

## **2001 CENSUS : HOUSING**

**(Census Paper No. 03/02)**



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Population Census Evaluation

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## SUMMARY OF FINDINGS

The 2001 Census Housing Paper evaluates the data quality of the Housing variables in the 2001 Census. Overall, Housing data has maintained, and in some cases, improved, data quality for most variables since the 1996 Census. Furthermore, comparisons with ABS surveys' data support the accuracy of the 2001 Census Housing data.

- The 2001 Census **Number of Bedrooms** data were consistent with that obtained from the 1996 Census and other ABS surveys. A minor issue arose where respondents were unsure how to provide a single digit response when space was provided for two digits.
- **Tenure Type** data were very consistent with 1996 - the largest intercensal difference was less than 1%. Comparisons with 1999 Australian Housing Survey (AHS) and 1999-2000 Survey of Income and Housing Costs (SIHC) data further supported the high quality of Tenure Type data, although the effect of reversing the response options 'fully owned' and 'being purchased' should be tested.
- The distribution of **Rent Payments** data showed a slight shift towards the higher end of the market between 1996 and 2001. Since 1996, rent payments less than \$150 a week have decreased, and conversely, amounts greater than this showed increases. These findings are consistent with inflation over this period.
- **Housing Loan Repayments** data distributions demonstrated a significant shift since 1996. There were decreases in the lower repayment categories (up to, and including, \$700-799 a month) and corresponding increases in the higher end categories (notably the \$1,700-1,799, \$2,100-2,199, and \$3,100 and above, ranges). Comparisons with 1999 AHS and 1999-2000 SIHC data showed that 2001 Census data had approximately 20% less respondents in the lower repayment categories.
- **Landlord Type** data distribution was consistent with 1996 Census, 1999 AHS and 1999-2000 SIHC data. The under-enumeration of the Public Housing sector is discussed in **Appendix C: Analysis of Public Housing Data, 2001 Census**, and is shown to be principally caused by the incidence of non-contacts or unoccupied dwellings. The non-response rate decreased by 1.2 percentage points to 2.3%.
- **Dwelling Structure** data from the 2001 Census were very consistent with 1996 Census, 1999 AHS and 1999-2000 SIHC data. However, a self-enumerated Dwelling Structure question should be tested for the 2006 Census.



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## **1. INTRODUCTION**

### ***1.1 About Census Papers***

The Australian Bureau of Statistics (ABS) has a stated, corporate objective to provide the means for informed and wider use of statistics. This Paper is one of a series produced after each census by the ABS Population Census Evaluation team, whose role it is to review the data quality of the 5-yearly Census of Population and Housing. The aim of Census Papers is to inform users of issues that have been identified as impacting on the quality of the census data, and that they should keep in mind when utilising the data. Analyses such as these are a critical factor in the continuous quality improvement of the Census Program.

The ABS welcomes your feedback and suggestions.

#### ***1.1.1 The 2001 Census Housing Paper***

For the 2001 Census there were five major housing variables: Number of Bedrooms; Tenure Type; Rent/Mortgage Payment; Landlord Type; and Dwelling Structure. The aim of this Census Paper is to evaluate the quality of 2001 Census data relating to these variables.

### ***1.2 Users of Census Housing Data***

Housing variables were selected for inclusion in the 2001 Census in consultation with the Australian Statistics Advisory Council (ASAC) and other key users.

Typical government users of housing data include the Department of Family and Community Services, the Australian Institute of Health and Welfare, the Department of Education, Training and Youth Affairs, the Department of Veterans Affairs, and state and territory housing authorities. Housing data are also used internally by the ABS in the development of publications and in cross-classification with other data.

Private sector users include economic research organisations, marketing firms, journalists and media organisations, individual researchers and universities, and the Australian Housing and Urban Research Institute.

Uses of housing data include monitoring home ownership trends, measuring housing standards, and in the development of social welfare and housing policies.

### ***1.3 Surveys used for Comparison with Census Data***

Two ABS housing surveys are used for comparison in this paper: the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC).

The Australian Housing Survey, the results of which were published in *Australian Housing Survey - Housing Characteristics* (cat. no. 4182.0), was conducted between September and December 1999. This was an interviewer-based survey which gathered information on housing costs, finances and amenities, as well as the physical characteristics and condition of dwellings. The scope of this survey was the same as for the 2001 Census, with the exception of Non-Private Dwellings (NPDs) and improvised dwellings.

The 1999-2000 SIHC was conducted as part of the Monthly Population Survey (MPS). Respondents were a sub-sample of those in the MPS during the 1999-2000 financial year. The survey was also interviewer-based and collected information on housing costs and characteristics of households in private dwellings. SIHC data was published in *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

Fundamental differences are apparent between these surveys and the census. The census attempts to enumerate every person in Australia on census night, while the AHS and SIHC produce estimates using information from a sample of households. Consequently, the AHS and SIHC estimates are subject to sampling variability. One measure of sampling variability used in this paper is the Relative Standard Error (RSE). For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

The two surveys also employ interviewer-based collection procedures rather than the self-enumeration method used in the census. The different collection methodologies can have a significant impact on data (for example, there are no 'not stated' responses in AHS or SIHC data). Nevertheless, comparability with AHS and SIHC data is a useful indicator of census data quality.

#### **1.4 Populations within the Scope of this Census Paper**

A number of different census forms are used during the census collection phase. Unless explicitly stated, information in this Census Paper refers to Household forms and Special Indigenous Household forms only. Household forms are used in the majority of private dwellings on census night. The latter are used in the enumeration of discrete, remote Indigenous communities.

Dwelling structure information provided on the back of Substitute Forms is also utilised. Substitute forms are completed by the collector who did not make contact with a householder and includes basic information regarding the number of males/females in the dwelling and dwelling structure.

The following form types are excluded in this Census Paper from analyses of Number of Bedrooms, Tenure Type, Rent/Mortgage Payment and Landlord Type data:

- Substitute forms - used by collectors to indicate non-contact with the householder, refusal to submit a census form, intent to mail back the census form or that a dwelling was unoccupied on census night. However, as indicated above Substitute forms are used in the examination of Dwelling Structure data.
- Summary forms - used by the collector in the enumeration of Non-Private Dwellings, where each respondent receives a Personal Form.
- Special Short forms - used as part of the Special Homeless Enumeration Strategy. This form asked a reduced number of questions to assist in counting the 'absolute homeless' on census night. Further information on 'absolute homeless' is available from the Glossary on page 41.

On these three forms respondents do not have the opportunity to respond to Housing questions and will be derived as not stated or not applicable to such variables. The presence of these responses in tables could result in misleading response rates.

For intercensal comparisons, 1996 data has been obtained from an equivalent population. Therefore, some figures quoted in this Census Paper may differ from those in the Working Paper titled *1996 Census Data Quality: Housing* (Working Paper No. 99/3).

**TABLE 1: DWELLINGS BY FORM TYPE FOR ALL DWELLINGS, 2001 CENSUS**

<i>Form type</i>	<i>Number</i>	<i>Per cent</i>
Household	6,937,165	88.8
Special Indigenous Household	15,784	0.2
Substitute	834,449	10.7
Summary	20,273	0.3
Special Short	2,681	< 0.1
<b>Total</b>	<b>7,810,352</b>	<b>100.0</b>

### **1.5     *Table Populations in this Census Paper***

This paper looks at each housing variable in turn and provides an analysis of collected data. Descriptions and counts of populations referred to in subsequent chapters are presented below.

**TABLE 2: TABLE POPULATIONS, 2001 CENSUS**

<i>Population description</i>	<i>Population count</i>	<i>Table number</i>
Occupied private dwellings	6,904,805	5
Occupied private dwellings excluding caravans, cabins and houseboats	6,803,522	3
All private dwellings including unoccupied dwellings	7,787,398	14
Dwellings being purchased	1,872,132	9
Dwellings being rented	1,953,095	12

## ***1.6 Changes to 2001 Census Forms***

### ***1.6.1 Intelligent Character Recognition (ICR)***

One of the most significant changes since 1996 was the design of census forms to utilise Intelligent Character Recognition (ICR) processing. ICR processing, along with Optical Character Recognition (OCR), scans the forms and converts all mark box, numeric, and alphabetic hand-written responses to codes and text.

ICR uses cost-effective technology to improve processing timeliness while delivering a high standard of data quality. An ICR approach minimises human error while maximising coding consistency and enables hand-written text and figures to be automatically deciphered and coded. ICR boxes have also proved advantageous in form design by replacing lengthy categoric mark box responses with a single write-in response box. ICR technology featured in the redesign of the Number of Bedrooms response field (see Section 2.1) and in the processing of responses to the Rent/Housing Loan Repayments question (see Section 4.1).

### ***1.6.2 Deletion of the Furnished/Unfurnished Dwelling Question***

Another significant change to the 2001 Census housing questions was the deletion of the Furnished/Unfurnished dwelling question. It was determined that the Australian Housing Survey (AHS) and the Household Expenditure Survey (HES) better fulfilled requirements for this data.

Changes to specific housing questions and to the order of these questions are discussed in the relevant sections of this paper. Appendix A. includes images of the housing questions on the 1996 and 2001 Census Household forms.

## 2. NUMBER OF BEDROOMS

A question on the Number of Bedrooms in a private dwelling has been included in every Australian census since 1911. The census is the only comprehensive source of Number of Bedrooms data at small area level. This information is useful as a broad measure of housing standards by providing an indication of dwelling size. It also enables the calculation of occupancy ratios, thus providing an indicator of overcrowding.

### 2.1 Background

The number of bedrooms is only asked of private dwelling occupants via the Household and Special Indigenous Household forms. In 1986, questions asked for the numbers of various room types but definitional problems and extra costs have resulted in all censuses since then capturing data only on the number of bedrooms.

