

**BUILDING ACTIVITY**

**DWELLING UNIT  
COMMENCEMENTS**

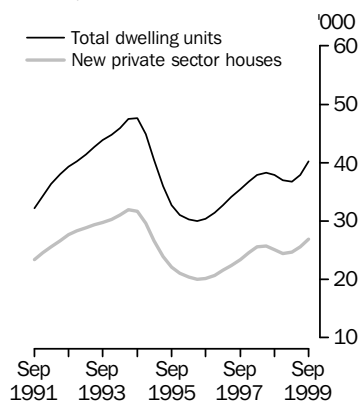
**AUSTRALIA**

**PRELIMINARY**

EMBARGO: 11:30AM (CANBERRA TIME) THURS 16 DEC 1999

**Dwelling units commenced**

Number, Trend



**SEPTEMBER QTR KEY FIGURES**

**TREND ESTIMATES**

Dwelling units commenced

New private sector houses

Total dwelling units

**Sep qtr 99**

26 906

40 212

**% change  
Jun qtr 99 to  
Sep qtr 99**

5.0

6.2

**% change  
Sep qtr 98 to  
Sep qtr 99**

7.6

6.0

**SEASONALLY ADJUSTED**

Dwelling units commenced

New private sector houses

Total dwelling units

**Sep qtr 99**

26 930

41 905

**% change  
Jun qtr 99 to  
Sep qtr 99**

4.0

14.8

**% change  
Sep qtr 98 to  
Sep qtr 99**

4.8

7.0

**SEPTEMBER QTR KEY POINTS**

**TREND ESTIMATES**

- Following a resurgence in residential building approvals, the trend for the total number of dwelling units commenced rose by 6.2% in the September quarter 1999, arresting the downward trend reported last quarter. The main factor contributing to the upswing was a significant rise in new other dwelling units (particularly apartment buildings) in most States and Territories.
- The change in direction of the trend for the number of new private sector houses commenced, as reported last quarter, was confirmed by an increase of 5.0% in the September quarter.

**SEASONALLY ADJUSTED ESTIMATES**

- The total number of dwelling units commenced during the September quarter increased by 5,419 to 41,905. This rise of 14.8% was largely due to the increase in new other dwelling units.
- The number of new private sector houses commenced rose by 1,030 to 26,930, an increase of 4.0%.

**ORIGINAL ESTIMATES**

- The total number of dwelling units commenced during the September quarter increased by 14.0% to 42,420 to be the most since the December quarter 1994.
- Almost three-quarters of the increase was due to a 39.3% jump in new other dwellings, while new house commencements rose by 4.3%. For details, see page 3.

- For further information about these and related statistics, contact Tony Bammann on Adelaide 08 8237 7316, or Client Services in any ABS office as shown on the back cover of this publication.

## NOTES

### FORTHCOMING ISSUES

ISSUE (Quarter)

RELEASE DATE

December 1999

20 March 2000

March 2000

22 June 2000

### DATA NOTES

The 1999 figures for Queensland may be an underestimate (and hence, to a lesser extent, for Australia) as a result of possible under-reporting of building approvals by some councils in Queensland. For more information, see *Building Approvals, Australia* (Cat. no. 8731.0) July 1999 and subsequent issues. Revisions are expected to be made in the next issue.

### SAMPLING ERRORS

The estimates in this publication are based on a sample survey of private sector house building activity and a complete enumeration of other building activity. Because data are not collected for all private sector house 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.

### RELATIVE STANDARD ERRORS

Relative standard errors for the number of new private sector houses and total dwelling units commenced in the September quarter 1999 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.

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	New private sector houses	Total dwellings
	%	%
New South Wales	3.5	1.8
Victoria	3.1	2.1
Queensland	2.7	1.9
South Australia	3.5	2.8
Western Australia	3.9	3.0
Tasmania	1.8	1.6
Northern Territory	..	..
Australian Capital Territory	1.2	0.5
<b>Australia</b>	<b>1.5</b>	<b>1.0</b>

