

# CONSTRUCTION WORK DONE

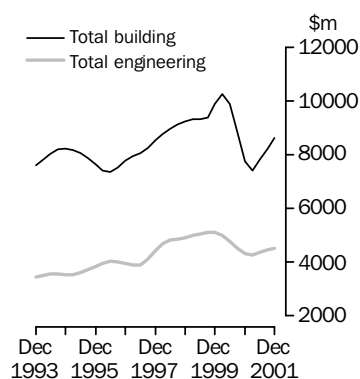
AUSTRALIA  
PRELIMINARY

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## DECEMBER QTR KEY FIGURES

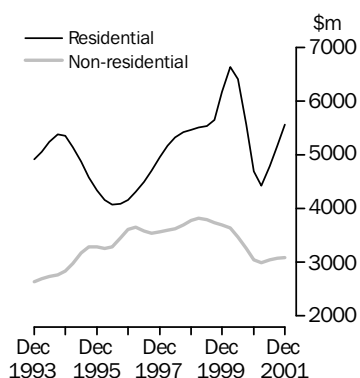
### Value of construction work done

Volume terms  
Trend estimates



### Value of building work done

Volume terms  
Trend estimates



- For further information about these and related statistics, contact Tony Bammann on Adelaide 08 8237 7316, or the National Information and Referral Service on 1300 135 070.

#### TREND ESTIMATES (a)

Value of work done

	Dec qtr 01 \$m	Sep qtr 01 to Dec qtr 01 % change	Dec qtr 00 to Dec qtr 01 % change
Building	8 628.4	4.6	11.4
Residential	5 564.0	7.7	18.5
Non-residential	3 086.5	0.3	1.1
Engineering	4 513.9	0.9	4.6
Total construction	13 155.3	3.4	9.1

#### SEASONALLY ADJUSTED (a)

Value of work done

	Dec qtr 01 \$m	Sep qtr 01 to Dec qtr 01 % change	Dec qtr 00 to Dec qtr 01 % change
Building	8 716.1	4.6	16.6
Residential	5 644.1	8.3	24.5
Non-residential	3 072.0	-1.7	4.4
Engineering	4 482.4	0.2	6.1
Total construction	13 198.5	3.1	12.8

(a) Chain volume measures, reference year 1999-00.

## DECEMBER QTR KEY POINTS

### VALUE OF CONSTRUCTION WORK DONE, VOLUME TERMS

#### TREND ESTIMATES

- The trend estimate of building work done rose 4.6% in the December quarter 2001. For the third successive quarter, the overall trend growth was driven by growth in the residential sector, amounting to 7.7% in the latest quarter, while the trend for non-residential building rose 0.3%.
- The trend estimate for engineering work done rose 0.9%, with the public sector up 1.4%.
- The trend estimate for total construction work done rose 3.4%, the third successive quarterly increase. The private sector has driven the growth each quarter.

#### SEASONALLY ADJUSTED ESTIMATES

- The seasonally adjusted estimate of building work done rose 4.6% in the December quarter 2001, to \$8,716.1m, and was 16.6% above the recent low of a year earlier. The latest increase was due to a 10.3% jump in new residential work to \$4,803.0m. Non-residential building work fell 1.7% to \$3,072.0m.
- Engineering work done rose by a marginal 0.2% to \$4,482.4m to be 6.1% above the level of a year earlier. For the latest quarter, a 3.9% rise in the public sector was offset by a 5.5% fall in the private sector.
- Total construction work done rose 3.1% to \$13,198.5m, the fourth successive quarterly increase, and was 12.8% above the level of a year earlier.

## NOTES

### FORTHCOMING ISSUES

<i>ISSUE (Quarter)</i>	<i>RELEASE DATE</i>
March 2002	30 May 2002
June 2002	27 August 2002

### ABOUT THIS ISSUE

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 building work done and 80% of the value of engineering work done during the quarter. More comprehensive and updated results will be released in *Building Activity, Australia* (Cat. no. 8752.0) on 17 April 2002 and in *Engineering Construction Activity, Australia* (Cat. no. 8762.0) on 16 April 2002.

### SIGNIFICANT REVISIONS THIS ISSUE

The methodology used to seasonally adjust a number of series has been changed in this publication.

In addition, the seasonally adjusted and trend series for both the Building Work Done and Engineering Work Done series have been revised as a result of the annual re-analysis of seasonal factors. The timing of the re-analysis for the Engineering series has been changed to coincide with that of the Building series.

For more details, see Explanatory Notes 23–25.

### DATA NOTES

Sampling in the Building Activity survey has been extended to include private sector non-residential building jobs (both new and alterations and additions), commencing with the December quarter 2001. See also Explanatory Notes 3, 21 and 22.

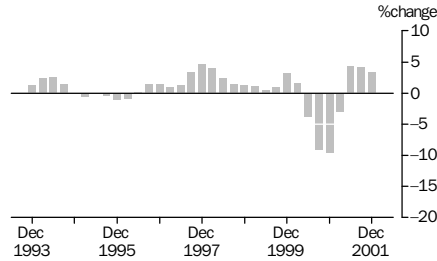
Dennis Trewin  
Australian Statistician

# CONSTRUCTION WORK DONE: Chain volume measures(a)

## TREND PERCENTAGE CHANGE

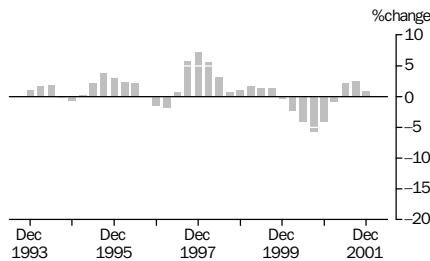
NOTE: Trend estimates are subject to revisions. See Explanatory Notes, paragraph 28.

