1.2 | 4.0 | -0.7 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2014-15 | -14.2 | -1.7 | -33.8 | -19.8 | -6.5 | -1.6 | 37.1 | -23.0 | -15.3 |
| 2015-16 | 3.6 | 8.9 | -38.8 | 7.3 | -11.8 | -9.0 | -21.7 | 3.0 | -14.8 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 14.8 | 17.1 | -3.6 | 8.1 | -9.7 | -4.3 | -20.6 | -6.5 | -2.4 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -2.5 | -0.5 | -25.0 | -19.7 | -13.1 | -11.7 | -8.7 | 2.8 | -12.2 |
| Jun Qtr | 11.3 | 10.1 | 20.2 | 11.6 | -21.0 | 31.4 | -3.0 | 12.7 | -0.4 |
| Sep Qtr | -14.4 | -12.3 | 4.1 | -9.9 | -18.7 | -10.8 | 1.1 | 3.4 | -10.2 |
| Dec Qtr | 18.3 | 7.3 | 3.2 | 4.0 | -6.8 | -4.7 | 6.3 | 12.9 | 4.2 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -2.9 | -0.7 | -9.6 | 12.3 | -5.5 | 14.6 | 0.1 | -4.8 | -3.6 |


| 2013-14 | -2.3 | - | 8.8 | 1.9 | 2.4 | 0.5 | 4.4 | -11.1 | 2.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 3.0 | 7.0 | -22.6 | -7.7 | -3.9 | 7.2 | 22.1 | -1.6 | -5.2 |
| 2015-16 | 12.6 | 10.2 | -18.5 | -0.2 | -10.0 | -0.6 | -19.3 | 0.6 | -3.2 |
| 2015 |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 8.9 | 3.6 | 1.7 | 3.2 | -8.4 | 3.2 | -17.7 | 2.1 | 0.1 |
| 2016 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -1.1 | -10.0 | -16.7 | -16.7 | -14.7 | -8.2 | -8.9 | 0.1 | -10.5 |
| Jun Qtr | 11.4 | 18.0 | 14.4 | 10.8 | -13.3 | 14.9 | -1.6 | 15.2 | 6.9 |
| Sep Qtr | -6.3 | -6.0 | 5.0 | -4.4 | -13.7 | -4.8 | 0.1 | -0.9 | -5.0 |
| Dec Qtr | 9.6 | 5.5 | 1.7 | 4.0 | -7.4 | -2.8 | 3.6 | 19.8 | 3.5 |
| 2017 |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -8.8 | -5.9 | -16.2 | -3.1 | -8.2 | 2.6 | -2.5 | -16.3 | -9.1 |

[^0]VALUE OF BUILDING WORK DONE, Chain volume measures(a)


## SEASONALLY ADJUSTED

2015

| Dec Qtr | 14729.1 | 14957.1 | 1976.0 | 2013.8 | 16705.0 | 16970.9 | 7523.2 | 9300.8 | 24228.2 | 26271.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 15495.7 | 15730.4 | 2001.4 | 2033.5 | 17497.1 | 17763.9 | 7203.4 | 9020.7 | 24700.5 | 26784.6 |
| Jun Qtr | 15806.0 | 16030.7 | 2065.7 | 2094.7 | 17871.7 | 18125.3 | 7264.5 | 9419.0 | 25136.1 | 27544.3 |
| Sep Qtr | 15540.3 | 15722.6 | 2034.8 | 2068.8 | 17575.1 | 17791.4 | 6434.0 | 8594.3 | 24009.2 | 26385.7 |
| Dec Qtr | 15727.4 | 15920.2 | 2118.4 | 2152.3 | 17845.8 | 18072.6 | 6831.0 | 8920.4 | 24676.8 | 26992.9 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | 14996.5 | 15177.6 | 1984.7 | 2041.7 | 16981.1 | 17219.2 | 6845.6 | 9008.0 | 23826.7 | 26227.2 |