W. McLennan  
Australian Statistician

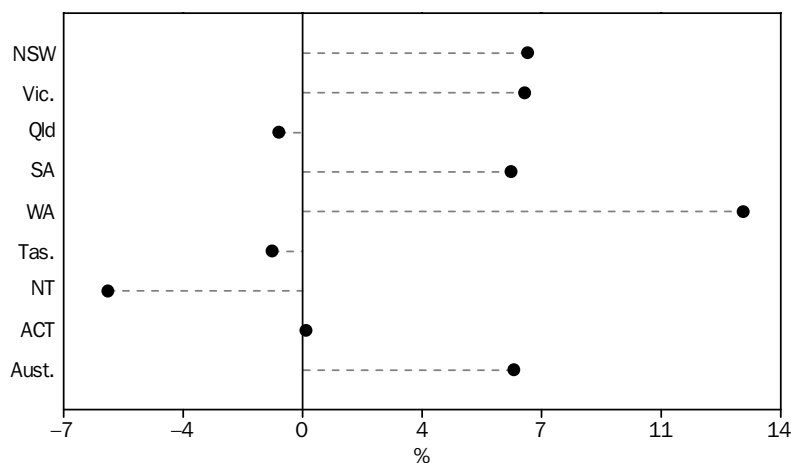
## STATE ESTIMATES

### TOTAL NUMBER OF DWELLING UNITS COMMENCED

#### Trend estimates

- Western Australia (+12.9%) and New South Wales (+6.6%) recorded the largest percentage increases in the trend estimate of the number of dwelling units commenced in the September quarter, and have reached their highest levels since the December quarter 1994. Victoria (+6.5%) was the highest since the series began in the September quarter 1984, while South Australia (+6.1%) and the Australian Capital Territory (+0.1%) were the highest since the March quarter 1995.
- Falls occurred in the Northern Territory (−5.7%), Tasmania (−0.9%) and Queensland (−0.7%).

#### Change from previous quarter



#### Seasonally adjusted estimates

- All States and Territories recorded increases in the number of dwelling units commenced in the September quarter, with the Australian Capital Territory showing the largest percentage increase (42.5%), followed by Western Australia (26.5%), New South Wales (16.9%), Queensland (8.8%), South Australia (8.3%), Victoria (7.8%) and Tasmania (6.1%).

#### Original estimates

- The largest percentage increases in the total number of dwelling units commenced during the September quarter were recorded by Western Australia (+24.9%), followed by the Australian Capital Territory (+24.7%), New South Wales (+20.1%) and South Australia (+18.8%).
- All States and Territories except Tasmania recorded increases in the number of new other dwelling units commenced. New South Wales jumped by 47.7% to 6,669, a record for the series which began 30 years ago, while Victoria rose 27.3% to 3,136, the highest for 26 years. Other dwelling units commenced for Western Australia also jumped, by 54.6% to 1,130, the highest since the March quarter 1995.
- The largest percentage increase in new house commencements was in Western Australia (17.2%), followed by South Australia (7.9%) and Queensland (5.2%).

**TABLE 1. NUMBER OF DWELLING UNITS COMMENCED**

<i>Period</i>	<i>New houses</i>		<i>Total dwelling units (includes conversions etc)</i>	
	<i>Private sector</i>	<i>Total</i>	<i>Private sector</i>	<i>Total</i>
<b>ORIGINAL</b>				
1998 June qtr	25,838	26,354	37,066	38,591
Sept. qtr	26,239	27,326	37,915	39,723
Dec. qtr	24,866	25,542	35,971	37,206
1999 Mar. qtr	22,404	22,870	33,240	34,415
June qtr	26,236	26,818	35,809	37,199
Sept. qtr	27,462	27,973	40,988	42,420
<b>SEASONALLY ADJUSTED</b>				
1998 June qtr	25,505	26,050	36,469	37,848
Sept. qtr	25,704	26,602	37,710	39,179
Dec. qtr	23,715	24,462	34,677	36,368
1999 Mar. qtr	24,413	24,937	35,327	36,480
June qtr	25,900	26,516	35,235	36,486
Sept. qtr	26,930	27,251	40,825	41,905
<b>TREND ESTIMATES</b>				
1998 June qtr	25,668	26,329	36,876	38,274
Sept. qtr	25,004	25,748	36,450	37,935
Dec. qtr	24,441	25,186	35,445	36,936
1999 Mar. qtr	24,700	25,333	35,336	36,682
June qtr	25,622	26,124	36,686	37,878
Sept. qtr	26,906	27,245	39,165	40,212