### TOTAL CONSTRUCTION



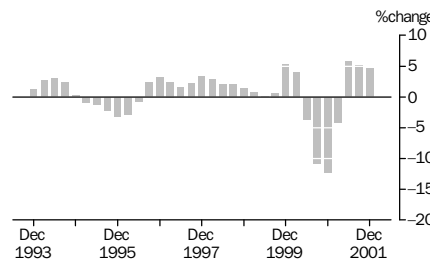
Growth in the total value of construction work done for the December quarter was 3.4%, down from the previous quarter.

### Engineering



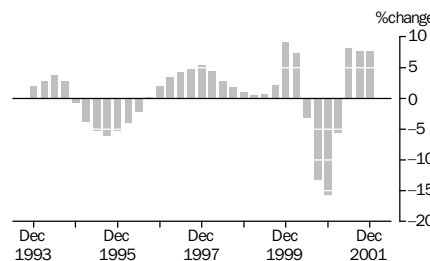
Engineering construction work done grew for the third successive quarter, but at a lesser rate.

### Building



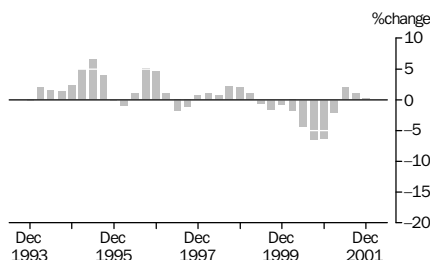
Building work done also grew for the third successive quarter, but again at a lesser rate.

### Residential



The trend estimate for the December quarter maintained the previous quarter's growth rate of 7.7%.

### Non-residential



Although showing a third quarter of positive growth, the rate of increase slowed to 0.3%.

(a) Reference year 1999-00.

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## CONSTRUCTION WORK DONE, Chain volume measures(a): All series

Period	BUILDING WORK DONE.....			ENGINEERING WORK DONE(b).....			CONSTRUCTION WORK DONE.....		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
ORIGINAL (\$m)									
<b>1998-99</b>	32 511.6	4 464.4	36 982.9	8 799.6	11 024.5	19 804.2	41 318.2	15 484.3	56 802.4
<b>1999-00</b>	35 958.4	4 283.4	40 241.9	7 786.0	12 122.3	19 908.3	43 744.4	16 405.7	60 150.2
<b>2000-01</b>	26 958.1	3 982.7	30 940.8	6 468.7	11 075.3	17 544.0	33 426.8	15 058.0	48 484.8
<b>2000</b>									
Sep qtr	7 313.9	1 020.1	8 334.1	1 676.3	2 747.2	4 423.4	8 990.2	3 767.3	12 757.5
Dec qtr	6 772.4	982.9	7 755.3	1 678.4	2 585.5	4 263.9	8 450.8	3 568.4	12 019.2
<b>2001</b>									
Mar qtr	6 134.0	943.6	7 077.6	1 475.9	2 474.3	3 950.2	7 609.9	3 417.9	11 027.8
Jun qtr	6 737.7	1 036.1	7 773.8	1 638.1	3 268.3	4 906.4	8 375.8	4 304.4	12 680.3
Sep qtr	7 505.3	1 055.3	8 560.7	1 799.3	2 448.6	4 247.9	9 304.6	3 504.0	12 808.6
Dec qtr	7 977.5	1 050.4	9 028.0	1 710.8	2 810.6	4 521.4	9 688.4	3 861.1	13 549.4
SEASONALLY ADJUSTED (\$m)									
<b>2000</b>									
Sep qtr	7 105.4	1 019.8	8 111.9	1 608.2	3 063.8	4 672.0	8 713.6	4 093.6	12 783.9
Dec qtr	6 600.2	954.1	7 475.0	1 599.8	2 624.9	4 224.7	8 199.9	3 568.4	11 699.7
<b>2001</b>									
Mar qtr	6 577.8	1 037.5	7 691.9	1 600.6	2 557.9	4 158.5	8 178.4	3 589.8	11 850.4
Jun qtr	6 674.8	971.4	7 662.0	1 660.1	2 828.7	4 488.8	8 334.9	3 806.2	12 150.8
Sep qtr	7 304.7	1 057.8	8 335.4	1 729.8	2 741.4	4 471.2	9 034.5	3 801.8	12 806.6
Dec qtr	7 800.6	1 024.7	8 716.1	1 635.2	2 847.2	4 482.4	9 435.8	3 860.9	13 198.5
TREND ESTIMATES (\$m)									
<b>2000</b>									
Sep qtr	7 807.9	1 026.4	8 822.7	1 629.9	2 874.5	4 505.0	9 504.6	3 901.4	13 325.7
Dec qtr	6 767.6	998.2	7 747.3	1 589.0	2 726.0	4 315.0	8 357.6	3 721.4	12 061.9
<b>2001</b>									
Mar qtr	6 415.5	990.4	7 422.9	1 616.2	2 659.8	4 275.8	8 022.5	3 648.0	11 699.2
Jun qtr	6 815.5	1 011.8	7 842.6	1 659.1	2 704.0	4 363.6	8 474.6	3 716.0	12 206.1
Sep qtr	7 246.5	1 026.9	8 245.7	1 680.5	2 791.6	4 472.0	8 927.0	3 818.5	12 717.1
Dec qtr	7 715.6	1 032.0	8 628.4	1 682.2	2 829.3	4 513.9	9 399.0	3 856.7	13 155.3

(a) Reference year for chain volume measures is 1999-00. See paragraphs 29-32 of the Explanatory Notes.

