

**BUILDING ACTIVITY**

**DWELLING UNIT  
COMMENCEMENTS**

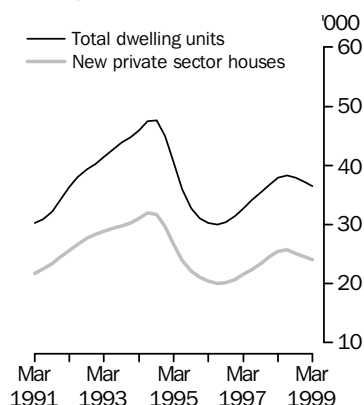
**AUSTRALIA**

**PRELIMINARY**

EMBARGO: 11:30AM (CANBERRA TIME) TUES 22 JUNE 1999

**Dwelling units commenced**

Number, Trend



**MARCH QTR KEY FIGURES**

	<b>Mar qtr 99</b>	<b>% change Dec qtr 98 to Mar qtr 99</b>	<b>% change Mar qtr 98 to Mar qtr 99</b>
<b>TREND ESTIMATES</b>			
Dwelling units commenced			
New private sector houses	24 049	-2.1	-5.8
Total dwelling units	36 460	-2.2	-3.8
.....			
	<b>Mar qtr 99</b>	<b>% change Dec qtr 98 to Mar qtr 99</b>	<b>% change Mar qtr 98 to Mar qtr 99</b>
<b>SEASONALLY ADJUSTED</b>			
Dwelling units commenced			
New private sector houses	24 429	2.6	-4.4
Total dwelling units	36 756	1.6	-1.6

**MARCH QTR KEY POINTS**

**TREND ESTIMATES**

- The trend for the number of new private sector houses commenced fell by 2.1% in the March quarter 1999, the third successive quarterly fall. The trend is now 5.8% below that of a year ago.
- The trend for the total number of dwelling units commenced also fell, by 2.2%, and is now 3.8% below the level of a year ago.

**SEASONALLY ADJUSTED ESTIMATES**

- The number of new private sector houses commenced during the March quarter rose by 618 to 24,429, an increase of 2.6%. The total number of dwelling units commenced increased by 592 to 36,756, a rise of 1.6%.
- New South Wales and the Australian Capital Territory were the only States/Territories to show an increase in the total number of dwelling units commenced during the quarter.

**ORIGINAL ESTIMATES**

- The total number of dwelling units commenced during the March quarter was 34,676, a fall of 6.3%. This is 1.5% below that for a year earlier. Falls in new house commencements (-10.8%) and in 'conversions, etc.' (-38.4%) were only partly offset by an increase in new other dwellings (+9.3%).
- Total private sector commencements fell by 6.4% to 33,508, with new houses down 10.2%. Public sector commencements fell by 5.4% to 1,168.

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

## NOTES

### FORTHCOMING ISSUES

*ISSUE (Quarter)*

*RELEASE DATE*

June 1999

14 September 1999

September 1999

16 December 1999

### CHANGES IN THIS ISSUE

There are no changes in this 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 March 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.

	<i>New private sector houses</i>	<i>Total dwellings</i>
	%	%
New South Wales	3.8	2.0
Victoria	4.1	2.8
Queensland	3.1	2.1
South Australia	3.9	3.1
Western Australia	4.0	3.3
Tasmania	2.2	2.1
Northern Territory	..	..
Australian Capital Territory	2.0	1.9
<b>Australia</b>	<b>1.8</b>	<b>1.2</b>