The 2001 Number of Bedrooms question was identical to that in 1996 but there were changes to the response options. In 2001, respondents were asked to record the number of bedrooms in two ICR boxes, rather than marking a category selection box as in 1996. This form design feature permitted a numeric response ranging from 0-99 and was adopted to take advantage of ICR processing.

### 2.2 Distribution of Number of Bedrooms Data - 1996 and 2001 Censuses

The following table compares distributions of 1996 and 2001 Census data relating to Number of Bedrooms. The categories 'Caravans, Cabins, Houseboats' and 'Improvised Homes, Tents, Sleepers Out' have been excluded as respondents in these dwelling types may not regard this as an applicable question. Number of Bedroom non-response rates for these groups in 2001 were 21.0% and 11.2%, respectively.

**TABLE 3: NUMBER OF BEDROOMS DATA, OCCUPIED PRIVATE DWELLINGS, 1996 AND 2001 CENSUSES**

<i>Number of Bedrooms</i>	<i>1996 Census</i>		<i>2001 Census</i>		<i>Intercensal change</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
None (incl. bedsitters)	37,251	0.6	36,802	0.5	-449	-0.1
1 bedroom	299,264	4.7	310,739	4.6	11,475	-0.1
2 bedrooms	1,394,928	22.1	1,409,433	20.7	14,505	-1.4
3 bedrooms	3,091,438	49.0	3,224,429	47.4	137,436	-1.6
4 bedrooms	1,164,490	18.5	1,427,787	21.0	263,297	2.5
5 or more bedrooms	215,450	3.4	292,279	4.3	76,829	0.9
Not stated	102,827	1.6	102,053	1.5	-774	-0.1
<b>Total (a)</b>	<b>6,305,648</b>	<b>100.0</b>	<b>6,803,522</b>	<b>100.0</b>	<b>497,904</b>	

(a) Excludes 'Caravans, Cabins, Houseboats' and 'Improvised Homes, Tents, Sleepers Out'.

In 2001 the most frequent dwelling size was three bedroom (47.4%). This was followed by four bedroom (21.0%) and two bedroom (20.7%) dwellings. The frequencies of one, and five or more bedroom dwellings were 4.6% and 4.3% respectively. The exclusion of 'Caravans,

Cabins Houseboats' and 'Impoverished Homes, Tents, Sleepers Out' resulted in very few dwellings with no bedrooms (0.5%).

The largest percentage change between 1996 and 2001 was for four bedroom dwellings, which increased by 2.5 percentage points. The only other minor increase was in the five or more bedrooms category (0.9%). See Section 2.3 for a brief discussion of five or more bedrooms data. Conversely, there were decreases of approximately 1.5% for both two and three bedroom dwellings. Analysis of this data indicate that the average size of dwellings has increased slightly. The non-response rate remained stable at 1.5%.

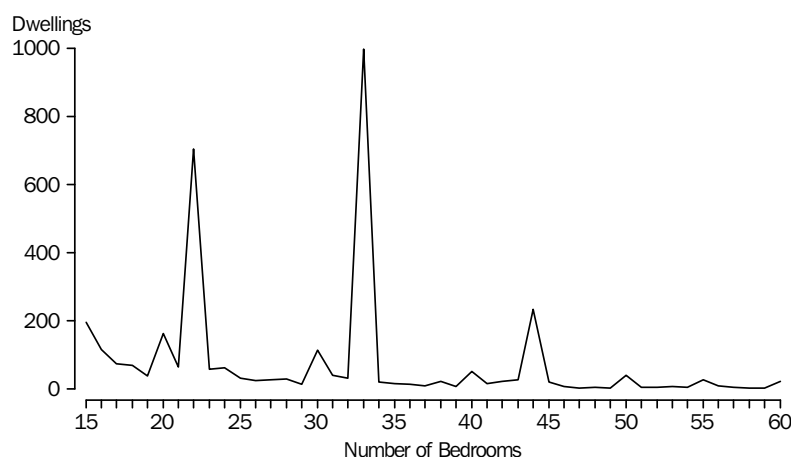
### 2.3 *Distribution of 'High' Number of Bedrooms Data*

Standard census output for Number of Bedrooms information is only available up to the level '5 or more Bedrooms'. However, detailed data are available for dwellings with more than 5 bedrooms. Such data suggest that a minority of respondents had difficulty with the ICR write-in boxes, particularly since two boxes were provided but generally only a single digit response was required.

Figure 1 shows the number of dwellings which were reported to have between 15 and 50 bedrooms. Note the large 'spikes' at 22, 33 and 44 bedrooms. It is assumed that most of these dwellings have 2, 3 or 4 bedrooms but have provided the same digit in both boxes. Also note smaller spikes at 20, 30, 40 and 50 bedrooms. Such cases are likely to be the result of respondents writing 2, 3, 4 or 5 in the first box and incorrectly filling the second box with a zero.

These reporting errors have a negligible effect on overall data quality. 991 dwellings, which is less than 0.01% of all dwellings in Australia, reported 33 bedrooms (see Appendix B for a detailed breakdown). However, it is recommended for the 2006 Census that more specific examples be provided on the form to show respondents how to write a single digit number when two digit fields are provided.

**FIGURE 1: 'HIGH' NUMBER OF BEDROOMS DATA, OCCUPIED PRIVATE DWELLINGS, 2001 CENSUS**





## 2.4 Comparison of 2001 Census Number of Bedrooms Data with ABS Surveys Data

The following table shows the distribution of Number of Bedrooms data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability with survey data, non-responses are excluded from the census counts. The categories 'Caravans, Cabins, Houseboats' and 'Improvised Homes, Tents, Sleepers Out' have been excluded.

**TABLE 4: COMPARISON OF 2001 CENSUS NUMBER OF BEDROOMS DATA, 1999 AHS AND 1999-2000 SIHC**

<i>Number of Bedrooms</i>	<i>2001 Census</i>		<i>1999 AHS</i>			<i>1999-2000 SIHC</i>		
	<i>Dwellings</i>	<i>Per cent</i>	<i>Dwellings</i>	<i>Per cent</i>	<i>RSE</i>	<i>Dwellings</i>	<i>Per cent</i>	<i>RSE</i>
None (incl. bed-sitters)	36,802	0.6	52,300	0.7	11.1	12,200	0.2(a)	31.7
1 bedroom	310,739	4.6	346,100	4.8	3.9	329,100	4.6	5.9
2 bedrooms	1,409,433	21.0	1,528,600	21.2	1.6	1,421,900	19.8	2.3
3 bedrooms	3,224,429	48.1	3,599,000	49.9	0.9	3,691,200	51.4	1.3
4 or more	1,720,066	25.7	1,690,900	23.4	1.5	1,733,700	24.1	2.0
<b>Total (b)</b>	<b>6,701,469</b>	<b>100.0</b>	<b>7,216,900</b>	<b>100.0</b>		<b>7,188,100</b>	<b>100.0</b>	

(a) RSE over 25%. (b) Excludes 'Caravans, Cabins, Houseboats' and 'Improvised Homes, Tents, Sleepers Out'.

Note: Only estimates with RSEs less than 25% are considered sufficiently reliable for most statistical purposes. Caution should be exercised when using these estimates. They should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%. For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

Table 4 shows a high consistency between 2001 Census, 1999 AHS and 1999-2000 SIHC data. Only differences for three and four or more bedrooms are larger than their associated RSE. In particular, it should be noted that categories showing the largest differences from 1996 remain reasonably consistent with survey data. Such comparisons support a positive assessment of the 2001 Census data relating to Number of Bedrooms.



### 3. TENURE TYPE

A Tenure Type question has been asked in all censuses since 1911 and refers to the arrangement by which people occupy a Private Dwelling (whether it is fully owned, being purchased or rented). Tenure Type data are a useful indicator of home ownership and social mobility trends, and are used by government departments in the development of housing and social welfare policies.

#### 3.1 Background

The Tenure Type question is asked on the Household Form and the Special Indigenous Household Form. It is applicable to all Occupied Private Dwellings including caravans, cabins and tents, as well as boats in marinas.

The phrasing of the 2001 Tenure Type question and response categories was unchanged from the 1996 Census. However, there was a change to the location of the question on the Household form - the order of Housing Loan Repayments (Q44 in 1996) and Tenure Type (Q45 in 1996) questions, was reversed. Testing confirmed that the new order lowered non-response. The Tenure Type question has two response options - 'Fully owned' and 'Being occupied rent-free' - sequencing out the Housing Loan Repayments question which is not applicable to respondents who select either of these options.

#### 3.2 Distribution of Tenure Type Data - 1996 and 2001 Censuses

Table 5 below shows the distribution of Tenure Type responses for Occupied Private Dwellings enumerated on Household or Special Indigenous Household forms in the 1996 and 2001 Censuses.

**TABLE 5: TENURE TYPE DATA, OCCUPIED PRIVATE DWELLINGS, 1996 AND 2001 CENSUSES**

<i>Tenure Type</i>	<i>1996 Census</i>		<i>2001 Census</i>		<i>Intercensal change</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Fully owned	2,657,516	41.5	2,810,917	40.7	153,401	-0.8
Being purchased	1,626,072	25.4	1,823,929	26.4	197,857	1.0
Being purchased under a rent/buy scheme	29,760	0.5	48,203	0.7	18,443	0.2
Being rented	1,727,210	27.0	1,858,324	26.9	131,114	-0.1
Being occupied rent-free	92,421	1.4	94,771	1.4	2,350	0.0
Being occupied (under a life tenure scheme)	28,444	0.4	29,167	0.4	723	0.0
Other	63,354	1.0	72,088	1.0	8,734	0.0
Not stated	181,673	2.8	167,406	2.4	-14,267	-0.4
<b>Total</b>	<b>6,406,450</b>	<b>100.0</b>	<b>6,904,805</b>	<b>100.0</b>	<b>498,355</b>	

In the 2001 Census, the distribution of Tenure Type data was dominated by three categories: 'Fully owned' (40.7%), 'Being rented' (26.9%), and 'Being purchased' (26.4%). The remaining categories aggregate to 5.9%. Response options provide comprehensive coverage, with only 1.0% of responses being reported in the 'Other' category. The non-response rate was 2.4%.