(b) Engineering work done is classified by the sector of intended owner.

Period	BUILDING WORK DONE.....			ENGINEERING WORK DONE(b).....			CONSTRUCTION WORK DONE.....		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
ORIGINAL (% change from preceding period)									
<b>1998-99</b>	7.6	2.2	6.9	14.1	7.3	10.1	9.0	5.8	8.1
<b>1999-00</b>	10.6	-4.1	8.8	-11.5	10.0	0.5	5.9	6.0	5.9
<b>2000-01</b>	-25.0	-7.0	-23.1	-16.9	-8.6	-11.9	-23.6	-8.2	-19.4
<b>2000</b>									
Sep qtr	-27.3	-13.1	-25.8	-1.5	-18.3	-12.7	-23.6	-17.0	-21.7
Dec qtr	-7.4	-3.7	-6.9	0.1	-5.9	-3.6	-6.0	-5.3	-5.8
<b>2001</b>									
Mar qtr	-9.4	-4.0	-8.7	-12.1	-4.3	-7.4	-9.9	-4.2	-8.2
Jun qtr	9.8	9.8	9.8	11.0	32.1	24.2	10.1	25.9	15.0
Sep qtr	11.4	1.9	10.1	9.8	-25.1	-13.4	11.1	-18.6	1.0
Dec qtr	6.3	-0.5	5.5	-4.9	14.8	6.4	4.1	10.2	5.8
SEASONALLY ADJUSTED (% change from preceding period)									
<b>2000</b>									
Sep qtr	-28.7	-7.8	-26.8	-7.1	5.2	0.6	-26.5	1.9	-18.7
Dec qtr	-7.1	-6.4	-7.9	-0.5	-14.3	-9.6	-5.9	-12.8	-8.5
<b>2001</b>									
Mar qtr	-0.3	8.7	2.9	0.1	-2.6	-1.6	-0.3	0.6	1.3
Jun qtr	1.5	-6.4	-0.4	3.7	10.6	7.9	1.9	6.0	2.5
Sep qtr	9.4	8.9	8.8	4.2	-3.1	-0.4	8.4	-0.1	5.4
Dec qtr	6.8	-3.1	4.6	-5.5	3.9	0.2	4.4	1.6	3.1
TREND ESTIMATES (% change from preceding period)									
<b>2000</b>									
Sep qtr	-11.6	-2.1	-10.8	-6.1	-5.4	-5.7	-10.8	-4.6	-9.1
Dec qtr	-13.3	-2.7	-12.2	-2.5	-5.2	-4.2	-12.1	-4.6	-9.5
<b>2001</b>									
Mar qtr	-5.2	-0.8	-4.2	1.7	-2.4	-0.9	-4.0	-2.0	-3.0
Jun qtr	6.2	2.2	5.7	2.7	1.7	2.1	5.6	1.9	4.3
Sep qtr	6.3	1.5	5.1	1.3	3.2	2.5	5.3	2.8	4.2
Dec qtr	6.5	0.5	4.6	0.1	1.4	0.9	5.3	1.0	3.4

(a) Reference year for chain volume measures is 1999-00. See paragraphs 29-32 of the Explanatory Notes.

(b) Engineering work done is classified by the sector of intended owner.

Period	BUILDING WORK DONE(a).....			ENGINEERING WORK DONE(b).....			CONSTRUCTION WORK DONE(a).....		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
ORIGINAL (\$m)									
<b>1998-99</b>	30 979.2	4 309.5	35 288.7	8 425.3	10 758.0	19 183.3	39 404.5	15 067.6	54 472.1
<b>1999-00</b>	35 958.4	4 283.4	40 241.9	7 786.0	12 121.6	19 907.5	43 744.4	16 405.0	60 149.4
<b>2000-01</b>	29 547.2	4 106.6	33 653.8	6 682.3	11 461.4	18 143.7	36 229.5	15 568.0	51 797.5
<b>2000</b>									
Sep qtr	8 006.4	1 052.0	9 058.3	1 712.7	2 812.3	4 525.0	9 719.1	3 864.3	13 583.4
Dec qtr	7 411.9	1 014.8	8 426.7	1 724.4	2 665.4	4 389.7	9 136.2	3 680.2	12 816.4
<b>2001</b>									
Mar qtr	6 733.6	973.8	7 707.4	1 536.9	2 575.0	4 112.0	8 270.6	3 548.8	11 819.4
Jun qtr	7 395.3	1 066.0	8 461.4	1 708.3	3 408.7	5 117.0	9 103.7	4 474.7	13 578.4
Sep qtr	8 259.7	1 087.3	9 347.0	1 880.2	2 567.5	4 447.6	10 139.8	3 654.8	13 794.6
Dec qtr	8 849.3	1 086.1	9 935.4	1 796.8	2 954.4	4 751.2	10 646.1	4 040.5	14 686.6
SEASONALLY ADJUSTED (\$m)									
<b>2000</b>									
Sep qtr	7 777.2	1 051.0	8 814.5	1 639.2	3 151.3	4 790.5	9 416.4	4 202.3	13 605.0
Dec qtr	7 226.8	986.4	8 125.1	1 643.7	2 696.6	4 340.3	8 870.6	3 682.9	12 465.4
<b>2001</b>									
Mar qtr	7 208.5	1 073.5	8 370.5	1 672.8	2 656.5	4 329.3	8 881.3	3 730.0	12 699.8
Jun qtr	7 319.6	1 002.7	8 339.8	1 729.7	2 957.2	4 686.9	9 049.3	3 959.9	13 026.7
Sep qtr	8 036.2	1 085.5	9 097.7	1 799.8	2 881.1	4 680.9	9 836.0	3 966.6	13 778.7
Dec qtr	8 654.3	1 055.2	9 594.1	1 713.5	2 985.9	4 699.4	10 367.8	4 041.1	14 293.5
TREND ESTIMATES (\$m)									
<b>2000</b>									
Sep qtr	8 034.7	1 053.1	8 960.1	1 661.8	3 032.0	4 693.8	9 696.5	4 085.1	13 653.8
Dec qtr	7 375.6	1 032.0	8 390.1	1 638.6	2 988.0	4 626.6	9 014.2	4 019.9	13 016.7
<b>2001</b>									
Mar qtr	7 146.1	1 024.9	8 200.2	1 679.5	2 937.8	4 617.3	8 825.7	3 962.7	12 817.5
Jun qtr	7 476.1	1 043.4	8 541.0	1 729.7	2 914.1	4 643.8	9 205.8	3 957.5	13 184.8
Sep qtr	7 984.8	1 056.6	9 014.8	1 754.2	2 931.8	4 686.0	9 739.0	3 988.4	13 700.8
Dec qtr	8 562.8	1 061.3	9 500.0	1 757.3	2 949.1	4 706.4	10 320.1	4 010.4	14 206.4

