

# Western Australia



**Australian  
Bureau of  
Statistics**

CATALOGUE NO. 8752.5

EMBARGOED UNTIL 9.30 A.M. 7 APRIL 1994



## BUILDING ACTIVITY, WESTERN AUSTRALIA DECEMBER QUARTER 1993

### SUMMARY OF FINDINGS

**Value of building work done at average 1989-90 prices, seasonally adjusted**

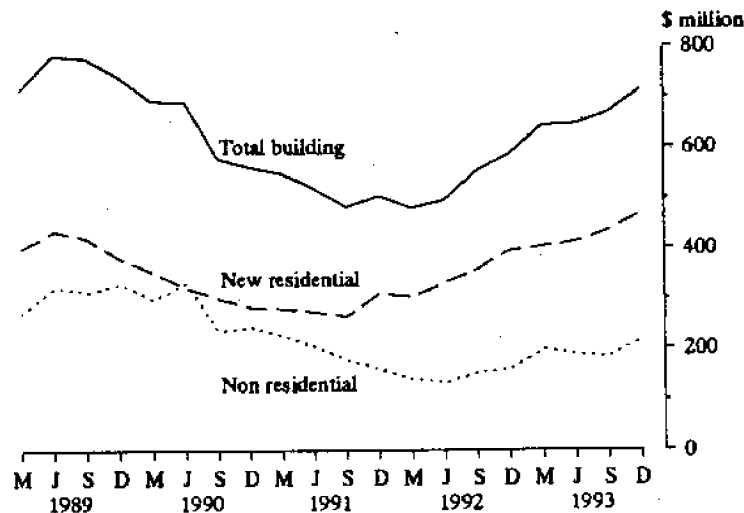
	Percentage change on	
	Sept. quarter 1993	Dec. quarter 1992
New residential building	7.2	18.4
Alterations and additions to residential buildings	-12.0	—
Non-residential building	18.2	35.9
<b>Total building</b>	<b>6.9</b>	<b>21.9</b>

- Expressed in seasonally adjusted, average 1989-90 prices the total value of building work done for the December quarter 1993 was \$713.8 million, 6.9% higher than the September quarter figure. The December figure was the highest since that for the December quarter 1989 (\$741.2

million) and the seventh consecutive increase in this statistical series.

- The \$468.2 million recorded for new residential building work done was 7.2% higher than the previous quarter's figure, the highest level since the statistical series began with the September quarter 1980 and the seventh consecutive increase. However residential alterations and additions fell 12.0% from the series high point achieved for the September quarter to be \$38.3 million for the December quarter.
- The value of non-residential building work done rose by 18.2% following small falls in the previous 2 quarters. The December quarter figure of \$216.2 million was last exceeded in March 1991 when \$225.8 million was recorded.

**VALUE OF WORK DONE  
AT AVERAGE 1989-90 PRICES  
SEASONALLY ADJUSTED**



### INQUIRIES

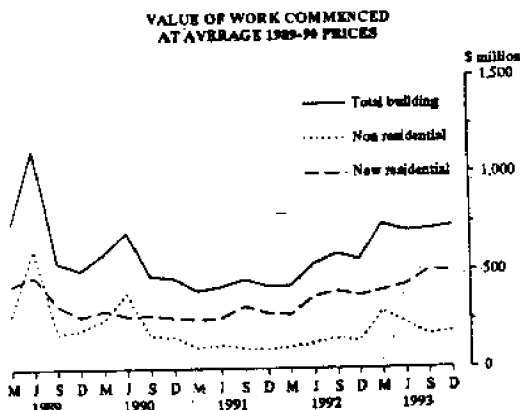
- for more information about statistics in this publication and the availability of related unpublished statistics, contact Colin Speechley on Adelaide (08) 237 7495 or any ABS State Office.
- for information about other ABS statistics and services please refer to the back of this publication.

## SUMMARY OF FINDINGS – continued

## Value of building work commenced at average 1989–90 prices

	Percentage change on	
	Sept. quarter 1993	Dec. quarter 1992
New residential building	-1.4	32.1
Alterations and additions to residential buildings	19.0	3.2
Non-residential building	10.3	35.1
<b>Total building</b>	<b>2.5</b>	<b>30.8</b>

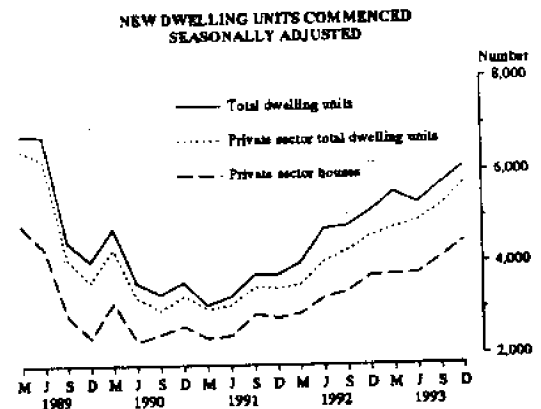
- Expressed in average 1989–90 prices (but not seasonally adjusted) the total value of building work commenced during the December quarter 1993 was \$728.7 million, only slightly higher than the September quarter figure but 30.8% higher than the December quarter figure for the previous year.
- The December quarter new residential commencements figure of \$495.4 million was not significantly different from the September quarter figure of \$502.5 million which was the highest level recorded since this statistical series began with the September quarter 1969.
- Non-residential commencements recovered some lost ground after 2 successive falls by increasing 10.3% to be \$191.3 million for the December quarter. Residential alterations and additions rose to \$42.0 million.



## Number of dwelling units commenced, seasonally adjusted

	Percentage change on	
	Sept. quarter 1993	Dec. quarter 1992
Private sector houses	9.1	19.9
Private sector dwelling units	9.1	24.1
<b>Total dwelling units</b>	<b>6.8</b>	<b>18.8</b>

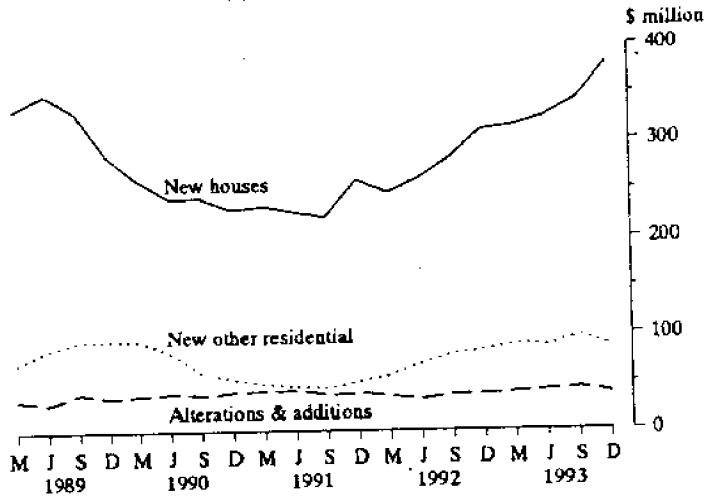
- In seasonally adjusted terms the estimate of the total number of dwelling units commenced during the December quarter 1993 was 6,103 which was 6.8% higher than the September quarter figure and the highest level since 6,775 were recorded for the June quarter 1989.
- For both private sector houses and private sector dwelling units there was a 9.1% increase over the September quarter. The figure of 4,482 for private sector houses was the highest since the 4,874 recorded for the March quarter 1989. For private sector dwelling units the December quarter figure of 5,721 was the highest since the June quarter 1989 figure of 6,292.



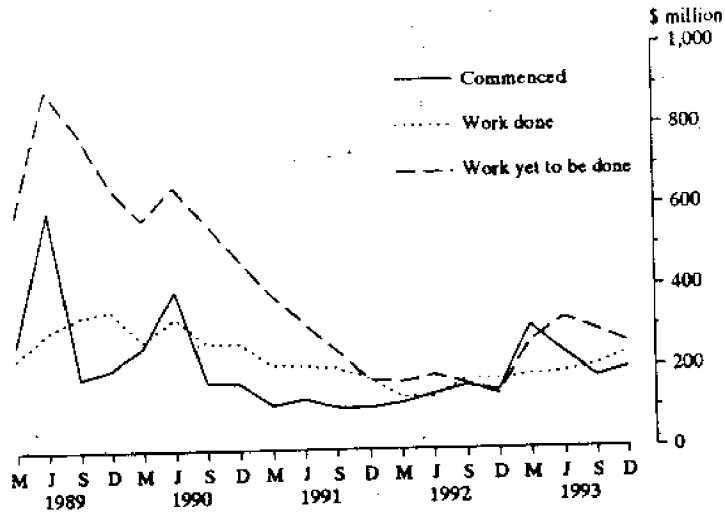
## Original unadjusted data

- The total value of building work commenced (unadjusted, at current prices) during the December quarter 1993 was \$698.1 million. Of this, \$463.6 million was for new residential building resulting in 5,978 dwelling units.
- The total value of work done during the December quarter was \$722.3 million while the value of work yet to be done on jobs under construction at the end of the quarter was \$697.7 million.