|  | TREND |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2015 |  |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 14817.2 | 15061.4 | 1994.9 | 2030.2 | 16812.0 | 17091.5 | 7416.2 | 9196.9 | 24228.3 | 26288.4 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 15380.8 | 15612.5 | 2006.8 | 2039.8 | 17387.6 | 17652.3 | 7290.6 | 9196.8 | 24678.2 | 26849.2 |
| Jun Qtr | 15706.2 | 15919.9 | 2044.0 | 2074.0 | 17750.1 | 17993.9 | 7014.9 | 9067.1 | 24765.0 | 27061.0 |
| Sep Qtr | 15685.6 | 15884.5 | 2065.2 | 2098.0 | 17750.7 | 17982.4 | 6796.1 | 8928.0 | 24546.9 | 26910.9 |
| Dec Qtr | 15482.0 | 15668.5 | 2058.2 | 2098.5 | 17540.2 | 17767.0 | 6728.7 | 8876.5 | 24269.0 | 26643.6 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 15211.0 | 15389.8 | 2032.8 | 2082.5 | 17242.8 | 17471.9 | 6739.2 | 8877.2 | 23982.0 | 26343.4 |

[^1]|  | NEW |  | ALTERATIONS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | RESIDENTIAL |  | AND |  | RESIDENTIAL |  | NON-RESIDENTIAL |  | TOTAL |  |
|  | BUILDING |  | ADDITIONS |  | BUILDING |  | BUILDING |  | BUILDING |  |
|  | Private | Total | Private | Total | Private | Total | Private | Total | Private | Total |
| Period | \% | \% | \% | \% | \% | \% | \% | \% | \% | \% |

ORIGINAL

| 2013-14 | 7.4 | 7.4 | 0.4 | 0.4 | 6.4 | 6.4 | 3.7 | 5.1 | 5.5 | 5.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 12.6 | 12.3 | 2.7 | 2.2 | 11.3 | 10.9 | 8.2 | -0.1 | 10.3 | 6.5 |
| 2015-16 | 12.8 | 12.8 | 3.3 | 3.0 | 11.6 | 11.6 | 2.9 | -0.1 | 8.8 | 7.2 |
| 2015 |  |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 1.5 | 1.1 | 3.9 | 3.7 | 1.8 | 1.4 | 3.5 | 2.5 | 2.3 | 1.8 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -3.9 | -3.9 | -18.4 | -18.1 | -5.7 | -5.7 | -17.5 | -15.8 | -9.4 | -9.3 |
| Jun Qtr | 10.8 | 10.7 | 17.6 | 17.1 | 11.6 | 11.4 | 12.7 | 15.8 | 11.9 | 12.9 |
| Sep Qtr | 0.5 | 0.3 | 1.8 | 1.9 | 0.6 | 0.5 | -8.6 | -5.6 | -2.0 | -1.6 |
| Dec Qtr | -0.2 | -0.2 | 9.8 | 9.4 | 0.9 | 0.9 | 7.2 | 4.2 | 2.6 | 2.0 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -12.8 | -12.8 | -24.6 | -22.9 | -14.3 | -14.1 | -13.7 | -12.1 | -14.1 | -13.4 |


| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2015 |  |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 3.1 | 2.8 | -1.4 | -1.3 | 2.6 | 2.3 | 3.1 | 2.3 | 2.7 | 2.3 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 5.2 | 5.2 | 1.3 | 1.0 | 4.7 | 4.7 | -4.3 | -3.0 | 1.9 | 2.0 |
| Jun Qtr | 2.0 | 1.9 | 3.2 | 3.0 | 2.1 | 2.0 | 0.8 | 4.4 | 1.8 | 2.8 |
| Sep Qtr | -1.7 | -1.9 | -1.5 | -1.2 | -1.7 | -1.8 | -11.4 | -8.8 | -4.5 | -4.2 |
| Dec Qtr | 1.2 | 1.3 | 4.1 | 4.0 | 1.5 | 1.6 | 6.2 | 3.8 | 2.8 | 2.3 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -4.6 | -4.7 | -6.3 | -5.1 | -4.8 | -4.7 | 0.2 | 1.0 | -3.4 | -2.8 |