(a) From the September quarter 2000 data is inclusive of the non-deductible GST payable on residential buildings.

(b) Engineering work done is classified by the sector of intended owner.

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## CONSTRUCTION WORK DONE, Current prices: **All series**—Percentage change

Period	BUILDING WORK DONE(a).....			ENGINEERING WORK DONE(b).....			CONSTRUCTION WORK DONE(a).....		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
ORIGINAL (% change from preceding period)									
<b>1998-99</b>	10.7	5.7	10.0	15.8	8.1	11.4	11.7	7.4	10.5
<b>1999-00</b>	16.1	-0.6	14.0	-7.6	12.7	3.8	11.0	8.9	10.4
<b>2000-01</b>	-17.8	-4.1	-16.4	-14.2	-5.4	-8.9	-17.2	-5.1	-13.9
<b>2000</b>									
Sep qtr	-22.3	-11.4	-21.2	-0.8	-17.5	-11.9	-19.2	-16.0	-18.3
Dec qtr	-7.4	-3.5	-7.0	0.7	-5.2	-3.0	-6.0	-4.8	-5.6
<b>2001</b>									
Mar qtr	-9.2	-4.0	-8.5	-10.9	-3.4	-6.3	-9.5	-3.6	-7.8
Jun qtr	9.8	9.5	9.8	11.2	32.4	24.4	10.1	26.1	14.9
Sep qtr	11.7	2.0	10.5	10.1	-24.7	-13.1	11.4	-18.3	1.6
Dec qtr	7.1	-0.1	6.3	-4.4	15.1	6.8	5.0	10.6	6.5
SEASONALLY ADJUSTED (% change from preceding period)									
<b>2000</b>									
Sep qtr	-23.8	-6.0	-22.2	-6.3	6.5	1.7	-21.2	3.1	-15.2
Dec qtr	-7.1	-6.1	-7.8	0.3	-14.4	-9.4	-5.8	-12.4	-8.4
<b>2001</b>									
Mar qtr	-0.3	8.8	3.0	1.8	-1.5	-0.3	0.1	1.3	1.9
Jun qtr	1.5	-6.6	-0.4	3.4	11.3	8.3	1.9	6.2	2.6
Sep qtr	9.8	8.3	9.1	4.1	-2.6	-0.1	8.7	0.2	5.8
Dec qtr	7.7	-2.8	5.5	-4.8	3.6	0.4	5.4	1.9	3.7
TREND ESTIMATES (% change from preceding period)									
<b>2000</b>									
Sep qtr	-7.4	-1.0	-5.7	-5.2	-1.6	-2.9	-7.0	-1.5	-4.8
Dec qtr	-8.2	-2.0	-6.4	-1.4	-1.5	-1.4	-7.0	-1.6	-4.7
<b>2001</b>									
Mar qtr	-3.1	-0.7	-2.3	2.5	-1.7	-0.2	-2.1	-1.4	-1.5
Jun qtr	4.6	1.8	4.2	3.0	-0.8	0.6	4.3	-0.1	2.9
Sep qtr	6.8	1.3	5.5	1.4	0.6	0.9	5.8	0.8	3.9
Dec qtr	7.2	0.4	5.4	0.2	0.6	0.4	6.0	0.6	3.7

(a) From the September quarter 2000 data is inclusive of the non-deductible GST payable on residential buildings.

(b) Engineering work done is classified by the sector of intended owner.