**TABLE 2. NUMBER OF DWELLING UNITS COMMENCED, PERCENTAGE CHANGE**

<i>Period</i>	<i>New houses</i>		<i>Total dwelling units (includes conversions etc)</i>	
	<i>Private sector</i>	<i>Total</i>	<i>Private sector</i>	<i>Total</i>
<b>ORIGINAL (% change from previous quarter)</b>				
1998 June qtr	10.3	10.4	8.9	9.7
Sept. qtr	1.6	3.7	2.3	2.9
Dec. qtr	-5.2	-6.5	-5.1	-6.3
1999 Mar. qtr	-9.9	-10.5	-7.6	-7.5
June qtr	17.1	17.3	7.7	8.1
Sept. qtr	4.7	4.3	14.5	14.0
<b>SEASONALLY ADJUSTED (% change from previous quarter)</b>				
1998 June qtr	-0.2	-0.1	0.7	1.3
Sept. qtr	0.8	2.1	3.4	3.5
Dec. qtr	-7.7	-8.0	-8.0	-7.2
1999 Mar. qtr	2.9	1.9	1.9	0.3
June qtr	6.1	6.3	-0.3	—
Sept. qtr	4.0	2.8	15.9	14.8
<b>TREND ESTIMATES (% change from previous quarter)</b>				
1998 June qtr	0.5	1.0	0.8	1.1
Sept. qtr	-2.6	-2.2	-1.2	-0.9
Dec. qtr	-2.3	-2.2	-2.8	-2.6
1999 Mar. qtr	1.1	0.6	-0.3	-0.7
June qtr	3.7	3.1	3.8	3.3
Sept. qtr	5.0	4.3	6.8	6.2

**TABLE 3. TOTAL NUMBER OF DWELLING UNITS (a) COMMENCED BY STATE**

<i>Period</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Australia</i>
SEASONALLY ADJUSTED									
1998 June qtr	12,262	9,346	8,853	1,645	4,746	389	n.a.	243	37,848
Sept. qtr	13,433	9,662	7,808	1,906	4,927	334	n.a.	559	39,179
Dec. qtr	11,363	9,289	7,471	1,798	4,453	358	n.a.	381	36,368
1999 Mar. qtr	12,863	9,659	6,766	1,784	4,286	353	n.a.	793	36,480
June qtr	12,083	10,423	6,397	1,930	4,750	330	n.a.	434	36,486
Sept. qtr	14,123	11,235	6,960	2,090	6,008	350	n.a.	619	41,905
TREND ESTIMATES									
1998 June qtr	12,647	9,273	8,689	1,780	4,711	371	578	346	38,274
Sept. qtr	12,556	9,409	8,041	1,791	4,713	357	569	434	37,935
Dec. qtr	12,272	9,497	7,317	1,808	4,493	348	531	537	36,936
1999 Mar. qtr	12,308	9,802	6,861	1,847	4,518	345	487	583	36,682
June qtr	12,778	10,392	6,667	1,925	4,942	344	438	583	37,878
Sept. qtr	13,628	11,064	6,618	2,043	5,578	341	413	583	40,212

(a) Includes conversions, etc.

**TABLE 4. TOTAL NUMBER OF DWELLING UNITS (a) COMMENCED BY STATE, PERCENTAGE CHANGE**

<i>Period</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Australia</i>
SEASONALLY ADJUSTED (% change from previous quarter)									
1998 June qtr	-2.6	7.3	-2.5	-8.0	9.2	0.4	n.a.	-30.3	1.3
Sept. qtr	9.5	3.4	-11.8	15.9	3.8	-14.1	n.a.	129.9	3.5
Dec. qtr	-15.4	-3.9	-4.3	-5.7	-9.6	7.0	n.a.	-31.8	-7.2
1999 Mar. qtr	13.2	4.0	-9.4	-0.8	-3.7	-1.3	n.a.	108.1	0.3
June qtr	-6.1	7.9	-5.4	8.2	10.8	-6.5	n.a.	-45.2	—
Sept. qtr	16.9	7.8	8.8	8.3	26.5	6.1	n.a.	42.5	14.8
TREND ESTIMATES (% change from previous quarter)									
1998 June qtr	1.2	3.2	-3.8	3.3	5.5	-5.7	1.3	9.0	1.1
Sept. qtr	-0.7	1.5	-7.5	0.6	—	-3.7	-1.7	25.5	-0.9
Dec. qtr	-2.3	0.9	-9.0	0.9	-4.7	-2.5	-6.6	23.7	-2.6
1999 Mar. qtr	0.3	3.2	-6.2	2.2	0.6	-0.8	-8.4	8.5	-0.7
June qtr	3.8	6.0	-2.8	4.2	9.4	-0.4	-10.0	—	3.3
Sept. qtr	6.6	6.5	-0.7	6.1	12.9	-0.9	-5.7	0.1	6.2

(a) Includes conversions, etc.