**VALUE OF RESIDENTIAL WORK DONE  
AT AVERAGE 1989-90 PRICES  
SEASONALLY ADJUSTED**



**VALUE OF NON-RESIDENTIAL BUILDING**



**VALUE OF NON-RESIDENTIAL WORK DONE**

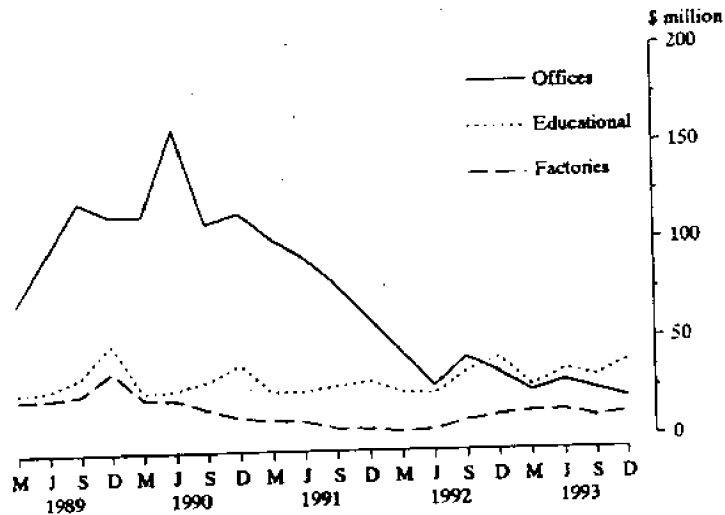


TABLE 1. SUMMARY OF BUILDING ACTIVITY, WESTERN AUSTRALIA

Period	New residential building										Non-residential building										Total building
	Houses					Other residential buildings					Alterations and additions to residential buildings					Total					
	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Hotels etc.	Shops	Factories	Offices	Other business premises	Educational	Religious	Health	Entertainment and recreational	Miscellaneous	Total				
COMMENCED																					
1990-91	10,319	784.2	3,059	206.3	13,378	990.5	131.8	23.9	77.4	36.5	159.7	58.9	88.3	7.0	22.7	34.6	65.9	1,697.2			
1991-92	12,279	914.1	4,044	233.3	16,323	1,147.4	118.6	11.3	69.3	19.4	68.4	62.3	107.6	7.7	39.2	33.0	44.2	1,728.3			
1992-93	15,011	1,134.3	5,778	341.6	20,789	1,475.9	142.9	12.8	212.8	43.7	117.8	69.0	134.7	10.0	83.1	70.3	87.9	2,460.9			
1992 Sept. qtr	3,677	276.2	1,555	86.5	5,232	362.6	32.4	4.2	28.1	7.6	31.2	11.8	31.2	6.8	7.9	9.2	19.8	552.8			
Dec. qtr	3,704	266.9	1,324	76.6	5,028	343.5	36.5	3.8	13.7	11.2	42.1	15.1	18.9	0.5	1.0	15.8	22.2	524.3			
1993 Mar. qtr	3,651	279.1	1,458	92.3	5,109	371.4	35.1	2.0	101.4	14.0	18.2	18.9	52.3	0.8	45.4	20.5	30.1	710.0			
June qtr	3,978	312.1	1,441	86.3	5,419	398.4	38.8	2.7	69.7	10.9	26.2	23.3	32.3	1.9	28.9	24.8	15.8	673.8			
Sept. qtr	4,531	361.7	1,683	106.5	6,214	468.2	32.4	6.9	33.6	9.3	14.7	22.6	22.8	1.6	29.7	13.2	22.6	677.6			
Dec. qtr	4,462	364.7	1,516	98.9	5,978	463.6	38.9	5.8	64.0	13.4	20.4	29.4	14.2	2.4	24.8	9.9	11.3	698.1			
UNDER CONSTRUCTION AT END OF PERIOD																					
1990-91	4,115	372.1	1,881	144.1	5,996	516.2	66.5	26.3	82.7	13.3	733.0	69.6	79.9	3.7	42.4	24.9	98.5	1,757.0			
1991-92	4,795	405.1	2,539	185.4	7,334	590.5	50.5	13.2	44.2	13.3	231.2	39.7	98.4	4.2	34.7	23.7	97.1	1,240.6			
1992-93	5,395	484.7	2,831	183.7	8,226	668.4	59.4	6.4	178.3	16.9	39.7	32.9	107.8	3.3	81.3	57.1	51.0	1,302.4			
1992 Sept. qtr	5,516	480.2	3,065	219.8	8,581	699.9	52.5	13.3	55.7	15.5	232.2	36.8	102.2	10.2	37.1	25.4	91.5	1,382.4			
Dec. qtr	5,197	437.6	2,922	215.2	8,119	652.8	54.6	6.1	31.8	21.2	250.5	33.3	81.1	7.6	26.3	35.6	47.6	1,248.3			
1993 Mar. qtr	5,630	489.2	3,166	239.9	8,796	729.1	58.3	4.7	124.9	23.4	49.2	23.6	88.1	6.6	67.1	47.3	61.6	1,284.0			
June qtr	5,395	484.7	2,831	183.7	8,226	668.4	59.4	6.4	178.3	16.9	39.7	32.9	107.8	3.3	81.3	57.1	51.0	1,302.4			
Sept. qtr	6,292	569.8	2,885	196.5	9,177	766.3	53.5	10.8	187.6	13.2	30.7	41.6	117.1	3.7	108.2	55.5	48.2	1,336.4			
Dec. qtr	6,600	595.5	2,935	206.4	9,535	801.9	53.5	14.2	218.7	16.7	29.3	51.5	83.3	4.0	129.6	39.7	36.1	1,478.5			
COMPLETED																					
1990-91	11,385	904.3	3,959	240.6	15,344	1,144.9	143.5	13.8	98.9	59.3	203.1	112.5	117.5	5.6	24.7	48.5	77.5	2,049.8			
1991-92	11,539	892.7	3,377	195.5	14,916	1,088.2	139.6	21.6	91.5	19.1	611.6	97.7	91.6	7.1	49.1	35.4	56.4	2,308.9			
1992-93	14,368	1,064.0	5,436	343.5	19,804	1,407.5	137.0	18.0	77.7	42.3	313.2	76.0	130.5	12.3	37.9	40.1	134.0	2,426.5			
1992 Sept. qtr	2,942	202.6	1,015	53.8	3,957	256.4	31.7	2.7	15.8	5.4	18.7	14.8	26.1	0.9	5.1	7.5	24.6	409.8			
Dec. qtr	4,011	311.9	1,467	83.7	5,478	395.6	34.9	10.6	37.0	7.1	34.6	18.5	41.3	3.0	12.1	6.2	66.0	667.0			
1993 Mar. qtr	3,208	228.2	1,205	67.7	4,413	295.9	30.9	3.6	8.6	12.3	223.9	28.8	48.4	2.0	5.0	9.0	16.2	357.8			
June qtr	4,206	321.2	1,749	138.4	5,955	459.6	39.4	1.1	16.3	17.6	36.0	13.9	14.6	6.4	15.7	17.4	27.2	665.1			
Sept. qtr	3,609	282.0	1,627	96.3	5,236	378.3	38.6	2.5	25.9	13.1	23.5	14.1	14.5	1.3	3.1	15.0	22.6	552.5			
Dec. qtr	4,153	343.8	1,466	91.6	5,619	435.4	40.2	2.9	33.4	10.0	21.7	19.5	49.9	1.9	9.5	25.1	23.2	672.7			