Period	NEW RESIDENTIAL.....		ALTERATIONS AND ADDITIONS TO RESIDENTIAL BUILDING.....		TOTAL RESIDENTIAL.....		NON-RESIDENTIAL.....		TOTAL BUILDING.....	
	Private	Total	Private	Total	Private	Total	Private	Total	Private	Total
ORIGINAL (\$m)										
<b>1998-99</b>	17 929.1	18 458.4	3 339.3	3 438.3	21 268.0	21 896.3	11 220.0	15 058.0	32 511.6	36 982.9
<b>1999-00</b>	21 217.0	21 658.8	3 779.4	3 892.9	24 996.4	25 551.8	10 962.0	14 690.1	35 958.4	40 241.9
<b>2000-01</b>	15 385.8	15 764.2	2 860.6	2 983.2	18 246.4	18 747.4	8 711.7	12 193.4	26 958.1	30 940.8
<b>2000</b>										
Sep qtr	4 280.3	4 388.8	670.2	695.7	4 950.5	5 084.5	2 363.4	3 249.6	7 313.9	8 334.1
Dec qtr	3 804.3	3 902.2	735.0	756.1	4 539.3	4 658.3	2 233.1	3 097.0	6 772.4	7 755.3
<b>2001</b>										
Mar qtr	3 487.3	3 570.2	681.9	713.3	4 169.2	4 283.4	1 964.8	2 794.2	6 134.0	7 077.6
Jun qtr	3 813.9	3 903.0	773.5	818.1	4 587.4	4 721.2	2 150.3	3 052.7	6 737.7	7 773.8
Sep qtr	4 399.9	4 504.6	827.5	864.0	5 227.4	5 368.6	2 277.9	3 192.0	7 505.3	8 560.7
Dec qtr	4 799.4	4 912.2	862.4	889.7	5 661.9	5 801.9	2 315.7	3 226.1	7 977.5	9 028.0
SEASONALLY ADJUSTED (\$m)										
<b>2000</b>										
Sep qtr	4 183.3	4 248.6	659.8	689.0	4 843.1	4 937.6	2 262.3	3 174.3	7 105.4	8 111.9
Dec qtr	3 804.8	3 818.3	689.7	714.2	4 494.5	4 532.5	2 105.6	2 942.5	6 600.2	7 475.0
<b>2001</b>										
Mar qtr	3 662.5	3 855.7	730.6	756.2	4 393.1	4 612.0	2 184.7	3 079.9	6 577.8	7 691.9
Jun qtr	3 735.2	3 841.6	780.5	823.8	4 515.7	4 665.3	2 159.1	2 996.7	6 674.8	7 662.0
Sep qtr	4 303.7	4 356.2	813.1	854.6	5 116.8	5 210.7	2 187.9	3 124.7	7 304.7	8 335.4
Dec qtr	4 803.6	4 803.0	810.3	841.1	5 613.9	5 644.1	2 186.7	3 072.0	7 800.6	8 716.1
TREND ESTIMATES (\$m)										
<b>2000</b>										
Sep qtr	4 675.5	4 758.0	786.9	814.0	5 462.4	5 572.1	2 346.7	3 252.1	7 807.9	8 822.7
Dec qtr	3 892.5	3 968.6	699.9	727.2	4 592.5	4 695.8	2 175.3	3 051.6	6 767.6	7 747.3
<b>2001</b>										
Mar qtr	3 578.3	3 693.9	709.4	740.3	4 287.7	4 434.2	2 127.6	2 988.5	6 415.5	7 422.9
Jun qtr	3 874.3	3 984.8	774.7	811.2	4 648.5	4 795.7	2 167.1	3 045.8	6 815.5	7 842.6
Sep qtr	4 260.4	4 324.7	803.5	842.2	5 063.7	5 166.7	2 182.9	3 078.2	7 246.5	8 245.7
Dec qtr	4 707.1	4 704.0	819.3	858.2	5 530.0	5 564.0	2 185.4	3 086.5	7 715.6	8 628.4

(a) Reference year for chain volume measures is 1999-00. See paragraphs 29-32 of the Explanatory Notes.



Period	NEW RESIDENTIAL...		ALTERATIONS AND ADDITIONS TO RESIDENTIAL BUILDING.....		TOTAL RESIDENTIAL...		NON-RESIDENTIAL...		TOTAL BUILDING.....	
	Private	Total	Private	Total	Private	Total	Private	Total	Private	Total
ORIGINAL (% change from preceding period)										
<b>1998-99</b>	8.3	8.8	6.0	6.1	7.9	8.4	7.0	4.9	7.6	6.9
<b>1999-00</b>	18.3	17.3	13.2	13.2	17.5	16.7	-2.3	-2.4	10.6	8.8
<b>2000-01</b>	-27.5	-27.2	-24.3	-23.4	-27.0	-26.6	-20.5	-17.0	-25.0	-23.1
<b>2000</b>										
Sep qtr	-32.2	-31.5	-36.8	-36.4	-32.9	-32.2	-12.1	-13.0	-27.3	-25.8
Dec qtr	-11.1	-11.1	9.7	8.7	-8.3	-8.4	-5.5	-4.7	-7.4	-6.9
<b>2001</b>										
Mar qtr	-8.3	-8.5	-7.2	-5.7	-8.2	-8.0	-12.0	-9.8	-9.4	-8.7
Jun qtr	9.4	9.3	13.4	14.7	10.0	10.2	9.4	9.3	9.8	9.8
Sep qtr	15.4	15.4	7.0	5.6	14.0	13.7	5.9	4.6	11.4	10.1
Dec qtr	9.1	9.0	4.2	3.0	8.3	8.1	1.7	1.1	6.3	5.5
SEASONALLY ADJUSTED (% change from preceding quarter)										
<b>2000</b>										
Sep qtr	-32.4	-32.6	-38.3	-37.4	-33.3	-33.3	-16.6	-13.7	-28.7	-26.8
Dec qtr	-9.0	-10.1	4.5	3.7	-7.2	-8.2	-6.9	-7.3	-7.1	-7.9
<b>2001</b>										
Mar qtr	-3.7	1.0	5.9	5.9	-2.3	1.8	3.8	4.7	-0.3	2.9
Jun qtr	2.0	-0.4	6.8	8.9	2.8	1.2	-1.2	-2.7	1.5	-0.4
Sep qtr	15.2	13.4	4.2	3.7	13.3	11.7	1.3	4.3	9.4	8.8
Dec qtr	11.6	10.3	-0.3	-1.6	9.7	8.3	-0.1	-1.7	6.8	4.6
TREND ESTIMATES (% change from preceding quarter)										
<b>2000</b>										
Sep qtr	-12.9	-13.4	-12.8	-12.3	-12.9	-13.2	-8.2	-6.4	-11.6	-10.8
Dec qtr	-16.7	-16.6	-11.1	-10.7	-15.9	-15.7	-7.3	-6.2	-13.3	-12.2
<b>2001</b>										
Mar qtr	-8.1	-6.9	1.3	1.8	-6.6	-5.6	-2.2	-2.1	-5.2	-4.2
Jun qtr	8.3	7.9	9.2	9.6	8.4	8.2	1.9	1.9	6.2	5.7
Sep qtr	10.0	8.5	3.7	3.8	8.9	7.7	0.7	1.1	6.3	5.1
Dec qtr	10.5	8.8	2.0	1.9	9.2	7.7	0.1	0.3	6.5	4.6