TABLE 5. TOTAL NUMBER OF DWELLING UNITS COMMENCED

<i>Period</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Australia</i>
NEW HOUSES									
1996-97	23,385	18,652	22,870	5,112	12,522	1,560	985	1,157	86,246
1997-98	26,764	26,004	23,754	5,823	14,790	1,387	1,219	1,022	100,764
1998-99	27,562	29,165	19,534	6,296	15,948	1,264	1,426	1,359	102,556
1998 June qtr	6,902	7,165	5,941	1,397	4,024	341	344	239	26,354
Sept. qtr	7,471	7,362	5,368	1,610	4,418	298	374	424	27,326
Dec. qtr	6,239	7,399	5,159	1,699	3,987	332	450	276	25,542
1999 Mar. qtr	6,633	6,494	4,131	1,326	3,386	330	285	285	22,870
June qtr	7,219	7,910	4,876	1,661	4,157	304	317	374	26,818
Sept. qtr	7,510	7,821	5,128	1,793	4,872	305	274	271	27,973
NEW OTHER RESIDENTIAL BUILDINGS									
1996-97	18,681	6,047	9,004	651	2,241	291	701	729	38,345
1997-98	19,852	7,598	11,222	741	2,360	231	952	236	43,192
1998-99	20,786	8,305	8,742	1,062	2,407	107	532	605	42,546
1998 June qtr	4,870	1,894	3,103	154	844	42	242	27	11,176
Sept. qtr	5,798	2,000	2,627	336	602	12	120	116	11,611
Dec. qtr	5,010	1,682	2,542	263	488	54	191	145	10,375
1999 Mar. qtr	5,464	2,159	1,820	302	586	18	124	240	10,713
June qtr	4,514	2,464	1,753	161	731	23	97	104	9,847
Sept. qtr	6,669	3,136	1,886	372	1,130	18	178	325	13,714
CONVERSIONS, ETC									
1996-97	1,667	1,131	535	26	86	30	40	65	3,580
1997-98	1,821	1,340	441	89	115	3	14	2	3,826
1998-99	1,359	1,566	212	57	92	6	15	133	3,441
1998 June qtr	400	473	144	7	28	3	6	—	1,062
Sept. qtr	406	299	30	34	12	2	3	—	786
Dec. qtr	488	653	101	3	37	3	4	—	1,289
1999 Mar. qtr	229	355	64	16	28	—	6	133	832
June qtr	236	259	17	4	15	1	2	—	534
Sept. qtr	192	285	119	5	124	4	4	—	733
TOTAL									
1996-97	43,733	25,831	32,409	5,789	14,849	1,881	1,726	1,951	128,172
1997-98	48,437	34,942	35,418	6,653	17,265	1,622	2,185	1,260	147,781
1998-99	49,707	39,036	28,488	7,416	18,447	1,377	1,973	2,097	148,543
1998 June qtr	12,172	9,532	9,188	1,558	4,896	387	592	266	38,591
Sept. qtr	13,675	9,662	8,025	1,980	5,032	312	497	540	39,723
Dec. qtr	11,737	9,734	7,802	1,965	4,512	389	645	421	37,206
1999 Mar. qtr	12,326	9,008	6,015	1,645	4,000	348	415	658	34,415
June qtr	11,969	10,632	6,646	1,826	4,903	328	416	478	37,199
Sept. qtr	14,371	11,242	7,133	2,170	6,126	327	456	596	42,420