TABLE 1. SUMMARY OF BUILDING ACTIVITY, WESTERN AUSTRALIA—continued

Period	New residential building										Non-residential building																					
	Houses					Other residential buildings					Total					Alterations and additions to residential buildings					Enter- tainment and recreo- national facilities					Total building						
	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Value (\$m)	Number of dwelling units	Value (\$m)	Hotels etc.	Shops	Factories	Offices	business premises	Educa- tional	Reli- gious	Health	Miscel- laneous	Total	Value (\$m)	Hotels etc.	Shops	Factories	Offices	business premises	Educa- tional	Reli- gious	Health	Miscel- laneous	Total		
VALUE OF WORK DONE DURING PERIOD																																
1990-91	..	857.4	..	212.3	..	1,069.7	147.5	19.1	93.8	45.5	420.6	92.4	116.9	6.2	40.7	38.8	72.9	2,163.9	1,600.0	22.6	10.5	36.9	6.3	126.0	14.7	39.2	2.3	9.9	8.9	58.6	313.2	580.0
1991-92	..	871.8	..	227.5	..	1,099.4	127.1	15.3	65.0	17.6	210.9	63.6	101.7	7.3	30.6	30.8	100.2	1,869.4	3,087.7	19.1	6.7	25.2	7.8	248.8	19.0	47.6	2.6	20.6	12.2	16.7	183.3	511.2
1992-93	..	1,102.1	..	346.1	..	1,448.2	140.8	15.3	103.0	46.7	125.7	69.2	133.9	12.2	72.4	59.3	84.2	2,310.8	3,477.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	319.9	692.6
1992 Sept. qtr	..	263.5	..	85.8	..	349.3	31.1	5.6	28.6	8.8	40.8	17.0	33.6	3.0	11.2	10.8	14.6	554.6	325.6	21.8	3.9	23.9	6.6	14.6	13.9	43.9	6.5	17.0	10.6	21.5	162.4	509.8
Dec. qtr	..	281.3	..	94.1	..	372.4	36.8	4.4	22.9	11.6	32.9	18.9	40.4	3.3	8.1	9.6	22.2	583.4	301.8	21.9	2.8	14.2	7.9	24.5	10.0	23.7	3.7	10.2	17.3	21.4	135.7	439.4
1993 Mar. qtr	..	265.0	..	83.9	..	348.9	32.9	2.9	17.4	13.1	23.3	17.3	26.1	3.7	33.8	17.6	29.3	566.3	325.4	24.5	2.2	98.6	9.3	23.8	11.8	53.1	1.1	22.3	20.4	22.2	264.6	614.5
June qtr	..	292.3	..	85.2	..	377.6	40.0	2.2	34.1	13.2	28.6	16.0	33.8	2.2	19.5	21.2	18.1	606.6	347.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	319.9	692.6
Sept. qtr 1	..	327.5	..	105.4	..	432.9	37.0	2.9	54.1	9.7	33.9	22.5	30.6	1.1	21.1	18.6	21.3	675.9	391.9	20.9	6.7	116.1	6.6	12.3	19.3	46.8	2.5	41.5	21.2	19.2	292.2	705.1
Dec. qtr	..	354.3	..	94.2	..	448.5	38.0	6.3	61.5	11.9	20.0	31.6	38.2	2.2	29.6	16.4	18.1	722.3	414.5	23.1	6.7	119.1	8.3	12.6	17.0	24.6	2.5	42.8	14.2	17.2	260.1	697.7
VALUE OF WORK YET TO BE DONE																																
1990-91	..	160.0	..	84.2	..	244.2	22.6	10.5	36.9	6.3	126.0	14.7	39.2	2.3	9.9	8.9	58.6	380.0	244.2	22.6	10.5	36.9	6.3	126.0	14.7	39.2	2.3	9.9	8.9	58.6	313.2	580.0
1991-92	..	214.7	..	94.0	..	308.7	19.1	6.7	25.2	7.8	248.8	19.0	47.6	2.6	20.6	12.2	16.7	511.2	308.7	19.1	6.7	25.2	7.8	248.8	19.0	47.6	2.6	20.6	12.2	16.7	183.3	511.2
1992-93	..	256.9	..	90.7	..	347.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	692.6	347.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	319.9	692.6
1992 Sept. qtr	..	229.3	..	96.4	..	325.6	21.8	3.9	23.9	6.6	14.6	13.9	43.9	6.5	17.0	10.6	21.5	509.8	325.6	21.8	3.9	23.9	6.6	14.6	13.9	43.9	6.5	17.0	10.6	21.5	162.4	509.8
Dec. qtr	..	217.4	..	84.4	..	301.8	21.9	2.8	14.2	7.9	24.5	10.0	23.7	3.7	10.2	17.3	21.4	439.4	301.8	21.9	2.8	14.2	7.9	24.5	10.0	23.7	3.7	10.2	17.3	21.4	135.7	439.4
1993 Mar. qtr	..	232.3	..	93.1	..	325.4	24.5	2.2	98.6	9.3	23.8	11.8	53.1	1.1	22.3	20.4	22.2	614.5	325.4	24.5	2.2	98.6	9.3	23.8	11.8	53.1	1.1	22.3	20.4	22.2	264.6	614.5
June qtr	..	256.9	..	90.7	..	347.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	692.6	347.7	25.0	2.7	134.2	7.0	21.6	19.0	53.6	1.9	32.7	26.4	20.7	319.9	692.6
Sept. qtr 1	..	296.8	..	95.2	..	391.9	20.9	6.7	116.1	6.6	12.3	19.3	46.8	2.5	41.5	21.2	19.2	705.1	391.9	20.9	6.7	116.1	6.6	12.3	19.3	46.8	2.5	41.5	21.2	19.2	292.2	705.1
Dec. qtr	..	312.1	..	102.4	..	414.5	23.1	6.7	119.1	8.3	12.6	17.0	24.6	2.5	42.8	14.2	17.2	697.7	414.5	23.1	6.7	119.1	8.3	12.6	17.0	24.6	2.5	42.8	14.2	17.2	260.1	697.7

NOTE: The number of self-contained dwelling units commenced as part of the construction of non-residential building and alterations and additions to existing buildings (including conversions to dwelling units) are excluded from this table. There were 60 such dwelling units commenced in the December quarter 1993.

TABLE 2. SUMMARY OF PRIVATE SECTOR BUILDING ACTIVITY, WESTERN AUSTRALIA

Period	New residential building				Non-residential building											Total building			
	Houses				Other residential buildings			Total			Value (\$m)								
	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Total	Alterations and additions to residential buildings	Hotels etc.	Shops	Factories	Offices	Other business premises	Educational	Religious		Health	Entertainment and recreational	Miscellaneous
COMMENCED																			
1990-91	9,971	761.7	2,453	172.7	12,424	934.5	130.9	23.8	75.9	36.5	123.2	41.6	29.5	7.0	14.4	15.7	22.7	390.3	1,455.7
1991-92	11,921	899.9	2,657	153.7	14,578	1,043.6	117.9	11.1	66.9	19.3	43.6	50.0	30.3	7.7	21.1	9.3	25.9	287.2	1,446.6
1992-93	14,615	1,103.2	3,955	231.1	18,570	1,334.3	139.1	12.6	211.3	39.0	49.6	56.1	30.0	10.0	63.0	25.5	43.9	540.9	2,014.4
1992 Sept-qr	3,628	272.1	988	54.9	4,616	327.0	32.3	4.2	27.3	7.6	12.9	11.6	7.3	6.8	7.5	4.6	16.4	106.3	465.6
Dec-qr	3,628	258.7	973	56.3	4,601	315.0	35.7	3.8	13.7	11.2	15.6	14.1	9.8	0.5	1.0	10.6	13.3	93.5	444.2
1993 Mar-qr	3,479	268.2	910	53.4	4,389	321.6	33.3	2.0	101.4	10.1	8.9	12.6	6.7	0.8	44.9	7.3	5.3	200.0	554.9
June-qr	3,879	304.2	1,084	66.5	4,963	370.7	37.9	2.6	68.9	10.1	12.1	17.8	6.3	1.9	9.6	3.0	8.9	141.2	549.7
Sept-qr	4,420	352.0	1,234	79.0	5,654	431.0	32.2	6.9	32.5	8.7	13.4	20.3	6.7	1.6	18.9	3.3	19.6	131.8	595.0
Dec-qr	4,357	357.3	1,363	89.2	5,720	446.5	38.5	5.8	63.3	13.2	17.0	26.0	8.7	2.4	10.5	7.1	10.2	164.3	649.3
UNDER CONSTRUCTION AT END OF PERIOD																			
1990-91	4,017	365.6	1,721	133.8	5,738	499.4	66.5	26.3	81.6	13.3	502.4	16.3	11.8	3.7	22.2	12.3	8.9	698.8	1,264.7
1991-92	4,706	397.8	1,554	126.4	6,260	524.2	50.4	13.2	42.3	13.3	19.2	35.1	14.8	4.2	16.3	4.9	14.2	177.5	752.1
1992-93	5,298	476.9	1,929	125.1	7,227	601.9	56.9	6.3	177.5	12.2	17.3	21.0	13.0	3.3	62.1	16.7	23.9	353.2	1,012.1
1992 Sept-qr	5,458	474.9	1,826	145.4	7,284	620.2	52.5	13.3	55.1	15.5	14.3	36.2	15.9	10.2	21.5	6.0	19.0	206.9	879.7
Dec-qr	5,144	431.5	1,910	150.2	7,054	581.7	54.0	6.0	31.4	21.2	15.1	32.2	15.8	7.6	18.9	12.2	27.9	188.3	823.9
1993 Mar-qr	5,455	475.9	2,020	160.1	7,475	636.1	56.7	4.7	124.9	19.5	17.0	16.3	12.8	6.6	59.3	16.3	23.2	300.5	993.2
June-qr	5,298	476.9	1,929	125.1	7,227	601.9	56.9	6.3	177.5	12.2	17.3	21.0	13.0	3.3	62.1	16.7	23.9	353.2	1,012.1
Sept-qr	6,182	559.9	2,032	137.6	8,214	697.5	53.4	10.8	185.6	12.6	21.1	29.0	17.8	3.7	78.1	9.8	30.4	398.9	1,149.8
Dec-qr	6,462	584.3	2,292	159.1	8,754	743.4	53.1	14.2	216.7	16.7	19.1	36.4	20.2	4.0	85.7	14.3	23.4	450.8	1,247.3
COMPLETED																			
1990-91	10,929	872.5	2,949	185.1	13,878	1,057.7	142.3	13.5	97.1	39.3	175.7	101.4	31.3	5.6	17.1	24.4	16.7	542.1	1,742.1
1991-92	11,172	869.2	2,815	164.4	13,987	1,033.6	139.0	21.4	89.8	19.0	567.9	31.5	27.5	7.1	27.5	17.7	20.1	829.7	2,002.3
1992-93	13,980	1,033.4	3,539	232.3	17,519	1,265.7	135.7	18.0	75.1	42.3	54.9	70.7	34.0	12.3	17.5	16.1	34.2	375.1	1,776.5
1992 Sept-qr	2,862	196.5	702	37.3	3,564	233.9	31.6	2.7	13.9	5.4	16.5	10.8	6.2	0.9	2.1	3.5	11.6	73.7	339.2
Dec-qr	3,930	304.6	889	53.7	4,819	358.3	34.7	10.6	36.7	7.1	15.0	18.0	10.1	3.0	3.6	5.0	4.1	113.3	506.3
1993 Mar-qr	3,158	224.4	791	43.7	3,949	268.1	30.1	3.6	8.2	12.3	11.3	28.7	9.7	2.0	4.6	3.6	9.9	94.0	392.2
June-qr	4,029	307.9	1,157	97.6	5,186	405.5	39.3	1.1	16.3	17.6	12.0	13.1	8.0	6.4	7.1	4.0	8.6	94.0	538.8
Sept-qr	3,511	274.4	1,131	68.3	4,642	342.7	36.0	2.3	25.9	8.4	9.6	12.4	2.0	1.3	3.1	10.2	13.1	88.4	467.0
Dec-qr	4,076	337.6	1,103	70.3	5,179	407.9	40.1	2.9	32.8	9.2	18.3	18.5	6.4	1.9	8.8	2.2	17.1	118.0	566.1