Dennis Trewin  
Acting Australian Statistician

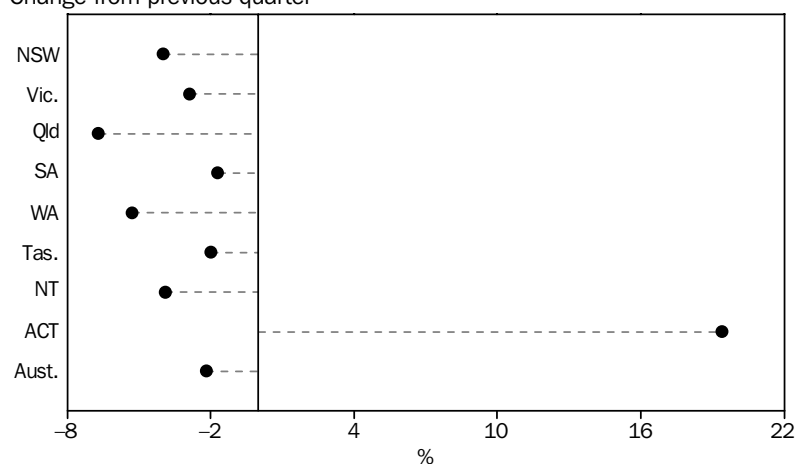
## STATE ESTIMATES

### TOTAL NUMBER OF DWELLING UNITS COMMENCED

#### Trend estimates

- Only the Australian Capital Territory (+19.4%) recorded an increase in the trend estimate of the number of dwelling units commenced in the March quarter.
- The largest fall occurred in Queensland (−6.7%), followed by Western Australia (−5.3%), New South Wales (−4.0%), the Northern Territory (−3.9%), Victoria (−2.9%), Tasmania (−2.0%) and South Australia (−1.7%).
- When compared with a year previously, the Australian Capital Territory (+102.2%) again showed the largest increase followed by South Australia (+2.1%) and Victoria (+0.2%). The largest fall was recorded by Queensland (−22.3%), followed by Tasmania (−13.7%), the Northern Territory (−10.3%), New South Wales (−8.1%) and Western Australia (−3.3%).

Change from previous quarter



#### Seasonally adjusted estimates

- Only the Australian Capital Territory (+102.1%) and New South Wales (+5.5%) showed an increase in the total number of dwelling units commenced in the March quarter.
- The largest fall was shown by Queensland (−8.3%), followed by South Australia and Tasmania (both −5.9%), Western Australia (−4.4%) and Victoria (−3.0%).
- When compared with a year previously, the Australian Capital Territory (+120.6%) and Victoria (+2.2%) showed increases. The largest fall was shown by Queensland (−23.0%), followed by Tasmania (−12.9%), New South Wales (−6.8%), South Australia (−5.4%) and Western Australia (−2.0%).

**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>				
1997 Dec. qtr	26,245	26,688	37,745	38,685
1998 Mar. qtr	23,427	23,882	34,023	35,192
June qtr	25,838	26,354	37,066	38,591
Sept. qtr	26,239	27,326	37,915	39,723
Dec. qtr	24,966	25,642	35,813	36,998
1999 Mar. qtr	22,419	22,879	33,508	34,676
<b>SEASONALLY ADJUSTED</b>				
1997 Dec. qtr	25,043	25,567	36,393	37,822
1998 Mar. qtr	25,555	26,065	36,222	37,370
June qtr	25,505	26,050	36,469	37,848
Sept. qtr	25,704	26,602	37,710	39,179
Dec. qtr	23,811	24,558	34,525	36,164
1999 Mar. qtr	24,429	24,946	35,611	36,756
<b>TREND ESTIMATES</b>				
1997 Dec. qtr	24,550	25,007	35,523	36,700
1998 Mar. qtr	25,526	26,052	36,598	37,883
June qtr	25,673	26,334	36,850	38,246
Sept. qtr	25,133	25,869	36,413	37,875
Dec. qtr	24,568	25,292	35,812	37,268
1999 Mar. qtr	24,049	24,710	35,123	36,460

**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>				
1997 Dec. qtr	12.5	11.9	10.8	9.5
1998 Mar. qtr	-10.7	-10.5	-9.9	-9.0
June qtr	10.3	10.4	8.9	9.7
Sept. qtr	1.6	3.7	2.3	2.9
Dec. qtr	-4.9	-6.2	-5.5	-6.9
1999 Mar. qtr	-10.2	-10.8	-6.4	-6.3
<b>SEASONALLY ADJUSTED (% change from previous quarter)</b>				
1997 Dec. qtr	9.8	10.3	7.7	8.9
1998 Mar. qtr	2.0	1.9	-0.5	-1.2
June qtr	-0.2	-0.1	0.7	1.3
Sept. qtr	0.8	2.1	3.4	3.5
Dec. qtr	-7.4	-7.7	-8.4	-7.7
1999 Mar. qtr	2.6	1.6	3.1	1.6
<b>TREND ESTIMATES (% change from previous quarter)</b>				
1997 Dec. qtr	4.8	4.7	3.4	3.6
1998 Mar. qtr	4.0	4.2	3.0	3.2
June qtr	0.6	1.1	0.7	1.0
Sept. qtr	-2.1	-1.8	-1.2	-1.0
Dec. qtr	-2.2	-2.2	-1.7	-1.6
1999 Mar. qtr	-2.1	-2.3	-1.9	-2.2