**TABLE 6. TOTAL NUMBER OF PRIVATE SECTOR DWELLING UNITS COMMENCED**

<i>Period</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Australia</i>
NEW HOUSES									
1996-97	23,180	18,395	22,523	5,057	12,013	1,543	815	1,116	84,645
1997-98	26,585	25,701	23,411	5,628	14,170	1,379	949	1,020	98,844
1998-99	27,169	28,512	19,098	6,091	15,383	1,263	932	1,295	99,745
1998 June qtr	6,827	7,092	5,819	1,334	3,892	339	295	239	25,838
Sept. qtr	7,252	7,164	5,269	1,563	4,049	297	221	423	26,239
Dec. qtr	6,181	7,214	5,019	1,644	3,946	332	256	273	24,866
1999 Mar. qtr	6,572	6,302	4,065	1,293	3,350	330	221	271	22,404
June qtr	7,164	7,832	4,745	1,591	4,038	304	234	328	26,236
Sept. qtr	7,472	7,714	5,031	1,754	4,742	293	201	256	27,462
NEW OTHER RESIDENTIAL BUILDINGS									
1996-97	16,878	5,636	8,314	647	1,858	246	685	711	34,975
1997-98	18,681	7,060	10,657	720	1,855	220	877	228	40,298
1998-99	19,638	7,876	8,072	1,039	1,982	107	485	601	39,800
1998 June qtr	4,552	1,734	2,798	149	640	37	235	27	10,172
Sept. qtr	5,461	1,905	2,425	332	543	12	106	116	10,900
Dec. qtr	4,785	1,592	2,442	244	398	54	187	145	9,847
1999 Mar. qtr	5,106	2,038	1,770	302	426	18	109	236	10,005
June qtr	4,286	2,341	1,435	161	615	23	83	104	9,048
Sept. qtr	6,363	3,076	1,603	362	911	18	178	305	12,816
CONVERSIONS, ETC									
1996-97	1,638	1,118	535	23	80	12	28	5	3,439
1997-98	1,807	1,317	419	89	115	3	14	2	3,767
1998-99	1,336	1,542	210	55	92	6	15	133	3,390
1998 June qtr	397	471	144	7	28	3	6	—	1,057
Sept. qtr	399	298	30	32	12	2	3	—	776
Dec. qtr	479	632	100	3	37	3	4	—	1,258
1999 Mar. qtr	228	355	64	16	28	—	6	133	831
June qtr	230	257	16	4	15	1	2	—	525
Sept. qtr	179	283	119	5	116	4	4	—	710
TOTAL									
1996-97	41,696	25,150	31,372	5,727	13,951	1,801	1,528	1,832	123,060
1997-98	47,073	34,078	34,488	6,437	16,140	1,603	1,840	1,250	142,908
1998-99	48,143	37,930	27,380	7,186	17,457	1,376	1,432	2,029	142,935
1998 June qtr	11,776	9,297	8,761	1,490	4,560	380	536	266	37,066
Sept. qtr	13,112	9,368	7,724	1,927	4,604	311	330	539	37,915
Dec. qtr	11,445	9,438	7,561	1,891	4,381	389	447	418	35,971
1999 Mar. qtr	11,906	8,695	5,899	1,612	3,804	348	336	640	33,240
June qtr	11,680	10,429	6,196	1,756	4,668	328	319	432	35,809
Sept. qtr	14,014	11,073	6,753	2,121	5,769	315	383	561	40,988

**TABLE 7. TOTAL NUMBER OF PUBLIC SECTOR DWELLING UNITS COMMENCED**

<i>Period</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Australia</i>
<b>NEW HOUSES</b>									
1996-97	205	257	347	55	509	17	170	41	1,601
1997-98	179	303	343	195	620	8	270	2	1,920
1998-99	393	653	436	205	565	1	494	64	2,811
1998 June qtr	75	73	122	63	132	2	49	—	516
Sept. qtr	219	198	99	47	369	1	153	1	1,087
Dec. qtr	58	185	140	55	41	—	194	3	676
1999 Mar. qtr	61	192	66	33	36	—	64	14	466
June qtr	55	78	131	70	119	—	83	46	582
Sept. qtr	38	107	97	39	130	12	73	15	511
<b>NEW OTHER RESIDENTIAL BUILDINGS</b>									
1996-97	1,803	411	690	4	383	45	16	18	3,370
1997-98	1,171	538	565	21	505	11	75	8	2,894
1998-99	1,148	429	670	23	425	—	47	4	2,746
1998 June qtr	318	160	305	5	204	5	7	—	1,004
Sept. qtr	337	95	202	4	59	—	14	—	711
Dec. qtr	225	90	100	19	90	—	4	—	528
1999 Mar. qtr	358	121	50	—	160	—	15	4	708
June qtr	228	123	318	—	116	—	14	—	799
Sept. qtr	306	60	283	10	219	—	—	20	898
<b>CONVERSIONS, ETC</b>									
1996-97	29	13	—	3	6	18	12	60	141
1997-98	14	23	22	—	—	—	—	—	59
1998-99	23	24	2	2	—	—	—	—	51
1998 June qtr	3	2	—	—	—	—	—	—	5
Sept. qtr	7	1	—	2	—	—	—	—	10
Dec. qtr	9	21	1	—	—	—	—	—	31
1999 Mar. qtr	1	—	—	—	—	—	—	—	1
June qtr	6	2	1	—	—	—	—	—	9
Sept. qtr	13	2	—	—	8	—	—	—	23
<b>TOTAL</b>									
1996-97	2,037	681	1,037	62	898	80	198	119	5,112
1997-98	1,364	864	930	216	1,125	19	345	10	4,873
1998-99	1,564	1,106	1,108	230	990	1	541	68	5,608
1998 June qtr	396	235	427	68	336	7	56	—	1,525
Sept. qtr	563	294	301	53	428	1	167	1	1,808
Dec. qtr	292	296	241	74	131	—	198	3	1,235
1999 Mar. qtr	420	313	116	33	196	—	79	18	1,175
June qtr	289	203	450	70	235	—	97	46	1,390
Sept. qtr	357	169	380	49	357	12	73	35	1,432