## TREND

| $\mathbf{2 0 1 5}$ |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Dec Qtr | 3.6 | 3.5 | -0.4 | -0.5 | 3.1 | 3.0 | 0.4 | 0.4 | 2.2 | 2.1 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 3.8 | 3.7 | 0.6 | 0.5 | 3.4 | 3.3 | -1.7 | - | 1.9 | 2.1 |
| Jun Qtr | 2.1 | 2.0 | 1.9 | 1.7 | 2.1 | 1.9 | -3.8 | -1.4 | 0.4 | 0.8 |
| Sep Qtr | -0.1 | -0.2 | 1.0 | 1.2 | - | -0.1 | -3.1 | -1.5 | -0.9 | -0.6 |
| Dec Qtr | -1.3 | -1.4 | -0.3 | - | -1.2 | -1.2 | -1.0 | -0.6 | -1.1 | -1.0 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |  |
| $\quad$ Mar Qtr | -1.8 | -1.8 | -1.2 | -0.8 | -1.7 | -1.7 | 0.2 | - | -1.2 | -1.1 |

[^2](a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory Notes.


SEASONALLY ADJUSTED
2015

| Dec Qtr | 15147.3 | 15379.8 | 2048.5 | 2087.7 | 17195.8 | 17467.5 | 7630.8 | 9429.3 | 24826.6 | 26896.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 15979.1 | 16218.8 | 2077.2 | 2110.5 | 18056.3 | 18329.3 | 7333.7 | 9179.8 | 25390.1 | 27509.1 |
| Jun Qtr | 16369.2 | 16599.2 | 2158.0 | 2188.3 | 18527.3 | 18787.5 | 7425.2 | 9620.2 | 25952.5 | 28407.7 |
| Sep Qtr | 16220.4 | 16409.3 | 2146.6 | 2181.7 | 18367.0 | 18591.1 | 6596.9 | 8792.2 | 24963.9 | 27383.2 |
| Dec Qtr | 16560.9 | 16761.6 | 2249.8 | 2285.5 | 18810.8 | 19047.1 | 7082.3 | 9222.6 | 25893.1 | 28269.7 |
| $\mathbf{2 0 1 7}$ |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 15876.3 | 16063.7 | 2128.0 | 2188.9 | 18004.2 | 18252.6 | 7119.3 | 9333.2 | 25123.6 | 27585.8 |

$\qquad$ TREND

| $\mathbf{2 0 1 5}$ |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Dec Qtr | 15269.1 | 15517.9 | 2066.5 | 2103.0 | 17335.6 | 17621.0 | 7516.6 | 9318.0 | 24852.2 | 26939.0 |
| $\mathbf{2 0 1 6}$ |  |  |  |  |  |  |  |  |  |  |



## ORIGINAL

| 2013-14 | 10.0 | 10.1 | 3.8 | 3.8 | 9.1 | 9.2 | 4.5 | 5.9 | 7.6 | 7.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014-15 | 16.4 | 16.0 | 7.2 | 6.7 | 15.1 | 14.7 | 10.6 | 2.1 | 13.7 | 9.7 |
| 2015-16 | 16.0 | 16.1 | 7.1 | 6.9 | 14.9 | 14.9 | 4.6 | 1.5 | 11.6 | 9.9 |
| 2015 |  |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 2.1 | 1.6 | 4.4 | 4.2 | 2.3 | 1.9 | 4.2 | 3.2 | 2.9 | 2.4 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -3.6 | -3.7 | -18.3 | -18.0 | -5.5 | -5.5 | -17.1 | -15.5 | -9.1 | -9.0 |
| Jun Qtr | 11.3 | 11.2 | 18.4 | 17.9 | 12.1 | 11.9 | 13.1 | 16.3 | 12.4 | 13.4 |
| Sep Qtr | 1.2 | 1.0 | 2.7 | 2.7 | 1.4 | 1.2 | -8.5 | -5.5 | -1.5 | -1.1 |
| Dec Qtr | 0.7 | 0.6 | 10.6 | 10.2 | 1.8 | 1.8 | 8.4 | 5.3 | 3.6 | 2.9 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -12.3 | -12.4 | -23.8 | -22.2 | -13.8 | -13.6 | -13.4 | -12.0 | -13.7 | -13.1 |


| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2015 |  |  |  |  |  |  |  |  |  |  |
| Dec Qtr | 3.7 | 3.4 | -0.9 | -0.9 | 3.1 | 2.8 | 3.7 | 3.0 | 3.3 | 2.9 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 5.5 | 5.5 | 1.4 | 1.1 | 5.0 | 4.9 | -3.9 | -2.6 | 2.3 | 2.3 |
| Jun Qtr | 2.4 | 2.3 | 3.9 | 3.7 | 2.6 | 2.5 | 1.2 | 4.8 | 2.2 | 3.3 |
| Sep Qtr | -0.9 | -1.1 | -0.5 | -0.3 | -0.9 | -1.0 | -11.2 | -8.6 | -3.8 | -3.6 |
| Dec Qtr | 2.1 | 2.1 | 4.8 | 4.8 | 2.4 | 2.5 | 7.4 | 4.9 | 3.7 | 3.2 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -4.1 | -4.2 | -5.4 | -4.2 | -4.3 | -4.2 | 0.5 | 1.2 | -3.0 | -2.4 |

## TREND

| 2015 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dec Qtr | 4.7 | 4.7 | 0.2 | 0.1 | 4.2 | 4.1 | 0.8 | 0.9 | 3.1 | 3.0 |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | 3.9 | 3.8 | 1.0 | 0.9 | 3.6 | 3.4 | -1.3 | 0.4 | 2.1 | 2.4 |
| Jun Qtr | 2.6 | 2.5 | 2.4 | 2.2 | 2.6 | 2.4 | -3.4 | -1.0 | 0.8 | 1.3 |
| Sep Qtr | 0.6 | 0.5 | 1.8 | 2.0 | 0.7 | 0.6 | -2.6 | -1.1 | -0.2 | 0.1 |
| Dec Qtr | -0.6 | -0.6 | 0.5 | 0.9 | -0.4 | -0.4 | -0.3 | - | -0.4 | -0.3 |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Mar Qtr | -1.1 | -1.1 | -0.5 | - | -1.0 | -1.0 | 0.8 | 0.5 | -0.5 | -0.5 |

RELATIVE STANDARD ERRORS, Total construction work done - States and Territories

|  | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \% | \% | \% | \% | \% | \% | \% | \% | Private \% | Public \% | Total \% |
|  | DECEMBER QUARTER 2016 |  |  |  |  |  |  |  |  |  |  |
| Building work done | 1.4 | 2.0 | 1.7 | 1.8 | 1.6 | 1.7 | 1.7 | 1.5 | 0.9 | 1.4 | 0.8 |
| Engineering work done | 2.7 | 3.7 | 1.7 | 5.4 | 1.7 | 2.2 | 0.3 | 3.9 | 1.0 | 2.0 | 1.1 |
| Construction work done | 1.3 | 1.8 | 1.2 | 2.7 | 1.2 | 1.4 | 0.4 | 1.5 | 0.7 | 1.5 | 0.7 |
| MARCH QUARTER 2017 |  |  |  |  |  |  |  |  |  |  |  |
| Building work done | 1.4 | 1.9 | 1.8 | 1.8 | 1.6 | 1.8 | 1.3 | 1.4 | 0.9 | 1.5 | 0.8 |
| Engineering work done | 2.7 | 3.4 | 2.2 | 3.6 | 1.9 | 1.4 | 0.6 | 4.0 | 1.1 | 1.4 | 0.9 |
| Construction work done | 1.3 | 1.7 | 1.4 | 2.1 | 1.3 | 1.1 | 0.5 | 1.5 | 0.7 | 1.2 | 0.6 |

RELATIVE STANDARD ERRORS, Building work done - Australia

|  | Private | Total |
| :---: | :---: | :---: |
|  | \% | \% |
| DECEMBER QUARTER 2016 |  |  |
| New residential building | 1.1 | 1.1 |
| Alterations and additions | 1.9 | 1.9 |
| Residential building | 1.0 | 1.0 |
| Non-residential building | 1.9 | 1.5 |
| Total building | 0.9 | 0.8 |
| MARCH QUARTER 2017 |  |  |
| New residential building | 1.1 | 1.0 |
| Alterations and additions | 2.4 | 2.3 |
| Residential building | 1.0 | 1.0 |
| Non-residential building | 2.0 | 1.6 |
| Total building | 0.9 | 0.8 |

1 This publication contains preliminary estimates of building and engineering construction work done during the current quarter and revised estimates for the previous two quarters. The estimates of building work done and engineering work done are from the quarterly Building Activity Survey and the quarterly Engineering Construction Survey respectively. Estimates of work done are based upon a response from each survey of approximately $85 \%$ of the value of work done during the current quarter. More comprehensive and updated results will be available shortly in Building Activity, Australia (cat. no. 8752.0) and Engineering Construction Activity, Australia (cat. no. 8762.0).