There was minimal movement between categories from 1996 to 2001. The most significant change is to the category 'Being purchased' which increased by 197,857 dwellings. This increase reflects the increase in house purchases consistent with Federal Government policies to stimulate the housing market.

### ***3.3 Comparison of 2001 Census Tenure Type Data with ABS Surveys Data***

The following table shows the distribution of Tenure Type data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability with survey data, non-responses are excluded from Census counts and some categories have been collapsed.

**TABLE 6: COMPARISON OF 2001 CENSUS TENURE TYPE DATA WITH 1999 AHS AND 1999-2000 SIHC**

<i>Tenure Type</i>	<i>2001 Census</i>	<i>1999 AHS</i>		<i>1999-2000 SIHC</i>	
	<i>Per cent</i>	<i>Per cent</i>	<i>RSE</i>	<i>Per cent</i>	<i>RSE</i>
Fully owned	41.7	38.7	1.0	38.2	1.5
Being purchased (a)	27.8	31.3	1.2	32.5	1.7
Rented	27.6	27.3	1.4	27.2	1.9
Occupied rent-free	1.4	1.7	7.1	- (b)	- (b)
Other (c)	1.5	1.0	9.2	2.1	9.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>		<b>100.0</b>	

(a) Includes 'Being purchased under a rent/buy scheme'. (b) Occupied rent-free is included in 'Other' for SIHC data. (c) Includes 'Being occupied under a life tenure scheme'.

Census figures for 'Being purchased' (27.8%) are less than the AHS and SIHC results (31.3% and 32.5% respectively). The opposite trend is noted for 'Fully owned' with the Census proportion (41.7%), larger than the AHS and SIHC (38.7% and 38.2%). The difference may be due to the 'Fully owned' category appearing at the top of the response list and respondents who are paying a mortgage not taking the time to compare the 'Fully owned' and 'Being purchased' options. It is recommended that a question be tested for the 2006 Census with the order of these response categories reversed.

Despite these minor discrepancies, the comparability of 2001 Census Tenure Type data with similar data for the 1996 Census, the 1999 AHS and the 1999-2000 SIHC, indicates that the 2001 Census data is of reasonable statistical quality.

## **4 RENT/HOUSING LOAN REPAYMENTS**

A question on rent payments was first asked in 1911 and mortgage repayments were first collected in the 1976 Census. Rent and housing loan repayment data are useful indicators of housing finance, home ownership trends and housing accessibility. When cross-classified with income data they provide a means of assessing disposable household income.

### **4.1 *Background***

The emergence of rent-buy schemes and user demand for actual amounts instead of range data led to a new approach to data collection in 1996. Instead of range data, the 1996 Census question required responses in dollar amounts. Respondents provided weekly, fortnightly or monthly amounts and these responses were coded to rent or housing loan repayments depending on their Tenure Type. This approach was continued in 2001 with minor changes to the design of the response boxes.

The only change to the rent and housing loan repayments question was its order in the sequencing of questions. In 1996 this question preceded the Tenure Type question but in 2001 this order was reversed (see Appendix A).

In 2001 for the first time, ICR technology was used to process rent and housing loan data. In 1996 these data were manually entered by coding staff but in 2001 the majority were captured automatically by the system. Note that in a small number of cases, the write-in problem identified in Section 2.3 may be present in the data.

### **4.2 *Distribution of Rent Data - 1996 and 2001 Censuses***

The following table compares 1996 Census and 2001 Census rent data. The overall number of rented dwellings increased by 87,720 in this period. This compares to a 304,731 dwelling increase in the same time frame between the 1991 and 1996 Censuses.

**TABLE 7: WEEKLY RENT PAYMENTS, DWELLINGS RENTED, 1996 AND 2001 CENSUSES**

<i>Amount</i>	<i>1996 Census</i>		<i>2001 Census</i>		<i>Intercensal change</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
\$0	92,418	5.0	94,771	4.9	2,353	-0.1
\$1-\$25	23,758	1.3	13,669	0.7	-10,089	-0.6
\$26-\$50	184,478	9.9	133,403	6.8	-51,075	-3.1
\$51-\$75	168,166	9.0	125,783	6.4	-42,383	-2.6
\$76-\$100	248,074	13.3	198,541	10.2	-49,533	-3.1
\$101-\$125	233,109	12.5	190,675	9.8	-42,434	-2.7
\$126-\$150	319,577	17.1	275,271	14.0	-44,306	-3.1
\$151-\$175	197,051	10.6	219,292	11.2	22,241	0.7
\$176-\$200	139,065	7.5	197,680	10.1	58,615	2.6
\$201-\$225	50,844	2.7	89,642	4.6	38,798	1.9
\$226-\$250	51,328	2.8	90,456	4.6	39,128	1.8
\$251-\$275	22,442	1.2	44,137	2.3	21,695	1.1
\$276-\$300	26,140	1.4	53,359	2.7	27,219	1.3
\$301-\$400	34,841	1.9	85,260	4.4	50,419	2.5
\$401-\$500	10,647	0.6	30,585	1.6	19,938	1.0
\$501 and above	11,371	0.6	38,814	2.0	27,443	1.4
Not stated	52,066	2.8	71,757	3.7	19,691	0.9
<b>Total</b>	<b>1,865,375</b>	<b>100.0</b>	<b>1,953,095</b>	<b>100.0</b>	<b>87,720</b>	

In general, there has been a shift toward the higher end of the market. In both 1996 and 2001, the most populated range was \$126-\$150. However, all categories below \$150 per week have decreased since 1996 while those above have increased. Such a finding is consistent with inflation over the 5 year period as measured by the Consumer Price Index (CPI). Overall, trends are consistent, with peaks and troughs in 2001 Census rent payments distribution concordant with those for the 1996 Census. There was a rise in the non-response rate from 2.8% to 3.7%.

For private rented dwellings in 2001 the most popular reporting period was weekly (70.9%), followed by fortnightly (18.5%), and finally monthly amounts (10.6%).

#### **4.3 Comparison of 2001 Census Rent Data with ABS Surveys Data**

Table 8 shows the distribution of rent data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability with survey data, non-responses are excluded from the 2001 Census counts.

**TABLE 8: COMPARISON OF 2001 CENSUS RENT DATA WITH 1999 AHS AND 1999-2000 SIHC RENT DATA**

<i>Rent per week</i>	<i>2001 Census</i>	<i>1999 AHS</i>		<i>1999-2000 SIHC</i>	
	<i>Per cent</i>	<i>Per cent</i>	<i>RSE</i>	<i>Per cent</i>	<i>RSE</i>
\$1-\$25	0.7	0.7	21.4	4.9(a)	41.7
\$26-\$50	7.2	9.9	5.5	10.7	7.5
\$51-\$75	6.8	8.3	6.5	8.4	8.5
\$76-\$100	10.7	12.9	4.7	11.6	7.1
\$101-\$125	10.3	12.0	4.9	11.3	7.2
\$126-\$150	14.8	18.3	3.8	18.6	5.4
\$151-\$175	11.8	12.2	4.8	10.9	7.4
\$176-\$200	10.6	10.0	5.4	9.5	8.0
\$201-\$225	4.8	4.0	8.9	3.3	14.2
\$226-\$250	4.9	4.4	8.4	3.8	13.2
\$251-\$275	2.4	1.3	16.3	1.9	18.8
\$276-\$300	2.9	2.0	13.1	1.4	21.8
\$301-\$325	1.3	0.8	20.3	1.0(a)	25.9
\$326-\$350	1.5	0.8	21.1	0.9(a)	26.3
\$351-\$375	0.8	0.5(a)	25.6	0.3(a)	44.3
\$376-\$400	1.0	0.4(a)	28.0	0.7(a)	30.5
\$401-\$425	0.4	0.3(a)	31.6	0.4(a)	38.9
\$426-\$450	0.5	0.3(a)	32.6	<0.1	(c)
\$451-\$475	0.3	<0.1	(c)	<0.1	(c)
\$476-\$500	0.4	0.1(b)	58.7	<0.1	(c)
\$501 and over	2.0	0.9	19.3	0.5(a)	34.6

(a) RSE over 25%. (b) RSE over 50%. (c) Data not for publication as RSEs are too high.

(Note: Only estimates with RSEs less than 25% are considered sufficiently reliable for most statistical purposes. Caution should be exercised when using these estimates. They should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%. For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).)

Similar distributions are observed across all three collections. Over 58% of census data falls in the range \$76-200 (65.4% for AHS and 61.9% SIHC). Census totals are generally less in the lower rent ranges and greater in the higher rent ranges.

Differences may be caused by changes in the market between the running of the surveys (1999 and 2000) and the (August 2001) Census. This explanation is supported by consistency with intercensal comparison. Overall, there is consistency in the distribution of census and survey data, reflecting a high level of comparability for the 2001 Census rent payments data with similar data from surveys.

#### **4.4 Distribution of Housing Repayments Data - 1996 and 2001 Censuses**

Total numbers of persons repaying a housing loan increased by 216,301 between the 1996 and 2001 Censuses. The increase between the 1991 and 1996 Censuses was 94,795. The total number of persons repaying a housing loan and amounts paid are largely affected by inflation and other economic factors such as variations in interest rates.