(a) Reference year for chain volume measures is 1999-00. See paragraphs 29-32 of the Explanatory Notes.

## 7

## VALUE OF BUILDING WORK DONE, Current prices: All series

Period	NEW RESIDENTIAL(a)....		ALTERATIONS AND ADDITIONS TO RESIDENTIAL BUILDING(a).....		TOTAL RESIDENTIAL(a)...		NON-RESIDENTIAL.....		TOTAL BUILDING(a).....	
	Private	Total	Private	Total	Private	Total	Private	Total	Private	Total
ORIGINAL (\$m)										
<b>1998-99</b>	16 999.0	17 504.9	3 155.5	3 249.4	20 154.6	20 754.3	10 824.7	14 534.4	30 979.2	35 288.7
<b>1999-00</b>	21 217.0	21 658.8	3 779.4	3 892.9	24 996.4	25 551.7	10 962.0	14 690.1	35 958.4	40 241.9
<b>2000-01</b>	17 389.7	17 811.5	3 255.3	3 395.0	20 645.0	21 206.6	8 902.2	12 447.2	29 547.2	33 653.8
<b>2000</b>										
Sep qtr	4 836.4	4 958.1	760.9	789.8	5 597.3	5 748.0	2 409.0	3 310.4	8 006.4	9 058.3
Dec qtr	4 292.9	4 402.1	833.6	857.5	5 126.4	5 259.6	2 285.5	3 167.1	7 411.9	8 426.7
<b>2001</b>										
Mar qtr	3 945.5	4 037.7	776.9	812.8	4 722.4	4 850.5	2 011.2	2 856.9	6 733.6	7 707.4
Jun qtr	4 315.0	4 413.6	883.9	934.8	5 198.9	5 348.5	2 196.4	3 112.9	7 395.3	8 461.4
Sep qtr	4 984.0	5 100.7	949.4	991.4	5 933.4	6 092.2	2 326.3	3 254.8	8 259.7	9 347.0
Dec qtr	5 476.0	5 603.7	999.9	1 031.3	6 475.9	6 635.0	2 373.4	3 300.4	8 849.3	9 935.4
SEASONALLY ADJUSTED (\$m)										
<b>2000</b>										
Sep qtr	4 722.6	4 799.0	750.4	783.3	5 473.0	5 582.3	2 304.2	3 232.1	7 777.2	8 814.5
Dec qtr	4 289.1	4 304.1	783.5	811.1	5 072.6	5 115.2	2 154.3	3 009.9	7 226.8	8 125.1
<b>2001</b>										
Mar qtr	4 138.6	4 356.2	833.7	862.9	4 972.4	5 219.1	2 236.1	3 151.4	7 208.5	8 370.5
Jun qtr	4 220.9	4 338.5	893.2	942.5	5 114.1	5 281.0	2 205.5	3 058.9	7 319.6	8 339.8
Sep qtr	4 871.7	4 936.7	934.4	981.7	5 806.0	5 918.4	2 230.1	3 179.4	8 036.2	9 097.7
Dec qtr	5 476.3	5 482.1	940.9	976.0	6 417.3	6 458.1	2 237.1	3 136.0	8 654.3	9 594.1
TREND ESTIMATES (\$m)										
<b>2000</b>										
Sep qtr	4 784.6	4 801.0	859.9	847.8	5 644.5	5 648.8	2 390.2	3 311.3	8 034.7	8 960.1
Dec qtr	4 331.2	4 439.9	820.0	830.6	5 151.2	5 270.5	2 224.4	3 119.6	7 375.6	8 390.1
<b>2001</b>										
Mar qtr	4 137.4	4 276.1	832.0	867.8	4 969.4	5 143.9	2 176.7	3 056.3	7 146.1	8 200.2
Jun qtr	4 380.1	4 505.2	881.9	926.1	5 261.8	5 431.0	2 214.2	3 109.2	7 476.1	8 541.0
Sep qtr	4 831.3	4 907.2	924.9	969.1	5 756.0	5 876.1	2 228.8	3 138.0	7 984.8	9 014.8
Dec qtr	5 376.1	5 376.2	951.8	994.1	6 330.6	6 373.1	2 232.0	3 146.5	8 562.8	9 500.0

(a) From the September quarter 2000 data is inclusive of the non-deductible GST payable on residential buildings.