2 The scope of the Building Activity Survey is all approved building activity involving the construction of new buildings or structural alterations, extensions or other additions made to existing buildings. Maintenance work is excluded but major repairs involving partial demolition and reconstruction are included.
3 As of the September quarter 2012, the survey consists of:

- an indirect, modelled component comprising residential building work with approval values from $\$ 10,000$ to less than $\$ 50,000$ and non-residential building work with approval values from $\$ 50,000$ to less than $\$ 250,000$. The contributions from these building jobs are modelled based on their building approval details.
- a direct collection of all identified building work having approval values of $\$ 5,000,000$ or more.
- a sample survey, selected from other identified building work.

4 For any particular quarter the Building Activity Survey includes newly selected jobs appearing in the survey for the first time and all incomplete building jobs which were selected in previous quarters. New selections are drawn from building jobs approved in the 3 month period prior to the last month in the quarter (e.g. up to the end of August for new selections in the September quarter survey) using the rules presented in paragraph 3, and any jobs otherwise identified to have commenced with approval values in excess of $\$ 5$ million, irrespective of the approval month. This may result in some jobs both approved and commencing in the last month of the quarter being shown as commencements in the following quarter.

5 The scope of the Engineering Construction Survey is all engineering construction activity undertaken in Australia. This incorporates all construction activity except the construction of new buildings or structural alterations, extensions or other additions made to existing buildings. Maintenance work is excluded but major repairs involving partial demolition and reconstruction are included. Since Engineering Construction Survey and Building Activity Survey are activity-based, there are a number of conceptual differences with other ABS surveys. For more information, see feature article "Mining Investment in ABS Publications" which was released with publication Private New Capital Expenditure and Expected Expenditure, Australia, March 2012 (cat. no. 5625.0).
6 In the Engineering Construction Survey, the statistical unit used to represent businesses, and for which statistics are reported, is the Australian Business Number (ABN) unit, in most cases. The ABN unit is the business unit which has registered for an ABN, and thus appears on the Australian Taxation Office (ATO) administered Australian Business Register. This unit is suitable for Australian Bureau of Statistics statistical needs when the business is simple in structure. For more significant and diverse businesses where the ABN unit is not suitable for Australian Bureau of Statistics statistical needs, the statistical unit used is the Type of Activity Unit (TAU). A TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision - and the TAU is classified to the relevant

SCOPE AND COVERAGE continued

RELATIONSHIP WITH
NATIONAL ACCOUNTS
subdivision of the Australian and New Zealand Standard Industrial Classification (ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision and the TAU is classified to the predominant ANZSIC subdivision.

7 Further details about the ABS economic statistical units used in the Engineering Construction Survey, and in other ABS economic surveys (both sample surveys and censuses), can be found in Chapter 2 of the Standard Economic Sector Classifications of Australia (SESCA) 2008 (cat. no. 1218.0).

8 Data on the value of work done on the construction of new private sector residential buildings, alterations and additions to private sector residential buildings, private sector non-residential buildings and the value of private sector engineering construction activity are the major sources of data which are used to compile the national accounts estimates for private gross fixed capital formation on dwellings, and other buildings and structures. However, there are some adjustments to the survey data which are made in the process of compiling these national accounts series. Allowances are made for the value of activity which is out of scope of the Building Activity Survey and the Engineering Construction Survey. Such activity includes work done on projects which fall below the size cut-offs used for the Building Activity survey and also the value of building work done which is undertaken without obtaining a building permit, either because such a permit is not required or because the requisite permit is not obtained. The national accounts estimates also make allowances for purchases (less sales) of buildings and other structures from (to) the public sector.

9 Statistics on the value of work (current prices) show residential building work done on a GST inclusive basis and non-residential work and engineering construction work done on a GST exclusive basis. This approach is consistent with that adopted in the Australian National Accounts which is based on the conceptual framework described in the 2008 edition of the international statistical standard System of National Accounts (SNA08).