**TABLE 9: MONTHLY HOUSING LOAN REPAYMENTS, DWELLINGS BEING PURCHASED, 1996 AND 2001 CENSUSES**

<i>Amount</i>	<i>1996 Census</i>		<i>2001 Census</i>		<i>Intercensal change</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
\$1-199	77,570	4.7	46,476	2.5	-31,094	-2.2
\$200-299	59,114	3.6	47,363	2.5	-11,751	-1.1
\$300-399	85,225	5.2	71,429	3.8	-13,796	-1.3
\$400-499	133,296	8.1	122,099	6.5	-11,197	-1.5
\$500-599	136,439	8.2	132,390	7.1	-4,049	-1.2
\$600-699	180,589	10.9	189,823	10.1	9,234	-0.8
\$700-799	131,686	8.0	132,943	7.1	1,257	-0.9
\$800-899	173,635	10.5	199,676	10.7	26,041	0.2
\$900-999	100,682	6.1	106,438	5.7	5,756	-0.4
\$1000-1099	133,407	8.1	165,336	8.8	31,929	0.8
\$1100-1199	58,741	3.6	62,891	3.4	4,150	-0.2
\$1200-1299	48,734	2.9	60,538	3.2	11,804	0.3
\$1300-1399	69,122	4.2	95,150	5.1	26,028	0.9
\$1400-1499	27,891	1.7	35,875	1.9	7,984	0.2
\$1500 and over	154,291	9.3	298,626	16.0	144,335	6.7
Not stated	85,409	5.2	105,079	5.6	19,670	0.4
<b>Total</b>	<b>1,655,831</b>	<b>100.0</b>	<b>1,872,132</b>	<b>100.0</b>	<b>216,301</b>	

Table 9 shows housing loan repayments data are very consistent between the 1996 and 2001 Censuses. The 2001 Census data is slightly less for the all ranges up to, and including, '\$700-\$799'. The most evident increase is in the '\$1,500 and above range' which experienced a 6.6% increase from the 1996 Census. (Reasons for the 2001 Census result are explored in Section 4.5). As with rent data, there is a shift in frequency from lower to higher repayment categories.

The non-response rate is relatively stable, with a slight increase to 5.6%. There are several possible reasons why such a high non-response rate is returned:

- The complex nature of people's financial details. Traditional mortgages are becoming less common, and the increase in more complicated borrowing arrangements increases the difficulty of succinctly describing these arrangements.
- Privacy concerns about divulging sensitive financial information.
- The relatively lower non-response rate for rent (3.7% in the 2001 Census) implies that some respondents with a mortgage may assume that this question applies only to renters.

For dwellings being purchased in 2001, the most popular response option was weekly (37.1%) followed by monthly (36.0%) and finally fortnightly (26.9%).

#### **4.5 Increase in 'Higher End' Housing Loan Repayments**

The range consisting of values greater than \$1500 comprised almost 16% in the 2001 Census, 6.6% higher than in the 1996 Census. To investigate this trend, further analysis was undertaken.



**FIGURE 2: DISTRIBUTION OF MONTHLY HOUSING LOAN REPAYMENTS GREATER THAN \$1,500, 1996 AND 2001 CENSUSES.**

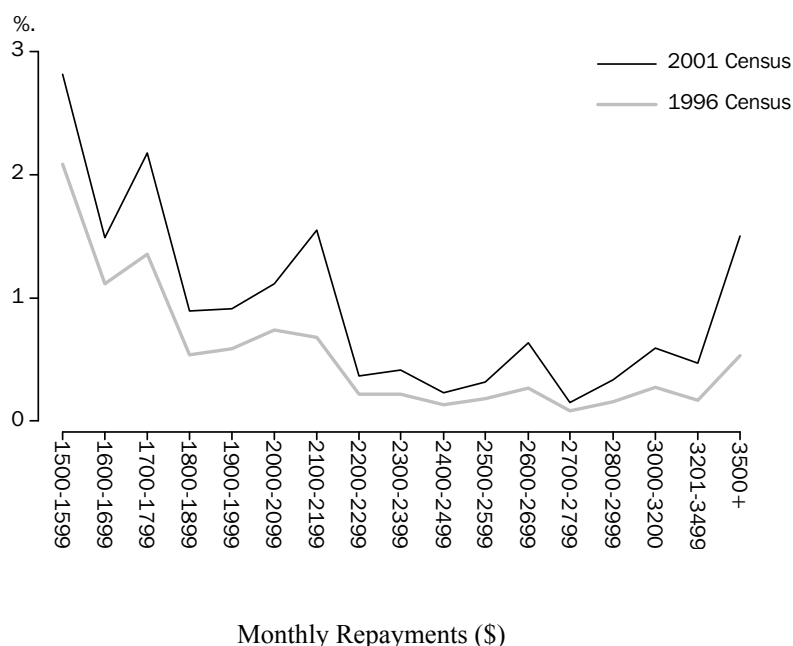


Figure 2 shows that the 2001 Census figures are higher than those for the 1996 Census in all cases, with the largest differences in the '\$1,700-\$1,799', '\$2,100-\$2,199' and '\$3,500+' ranges. Note that the scale of the graph exaggerates differences which are generally 1 or 2 percentage points.

There are several reasons for increases in the higher end housing loan repayments. Principally, there has been a shift away from traditional mortgages and towards more complicated borrowing arrangements. In recent years there has been increased use of the home to secure loans for other purposes (cars, investments, holidays, etc.). In 1999, approximately one third of home owners with a mortgage were using it to secure loans for purposes other than to buy or build their home. See *Australian Social Trends, 2001* (cat. no. 4102.0). Lending institutions also offer banking services based on home loan accounts, whereby all salaries are paid into the loan account to reduce the principle amount, and then credit is redrawn when required. This change in banking arrangements may further explain the increases in the housing loan amounts.

#### **4.6 Comparison of 2001 Census Housing Loan Repayments Data with ABS Surveys Data**

Table 10 shows the distribution of housing loan repayments data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability with survey data, non-responses are excluded from the 2001 Census counts and loan repayment categories are based on those used for the surveys.

**TABLE 10: COMPARISON OF 2001 CENSUS MONTHLY HOUSING LOAN REPAYMENTS DATA WITH 1999 AHS AND 1999-2000 SIHC DATA**

<i>Amount</i>	<i>2001 Census (a)</i>		<i>1999 AHS</i>			<i>1999-2000 SIHC</i>		
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>
\$1-799	742,523	42.0	1,196,000	58.3	1.8	1,219,800	57.1	2.5
\$800-1599	778,649	44.0	695,300	33.9	2.6	763,000	35.7	3.4
\$1600-2399	166,806	9.4	112,700	5.5	7.4	111,200	5.2	10.8
\$2400-3199	41,481	2.0	23,600	1.2	16.6	25,500	1.2	22.9
\$3200-3999	15,396	0.9	9,700	0.59(b)	25.8	12,200	0.6(b)	31.6
\$4000 and over	22,198	1.3	12,600	0.6	22.7	5,000	0.2(b)	46.4
<b>Total</b>	<b>1,767,053</b>	<b>100.0</b>	<b>2,049,900</b>	<b>100.0</b>		<b>2,136,700</b>	<b>100.0</b>	

(a) Excludes non-responses. (b) RSE over 25%.

Note: Only estimates with RSEs less than 25% are considered sufficiently reliable for most statistical purposes. Caution should be exercised when using these estimates. They should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%. For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

The table above shows a large difference between housing survey and census data in the two lowest repayment categories. This is consistent with the increase observed between the 1996 and 2001 Censuses data. However, the discrepancies with the AHS and SIHC data are much more pronounced. There are differences of greater than 15 percentage points at the '\$1-\$799' category. 2001 Census data is approximately 10% higher than the AHS data and approximately 8% higher than the SIHC data for the '\$800-1,599' category.

Given the consistency of AHS and SIHC data, possible explanations are:

- The interviewer-based AHS and SIHC are more thorough in obtaining small housing loan repayments. The self-enumerated nature of the census may mean that respondents who are repaying small amounts do not regard these amounts as large enough to report.
- Small repayments may be rounded up to the \$800-1,599 a month category (which includes possible rounding points of \$200 a week and \$1,000 a month).
- Under reporting in the 2001 Census of persons who are paying a mortgage (see Section 3.3).

## 5. LANDLORD TYPE

A question relating to Landlord Type has been asked since the 1971 Census and indicates to whom rent for a dwelling (including caravans, etc. in caravan parks), is paid. Cross-classified with other variables, Landlord Type data provide information about the socio-economic characteristics of private and public housing tenants.

### 5.1 Background

The 2001 Landlord Type question remained unchanged from that used in 1996 but there were changes to the order and format of the response options.

The 2001 public housing response option was similar to that used in the 1991 Census, in that the name of the relevant Housing Authority was used for each state or territory rather than generic 'State/Territory housing authority' label. This change required the final page of census forms to be printed separately for each state and territory. The names of the respective housing authorities are listed in the following table.

**TABLE 11: STATE AND TERRITORY HOUSING AUTHORITIES, 2001 CENSUS**

<i>State/ Territory</i>	<i>Name of housing authority</i>
New South Wales	Department of Housing
Victoria	State Housing Commission
Queensland	Department of Housing
South Australia	South Australian Housing Trust
Western Australia	Homeswest
Tasmania	Housing Tasmania
Australian Capital Territory	ACT Housing
Northern Territory	Territory Housing
Other Territories	Island Administration/Island Council

The order of response options for Landlord Type also altered for the 2001 Census. The relevant public housing authority response was moved from the third response in the 1996 Census, to the first in the 2001 Census. The first two response options from the 1996 Census, 'Private landlord not in the same household' and 'Real estate agent' were listed as second and third options respectively. Testing indicated that re-ordering the options lowered the overall non-response rate, as well as improving responses from state-owned dwellings.