**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									
1997 Dec. qtr	12,093	8,799	9,032	1,748	4,250	410	n.a.	364	37,822
1998 Mar. qtr	12,589	8,709	9,083	1,788	4,347	387	n.a.	349	37,370
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	11,121	9,175	7,625	1,798	4,453	358	n.a.	381	36,164
1999 Mar. qtr	11,732	8,904	6,995	1,692	4,259	337	n.a.	770	36,756
TREND ESTIMATES									
1997 Dec. qtr	11,943	8,562	8,929	1,691	4,169	413	552	328	36,700
1998 Mar. qtr	12,513	8,994	9,022	1,723	4,465	393	571	317	37,883
June qtr	12,699	9,310	8,684	1,786	4,713	372	579	347	38,246
Sept. qtr	12,440	9,397	8,081	1,796	4,723	357	560	421	37,875
Dec. qtr	11,976	9,275	7,510	1,790	4,561	346	533	537	37,268
1999 Mar. qtr	11,501	9,010	7,008	1,760	4,319	339	512	641	36,460

(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)									
1997 Dec. qtr	4.9	9.0	6.8	18.0	8.5	-6.2	n.a.	17.0	8.9
1998 Mar. qtr	4.1	-1.0	0.6	2.3	2.3	-5.6	n.a.	-4.1	-1.2
June qtr	-2.6	7.3	-2.5	-8.0	9.2	0.5	n.a.	-30.4	1.3
Sept. qtr	9.5	3.4	-11.8	15.9	3.8	-14.1	n.a.	130.0	3.5
Dec. qtr	-17.2	-5.0	-2.3	-5.7	-9.6	7.2	n.a.	-31.8	-7.7
1999 Mar. qtr	5.5	-3.0	-8.3	-5.9	-4.4	-5.9	n.a.	102.1	1.6
TREND ESTIMATES (% change from previous quarter)									
1997 Dec. qtr	2.6	5.3	3.8	2.3	4.5	-2.8	12.0	-21.5	3.6
1998 Mar. qtr	4.8	5.0	1.0	1.9	7.1	-4.8	3.4	-3.4	3.2
June qtr	1.5	3.5	-3.7	3.7	5.6	-5.3	1.4	9.5	1.0
Sept. qtr	-2.0	0.9	-6.9	0.6	0.2	-4.0	-3.3	21.3	-1.0
Dec. qtr	-3.7	-1.3	-7.1	-0.3	-3.4	-3.1	-4.8	27.6	-1.6
1999 Mar. qtr	-4.0	-2.9	-6.7	-1.7	-5.3	-2.0	-3.9	19.4	-2.2

(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									
1995-96	23,058	19,399	23,082	5,071	11,511	1,880	885	1,290	86,173
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
1997 Dec. qtr	7,050	7,088	6,224	1,588	3,788	377	270	302	26,688
1998 Mar. qtr	6,599	6,034	5,457	1,436	3,465	353	290	249	23,882
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	5,259	1,699	3,987	332	450	276	25,642
1999 Mar. qtr	5,960	5,971	4,232	1,260	3,348	314	276	266	22,879
NEW OTHER RESIDENTIAL BUILDINGS									
1995-96	17,226	4,276	8,043	835	3,721	530	572	927	36,130
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
1997 Dec. qtr	4,901	1,958	3,058	312	471	67	229	98	11,094
1998 Mar. qtr	4,985	1,924	2,575	145	561	29	309	40	10,568
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	4,761	1,563	2,602	263	488	54	191	145	10,067
1999 Mar. qtr	5,087	1,975	1,930	284	599	18	118	240	11,003
CONVERSIONS, ETC									
1995-96	1,002	913	217	55	104	8	12	70	2,381
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
1997 Dec. qtr	539	174	141	6	41	—	2	—	903
1998 Mar. qtr	440	169	33	67	29	—	2	2	742
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	195	358	57	16	28	—	6	133	794
TOTAL									
1995-96	41,286	24,588	31,342	5,960	15,336	2,418	1,469	2,287	124,684
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
1997 Dec. qtr	12,490	9,220	9,424	1,906	4,300	444	501	400	38,685
1998 Mar. qtr	12,024	8,127	8,065	1,648	4,055	382	601	291	35,192
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	11,488	9,615	7,962	1,965	4,512	389	645	421	36,998
1999 Mar. qtr	11,242	8,304	6,219	1,560	3,975	332	400	639	34,676