Period	NEW RESIDENTIAL(a)		ALTERATIONS AND ADDITIONS TO RESIDENTIAL BUILDING(a).....		TOTAL RESIDENTIAL(a)		NON-RESIDENTIAL..		TOTAL BUILDING(a)...	
	Private	Total	Private	Total	Private	Total	Private	Total	Private	Total
ORIGINAL (% change from preceding period)										
<b>1998-99</b>	10.8	11.3	7.9	7.9	10.3	10.8	11.3	9.0	10.7	10.0
<b>1999-00</b>	24.8	23.7	19.8	19.8	24.0	23.1	1.3	1.1	16.1	14.0
<b>2000-01</b>	-18.0	-17.8	-13.9	-12.8	-17.4	-17.0	-18.8	-15.3	-17.8	-16.4
<b>2000</b>										
Sep qtr	-25.4	-24.6	-30.5	-30.1	-26.1	-25.4	-11.6	-12.5	-22.3	-21.2
Dec qtr	-11.2	-11.2	9.5	8.6	-8.4	-8.5	-5.1	-4.3	-7.4	-7.0
<b>2001</b>										
Mar qtr	-8.1	-8.3	-6.8	-5.2	-7.9	-7.8	-12.0	-9.8	-9.2	-8.5
Jun qtr	9.4	9.3	13.8	15.0	10.1	10.3	9.2	9.0	9.8	9.8
Sep qtr	15.5	15.6	7.4	6.1	14.1	13.9	5.9	4.6	11.7	10.5
Dec qtr	9.9	9.9	5.3	4.0	9.1	8.9	2.0	1.4	7.1	6.3
SEASONALLY ADJUSTED (% change from preceding quarter)										
<b>2000</b>										
Sep qtr	-25.6	-25.8	-32.2	-31.2	-26.6	-26.6	-16.1	-13.2	-23.8	-22.2
Dec qtr	-9.2	-10.3	4.4	3.5	-7.3	-8.4	-6.5	-6.9	-7.1	-7.8
<b>2001</b>										
Mar qtr	-3.5	1.2	6.4	6.4	-2.0	2.0	3.8	4.7	-0.3	3.0
Jun qtr	2.0	-0.4	7.1	9.2	2.9	1.2	-1.4	-2.9	1.5	-0.4
Sep qtr	15.4	13.8	4.6	4.2	13.5	12.1	1.1	3.9	9.8	9.1
Dec qtr	12.4	11.0	0.7	-0.6	10.5	9.1	0.3	-1.4	7.7	5.5
TREND ESTIMATES (% change from preceding quarter)										
<b>2000</b>										
Sep qtr	-7.6	-5.7	-5.5	-5.2	-7.3	-5.6	-7.7	-5.8	-7.4	-5.7
Dec qtr	-9.5	-7.5	-4.6	-2.0	-8.7	-6.7	-6.9	-5.8	-8.2	-6.4
<b>2001</b>										
Mar qtr	-4.5	-3.7	1.5	4.5	-3.5	-2.4	-2.1	-2.0	-3.1	-2.3
Jun qtr	5.9	5.4	6.0	6.7	5.9	5.6	1.7	1.7	4.6	4.2
Sep qtr	10.3	8.9	4.9	4.6	9.4	8.2	0.7	0.9	6.8	5.5
Dec qtr	11.3	9.6	2.9	2.6	10.0	8.5	0.1	0.3	7.2	5.4

(a) From the September quarter 2000 data is inclusive of the non-deductible GST payable on residential buildings.

# EXPLANATORY NOTES

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## INTRODUCTION

**1** This publication contains preliminary estimates of building and engineering construction work done during the quarter. The estimates of building work done are from the quarterly Building Activity Survey and are based upon a response of approximately 85% of the value of work done during the quarter. The estimates of engineering work done are from the quarterly Engineering Construction Survey and are based upon a response of approximately 80% of the value of work done during the 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).

## SCOPE AND COVERAGE

**2** The scope of the Building Activity Survey is building activity which includes construction of new building, and alterations and additions to existing buildings. Value of building activity 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.

**3** The building statistics were compiled on the basis of returns collected from builders and other individuals and organisations engaged in building activity. From the December quarter 2001, the quarterly survey consists of:

- a sample survey of private sector jobs involving new house construction or alterations and additions valued at \$10,000 or more to houses
- a sample survey of private sector jobs involving new non-residential buildings or alterations and additions valued at \$50,000 or more to non-residential buildings
- a complete enumeration of jobs involving construction of new residential buildings other than private sector houses, all alterations and additions to residential buildings (other than private sector houses) with an approval value of \$10,000 or more, and all public sector non-residential building jobs with an approval value of \$50,000 or more.

**4** The scope of the Engineering Construction Survey is the value of all engineering construction work undertaken in Australia. For the Engineering Construction Survey all management units recorded on the ABS central register of businesses and classified to the construction industry and all other units known to be undertaking engineering construction work (from trade journals, newspapers, etc.), are included in the survey framework.

**5** The cost of land and the value of building construction is excluded from the scope of the Engineering Construction Survey. Where projects include elements of both building and engineering construction every effort is taken to exclude the building component from the engineering construction statistics. Repair and maintenance activity is also excluded as are 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. A contract for the installation of machinery and equipment which is an integral part of a construction project is included.

### RELATIONSHIP WITH NATIONAL ACCOUNTS

**6** Data on the value of work done on the construction of new residential buildings, alterations and additions to residential buildings, private sector non-residential buildings and the value of total and new 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 building 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 surveys and also the value of 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.

### TREATMENT OF THE GST

**7** Statistics on 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 1993 edition of the international statistical standard System of National Accounts (SNA93).

**8** SNA93 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.

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 SNA93 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.