### 5.2 Investigation of Public Housing Landlord Data

A separate investigation of the New South Wales (NSW) public housing landlord data was conducted due to concerns raised by state housing authorities about the under-enumeration of public housing tenants. This investigation took place with assistance from the NSW Department of Housing. Results are published in Appendix C.

### 5.3 *Distribution of Landlord Type, Rented Dwellings Data - 1996 and 2001 Censuses*

The following table compares the distributions of 1996 and 2001 Census data relating to Landlord Type. Data is limited to rented dwellings enumerated on Household and Special Indigenous Household forms.

**TABLE 12: LANDLORD TYPE, RENTED DWELLINGS, 1996 AND 2001 CENSUSES**

<i>Landlord Type</i>	<i>1996 Census</i>		<i>2001 Census</i>		<i>Intercensal change</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Private landlord not in same household	534,077	28.6	570,969	29.2	36,892	0.4
Real estate agent	745,374	40.0	815,120	41.7	69,746	1.7
State/territory housing authority	329,769	17.7	318,292	16.3	-11,477	-1.4
Community or co-operative housing group	33,264	1.8	45,250	2.3	11,986	0.5
Employer - Government	39,546	2.1	33,355	1.7	-6,191	-0.4
Employer - Private	40,839	2.2	44,448	2.3	3,609	0.1
Other	76,387	4.1	80,928	4.1	4,541	0.0
Not stated	66,119	3.5	44,733	2.3	-21,386	-1.2
<b>Total</b>	<b>1,865,375</b>	<b>100.0</b>	<b>1,953,095</b>	<b>100.0</b>	87,960	

In the 2001 Census the majority of households renting their dwelling did so from a real estate agent (41.7%). Over a quarter rented from a private landlord (29.2%), while another 16.3% rented from their state/territory housing authority. The other four responses combined to form just 12.7%, with 'Other' making up the largest single contribution (4.1%). The non-response rate was 2.3%.

Comparison with 1996 Census data shows minor intercensal changes, the largest being a 1.7% increase in dwellings rented from real estate agents. The largest decrease over this period was a 1.4% drop in dwellings rented from state/territory housing authorities which is discussed further in Appendix C.

A noteworthy change was the decrease in the non-response rate which may indicate that form design changes have been effective. Note that, as in the 1996 Census, an edit set 'Landlord Type' to 'Not Applicable' where 'Tenure Type' was not stated. Therefore, the not stated rate is marginally higher than implied by the above figures as a proportion of respondents who answered neither 'Tenure Type', or 'Landlord Type', would be renting their dwelling.

#### 5.4 Comparison of 2001 Census Landlord Type Data with ABS Surveys Data

Table 13 below shows the distribution of Landlord Type data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability with survey data, non-responses are excluded from census counts and census output is collapsed to match the survey categories.

**TABLE 13: COMPARISON OF 2001 CENSUS LANDLORD DATA WITH 1999 AHS AND 1999-2000 SIHC DATA**

	<i>2001 Census (a)</i>		<i>1999 AHS</i>			<i>1999-2000 SIHC</i>		
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>
Private landlord not in same household (b)	1,386,089	72.6	1,563,300	73.6	1.6	1,446,400	74.0	2.2
State/territory housing authority	318,292	16.7	369,200	17.4	3.8	402,000	20.6	5.2
Employer	77,803	4.1	83,000	3.9	8.6	33,700	1.7	20.0
Community or co-operative housing group	45,250	2.4	45,000	2.1	12.1	33,900	1.7	20.0
Other	80,928	4.2	64,500	3.0	9.8	39,500	2.0	18.6
<b>Total</b>	<b>1,908,362</b>	<b>100.0</b>	<b>2,125,000</b>	<b>100.0</b>		<b>1,955,500</b>	<b>100.0</b>	

(a) Excludes non-responses. (b) Includes 'Real estate agent'.

As the above table shows, 2001 Census Landlord Type data is comparable with similar data from the 1999 AHS and the 1999-2000 SIHC, which indicates that the 2001 Census data is of reasonable statistical quality.



## 6. STRUCTURE OF PRIVATE DWELLINGS

Information on the structure of private dwellings has been collected in all censuses since 1911. This question was self-enumerated until the 1981 Census, but for the past four censuses has been recorded by the Census Collector. Dwelling structure data are used as indicators of urban form and density by identifying changes in housing patterns and providing benchmarks for available housing types.

### 6.1 Background

In the 2001 Census a question relating to dwelling structure was included on the Household and Special Indigenous Household forms, as well as on Substitute forms. The question on Household and Substitute forms was identical to that used in 1996, except numerical symbols in the 1996 response options were replaced by text in 2001.

On Special Indigenous forms, the Dwelling Structure response field contained only three response options: 'House'; 'Caravan, tin shed or cabin'; and 'Humpy, tent or sleepout'. The reduced number of options was intended to better reflect dwelling structures in remote parts of Australia.

### 6.2 Distribution of Dwelling Structure Data - 1996 and 2001 Censuses

Table 14 below shows the distribution and intercensal change for Dwelling Structure data in the 1996 and 2001 Censuses. Unlike previous tables, the following tables include Substitute forms.

**TABLE 14: DWELLING STRUCTURE, PRIVATE DWELLINGS, 1996 AND 2001 CENSUSES (a)**

	1996		2001		Intercensal change	
	Number	Per cent	Number	Per cent	Number	Per cent
Separate house	5,366,477	74.8	5,826,044	74.8	459,567	0.0
Semi-detached, row or terrace house, townhouse, etc.:						
One storey	394,960	5.5	448,857	5.8	53,897	0.3
Two or more storeys	179,103	2.5	250,776	3.2	71,673	0.7
Flat, unit or apartment:						
In one or two storey block	512,184	7.1	536,663	6.9	24,479	-0.2
In three storey block	223,645	3.1	261,930	3.4	38,285	0.3
In four or more storey block	171,588	2.4	228,775	2.9	57,187	0.5
Attached to a house	23,438	0.3	21,432	0.3	-2,006	0.0
Caravan, cabin, houseboat	98,076	1.4	101,656	1.3	3,580	-0.1
Improvised home, tent, sleepers out	15,146	0.2	13,748	0.2	-1398	0.0
House/flat attached to a shop, office, etc.	34,612	0.5	30,583	0.4	-4,029	-0.1
Not stated	155,998	2.2	66,934	0.9	-89,064	-1.3
<b>Total</b>	<b>7,175,228</b>	<b>100.0</b>	<b>7,787,398</b>	<b>100.0</b>	<b>612,170</b>	

(a) Includes information from Substitute forms.

The majority of dwelling structures in the 2001 Census were separate houses (74.8%), followed by flats in a one or two storey block (6.9%) and one storey semi-detached, row or terrace houses, townhouses, etc. (5.8%). The non-response rate was 0.9%.

There was an overall increase of dwellings by 612,170 to a total in 2001 of 7,787,398. The distribution of the dwelling structure types remained consistent over this period, with the most notable change being the reduction of the non-response rate from 2.2% to 0.9%.

### 6.3 Comparison of 2001 Census Dwelling Structure Data with ABS Surveys Data

The following table shows the distribution of Dwelling Structure data from the 2001 Census, the 1999 Australian Housing Survey (AHS) and the 1999-2000 Survey of Income and Housing Costs (SIHC). To enable comparability, non-responses are excluded from census counts and some census categories are aggregated to the level of detail available in the surveys.

**TABLE 15: COMPARISON OF 2001 CENSUS DWELLING STRUCTURE, PRIVATE DWELLINGS DATA WITH 1999 AHS AND 1999-2000 SIHC DATA**

	<i>2001 Census (a)</i>		<i>1999 AHS</i>			<i>1999-2000 SIHC</i>		
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>	<i>Number</i>	<i>Per cent</i>	<i>RSE</i>
Separate house	5,826,044	75.5	5,735,400	79.5	0.7	5,697,400	79.3	1.0
Semi-detached, row or terrace house, townhouse, etc.(b)	699,633	9.1	641,400	8.9	2.7	708,900	9.9	3.6
Flat (c)	1,079,383	14.0	798,500	11.1	2.4	725,800	10.0	3.5
Other (d)	115,404	1.5	41,600	0.6	12.5	56,100	0.8	15.5
<b>Total</b>	<b>7,720,464</b>	<b>100.0</b>	<b>7,216,900</b>	<b>100.0</b>		<b>7,188,200</b>	<b>100.0</b>	

(a) Includes information from Substitute forms. (b) Includes one and more storeys. (c) Includes 'Flats, units or apartments in one or more storey blocks or attached to a house' and 'Houses or flats attached to a shop, office, etc.'. (d) Includes 'Caravans, cabins, houseboats' and 'Improvised homes, tents and sleepers out'.

Although this table contains collapsed categories, comparisons show high consistency between the three sources of dwelling structure data. The largest difference was for flats, with 2001 Census figures three to four percent higher.

### 6.4 Collection Strategy for Dwelling Structure Data

Non-response rates are generally good indicators of data quality. Since Dwelling Structure is marked by the Census Collector rather than the householder we would expect a very low non-response rate. Furthermore, during pre-capture processing which takes place before forms are scanned, any forms with no response to Dwelling Structure are marked by pre-capture coders according to any additional information available from Collector Record Books.