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									
1995-96	22,674	18,926	22,661	4,837	11,229	1,859	773	1,251	84,207
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
1997 Dec. qtr	7,032	7,009	6,133	1,531	3,665	374	200	300	26,245
1998 Mar. qtr	6,548	5,901	5,418	1,409	3,357	351	195	249	23,427
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	5,119	1,644	3,946	332	256	273	24,966
1999 Mar. qtr	5,899	5,781	4,167	1,228	3,312	314	214	252	22,419
NEW OTHER RESIDENTIAL BUILDINGS									
1995-96	15,775	3,218	7,292	800	2,920	378	455	839	31,677
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
1997 Dec. qtr	4,752	1,833	2,945	304	396	65	209	98	10,602
1998 Mar. qtr	4,688	1,774	2,501	141	408	25	299	40	9,876
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	4,536	1,473	2,502	244	398	54	187	145	9,539
1999 Mar. qtr	4,729	1,856	1,879	284	439	18	103	236	10,296
CONVERSIONS, ETC									
1995-96	973	884	217	55	104	8	9	—	2,250
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
1997 Dec. qtr	534	174	141	6	41	—	2	—	898
1998 Mar. qtr	439	148	33	67	29	—	2	2	720
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	194	358	57	16	28	—	6	133	793
TOTAL									
1995-96	39,422	23,028	30,170	5,691	14,253	2,245	1,237	2,090	118,134
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
1997 Dec. qtr	12,318	9,016	9,220	1,841	4,102	439	411	398	37,745
1998 Mar. qtr	11,675	7,823	7,952	1,617	3,794	376	496	291	34,023
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	11,196	9,319	7,721	1,891	4,381	389	447	418	35,813
1999 Mar. qtr	10,822	7,995	6,103	1,528	3,779	332	323	621	33,508

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>
NEW HOUSES									
1995-96	384	473	421	234	282	21	112	39	1,966
1996-97	205	257	347	55	509	17	170	41	1,601
1997-98	179	303	343	195	620	8	270	2	1,920
1997 Dec. qtr	18	79	91	57	123	3	70	2	443
1998 Mar. qtr	51	133	39	27	108	2	95	—	455
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	190	65	32	36	—	62	14	460
NEW OTHER RESIDENTIAL BUILDINGS									
1995-96	1,451	1,058	751	35	801	152	117	88	4,453
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
1997 Dec. qtr	149	125	113	8	75	2	20	—	492
1998 Mar. qtr	297	150	74	4	153	4	10	—	692
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	119	51	—	160	—	15	4	707
CONVERSIONS, ETC									
1995-96	29	29	—	—	—	—	3	70	131
1996-97	29	13	—	3	6	18	12	60	141
1997-98	14	23	22	—	—	—	—	—	59
1997 Dec. qtr	5	—	—	—	—	—	—	—	5
1998 Mar. qtr	1	21	—	—	—	—	—	—	22
June qtr	3	2	—	—	—	—	—	—	5
Sept. qtr	7	1	—	2	—	—	—	—	10
Dec. qtr	9	21	1	—	—	—	—	—	31
1999 Mar. qtr	1	—	—	—	—	—	—	—	1
TOTAL									
1995-96	1,864	1,560	1,172	269	1,083	173	232	197	6,550
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
1997 Dec. qtr	172	204	204	65	198	5	90	2	940
1998 Mar. qtr	349	304	113	31	261	6	105	—	1,169
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	309	116	32	196	—	77	18	1,168



## 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:  
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### 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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