## EXPLANATORY NOTES

### INTRODUCTION

**1** This publication contains preliminary estimates from the quarterly Building Activity Survey of the number of dwelling units commenced. More comprehensive updated results for the last two quarters will be available shortly in *Building Activity, Australia* (Cat. no. 8752.0).

**2** The statistics were compiled on the basis of returns collected from builders and other individuals and organisations engaged in building activity. The quarterly survey comprises a sample survey of private sector house building activity and a complete enumeration of other building activity. Estimates in respect of commencements of private sector houses are therefore subject to sampling variability. The relative standard errors for these estimates are shown on page 2. Also, some returns containing jobs not known to have commenced are not received in time for inclusion in these estimates. Allowance is made for a proportion of these jobs, based on past experience, to have commenced. Estimates in this issue are therefore subject to revision.

**3** The use of sample survey techniques in the Building Activity Survey means that reliable estimates of private sector house commencements based on survey results are available only at the State, Territory and Australia levels. Further geographic disaggregations are not available. However, data for regions below State and Territory level are available from the building approvals series compiled by the Australian Bureau of Statistics (ABS) and based on information reported by local government and other reporting authorities.

### DEFINITIONS

**4** 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.

**5** 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.

**6** 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, apartment buildings, etc.).

These statistics present the number of dwelling units in other residential buildings (and not the number of buildings).

## EXPLANATORY NOTES *continued*

### DEFINITIONS *continued*

**7** *Conversions, etc.* Dwelling units can also be created as part of alterations and additions to existing buildings (including conversions to dwelling units) and as part of the construction of non-residential buildings. Such dwelling units are referred to in this publication under the heading of Conversions, etc.

**8** *Commenced.* A building 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).

**9** *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.

### SEASONAL ADJUSTMENT

**10** Seasonally adjusted building statistics are shown in tables 1–4. 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. Details regarding the methods used in seasonally adjusting the series are available on request.

**11** 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 dwelling units should not be used to represent seasonally adjusted public sector dwelling units.

**12** As happens with all seasonally adjusted series, the seasonal factors are reviewed annually to take account of each additional year's data. For the Building Activity Survey, the results of the latest review are shown in the December quarter issue each year.

### TREND ESTIMATES

**13** 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.

**14** 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*

### TREND ESTIMATES *continued*

**15** While the smoothing technique described in paragraphs 13 and 14 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 6345.

### ACKNOWLEDGEMENT

**16** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

### RELATED PUBLICATIONS

**17** Users may also wish to refer to the following publications:  
*Building Activity, Australia* (Cat. no. 8752.0) – issued quarterly  
*Building Approvals, Australia* (Cat. no. 8731.0) – issued monthly  
*House Price Indexes: Eight Capital Cities* (Cat. no. 6416.0) – issued quarterly  
*Housing Finance for Owner Occupation, Australia* (Cat. no. 5609.0)  
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*Price Index of Materials Used in Building Other Than House Building*  
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**18** Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office in your State or Territory.

### UNPUBLISHED STATISTICS

**19** The ABS can also make available certain building approvals and activity data which are not published. A charge may be made for providing unpublished information.

### ELECTRONIC SERVICES

**20** A large range of data is available via on-line services, diskette, magnetic tape, tape cartridge and CD-ROM. For more details about our electronic data services, contact the ABS office in your State or Territory.

### SYMBOLS AND OTHER USAGES

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

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

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