Therefore, the non-response rate of 0.9 % represents those forms which the Census Collector failed to mark and for which the pre-capture coders could not reliably identify a dwelling structure using information from Collector Record Books. Although the Dwelling Question is



answered by Census Collectors, the quality of data (measured in this case by non-response) may not be an improvement on the data that would be obtained by a self-enumerated question.

It is likely that alternative collection return methodologies (incorporating Internet forms and the wider use of mail back forms) may be used for the 2006 Census. If this is the case, Dwelling Structure would be a self-enumerated question. A revised question format should be tested early in the 2006 Census cycle.



## **7. CONCLUSIONS AND RECOMMENDATIONS**

### **Number of bedrooms:**

For the 2006 Census, the inclusion of an extra 'dot-point' example may help improve respondents' understanding of why this question is asked, and what the data are used for. This increased understanding may help lower non-response to this question.

It is also recommended that in order to overcome incorrect filling in of the second write-in box, more specific examples be provided on the form to show respondents how to write a single digit number when two digit fields are provided.

### **Tenure Type:**

Census figures for 'Being Purchased' are lower than the AHS and SIHC results and the opposite trend is noted for 'Fully Owned' with the census proportion larger than AHS and SIHC. This difference may be due to the 'Fully Owned' category appearing at the top of the response list and respondents who are paying a mortgage not taking the time to compare the 'Fully Owned' and 'Being Purchased' options. Therefore, it is recommended that a question be tested for the 2006 Census with the order of these response categories reversed.

### **Rent/Housing loan repayments:**

The inclusion of an explanation of why this question is asked and what the data are used for, in the Census Guide/Hotline may help to reduce non-response associated with this question. A more visible assurance that any responses are completely confidential and not released to any other government organisations may also help.

### **Landlord Type:**

The changes implemented for the 2001 Census appear to have effectively reduced non-response for this question. However, the differential form printing has associated printing and co-ordination costs, and while it may have helped overall non-response it is still uncertain if it had any impact on the enumeration of public housing dwellings. The undercount of these dwellings appears to be primarily associated with non-contact issues. Liaison with local housing authorities may prove useful in the development of field collection and contact procedures for 2006 as these organisations have address information, which may be valuable in a targeted 'mail out' prior to Census night. A leaflet addressing the major issues of concern may help to make the dwellings in difficult to enumerate areas more easily contactable.

### **Dwelling Structure:**

The possibility of collecting dwelling structure on a self-enumerated question on the form needs to be considered. This Census Paper showed that the data gathered by Census Collectors had approximately the same error/non-response rates as the self-enumerated questions. Therefore, there is a possibility that the use of a self-enumerated question may reduce Census Collector burden, and associated costs, without sacrificing data quality.



## APPENDIX A: 1996 and 2001 Censuses: Housing Questions

Fig A1: 2001 Census housing questions completed by respondents (Household Form):

<p><b>46 How many bedrooms are there in this dwelling?</b>          • If the dwelling is a bed-sitter, write '0'.</p>	<p><input type="text"/> <input type="text"/> Number of bedrooms</p>
<p><b>47 Mark the box which best describes this dwelling.</b>          • Include owners of caravans, manufactured homes or houseboats regardless of whether or not the site is owned.</p>	<p> <input type="checkbox"/> Fully owned ► <b>Go to 50</b>  <input type="checkbox"/> Being purchased  <input type="checkbox"/> Being purchased under a rent/buy scheme  <input type="checkbox"/> Being rented  <input type="checkbox"/> Being occupied rent-free ► <b>Go to 49</b>  <input type="checkbox"/> Being occupied under a life tenure scheme  <input type="checkbox"/> Other         </p>
<p><b>48 How much does your household pay for this dwelling?</b>          • Include rent and mortgage repayments and site fees if the dwelling is a caravan or manufactured home in a caravan park or manufactured home estate.          • Exclude water rates, council rates, repairs, maintenance and other fees.          • Do not include cents.          • If no payments, please mark 'NIL' box.</p>	<p>           \$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per week            OR            \$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per fortnight            OR            \$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per month  <input type="checkbox"/> NIL         </p>
<p><b>49 If this dwelling is being rented, who is it rented from?</b></p>	<p> <input type="checkbox"/> ACT Housing  <input type="checkbox"/> Private landlord not in the same household  <input type="checkbox"/> Real estate agent  <input type="checkbox"/> Community or co-operative housing group  <input type="checkbox"/> Employer – Government  <input type="checkbox"/> Employer – Private  <input type="checkbox"/> Other         </p>

Fig A2: 2001 Census Dwelling Structure question completed by Census Collector:

**Dwelling Structure**

0 ☐ **Separate house**

---

**Semi-detached, row or terrace house, townhouse etc.**

1 ☐ One storey

2 ☐ Two or more storeys

---

**Flat, unit or apartment**

3 ☐ In a one or two storey block

4 ☐ In a three storey block

5 ☐ In a four or more storey block

6 ☐ Attached to a house

---

7 ☐ **Caravan, cabin, houseboat**

8 ☐ **Improvised home, tent, sleepers out**

9 ☐ **House or flat attached to a shop, office etc.**

**Fig A3: 2001 Census housing questions completed by Interviewer (Special Indigenous Household Form):**

<p><b>2 Is this place a house?</b> (Interviewer to answer)</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No – caravan, tin shed or cabin</p> <p><input type="checkbox"/> No – humpy, tent or sleepout ► <b>Go to 7</b></p>
<p><b>3 How many bedrooms are there in this place?</b></p> <p><input type="text"/> <input type="text"/> Number of bedrooms</p>
<p><b>4 What is the total amount being paid for this place each week?</b></p> <p>• Exclude electricity, repairs, council rates etc. • If no payments, please mark 'NIL' box.</p> <p>\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per week</p> <p><input type="checkbox"/> NIL</p>
<p><b>5 Is this place being rented?</b></p> <p><input type="checkbox"/> Yes, rented</p> <p><input type="checkbox"/> No, being bought ► <b>Go to 7</b></p> <p><input type="checkbox"/> No, owned ► <b>Go to 7</b></p> <p><input type="checkbox"/> No, being occupied rent-free</p> <p><input type="checkbox"/> No, other ► <b>Go to 7</b></p>
<p><b>6 Who is the place rented from?</b></p> <p><input type="checkbox"/> Community or co-operative housing group</p> <p><input type="checkbox"/> Government Housing Authority</p> <p><input type="checkbox"/> Employer – Government</p> <p><input type="checkbox"/> Employer – Private</p> <p><input type="checkbox"/> Other</p>

## 1996 Census Housing Questions

Fig A4: 1996 Census housing questions completed by respondents (Household Form):

<p><b>43 How many bedrooms are there in this dwelling?</b></p>	<p><input type="checkbox"/> None (includes Bedsitter)</p> <p><input type="checkbox"/> 1 bedroom</p> <p><input type="checkbox"/> 2 bedrooms</p> <p><input type="checkbox"/> 3 bedrooms</p> <p><input type="checkbox"/> 4 bedrooms</p> <p><input type="checkbox"/> 5 bedrooms or more</p>
<p><b>44 How much does your household pay for this dwelling?</b></p> <ul style="list-style-type: none"> <li>• Include rent and mortgage repayments and site fees if caravan or manufactured home in caravan park or manufactured home estate.</li> <li>• Exclude water rates, council rates, repairs, maintenance and other fees.</li> <li>• If no payments please mark 'NIL' box.</li> </ul>	<p>\$ <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> per week</p> <p><b>OR</b></p> <p>\$ <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> per fortnight</p> <p><b>OR</b></p> <p>\$ <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> per month</p> <p><input type="checkbox"/> NIL</p>
<p><b>45 Mark the box which best describes this dwelling.</b></p> <ul style="list-style-type: none"> <li>• Owners include owners of caravans, manufactured homes or houseboats regardless of whether or not the site is owned.</li> </ul>	<p><input type="checkbox"/> Fully owned ► <b>Go to 48</b></p> <p><input type="checkbox"/> Being purchased ► <b>Go to 48</b></p> <p><input type="checkbox"/> Being purchased under a rent/buy scheme</p> <p><input type="checkbox"/> Being rented</p> <p><input type="checkbox"/> Being occupied rent-free</p> <p><input type="checkbox"/> Being occupied under a life tenure scheme ► <b>Go to 48</b></p> <p><input type="checkbox"/> Other</p>
<p><b>46 If this dwelling is being rented, who is it rented from?</b></p>	<p><input type="checkbox"/> Private landlord not in the same household</p> <p><input type="checkbox"/> Real estate agent</p> <p><input type="checkbox"/> State public housing department</p> <p><input type="checkbox"/> Community or co-operative housing group</p> <p><input type="checkbox"/> Employer — Government</p> <p><input type="checkbox"/> Employer — other</p> <p><input type="checkbox"/> Other</p>
<p><b>47 If this dwelling is being rented, was it furnished by the landlord?</b></p>	<p><input type="checkbox"/> Yes, fully furnished</p> <p><input type="checkbox"/> Yes, partly furnished</p> <p><input type="checkbox"/> No, unfurnished</p>



**Fig A5: 1996 Census Dwelling Structure question completed by Census Collector:**

<b>Dwelling Structure</b>	
<input type="checkbox"/>	<b>Separate house</b>
<b>Semi-detached, row or terrace house, townhouse etc.</b>	
<input type="checkbox"/>	1 storey
<input type="checkbox"/>	2 or more storeys
<b>Flat, unit or apartment</b>	
<input type="checkbox"/>	In a 1 or 2 storey block
<input type="checkbox"/>	In a 3 storey block
<input type="checkbox"/>	In a 4 or more storey block
<input type="checkbox"/>	Attached to a house
<input type="checkbox"/>	<b>Caravan, cabin, houseboat</b>
<input type="checkbox"/>	<b>Improvised home, tent, sleepers out</b>
<input type="checkbox"/>	<b>House or flat attached to a shop, office etc.</b>