**9** 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.

**10** 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.

**11** 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.

### DEFINITIONS

**12** A *building* is defined as 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.

**13** A *dwelling unit* is defined as 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.

**14** A *residential building* is defined as a building predominantly consisting of one or more dwelling units. Residential buildings can be either *houses* or *other residential buildings*:

- A *house* is defined as a detached building predominantly used for long-term residential purposes and consisting of only one dwelling unit. Thus, detached 'granny flats' and detached dwelling units (such as caretakers' residences) associated with non-residential buildings are defined as houses for the purpose of these statistics.
- An *other residential building* is defined as a building which is predominantly used for long-term residential purposes and which contains (or has attached to it) more than one dwelling unit (e.g. includes townhouses, duplexes, blocks of flats, apartment buildings, etc.).

**15** A *non-residential building* is primarily intended for purposes other than long term residential purposes.

**16** *Alterations and additions* refer to building activity carried out on existing building. It 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.

**17** The *value of engineering work done for the private sector* consists of the value of work done on prime contracts, plus speculative contracts, plus work done on own account.

**18** The *value of building and engineering work done during the period* represents the estimated value of work actually carried out during the quarter on jobs which have commenced.

### CLASSIFICATION: OWNERSHIP

**19** 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 or project as evident at the time of approval.

**20** Engineering projects are classified as either *private sector* or *public sector* according to the expected ownership of the project at the time of completion.

### RELIABILITY OF THE ESTIMATES

**21** The estimates of engineering activity in this publication are based on a sample survey as are the estimates of the building activity concerning private sector houses (including alterations and additions to private sector houses) and all private sector non-residential building jobs. A complete enumeration of other building activity is done. Because data are not collected for all engineering jobs nor for all building 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.

## EXPLANATORY NOTES *continued*

### RELIABILITY OF THE ESTIMATES *continued*

**22** Relative standard errors for the value of work done in the December quarter 2001 are given below. There is 67% confidence that the actual value would be within one standard error of the sample estimate, and 95% confidence that it lies within two standard errors.

	%
New private residential building	0.8
Total private residential building	0.8
Private non-residential building	0.7
Total private building	0.6
Total residential building	0.8
Total non-residential building	0.5
<b>Total building</b>	<b>0.5</b>
Engineering for the private sector	2.1
<b>Total engineering</b>	<b>1.3</b>

### SEASONAL ADJUSTMENT

**23** In the seasonally adjusted series, account has been taken of normal seasonal factors and the effect of movement in the date of Easter which may, in successive years, affect figures for different quarters.

**24** 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. In most instances, the seasonally adjusted components of a series add to the seasonally adjusted total. However, for Building Work Done and Construction Work Done, the 'Public' series shown in tables 1 and 3 has been seasonally adjusted independently. As a consequence, while the unadjusted components in the original series shown add to the totals, the adjusted 'Private' and 'Public' components of both 'Building Work Done' and 'Construction Work Done' may not add to the respective totals. Also in table 1, the sum of the 'Public' sector components for Building and Engineering may not add to the relevant total.

**25** The seasonal factors are reviewed annually to take account of each additional year's data. The results of the latest review for Construction Work Done are reflected in the December quarter issue each year.

### TREND ESTIMATES

**26** 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.

**27** 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.

## EXPLANATORY NOTES *continued*

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### TREND ESTIMATES *continued*

**28** While the smoothing technique described in paragraphs 26 and 27 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 and as a result of the re-estimation of the seasonal factors. For further information, see *Information Paper: A Guide to Interpreting Time Series — Monitoring Trends: an Overview* (Cat. no. 1348.0) or contact the Assistant Director, Time Series Analysis on Canberra 02 6252 6076.

### CHAIN VOLUME MEASURES

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

**30** 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'.

**31** 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 (currently 1999–2000). The reference year is updated annually in the June 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 (i.e. 1999–2000). Comparability with previous years is achieved by linking (or chaining) the series together to form a continuous time series. Further information on the nature and concepts of chain volume measures is contained in the ABS *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts* (Cat. no. 5248.0).

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

### ACKNOWLEDGMENT

**33** 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*.



## EXPLANATORY NOTES *continued*

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### RELATED PRODUCTS

**34** Users may also wish to refer to the following publications which are available from ABS Bookshops:

*Building Activity, Australia: Dwelling Unit Commencements, Preliminary* (Cat. no. 8750.0)—issued quarterly

*Building Activity, Australia* (Cat. no. 8752.0)—issued quarterly

*Building Approvals, Australia* (Cat. no. 8731.0)—issued monthly

*Private Sector Construction Industry, Australia, 1996–97* (Cat. no. 8772.0)

*Engineering Construction Activity, Australia* (Cat. no. 8762.0)—issued quarterly

*House Price Indexes: Eight Capital Cities* (Cat. no. 6416.0)—issued quarterly

*Housing Finance for Owner Occupation, Australia* (Cat. no. 5609.0)—issued monthly

*Producer Price Indexes, Australia* (Cat. no. 6427.0)—issued quarterly

**35** Current publications and other products produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists products to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

### ABS DATA AVAILABLE ON REQUEST

**36** 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 1300 135 070.

### SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
n.a.	not available
..	not applicable
—	nil or rounded to zero

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.





## FOR MORE INFORMATION...

- INTERNET* **www.abs.gov.au** the ABS web site is the best place to start for access to summary data from our latest publications, information about the ABS, advice about upcoming releases, our catalogue, and Australia Now—a statistical profile.
- LIBRARY* A range of ABS publications is available from public and tertiary libraries Australia-wide. Contact your nearest library to determine whether it has the ABS statistics you require, or visit our web site for a list of libraries.
- CPI INFOLINE* For current and historical Consumer Price Index data, call 1902 981 074 (call cost 77c per minute).
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