10 SNA08 requires value added taxes (VAT), such as the GST, to be recorded on a net basis where:
(a) both outputs of goods and services and imports are valued excluding invoiced VAT
(b) purchases of goods and services are recorded including non-deductible VAT.

11 Under the net system, VAT is recorded as being payable by purchasers, not sellers, and then only by those purchasers who are not able to deduct it. Almost all VAT is therefore recorded in the SNA08 as being paid on final uses - mainly on household consumption. Small amounts of VAT, may however, be paid by businesses in respect of certain kinds of purchases on which VAT may not be deductible.

12 The ABS records value of work done inclusive of GST in respect of residential construction and exclusive of GST in respect of non-residential construction and engineering construction. Purchasers of residential structures are unable to deduct GST from the purchase price. For non-residential structures and engineering construction, the reverse is true in most circumstances.

13 Total construction work is derived by adding total building work and total engineering construction work. To derive total building activity it is appropriate to add the residential and non-residential components. Valuation of the components of the total is consistent, since, for both components, the value of work done is recorded inclusive of non-deductible GST paid by the purchaser. As such, total building activity and total construction includes the non-deductible GST payable on residential building.
treatment of the gst continued

CLASSIFICATION

RELIABILITY OF THE
EStimates

14 As estimates for engineering work are provided on a GST exclusive basis, and the majority of construction materials used were exempt from Wholesale Sales Tax, the introduction of the GST had little direct effect on the estimates of engineering construction.

15 Ownership. The ownership of a building is classified as either private sector or public sector, according to the sector of the intended owner of the completed building as evident at the time of approval. Engineering projects are classified as either private sector or public sector according to the expected ownership of the project at the time of completion

16 Building jobs are classified both by the Type of building ('residential' and 'non-residential') and by the Type of work involved ('new' and 'alterations and additions'). For residential buildings these classifications are used in conjunction with each other. The classes are defined in the Glossary.

17 The estimates of both building activity and engineering activity are based on sample surveys. Because data are not collected for all building jobs nor for all engineering jobs, the published estimates are subject to sampling variability. Relative standard errors give a measure of this variability and therefore indicate the degree of confidence that can be attached to the data.

18 Estimates presented in the tables are subject to sampling error arising from the inclusion of a sample only; that is, they may differ from the figures that would have been obtained if all eligible building jobs and engineering businesses had been included in the surveys. The likely differences due to the sampling process can be characterised by the standard error (SE) of the estimate. To more easily determine the relative quality of an estimate or to compare the quality of different estimates, the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the corresponding estimate, is commonly used. There are about two chances in three that an estimate from a sample of a group will differ by less than one RSE of the figure that would have been obtained if the entire group were surveyed, and about nineteen chances in twenty that the difference will be less than two RSEs of the estimate. Estimated RSEs for the value of work done in this quarter are given in tables 15 and 16 of this publication.

19 In the seasonally adjusted series, account has been taken of normal seasonal factors, 'trading day' effects arising from the varying numbers of working days in a quarter and the effect of movement in the date of Easter which may, in successive years, affect figures for different quarters.
20 Since seasonally adjusted statistics reflect both irregular and trend movements, an upward or downward movement in a seasonally adjusted series does not necessarily indicate a change of trend. Particular care should therefore be taken in interpreting individual quarter-to-quarter movements.

21 The seasonally adjusted estimates in this publication are produced by the concurrent seasonal adjustment method which takes account of the latest available original estimates. The concurrent method improves the estimation of seasonal factors and, therefore, the seasonally adjusted and trend estimates of the current and previous quarters.

22 A more detailed review of concurrent seasonal factors will be conducted annually, generally prior to the release of data for the March quarter.

23 The revision properties of the seasonally adjusted and trend estimates have been improved by the use of autoregressive integrated moving average (ARIMA) modelling. ARIMA modelling relies on the characteristics of the series being analysed to project future period data. The ARIMA model is assessed as part of the annual reanalysis. For

SEASONAL ADJUSTMENT
continued

TREND ESTIMATES
more information on the details of ARIMA modelling see feature article: Use of ARIMA modelling to reduce revisions in the October 2004 issue of Australian Economic Indicators (cat. no. 1350.0).