TABLE 3. SUMMARY OF PUBLIC SECTOR BUILDING ACTIVITY, WESTERN AUSTRALIA

Period	New residential building				Non-residential building										Total building		
	Other residential buildings		Total		Value (\$m)												
	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Alterations and additions to residential buildings	Hotels etc.	Shops	Factories	Offices	Other business premises	Educational	Religious	Health	Entertainment and recreational		Miscellaneous	
COMMENCED																	
1990-91	348	22.5	606	33.6	56.1	0.9	1.5	36.5	17.2	58.8	—	—	8.3	18.8	43.2	184.6	241.5
1991-92	358	24.3	1,387	79.6	103.9	0.7	2.4	24.9	12.3	77.3	—	—	18.1	23.8	18.3	177.1	281.6
1992-93	396	31.1	1,823	110.5	141.6	3.7	1.5	68.2	12.8	104.7	—	—	20.1	44.8	44.1	301.2	446.5
1992 Sept. qtr	49	4.1	567	31.6	35.6	0.1	0.7	18.3	0.1	23.9	—	—	0.4	4.6	3.3	51.5	87.2
Dec. qtr	76	8.2	351	20.2	28.5	0.8	—	26.4	1.0	9.2	—	—	—	5.2	9.0	50.9	80.1
1993 Mar. qtr	172	10.9	548	38.8	49.8	1.9	—	9.4	6.3	45.6	—	—	0.5	13.1	24.8	103.5	155.2
June qtr	99	7.9	357	19.8	27.7	1.0	0.2	0.7	14.1	26.0	—	—	19.3	21.9	7.0	95.4	124.0
Sept. qtr	111	9.6	449	27.6	37.2	0.2	1.2	0.6	1.3	16.1	—	—	10.8	9.9	3.0	45.2	82.5
Dec. qtr	105	7.5	553	9.7	17.2	0.4	0.6	0.2	3.4	5.5	—	—	14.2	2.7	1.1	31.2	48.8
UNDER CONSTRUCTION AT END OF PERIOD																	
1990-91	98	6.6	160	10.2	16.8	—	1.1	230.6	53.2	68.1	—	—	20.2	12.7	89.6	475.5	492.3
1991-92	89	7.3	985	59.1	66.4	0.1	1.8	212.0	4.6	83.5	—	—	18.4	18.8	82.9	422.1	488.5
1992-93	97	7.8	902	58.6	66.5	2.4	0.8	22.4	11.9	94.8	—	—	19.2	40.4	27.1	221.4	290.3
1992 Sept. qtr	58	5.3	1,239	74.4	79.7	—	0.6	—	0.6	86.3	—	—	15.6	19.4	72.5	423.0	502.8
Dec. qtr	53	6.1	1,012	64.9	71.1	0.6	0.4	—	1.1	65.3	—	—	7.3	23.4	19.7	352.8	424.4
1993 Mar. qtr	175	13.3	1,146	79.8	93.1	1.6	—	3.9	32.2	7.4	75.3	—	7.9	31.0	38.4	196.1	290.7
June qtr	97	7.8	902	58.6	66.5	2.4	0.8	4.6	22.4	11.9	94.8	—	19.2	40.4	27.1	221.4	290.3
Sept. qtr	110	9.9	853	58.9	68.8	0.1	1.9	0.6	9.7	12.6	99.3	—	30.0	45.7	17.9	217.7	286.6
Dec. qtr	138	11.2	643	47.3	58.5	0.4	1.9	—	10.2	15.0	63.1	—	44.0	25.5	12.7	172.3	231.3
COMPLETED																	
1990-91	456	31.7	1,010	55.5	87.2	1.2	0.2	—	27.5	11.0	86.3	—	7.7	24.1	60.8	219.3	307.7
1991-92	367	23.5	562	31.1	54.6	0.6	0.2	—	43.8	66.2	64.1	—	21.5	17.8	36.2	251.4	306.6
1992-93	388	30.6	1,897	111.2	141.8	1.3	0.1	—	258.2	5.4	96.5	—	20.3	24.0	99.8	506.9	650.0
1992 Sept. qtr	80	6.1	313	16.5	22.6	0.1	—	—	2.2	4.0	20.0	—	2.8	4.0	13.0	47.9	70.6
Dec. qtr	81	7.4	578	30.0	37.4	0.2	0.3	—	19.5	0.5	31.2	—	8.5	1.2	61.9	123.0	160.6
1993 Mar. qtr	50	3.8	414	24.0	27.8	0.9	0.1	—	212.5	0.1	38.7	—	0.4	5.4	6.3	263.8	292.4
June qtr	177	13.4	592	40.7	54.1	0.1	—	—	24.0	0.9	6.7	—	8.6	13.4	18.6	72.2	126.3
Sept. qtr	98	7.6	496	28.0	35.7	2.7	0.2	—	4.6	13.9	1.6	—	4.8	9.4	9.4	47.1	85.5
Dec. qtr	77	6.2	363	21.3	27.5	0.1	0.6	—	0.9	3.4	0.9	—	0.7	22.9	6.1	79.0	106.7



TABLE 3. SUMMARY OF PUBLIC SECTOR BUILDING ACTIVITY, WESTERN AUSTRALIA - continued

Period	New residential building										Non-residential building									
	Houses			Other residential buildings			Total				Alterations and additions to residential buildings			Non-residential building						
	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Number of dwelling units	Value (\$m)	Hotels etc.	Shops	Factories	Offices	Other business premises	Educational	Religious	Health	Entertainment and recreational	Miscellaneous	Total building			
VALUE OF WORK DONE DURING PERIOD																				
1990-91	..	27.4	..	43.3	..	70.8	1.0	0.2	0.7	..	124.7	37.3	86.4	..	20.9	20.2	55.1	345.5		
1991-92	..	22.1	..	49.4	..	71.5	0.7	0.2	1.8	..	80.8	23.3	71.2	..	12.5	20.6	71.7	283.3		
1992-93	..	31.6	..	113.7	..	145.4	2.9	0.2	2.4	4.0	68.9	6.9	100.7	..	12.2	35.6	43.9	274.8		
1992 Sept. qtr	..	6.7	..	33.6	..	40.3	0.1	..	1.6	..	22.6	0.8	26.1	..	5.8	5.5	7.6	70.0		
Dec. qtr	..	6.6	..	29.4	..	36.0	0.5	..	0.5	..	18.1	0.3	30.4	..	2.7	4.1	8.6	64.6		
1993 Mar. qtr	..	8.6	..	28.5	..	37.1	1.2	..	..	2.0	11.6	2.2	18.9	..	1.1	10.1	16.8	62.8		
June qtr	..	9.7	..	22.2	..	31.9	1.1	0.1	0.3	2.0	16.6	3.7	25.2	..	2.6	16.0	10.9	77.5		
Sept. qtr	..	8.6	..	31.1	..	39.7	1.1	..	0.2	0.8	9.7	3.6	24.5	..	8.4	13.4	6.3	66.9		
Dec. qtr	..	6.7	..	19.7	..	26.4	0.3	..	1.2	0.6	6.7	6.4	29.0	..	8.8	10.3	5.5	68.4		
VALUE OF WORK YET TO BE DONE																				
1990-91	..	2.7	..	3.9	..	6.6	..	..	0.8	..	68.6	6.7	32.0	..	1.3	6.5	52.9	168.8		
1991-92	..	4.8	..	34.4	..	39.3	..	..	1.3	..	12.9	1.0	40.3	..	8.5	9.8	13.0	86.9		
1992-93	..	4.3	..	31.7	..	36.0	0.8	..	0.5	0.6	12.6	6.7	47.4	..	17.4	19.8	13.5	118.7		
1992 Sept. qtr	..	2.2	..	32.6	..	34.8	..	..	0.5	..	8.5	0.2	36.9	..	2.7	8.9	8.4	66.1		
Dec. qtr	..	3.8	..	23.8	..	27.5	0.3	..	..	..	17.3	0.9	16.8	..	0.2	10.0	8.9	54.3		
1993 Mar. qtr	..	6.1	..	34.1	..	40.2	1.0	..	..	1.9	15.1	5.0	46.5	..	12.9	17.1	17.1	98.6		
June qtr	..	4.3	..	31.7	..	36.0	0.8	..	0.5	0.6	12.6	6.7	47.4	..	17.4	19.8	13.5	118.7		
Sept. qtr	..	5.4	..	29.0	..	34.4	..	..	1.5	0.3	4.2	5.5	40.0	..	19.9	16.4	7.5	95.2		
Dec. qtr	..	6.2	..	19.0	..	25.1	0.2	..	1.0	..	1.4	2.4	18.3	..	25.7	8.8	2.9	60.5		