**Fig A6: 1996 Census housing questions completed by Interviewer (Special Indigenous Household Form):**

<p><b>2 Is this place a house?</b> (Interviewer to answer)</p> <p><input type="checkbox"/> No — shack, tent, caravan, humpy, willja ➤ No more questions on this form</p> <p><input type="checkbox"/> Yes</p>	<p><b>6 Who is the house rented from?</b></p> <p><input type="checkbox"/> Government Housing Authority</p> <p><input type="checkbox"/> Community or co-operative housing group</p> <p><input type="checkbox"/> Employer — government</p> <p><input type="checkbox"/> Employer — other</p> <p><input type="checkbox"/> Other</p>
<p><b>3 How many bedrooms are there in this house?</b></p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> 1 bedroom</p> <p><input type="checkbox"/> 2 bedrooms</p> <p><input type="checkbox"/> 3 bedrooms</p> <p><input type="checkbox"/> 4 bedrooms</p> <p><input type="checkbox"/> 5 bedrooms or more</p>	<p><b>7 Was there any furniture in the house when you moved in?</b></p> <p><input type="checkbox"/> Yes, fully furnished</p> <p><input type="checkbox"/> Yes, partly furnished</p> <p><input type="checkbox"/> No, unfurnished</p>
<p><b>4 What is the total amount being paid for this house each fortnight?</b></p> <p>• Include rent and mortgage payments. • Exclude electricity, repairs, council rates etc. • If no payments, please mark 'NIL' box.</p> <p>\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> per fortnight</p> <p><input type="checkbox"/> NIL</p>	
<p><b>5 Is this house being rented?</b></p> <p><input type="checkbox"/> No, owned ➤ No more questions on this form</p> <p><input type="checkbox"/> No, being bought ➤ No more questions on this form</p> <p><input type="checkbox"/> Yes, rented ➤ Go to 6</p> <p><input type="checkbox"/> No, being occupied rent free ➤ Go to 6</p> <p><input type="checkbox"/> No, other ➤ No more questions on this form</p>	



## APPENDIX B: Number of Bedrooms Data for 5 or More Bedrooms

<i>Number of Bedrooms</i>	<i>Dwellings</i>	<i>% of all 5+ Bedrooms</i>	<i>Number of Bedrooms</i>	<i>Dwellings</i>	<i>% of all 5+ Bedrooms</i>
5	236,564	80.9	53	4	0.0
6	37,648	12.9	54	5	0.0
7	7,780	2.7	55	25	0.0
8	3,006	1.0	56	9	0.0
9	1,070	0.4	57	4	0.0
10	703	0.2	58	3	0.0
11	909	0.3	59	4	0.0
12	502	0.2	60	23	0.0
13	277	0.1	61	0	0.0
14	195	0.1	62	13	0.0
15	186	0.1	63	21	0.0
16	107	0.0	64	18	0.0
17	71	0.0	65	5	0.0
18	63	0.0	66	5	0.0
19	38	0.0	67	3	0.0
20	144	0.1	68	6	0.0
21	64	0.0	69	9	0.0
22	680	0.2	70	5	0.0
23	58	0.0	71	4	0.0
24	59	0.0	72	6	0.0
25	33	0.0	73	0	0.0
26	24	0.0	74	3	0.0
27	26	0.0	75	0	0.0
28	29	0.0	76	3	0.0
29	14	0.0	77	3	0.0
30	111	0.0	78	3	0.0
31	40	0.0	79	0	0.0
32	29	0.0	80	13	0.0
33	991	0.3	81	3	0.0
34	18	0.0	82	3	0.0
35	16	0.0	83	7	0.0
36	12	0.0	84	9	0.0
37	10	0.0	85	6	0.0
38	23	0.0	86	0	0.0
39	8	0.0	87	0	0.0
40	47	0.0	88	0	0.0
41	17	0.0	89	3	0.0
42	21	0.0	90	11	0.0
43	25	0.0	91	3	0.0
44	232	0.1	92	4	0.0
45	21	0.0	93	8	0.0
46	8	0.0	94	3	0.0
47	3	0.0	95	5	0.0
48	5	0.0	96	3	0.0
49	3	0.0	97	3	0.0
50	38	0.0	98	3	0.0
51	5	0.0	99	73	0.0
52	5	0.0	<b>Total</b>	<b>292,279</b>	<b>100.0</b>



## APPENDIX C: Analysis of Public Housing Data, 2001 Census

### *C1 Background and Under-Reporting of State Housing in the 2001 Census*

State Housing Departments have repeatedly expressed concerns about census under-enumeration of public housing tenants. An unpublished paper '*Under-enumeration of Public Housing Tenants in Victoria*' (ABS, 1998) identified a 25% difference between the reported number of public housing dwellings in the 1996 Census and known public housing stock in Victoria. An identified problem was that people of a non-English speaking background often did not respond to this question, or confused state housing authorities with community or co-operative housing groups.

Changes to form design for 2001 were implemented to address language difficulties. The relevant state or territory housing authority name was printed on the form as a response option and moved to the top of the response list. Respondents would be more likely to 'recognise' the specific name of their housing authority rather than a general label and more likely to consider this option in a more prominent position.

The New South Wales Department of Housing (DoH) provided a list of all public housing addresses in New South Wales (NSW). These addresses were coded to Collection District (CD) level using a combination of Automatic Coding (AC), Computer Assisted Coding (CAC) and in some cases more detailed investigations via street directories. Using 2001 Census counts, it was then possible to calculate an undercount rate for public housing dwellings and to identify particular areas where this undercount was the most pronounced.

**TABLE C1: NUMBER OF PUBLIC HOUSING DWELLINGS, 2001 CENSUS AND DEPARTMENT OF HOUSING ADMINISTRATIVE RECORDS, NSW**

	<i>Number of dwellings</i>
Public Housing (Census)	114,606
Public Housing Stock (DoH)	138,047
Difference	23,441

Table C1 above shows the simple undercount rate to be 17.0%. While this is a substantial figure, it is an improvement on the 25% undercount of Victorian public housing dwellings in 1996.

### *C2 Investigation of State Housing Data Relative to Other Landlord Type Data*

It is necessary to determine the extent to which DoH dwellings are under-reported relative to the rest of the population. In this, we may identify the unique characteristics of public housing dwellings or occupants that cause such a discrepancy.

In NSW there were 2,540,862 private dwellings that were not in the categories 'Caravans, cabins, houseboats' or 'Improvised home, tent, sleepers out'. Of these dwellings, only those enumerated on Household forms or Special Indigenous forms (SIFs) had the opportunity to have responses to the Landlord Type question. The 275,277 (10.8%) dwellings that were enumerated on Substitute Forms would therefore undercount all Landlord Type responses, not just state housing. Substitute Forms were raised for non-contact with householders

(1.9%), refusals (0.1%), requests to mail back census a form but which were never received (0.7%) and unoccupied dwellings on census night (8.2%).

For the remaining dwellings enumerated on Household forms and SIFs, 53,628 (2.1%) respondents did not respond to either Tenure Type or Landlord Type (coded as 'Not Stated' to Tenure Type and 'Not Applicable' to Landlord Type). A further 14,515 (0.6%) respondents indicated that they rented their dwelling or occupied it rent free but did not provide any landlord details.

The table below 'projects' these proportions to the 138,047 DoH dwellings. These projections determine the extent to which DoH dwellings are undercounted relative to any other dwelling type.

**TABLE C2: PRIVATE DWELLING UNDERCOUNT PROPORTIONS PROJECTED TO STATE HOUSING NUMBERS, NSW, 2001 CENSUS**

	<i>% of Private Dwellings</i>	<i>Projected to DoH Dwellings</i>
Total Dwellings	100.0	138,047
Substitute Forms	10.8	14,909
'Not Stated' to Tenure Type, 'Not Applicable' to Landlord Type	2.1	2,899
'Rented' or 'Occupied Rent Free' to TenureType, 'Not Stated' to Landlord Type	0.6	828
<b>Adjusted Total Dwellings</b>	<b>86.5</b>	<b>119411</b>

The above table shows that Landlord Type information was lost for 13.5% of dwellings across NSW and that 119,411 dwellings would have expected to be identified as DoH. However, 114,606 dwellings were identified in the 2001 Census as DoH, some 4,805 less than expected. Therefore, it is estimated that NSW DoH dwelling tenants were 4.0% less likely to identify their landlord than tenants of private dwellings.

### ***C3 Investigation of 'Wholly' Department of Housing CDs***

Using the files provided by the DoH, an undercount or overcount of State Housing dwellings was calculated for each CD in NSW. It is also possible to identify CDs that are likely to consist of DoH dwellings only. These CDs are an important source of information as the tabulations show the response patterns of those respondents who did not identify as DoH tenants which may be generalised to other state-owned dwelling tenants. The 25 CDs in the table below were identified because the expected DoH count was within five dwellings of the total 2001 Census count for the CD.