24 Seasonally adjusted series can be smoothed to reduce the impact of the irregular component in the adjusted series. This smoothed seasonally adjusted series is called a trend estimate.

25 The trend estimates are derived by applying a 7-term Henderson moving average to the seasonally adjusted series. The 7 -term Henderson average (like all Henderson averages) is symmetric but, as the end of a time series is approached, asymmetric forms of the average are applied. Unlike weights of the standard 7 -term Henderson moving average, the weights employed here have been tailored to suit the particular characteristics of individual series.

26 While the smoothing technique described in paragraphs 24 and 25 enables trend estimates to be produced for recent quarters, it does result in revisions to the estimates for the most recent three quarters as additional observations become available. There may also be revisions because of changes in the original data. For further information, see Information Paper: A Guide to Interpreting Time Series-Monitoring Trends, 2003 (cat. no. 1349.0).

27 Chain volume estimates of the value of work done are presented in original, seasonally adjusted and trend terms.

28 While current price estimates of value of work done reflect both price and volume changes, chain volume estimates measure changes in value after the direct effects of price changes have been eliminated and therefore only reflect volume changes. The direct impact of the GST is a price change, and hence is removed from chain volume estimates. The deflators used to revalue the current price estimates in this publication are derived from the same price data underlying the deflators compiled for the dwellings and new other building components, and the new engineering construction component, of the national accounts aggregate 'Gross fixed capital formation'.

29 The chain volume measures of work done appearing in this publication are annually reweighted chain Laspeyres indexes referenced to current price values in a chosen reference year. The reference year is updated annually in the September quarter publication. Each year's data in the value of work done series are based on the prices of the previous year, except for the quarters of the latest incomplete year which are based upon the current reference year. Comparability with previous years is achieved by linking (or chaining) the series together to form a continuous time series.
30 Chain volume measures do not, in general, sum exactly to the extrapolated total value of the components. Further information on the nature and concepts of chain volume measures is contained in the ABS Information Paper: Australian National Accounts, Introduction of Chain Volume and Price Indexes (cat. no. 5248.0).

31 The factors used to seasonally adjust the chain volume series are identical to those used to adjust the corresponding current price series.

32 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

33 All tables in this publication, plus some additional state and territory series are available in electronic form on the ABS web site.

RELATED PRODUCTS continued

ABS DATA AVAILABLE ON REQUEST

34 Users may also wish to refer to the following publications: Building Activity, Australia, cat. no. 8752.0
Building Approvals, Australia, cat. no. 8731.0
Engineering Construction Activity, Australia, cat. no. 8762.0
House Price Indexes: Eight Capital Cities, cat. no. 6416.0
Housing Finance, Australia, cat. no. 5609.0
Private Sector Construction Industry, Australia, cat. no. 8772.0
Producer Price Indexes, Australia, cat. no. 6427.0.
35 As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. Inquiries should be made to the National Information and Referral Service on 1300135070 . The ABS Privacy Policy outlines how the ABS will handle any personal information that you provide to us.

| \$m | million dollars |
| ---: | :--- |
| ABN | Australian Business Number |
| ABS | Australian Bureau of Statistics |
| ACT | Australian Capital Territory |
| ANZSIC | Australian and New Zealand Standard Industrial Classification |
| ATO | Australian Taxation Office |
| Aust. | Australia |
| GST | goods and services tax |
| NSW | New South Wales |
| NT | Northern Territory |
| qtr | quarter |
| Qld | Queensland |
| SA | South Australia |
| Tas. | Tasmania |
| TAU | type of activity unit |
| VAT | value added tax |
| Vic. | Victoria |
| WA | Western Australia |

## APPENDIX LIST OF ELECTRONIC TABLES

ELECTRONIC TABLES
The following tables are available electronically via the ABS web site. Not all series in the table go back to the earliest start date.