**TABLE 4. NUMBER OF DWELLING UNITS BY STAGE OF CONSTRUCTION, WESTERN AUSTRALIA  
SEASONALLY ADJUSTED SERIES (a)**

Period	Houses				Total			
	Private sector		Total		Private sector		Total	
	Commenced	Completed	Commenced	Completed	Commenced	Completed	Commenced	Completed
1992 Sept. qtr	3,398	3,097	3,468	n.a.	4,294	3,854	4,832	4,338
Dec. qtr	3,737	3,447	3,840	n.a.	4,611	4,231	5,138	4,815
1993 Mar. qtr	3,751	3,294	3,912	n.a.	4,781	4,154	5,566	4,551
June qtr	3,767	4,114	3,833	n.a.	4,929	5,252	5,320	6,066
Sept. qtr	4,110	3,822	4,244	n.a.	5,242	5,041	5,714	5,758
Dec. qtr	4,482	3,571	4,620	n.a.	5,721	4,545	6,103	4,937

(a) Series have been revised due to annual re-analysis of seasonal adjustment factors.

**TABLE 5. VALUE OF BUILDING WORK DONE, WESTERN AUSTRALIA  
SEASONALLY ADJUSTED SERIES (a)  
(\$ million).**

Period	New residential building			Alterations and additions to residential buildings	Non-residential building		Total building
	Houses	Other residential buildings	Total		Private sector	Total	
1992 Sept. qtr	250.0	81.7	329.1	33.2	97.7	160.6	527.1
Dec. qtr	277.9	85.2	364.9	34.2	99.5	166.0	558.5
1993 Mar. qtr	282.9	91.3	374.0	35.7	135.6	204.7	614.7
June qtr	293.2	88.8	383.5	37.6	119.8	196.0	618.0
Sept. qtr	311.0	100.3	407.7	39.5	129.9	189.8	642.2
Dec. qtr	349.9	88.2	439.6	35.3	151.5	224.7	691.4

(a) Series have been revised due to annual re-analysis of seasonal adjustment factors.

TABLE 6. VALUE OF BUILDING WORK COMMENCED, AT AVERAGE 1989-90 PRICES (a), WESTERN AUSTRALIA  
(\$ million)

Period	New residential building			Alterations and additions to residential buildings	Non-residential building		Total building
	Houses	Other residential buildings	Total		Private sector	Total	
1990-91	855.2	202.4	1,057.6	144.7	381.7	561.9	1,764.2
1991-92	1,036.7	227.6	1,264.3	133.9	277.6	450.0	1,848.2
1992-93	1,266.4	336.9	1,603.3	158.5	530.3	825.6	2,587.4
1992 Sept. qtr	311.7	84.9	396.6	36.3	103.9	154.2	587.1
Dec. qtr	299.5	75.5	375.0	40.7	91.7	141.6	557.3
1993 Mar. qtr	310.4	91.2	401.6	38.8	196.3	297.9	738.3
June qtr	344.8	85.3	430.1	42.7	138.4	231.9	704.7
Sept. qtr	397.3	105.2	502.5	35.3	129.1	173.4	711.2
Dec. qtr	397.8	97.6	495.4	42.0	160.8	191.3	728.7

(a) See paragraphs 24 and 25 of the Explanatory Notes. Constant price estimates are subject to revision each quarter as more up to date information on prices and commodity compositions becomes available.

TABLE 7. VALUE OF BUILDING WORK DONE, AT AVERAGE 1989-90 PRICES (a), WESTERN AUSTRALIA  
ORIGINAL AND SEASONALLY ADJUSTED SERIES  
(\$ million)

Period	New residential building			Alterations and additions to residential buildings	Non-residential building		Total building
	Houses	Other residential buildings	Total		Private sector	Total	
ORIGINAL							
1990-91	929.8	207.4	1,137.2	160.4	579.9	913.0	2,210.6
1991-92	986.1	219.6	1,205.7	143.8	344.0	614.9	1,964.4
1992-93	1,230.5	337.5	1,568.0	157.1	429.6	693.6	2,418.7
1992 Sept. qtr	297.4	83.0	380.4	35.1	99.3	166.0	581.5
Dec. qtr	315.0	88.6	403.6	41.2	105.1	167.0	611.8
1993 Mar. qtr	294.8	82.3	377.1	36.6	117.5	178.1	591.8
June qtr	323.3	83.6	406.9	44.2	107.7	182.5	633.6
Sept. qtr	360.3	103.3	463.6	40.7	134.0	198.5	702.8
Dec. qtr	385.5	92.2	477.7	41.3	161.0	226.8	745.8
SEASONALLY ADJUSTED							
1992 Sept. qtr	282.1	79.0	358.4	37.5	93.1	153.1	552.7
Dec. qtr	311.2	82.8	395.4	38.3	95.4	159.1	585.7
1993 Mar. qtr	314.8	89.5	404.2	39.7	131.0	197.7	642.5
June qtr	324.3	87.0	413.3	41.5	115.7	189.2	645.6
Sept. qtr	342.1	98.3	436.6	43.5	125.2	182.9	667.8
Dec. qtr	380.7	86.3	468.2	38.3	145.8	216.2	713.8

(a) See paragraphs 24 to 26 of the Explanatory Notes. Constant price estimates are subject to revision each quarter as more up to date information on prices and commodity compositions becomes available.

TABLE 8. NUMBER OF DWELLING UNITS BY OWNERSHIP,  
CLASS OF BUILDER AND STAGE OF CONSTRUCTION,  
WESTERN AUSTRALIA

Period	Private sector			Public sector			Total				
	Houses			Other residential buildings	Total	Houses			Other residential buildings	Total	
	Contractor-built	Other	Total			Houses	Other residential buildings	Total			
<b>COMMENCED</b>											
1990-91	8,287	1,684	9,971	2,453	12,424	348	606	954	10,319	3,059	13,378
1991-92	9,811	2,110	11,921	2,657	14,578	358	1,387	1,745	12,279	4,044	16,323
1992-93	12,704	1,911	14,615	3,955	18,570	396	1,823	2,219	15,011	5,778	20,789
1992 Sept. qtr	3,192	436	3,628	988	4,616	49	567	616	3,677	1,555	5,232
Dec. qtr	3,133	495	3,628	973	4,601	76	351	427	3,704	1,324	5,028
1993 Mar. qtr	2,990	489	3,479	910	4,389	172	548	720	3,651	1,458	5,109
June qtr	3,388	491	3,879	1,084	4,963	99	357	456	3,978	1,441	5,419
Sept. qtr	3,878	542	4,420	1,234	5,654	111	449	560	4,531	1,683	6,214
Dec. qtr	3,735	622	4,357	1,363	5,720	105	153	258	4,462	1,516	5,978
<b>UNDER CONSTRUCTION AT END OF PERIOD</b>											
1990-91	2,410	1,607	4,017	1,721	5,738	98	160	258	4,115	1,881	5,996
1991-92	2,800	1,906	4,706	1,554	6,260	89	985	1,074	4,795	2,539	7,334
1992-93	3,470	1,828	5,298	1,929	7,227	97	902	999	5,395	2,831	8,226
1992 Sept. qtr	3,611	1,847	5,458	1,826	7,284	58	1,239	1,297	5,516	3,065	8,581
Dec. qtr	3,337	1,807	5,144	1,910	7,054	53	1,012	1,065	5,197	2,922	8,119
1993 Mar. qtr	3,558	1,897	5,455	2,020	7,475	175	1,146	1,321	5,630	3,166	8,796
June qtr	3,470	1,828	5,298	1,929	7,227	97	902	999	5,395	2,831	8,226
Sept. qtr	4,231	1,952	6,182	2,032	8,214	110	853	963	6,292	2,885	9,177
Dec. qtr	4,395	2,067	6,462	2,292	8,754	138	643	781	6,600	2,935	9,535
<b>COMPLETED</b>											
1990-91	8,730	2,200	10,929	2,949	13,878	456	1,010	1,466	11,385	3,959	15,344
1991-92	9,398	1,774	11,172	2,815	13,987	367	562	929	11,539	3,377	14,916
1992-93	12,053	1,927	13,980	3,539	17,519	388	1,897	2,285	14,368	5,436	19,804
1992 Sept. qtr	2,407	455	2,862	702	3,564	80	313	393	2,942	1,015	3,957
Dec. qtr	3,406	524	3,930	889	4,819	81	578	659	4,011	1,467	5,478
1993 Mar. qtr	2,769	389	3,158	791	3,949	50	414	464	3,208	1,205	4,413
June qtr	3,470	560	4,029	1,157	5,186	177	592	769	4,206	1,749	5,955
Sept. qtr	3,116	394	3,511	1,131	4,642	98	496	594	3,609	1,627	5,236
Dec. qtr	3,569	506	4,076	1,103	5,179	77	363	440	4,153	1,466	5,619