WORK DONE
$\left.\begin{array}{lrrrr} & \begin{array}{r}\text { Publication } \\ \text { table no. }\end{array} & \begin{array}{r}\text { Electronic } \\ \text { table no. }\end{array} \\ \text { date }\end{array}\right]$

DATACUBES

|  | Publication <br> table no. | Electronic <br> table no. Start date |
| :--- | ---: | :---: |
| Relative standard errors, total construction work done - states and territories | 15 | Datacube |
| Relative standard errors, building work done - Australia | 16 | Datacube |
| Relative standard errors, building work done - states and territories | na | Datacube |

## Alterations and additions

Building
Building work done Construction work done Dwelling unit

## Engineering work done

New

Non-residential building
Residential building
Type of building

Refer to Type of work. The term 'Alterations and additions' in tables 11, 12, 13, 14 and 16 refers to alterations and additions to residential buildings only.

A building is a rigid, fixed and permanent structure which has a roof. Its intended purpose is primarily to house people, plant, machinery, vehicles, goods or livestock. An integral feature of a building's design, to satisfy its intended use, is the provision for regular access by persons.

The Value of building work done including only work carried out during the quarter
The sum of building work done and engineering work done.
A dwelling unit is a self-contained suite of rooms, including cooking and bathing facilities and intended for long-term residential use. Units (whether self-contained or not) within buildings offering institutional care, such as hospitals, or temporary accommodation such as motels, hostels and holiday apartments, are not defined as dwelling units. The value of units of this type is included in non-residential building.

The Value of engineering work done including only work carried out during the quarter Refer to Type of Work. Refer to Type of Building. Refer to Type of Building.

Buildings are classified as either:

- Residential building

A residential building is a building consisting of one or more dwelling units.Ressidential buildings can be either houses or other residential buildings.

- A bouse is a detached building primarily used for long term residential purposes. It consists of one dwelling unit. For instance, detached 'granny flats' and detached dwelling units (e.g. caretaker's residences) associated with a non-residential building are defined as houses. Also includes 'cottages', 'bungalows' and rectories.
- An other residential building is a building other than a house primarily used for long-term residential purposes. An other residential building contains more than one dwelling unit. Other residential buildings are coded to the following categories: semidetached, row or terrace house or townhouse with one storey; semidetached, row or terrace house or townhouse with two or more storeys; flat, unit or apartment in a building of one or two storeys; flat, unit or apartment in a building of three storeys; flat, unit or apartment in a building of four or more storeys; flat, unit or apartment attached to a house; other/number of storeys unknown.


## - Non-residential building

A non-residential building is primarily intended for purposes other than long term residential purposes. Note that, on occasions, one or more dwelling units may be created through non-residential building activity. The value of these dwelling units cannot be separated out from that of the non-residential building which they are part of, therefore the value associated with these remain in the appropriate non-residential category.
Non-residential building's are further classified by their functional use at time of approval.

Type of work The Type of Work classification refers to building activity approved to be carried out and

Type of work continued

Value of building work done

Value of engineering work
consists of:

## Alterations and additions

Building activity carried out on existing buildings excluding conversions. Includes adding to or diminishing floor area, altering the structural design of a building and affixing rigid components which are integral to the functioning of the building. Total alterations and additions includes the conversion of non-residential buildings to residential buildings.
New
Building activity which will result in the creation of a building which previously did not exist

Includes the costs of materials fixed in place, labour, and architects fees. It excludes the value of land and landscaping and non-building components such as fencing, paving roadworks, tennis courts, outdoor pools and car parks.

The value of engineering work done for the private sector consists of the value of work done done on prime contracts, plus speculative contracts, plus work done on own account. The value of engineering work done for the public sector is the work done by the organisation's own workforce and subcontractors. In each case, the value excludes the cost of land and repair and maintenance activity, as well as the value of any transfers of existing assets, the value of installed machinery and equipment not integral to the structure and the expenses for relocation of utility services. However, a contract for the installation of machinery and equipment which is an integral part of a construction project is included.

## FOR MORE INFORMATION

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| :--- |
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information published by the ABS that is available free of
charge from our website. Information tailored to your
needs can also be requested as a 'user pays' service.
Specialists are on hand to help you with analytical or
methodological advice.


[^0]:    - nil or rounded to zero (including null cells)

[^1]:    (a) Reference year for chain volume measures is 2014-15. Refer to paragraphs 27-31 of the Explanatory notes

[^2]:    - nil or rounded to zero (including null cells)