**TABLE 9. NUMBER AND VALUE OF NEW HOUSES BUILT BY CONTRACT BUILDERS FOR PRIVATE OWNERSHIP, BY COMPLETION VALUE RANGE AND STAGE OF CONSTRUCTION WESTERN AUSTRALIA**

Period	Commenced			Under construction at end of period				Completed			Total	
	Less than \$40,000	\$40,000 to \$59,999	\$60,000 and over	Total	Less than \$40,000	\$40,000 to \$59,999	\$60,000 and over	Total	Less than \$40,000	\$40,000 to \$59,999		\$60,000 and over
<b>NUMBER</b>												
1990-91	395	3,727	4,165	8,287	83	808	1,519	2,410	407	3,743	4,579	8,730
1991-92	327	4,362	5,122	9,811	84	961	1,755	2,800	300	4,211	4,887	9,398
1992-93	732	4,604	7,367	12,704	165	831	2,474	3,470	651	4,728	6,673	12,053
1992 Sept. qtr	104	1,264	1,824	3,192	95	1,160	2,356	3,611	128	1,056	1,223	2,407
Dec. qtr	187	1,299	1,647	3,133	177	1,047	2,113	3,337	59	1,435	1,913	3,406
1993 Mar. qtr	239	884	1,868	2,990	240	878	2,439	3,558	176	1,065	1,529	2,769
June qtr	201	1,158	2,028	3,388	165	831	2,474	3,470	288	1,173	2,009	3,470
Sept. qtr r	25	1,348	2,505	3,878	40	1,084	3,108	4,231	50	1,158	1,908	3,116
Dec. qtr	49	946	2,740	3,735	14	895	3,486	4,395	87	1,134	2,348	3,569
<b>VALUE (\$m)</b>												
1990-91	13.7	187.5	426.4	627.6	3.0	40.3	194.7	237.9	13.8	188.3	509.3	711.4
1991-92	11.8	221.1	491.6	724.5	3.1	48.8	192.3	244.2	11.0	212.6	505.0	728.5
1992-93	25.3	234.6	702.7	962.5	5.9	43.3	285.2	334.4	22.4	239.3	622.0	883.7
1992 Sept. qtr	3.7	64.7	169.1	237.4	3.3	59.2	257.3	319.8	4.6	53.6	106.6	164.8
Dec. qtr	6.5	66.4	150.5	223.4	6.0	53.9	330.2	290.1	2.1	72.9	181.6	256.5
1993 Mar. qtr	8.3	44.1	179.2	231.6	8.4	44.2	275.3	328.0	5.9	54.2	134.6	194.8
June qtr	6.8	59.4	203.9	270.1	5.9	43.3	285.2	334.4	9.8	58.6	199.2	267.6
Sept. qtr r	0.9	70.7	236.8	308.4	1.3	57.2	343.8	402.3	1.8	60.0	182.1	243.9
Dec. qtr	1.4	50.1	256.8	308.3	0.4	47.6	373.3	421.2	2.8	59.5	229.8	292.1

**TABLE 10. SUMMARY OF BUILDING ACTIVITY, WESTERN AUSTRALIA  
RELATIVE STANDARD ERRORS (PER CENT)  
DECEMBER QUARTER 1993**

Ownership and stage of construction	New residential building				Value	
	Houses		Total		Alterations and additions to residential buildings	Total building
	Number	Value	Number of dwelling units	Value		
<b>PRIVATE SECTOR</b>						
Commenced	3.2	3.1	2.4	2.5	5.6	1.8
Under construction at end of period	3.1	3.1	2.3	2.4	6.5	1.5
Completed	4.3	4.9	3.4	4.0	8.1	3.0
Value of work done	...	2.9	...	2.4	5.5	1.6
Value of work yet to be done	...	3.6	...	2.8	8.3	1.8
<b>TOTAL PRIVATE AND PUBLIC SECTORS</b>						
Commenced	3.1	3.1	2.3	2.4	5.6	1.6
Under construction at end of period	3.0	3.0	2.1	2.2	6.5	1.2
Completed	4.3	4.8	3.2	3.8	8.1	2.5
Value of work done	...	2.8	...	2.2	5.5	1.4
Value of work yet to be done	...	3.5	...	2.7	8.2	1.6

TABLE 11 - VALUE OF NON-RESIDENTIAL BUILDING COMPLETED AND UNDER CONSTRUCTION  
BY STATISTICAL LOCAL AREAS AND STATISTICAL DIVISIONS  
(\$'000)

Statistical division Statistical local area (a)	Completed during period			Under construction at end of period
	Year ended June 1993	Quarter ended September 1993 (r)	Quarter ended December 1993p	Quarter ended December 1993p
<b>PERTH STATISTICAL DIVISION</b>				
Armadale (C)	6,294	258	2,078	8,862
Bassendean (T)	2,004	1,900	936	1,055
Bayswater (C)	7,267	863	4,040	86,176
Belmont (C)	10,160	2,773	4,364	2,215
Canning (C)	36,721	6,882	7,630	12,374
Claremont (T)	6,715	921	612	360
Cockburn (C)	28,910	1,767	7,387	9,018
Cottesloe (T)	670	165	53	720
East Fremantle (T)	395	—	120	7,888
Fremantle (C) - Inner	2,977	380	2,933	650
Fremantle (C) - Remainder	13,450	2,200	2,092	13,797
Fremantle (C) - Total	16,427	2,580	5,025	14,447
Gosnells (C)	8,821	711	5,917	4,082
Kalamunda (S)	6,125	2,804	1,285	1,463
Kwinana (F)	7,399	2,821	561	1,018
Melville (C)	27,054	4,467	2,867	72,224
Mosman Park (T)	789	—	600	6,724
Mundaring (S)	6,214	300	1,180	1,144
Nedlands (C)	11,946	340	10,271	5,153
Peppermint Grove (S)	—	622	—	—
Perth (C) - Inner	305,938	2,930	11,679	15,847
Perth (C) - North	2,704	—	327	5,301
Perth (C) - Outer	26,195	5,948	9,237	9,980
Perth (C) - South	24,299	91	10,588	25,335
Perth (C) - Wembley-Coastal	11,738	81	168	570
Perth (C) - Total	370,874	9,050	31,999	57,033
Rockingham (C)	15,270	3,665	3,831	36,335
Serpentine-Jarrahdale (S)	3,950	85	—	1,033
South Perth (C)	4,928	1,230	3,988	7,153
Stirling (C) - Central	29,295	6,173	3,147	11,020
Stirling (C) - West	26,832	3,141	7,681	12,540
Stirling (C) - South-Eastern	2,169	—	735	8,039
Stirling (C) - Total	58,296	9,314	11,563	31,599
Subiaco (C)	6,018	6,137	7,667	13,289
Swan (S)	52,332	19,994	6,253	47,766
Warneroo (C)	70,617	18,994	24,816	101,335
<b>Total</b>	<b>766,196</b>	<b>98,642</b>	<b>145,044</b>	<b>530,465</b>
<b>SOUTH-WEST STATISTICAL DIVISION (b)</b>				
Augusta-Margaret River (S)	1,993	545	1,430	1,105
Boddington (S) (b)	—	—	—	—
Boyup Brook (S)	—	—	—	30
Bridgetown-Greenbushes (S)	917	392	93	889
Bunbury (C)	6,363	4,041	2,091	6,441
Busseton (S)	7,592	456	4,583	8,054
Capel (S)	502	—	—	100
Collie (S)	98	—	220	2,395
Dardanup (S)	432	193	641	410
Donnybrook-Balingup (S)	517	175	—	1,265
Harvey (S)	3,729	2,718	665	1,352
Mandurah (C)	6,526	1,690	1,539	4,750
Manjimup (S)	1,081	181	1,018	1,812
Murray (S)	595	—	407	497
Nannup (S)	545	—	—	106
Waroona (S)	4,510	—	—	—
<b>Total (b)</b>	<b>35,400</b>	<b>10,390</b>	<b>12,688</b>	<b>29,205</b>

**TABLE 11 - VALUE OF NON-RESIDENTIAL BUILDING COMPLETED AND UNDER CONSTRUCTION  
BY STATISTICAL LOCAL AREAS AND STATISTICAL DIVISIONS - continued**  
(\$'000)

Statistical division Statistical local area (a)	Completed during period			Under construction at end of period
	Year ended June 1993	Quarter ended September 1993 (r)	Quarter ended December 1993p	Quarter ended December 1993p
<b>LOWER GREAT SOUTHERN STATISTICAL DIVISION</b>				
Albany (T)	8,235	2,832	549	2,790
Albany (S)	1,725	770	294	2,110
Broomehill (S)	—	—	—	—
Cranbrook (S)	—	—	—	—
Denmark (S)	1,180	85	964	329
Gnowangerup (S)	—	—	—	100
Jerramungup (S)	225	—	770	30
Katanning (S)	162	—	—	—
Kent (S)	—	—	—	—
Kojonup (S)	—	—	140	—
Plantagenet (S)	889	—	215	120
Tambellup (S)	—	—	410	—
Woodanilling (S)	—	—	—	—
<b>Total</b>	<b>12,416</b>	<b>3,686</b>	<b>3,342</b>	<b>5,479</b>
<b>UPPER GREAT SOUTHERN STATISTICAL DIVISION (b)</b>				
Brookton (S)	—	—	—	370
Corrigin (S)	—	—	—	—
Cuballing (S)	—	—	—	—
Dumbleyung (S)	—	—	—	—
Kondinin (S)	848	—	—	140
Kulin (S)	—	—	—	—
Lake Grace (S)	—	—	—	—
Narrogin (T)	950	250	—	1,665
Narrogin (S)	—	—	—	—
Pingelly (S)	—	—	—	—
Wagin (S)	84	—	—	—
Wandering (S)	—	—	—	—
West Arthur (S)	—	—	—	—
Wickepin (S)	—	—	—	400
Williams (S)	155	—	—	89
<b>Total (b)</b>	<b>2,037</b>	<b>250</b>	<b>—</b>	<b>2,664</b>
<b>MIDLANDS STATISTICAL DIVISION</b>				
Beverley (S)	—	—	135	—
Bruce Rock (S)	—	—	—	—
Chittering (S)	334	—	1,150	—
Cunderdin (S)	60	—	—	—
Dalwallinu (S)	—	—	298	—
Dandaragan (S)	113	—	217	722
Dowerin (S)	—	—	—	—
Gingin (S)	55	190	180	2,408
Goornalling (S)	—	—	128	—
Kellerberrin (S)	—	—	—	—
Koorda (S)	—	—	—	—
Merredin (S)	204	178	55	745
Moora (S)	420	—	—	—
Mount Marshall (S)	—	—	—	—
Mukinbudin (S)	390	—	—	—
Narembeen (S)	—	—	—	—
Northam (T)	732	450	655	14,050
Northam (S)	641	82	—	2,679
Nungarin (S)	—	—	—	—
Quairading (S)	—	—	—	185
Tammin (S)	—	—	—	—
Toodyay (S)	212	180	—	357
Trayning (S)	—	—	—	—
Victoria Plains (S)	—	—	100	54
Westonia (S)	—	—	—	—
Wongan-Ballidu (S)	915	439	—	—
Wyalkatchem (S)	—	—	—	—
Yilgarn (S)	220	—	—	—
York (S)	50	—	60	—
<b>Total</b>	<b>4,346</b>	<b>1,520</b>	<b>2,978</b>	<b>21,200</b>

TABLE 11 - VALUE OF NON-RESIDENTIAL BUILDING COMPLETED AND UNDER CONSTRUCTION  
BY STATISTICAL LOCAL AREAS AND STATISTICAL DIVISIONS - *continued*  
(\$'000)

Statistical division Statistical local area (a)	Completed during period			Under construction at end of period
	Year ended June 1993	Quarter ended September 1993 (r)	Quarter ended December 1993p	Quarter ended December 1993p
<b>SOUTH-EASTERN STATISTICAL DIVISION</b>				
Coolgardie (S)	189	—	225	—
Dundas (S)	—	88	—	—
Esperance (S)	1,834	278	300	820
Kalgoorlie-Boulder (C)	9,912	3,215	10,942	6,916
Laverton (S)	—	—	—	—
Leonora (S)	1,797	366	1,473	—
Menzies (S)	—	—	—	—
Ravensthorpe (S)	1,432	—	—	—
<b>Total</b>	<b>15,164</b>	<b>3,948</b>	<b>12,940</b>	<b>7,736</b>
<b>CENTRAL STATISTICAL DIVISION</b>				
Carnamah (S)	228	—	—	—
Carnarvon (S)	1,111	518	404	1,736
Chapman Valley (S)	113	104	—	—
Coorow (S)	130	—	140	—
Cue (S)	—	—	99	70
Exmouth (S)	240	—	101	—
Geraldton (C)	4,914	1,996	3,350	1,477
Greenough (S)	1,887	53	—	250
Irwin (S)	535	650	—	—
Meekatharra (S)	1,591	56	—	267
Mingenew (S)	—	—	—	—
Morawa (S)	1,815	—	—	—
Mount Magnet (S)	—	—	—	—
Mullewa (S)	186	—	—	260
Murchison (S)	—	—	170	—
Ngaanyatjarraku (S) (c)	—	—	—	—
Northampton (S)	151	120	250	—
Perenjori (S)	—	—	—	—
Sandstone (S)	—	—	—	—
Shark Bay (S)	200	—	47	90
Three Springs (S)	—	—	—	—
Upper Gascoyne (S)	—	—	—	—
Wiluna (S) (c)	171	—	5,290	—
Yalgoo (S)	—	—	—	—
<b>Total</b>	<b>13,271</b>	<b>3,497</b>	<b>9,851</b>	<b>4,149</b>
<b>PILBARA STATISTICAL DIVISION</b>				
Ashburton (S)	2,283	—	1,059	13,956
East Pilbara (S)	1,703	209	3,236	2,591
Port Hedland (T)	6,993	227	1,691	2,561
Roebourne (S)	12,279	10,253	1,070	250
<b>Total</b>	<b>23,258</b>	<b>10,689</b>	<b>7,055</b>	<b>19,357</b>
<b>KIMBERLEY STATISTICAL DIVISION</b>				
Broome (S)	2,339	1,414	538	1,489
Derby-West Kimberley (S)	1,920	530	1,124	—
Halls Creek (S)	707	—	1,321	663
Wyndham-East Kimberley (S)	4,917	948	199	690
<b>Total</b>	<b>9,883</b>	<b>2,892</b>	<b>3,182</b>	<b>2,842</b>
<b>STATE SUMMARY</b>				
Statistical division—				
Perth	766,196	98,642	145,044	530,465
South-West	35,399	10,390	12,688	29,205
Lower Great Southern	12,416	3,686	3,342	5,479
Upper Great Southern	2,037	250	—	2,664
Midlands	4,346	1,520	2,978	21,200
South-Eastern	15,164	3,948	12,940	7,736
Central	13,271	3,497	9,851	4,149
Pilbara	23,258	10,689	7,055	19,357
Kimberley	9,883	2,892	3,182	2,842
<b>WESTERN AUSTRALIA</b>	<b>881,970</b>	<b>135,514</b>	<b>197,079</b>	<b>623,098</b>

(a) City councils are marked (C), Towns councils (T) and Shire councils (S). (b) From 1 July 1993, Boddington (S) is part of the South-West Statistical Division. Formerly part of the Upper Great Southern Statistical Division. (c) From 1 July 1991, Ngaanyatjarraku is a new Shire council. Formerly part of Wiluna (S).



## EXPLANATORY NOTES

### Introduction

This publication contains detailed results from the quarterly Building Activity Survey.

2. The statistics are compiled on the basis of returns collected from builders and other individuals and organisations engaged in building activity. The quarterly survey consists of two components.

- (a) A sample survey of private sector house building activity involving new house construction or alterations and additions valued at \$10,000 or more to houses.
- (b) 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 non-residential building jobs with an approval value of \$50,000 or more.

3. From the September quarter 1990, only non-residential building jobs (both new and alterations and additions) with an approval value of \$50,000 or more are included in the survey. For the September quarter 1985 to June quarter 1990, the cut-off for inclusion was \$30,000 or more and prior to that it was \$10,000 or more. Care should be taken in interpreting data for specific classes of non-residential building.

4. The use of sample survey techniques in the Building Activity Survey means that reliable estimates of private sector house building activity, including alterations and additions to houses, are available only at the State/Territory and Australia levels with the exception of the Northern Territory. However, dwelling unit commencement data for regions below State level are shown in the monthly series of dwelling unit commencements compiled by State offices of the ABS. Data from this series, unlike those compiled from the Building Activity Survey, are based on information reported by local and other government authorities.

### Scope and coverage

5. The statistics relate to *building* activity which includes construction of new buildings and alterations and additions to existing buildings. Construction activity not defined as building (e.g. construction of roads, bridges, railways, earthworks, etc.) is excluded.

6. Building jobs included in each quarter in the Building Activity Survey comprise those building jobs selected in previous quarters which have not been completed (or commenced) by the end of the previous quarter and those building jobs newly selected in the current quarter. The population list from which building jobs are selected for inclusion comprises all approved building jobs which were notified to the ABS up to but not including the last month of the reference quarter (e.g. up to the end of August in respect of the September quarter survey). This introduces a lag to the statistics in respect of those building jobs notified and commenced in the last month of the reference quarter (e.g. for the month of September in respect of the September quarter survey). For example, building jobs which were notified as approved in the month of June and which actually commenced in that month are shown as commencements in the September quarter. Similarly, building jobs which were notified in the month of September and which actually commenced in that month are shown as commencements in the December quarter.

### Definitions

7. 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.

8. 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 the appropriate category of non-residential building.

9. 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) 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.

(b) 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, apartment buildings, etc.).

10. The number of dwelling units created by alterations and additions to existing buildings, and through the construction of new non-residential buildings, is not included in the tables but is shown as a footnote to Table 1.

11. *Commenced*. A building job is regarded as commenced when the first physical building activity has been performed on site in the form of materials fixed in place and/or labour expended (this includes site preparation but excludes delivery of building materials, the drawing of plans and specifications and the construction of non-building infrastructures such as roads).

12. *Under construction*. A building job is regarded as being under construction at the end of a period if it has been commenced but has not been completed, and work on it has not been abandoned.

13. *Completed*. A building job is regarded as completed when building activity has progressed to the stage when the building can fulfil its intended function. In practice, the ABS regards buildings as completed when notified as such by respondents to the survey.

### Valuation of building jobs

14. The value series in this publication are derived from estimates reported on survey returns as follows.

- (a) *Value of building commenced or under construction* represents the anticipated completion value based, where practicable, on estimated market or contract price of building jobs excluding the value of land and landscaping. Site preparation costs are included. Where building jobs proceed over several quarters,

the anticipated completion value reported on the return for the first (commencement) quarter may be amended on returns for subsequent (under construction) quarters as the job nears completion.

- (b) *Value of building completed* represents the actual completion value based, where practicable, on the market or contract price of building jobs including site preparation costs but excluding the value of land and landscaping.
- (c) *Value of building work done during the period* represents the estimated value of building work actually carried out during the quarter on building jobs which have commenced.
- (d) *Value of building work yet to be done* represents the difference between the anticipated completion value and the estimated value of work done on building jobs up to the end of the period.

### Building classification

15. *Ownership.* The ownership of a building is classified as either *public sector* or *private sector* according to the sector of the intended owner of the completed building as evident at the time of approval. Residential buildings being constructed by private sector builders under government housing authority schemes whereby the authority has contracted, or intends to contract, to purchase the buildings on or before completion, are classified as public sector.

16. *Builder type.* Houses are classified according to the type of builder as follows.

- (a) *Contractor-built houses* are those constructed by a private recognised building contractor, either under contract, or in anticipation of sale or rental.
- (b) *Houses built by other than contract builders* are those constructed by an owner (other than a recognised building contractor) or under the owner's direction, without the services of a single contractor responsible for the whole job. Houses built by businesses (other than recognised building contractors) and public sector organisations are also included in this category.

17. *Functional classification of buildings.* A building is classified according to its intended major function. Hence, a building which is ancillary to other buildings or forms a part of a group of related buildings is classified to the function of the building and not to the function of the group as a whole. An example of this can be seen in the treatment of building work approved for a factory complex. In this case a detached administration building would be classified to Offices, a detached cafeteria building to Shops, while factory buildings would be classified to Factories. An exception to this rule is the treatment of group accommodation buildings where, for example, a student accommodation building on a university campus would be classified to Educational.

18. Examples of the types of buildings included under each main functional heading are shown in the following list.

- (a) *Houses.* Includes cottages, bungalows, detached caretakers'/managers' cottages, rectories.
- (b) *Other residential buildings.* Includes blocks of flats, home units, attached townhouses, villa units, terrace houses, semi-detached houses, maisonettes.
- (c) *Hotels, etc.* Includes motels, hostels, boarding houses, guest houses, holiday apartment buildings.

- (d) *Shops.* Includes retail shops, restaurants, cafes, taverns, dry cleaners, laundromats, hair salons, shopping arcades.
- (e) *Factories.* Includes paper mills, oil refinery buildings, brickworks, foundries, powerhouses, manufacturing laboratories, workshops as part of a manufacturing process.
- (f) *Offices.* Includes banks, post offices, council chambers, head and regional offices.
- (g) *Other business premises.* Includes warehouses, storage depots, service stations, transport depots and terminals, electricity sub-station buildings, pumping station buildings, telephone exchanges, mail sorting centres, broadcasting stations, film studios.
- (h) *Educational.* Includes schools, colleges, kindergartens, libraries, museums, art galleries, research and teaching laboratories, theological colleges.
- (i) *Religious.* Includes churches, chapels, temples.
- (j) *Health.* Includes hospitals, nursing homes, surgeries, clinics, medical centres.
- (k) *Entertainment and recreational.* Includes clubs, theatres, cinemas, public halls, gymnasiums, grandstands, squash courts, sports and recreation centres.
- (l) *Miscellaneous.* Includes law courts, homes for the aged (where medical care is not provided as a normal service), orphanages, gaols, barracks, mine buildings, glasshouses, livestock sheds, shearing sheds, fruit and skin drying sheds, public toilets, and ambulance, fire and police stations.

### Reliability of the estimates

19. Since the figures for private sector house building activity (including alterations and additions) are derived from information obtained from a sample of approved building jobs, they are subject to sampling error; that is, they may differ from the figures that would have been obtained if information for all approved jobs for the relevant period had been included in the survey. One measure of the likely difference is given by the *standard error*, which indicates the extent to which an estimate might have varied by chance because only a sample of approved jobs was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all approved jobs had been included, and about nineteen chances in twenty that the difference will be less than two standard errors. Another measure of sampling variability is the *relative standard error*, which is obtained by expressing the standard error as a percentage of the estimate to which it refers. The relative standard errors of estimates provide an indication of the percentage errors likely to have occurred due to sampling, and are shown in Table 10.

20. An example of the use of relative standard errors is as follows. Assume that the estimate of the number of new private sector houses commenced during the latest quarter is 2,000 (for actual estimate see Table 2) and that the associated relative standard error is 2.5 per cent (for actual percentage see Table 10). There would then be about two chances in three that the number which would have been obtained if information had been collected about all approved private sector house jobs would have been within the range 1,950 to 2,050 (2.5 per cent of 2,000 is 50) and about nineteen chances in twenty that the number would have been within the range 1,900 to 2,100.

21. The imprecision due to sampling variability, which is measured by the relative standard error, should not be confused with inaccuracies that may occur because of inadequacies in the source of building approval information, imperfections in reporting by respondents, and errors made in the coding and processing of data. Inaccuracies of this kind are referred to as non-sampling error, and may occur in any enumeration whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by the careful design of questionnaires, efforts to obtain responses for all selected building jobs, and efficient operating procedures.

#### Seasonal adjustment

22. Seasonally adjusted building statistics are shown in Tables 4, 5 and 7. In the seasonally adjusted series, account has been taken of normal seasonal factors and trading day effects (arising from the varying numbers of Sundays, Mondays, Tuesdays etc. in the quarter) and the effect of movement in the date of Easter which may, in successive years, affect figures for different quarters. In this publication (i.e. the December quarter issue) the seasonally adjusted series have been revised as a result of the annual re-analysis of seasonal factors. Details of the methods used in seasonally adjusting the series are given in *Seasonally Adjusted Indicators, Australia* (1308.0).

23. 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. Each of the component series shown has been seasonally adjusted independently. As a consequence, while the unadjusted components in the original series shown add to the totals, the adjusted components may not add to the adjusted totals. Further, the difference between independently seasonally adjusted series does not necessarily produce series which are optimal or even adequate adjustments of the similarly derived original series. Thus the figures which can be derived by subtracting seasonally adjusted private sector dwelling units from the seasonally adjusted total should not be used to represent seasonally adjusted public sector dwelling units.

#### Estimates at constant prices

24. Estimates of the value of commencements and work done at average 1989-90 prices are shown in Tables 6 and 7. Constant price estimates measure changes in value after the direct effects of price changes have been eliminated. 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 non-dwelling construction components of the national accounts aggregate 'Gross fixed capital expenditure'.

25. Estimates at constant prices are subject to a number of approximations and assumptions. Further information on the nature and concepts of constant price estimates is contained in Chapter 4 of *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

26. The factors used to seasonally adjust the constant price series are identical to those used to adjust the corresponding current price series.

#### Australian Standard Geographical Classification

27. Area statistics are classified according to the Australian Standard Geographical Classification. Figures previously published for local government areas and statistical divisions are directly comparable with this classification except for the cities of Perth, Fremantle and Stirling which are obtained by aggregating the component statistical local areas.

#### Unpublished data and related publications

28. The ABS can also make available certain building approvals and activity data which are not published. Where it is not practicable to provide the required information by telephone, data can be provided in the following forms: microfiche, photocopy, computer printout, floppy disk and clerically extracted tabulation. For details of what further information is available and its cost, please telephone this publication's contact officer (shown on the front page).

29. Users may also wish to refer to the following building and construction publications which are available on request:

*Building Approvals, Australia* (8731.0) – monthly (\$13.50)  
*Building Approvals, Western Australia* (8731.5) – monthly (\$11.00)

*Dwelling Unit Commencements Reported by Approving Authorities, Western Australia* (8741.5) – monthly (\$11.00)

*Building Activity, Australia: Dwelling Unit Commencements, Preliminary* (8750.0) – quarterly (\$11.00)

*Building Activity, Australia* (8752.0) – quarterly (\$14.50)  
*Engineering Construction Activity, Australia* (8762.0) – quarterly (\$11.00)

*Construction Activity at Constant Prices, Australia* (8782.0) – quarterly (\$11.00)

30. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

#### Symbols and other usages

— not applicable  
— nil or rounded to zero  
r figure or series revised since previous issue  
p preliminary – series subject to revision

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

**P.C. KELLY**  
Deputy Commonwealth Statistician  
and Government Statist



-1 FEB 1995

Cat. No. 8752.5 December Qtr 1993

## For more information ...

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the *ABS Catalogue of Publications and Products* available at all ABS Offices.

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2875250012930  
ISSN 0728-4055