**TABLE C3: CDs IDENTIFIED AS CONSISTING OF DEPARTMENT OF HOUSING DWELLINGS ONLY, NSW, 2001 CENSUS**

<i>CD Identifier</i>	<i>Total Dwellings (Census count)</i>	<i>Expected DoH count</i>	<i>Dwellings Identifying as DoH (Census count)</i>	<i>Dwellings not Identifying as DoH</i>
1272403	181	178	153	28
1300406	183	184	154	29
1300408	264	264	227	37
1300412	160	165	107	53
1301410	261	262	231	30
1301705	263	259	224	39
1301709	190	195	163	27
1350111	192	192	162	30
1400701	281	284	223	58
1400702	125	122	94	31
1400711	214	214	164	50
1400712	201	202	161	40
1400714	215	214	180	35
1400812	211	210	170	41
1400813	214	214	180	34
1400902	209	207	161	48
1400903	108	108	84	24
1400910	192	192	166	26
1400911	192	192	157	35
1400912	192	192	157	35
1401209	163	166	137	26
1401210	430	429	321	109
1421711	242	242	205	37
1431110	281	281	234	47
1431607	274	274	214	60
<b>Total</b>	<b>5438</b>	<b>5442</b>	<b>4429</b>	<b>1009</b>

For the 1,009 dwellings in these CDs that did not identify as DoH, the pattern of responding needs to be established. The following table shows various non-identification reasons for these dwellings.

**TABLE C4: NON-IDENTIFICATION AS STATE HOUSING RESPONSES, DoH ONLY CDs, NSW, 2001 CENSUS**

<i>Non-identification type</i>	<i>Dwellings (number)</i>	<i>Undercount (per cent)</i>
<b>Substitute forms:</b>	<b>560</b>	<b>55.5</b>
Non contact	170	16.8
Refusal	23	2.3
Mailback	69	6.8
Unoccupied	298	29.5
<b>Household forms:</b>	<b>449</b>	<b>44.5</b>
Marked Landlord Type other than 'DoH'	51	5.1
Marked Tenure Type other than 'Rented'	145	14.4
Failed to Answer Tenure Type or Landlord Type	163	16.2
Answered 'Rented' to Tenure Type, but did not answer Landlord Type	53	5.3
Other (a)	37	3.7
<b>Total forms</b>	<b>1009</b>	<b>100.0</b>

(a) Reasons include dwellings enumerated as Non-Private Dwellings or incorrectly enumerated on a Household form when a Substitute form was more appropriate.

Table C4 above shows that Substitute forms accounted for more than half of the dwellings which did not identify as DoH. The next most common reason was the respondent failing to answer either the Tenure Type question or the Landlord Type question. Non-response could be regarded as an unfortunate consequence of housing questions appearing at the end of the census form.

Only 5% of the under-reporting was due to respondents providing a landlord other than the DoH response. If respondents did answer in this way, the most likely response was 'Community or co-operative housing group (39 dwellings or 3.9%).

A larger than expected proportion of respondents marked a box other than 'Being rented' or 'Being occupied rent free' for Tenure Type. Regardless of their response to Landlord Type, an edit would set this field to 'Not Applicable' based on the response to Tenure Type. The most common response was 'Being occupied under a life tenure scheme' (61 dwellings or 6.0%).

#### ***C4 Reasons for State Housing Authority Under-Identification***

Identification of State Housing dwellings in the 2001 Census was affected by:

- **Non-contact resulting in use of Substitute forms - Significant effect.** Examination of the 'wholly' DoH CDs suggests that more than half of the unidentified State Housing dwellings were collected on Substitute forms. While there is no complete solution for reducing the numbers of unoccupied dwellings on Census night, greater contact with householders, generally and in particular with state housing tenants, is a major aim for 2006. In NSW non-contact in identified DoH CDs was 3.1% compared to 1.9% in non-DoH CDs.



- **Non-response - Moderate effect.** The Landlord Type question is the last compulsory question on the census form and respondent fatigue reduces the response rate to this question. Note also that non-response to both Tenure Type and Landlord Type results in a 'Not Applicable' code to Landlord Type.
- **Reporting as 'Not Renting' - Greater than expected effect.**
- **Identification as other than State Housing - Minor effect.** A small number of respondents were found to answer a Tenure Type other than 'Rented' and some provided a Landlord Type other than the state housing authority, the most common error was to provide 'Community or Co-operative Housing Group'.
- **Not counting State Housing Dwellings - Nil effect.** The above data suggests that the nature of the problem is non-identification and not under-enumeration. State owned dwellings are counted, but sometimes not identified as such.

As with all census variables, users need to make a number of decisions about non-respondents and non-identifiers. The simple assumption is that non-identifiers possess the same characteristics as identifiers and that a simple weighting factor can be applied to the figures. However, in all likelihood the very cause of non-identification was due to the respondent's unique characteristics and that they are also probably different to the general population with regard to, for example, Indigenous Status, Birthplace and Income Status.



## GLOSSARY

**Absolute homeless** Homeless people who are not staying in conventional accommodation, for example, living on the streets, in deserted buildings, in improvised dwellings, under bridges, in parks.

**Australian Bureau of Statistics (ABS)** Australia's official statistical organisation.

**Australian Housing Survey (AHS)** The survey collected information from persons in private dwellings throughout Australia and was conducted between September and December 1999. Topics covered include the characteristics, affordability and adequacy of dwellings, and the demographics, tenure and housing costs of persons and households. The unit of analysis is the household.

**Australian Statistics Advisory Council (ASAC)** Advises the Minister and the Australian Statistician on statistical matters. Part of ASAC's role involves monitoring progress on the development of the census and in particular, advises the Minister on topics being considered for inclusion in the census.

**Caravan, cabin, houseboat** This category includes all occupied caravans, cabins and houseboats regardless of location. It also includes occupied campervans, mobile houses and small boats. Separate houses in caravan parks or marinas occupied by managers are not included in this category.

*Caravans on Residential Allotments:* An occupied caravan on a residential allotment is usually treated as an occupied private dwelling. The exception to this is where there are one or more other structures on the allotment and the occupants of the caravan live and eat with the occupants of the main dwelling. In this case the occupants are all classed as one household and the caravan is counted as an additional room of the main dwelling.

*Caravans on Roadsides/Open Land:* Occupied caravans at roadside parking areas or on open land are classified as sleepers-out for the variable Dwelling Structure (STRD). The occupants of the caravans complete Household Forms.

*Caravans or Cabins in Caravan Parks:* Since the 1986 Census occupied caravans or cabins in caravan parks have been treated as occupied private dwellings, i.e. families are identified and coded. Prior to this, they were treated as non-private dwellings.

*Houseboats:* Occupied houseboats are treated as occupied dwellings regardless of location. Prior to the 1986 Census, occupied craft in marinas were treated as non-private dwellings. Managers' residences in caravan parks or marinas are enumerated and classified as separate private dwellings. Unoccupied caravans and boats/craft, regardless of location, are not counted in the Census.

*See also* Dwelling, Dwelling Location (DLOD), Dwelling Structure (STRD), Dwelling Type (DWTD), Household.

**Collection District (CD)** The smallest geographic area defined in the Australian Standard Geographical Classification (ASCC). It has been designed for use in the Census of Population and Housing as the smallest unit for collection, processing and output of data.

**Consumer Price Index (CPI)** A measure of changes, over time, in retail prices of a constant basket of goods and services representative of consumption expenditure by resident households in Australian metropolitan areas.

**CD** See Collection District (CD).

**Data Processing Centre (DPC)** The central site where the capture and data entry of census takes place. After census forms have been completed on census night, they are collected and returned to the state distribution offices or sent directly to the DPC.

**Data Quality Investigation (DQI)** A DQI team operated within the DPC, conducting non-standard coding exercises to investigate data quality issues.

**Dwelling** In general terms, a dwelling is a structure which is intended to have people live in it, and which is habitable on census night. Some examples of dwellings are houses, motels, flats, caravans, prisons, tents, humpies and houseboats. All occupied dwellings are counted in the census. *See also* Dwelling Location (DLOD), Dwelling Structure (STRD), Dwelling Type (DWTD), Household.

**Dwelling Location (DLOD)** This variable applies to private dwellings and describes the location of dwellings other than 'typical' private dwellings. From the 1996 Census dwellings are classified according to whether they are located in caravan parks (or marinas), manufactured home estates, retirement villages or elsewhere. *See also* Dwelling Structure (STRD), Dwelling Type (DWTD).

**Dwelling Structure (STRD)** This variable classifies the structure of private dwellings enumerated in the Census. The information is determined by the Census Collector. The broad categories are:

*Separate house:* This is a house which stands alone in its own grounds separated from other dwellings by at least half a metre. A separate house may have a flat attached to it, such as a granny flat or converted garage (the flat is categorised under *Flat, unit or apartment* — see below). The number of storeys of separate houses is not recorded. Also included in this category are occupied accommodation units in manufactured home estates which are identified as separate houses.

*Semi-detached, row or terrace house, townhouse, etc.:* These dwellings have their own private grounds and no other dwelling above or below them.

*Flat, unit or apartment:* This category includes all dwellings in blocks of flats, units or apartments. These dwellings do not have their own private grounds and usually share a common entrance foyer or stairwell. This category also includes flats attached to houses such as granny flats, and houses converted into two or more flats. For the 2001 Census there have been some changes to classification procedures for private apartments within non-private dwellings. This may result in changes to the counts of private dwellings in some areas.

*Caravan, cabin, houseboat:* This category includes all occupied caravans, cabins and houseboats regardless of location. It also includes occupied campervans, mobile houses and small boats. Separate houses in caravan parks or marinas occupied by managers are not included in this category.

*Improvised home, tent, sleepers out:* This category includes sheds, tents, humpies and other improvised dwellings, occupied on census night. It includes caravans occupied on census night and located in roadside parking areas. It also includes people sleeping on park benches or in other 'rough' accommodation (the traditional definition of homeless people).

*House or flat attached to a shop, office, etc.:* A house or flat attached to a shop, office, factory or any other non-residential structure is included in this category.

*See also* Dwelling, Dwelling Location (DLOD), Dwelling Type (DWTD), Tenure Type (TEND), Type of Non-Private Dwelling (NPDD).

**Dwelling Type (DWTD)** This variable classifies all dwellings into the basic dwelling types. The categories are:

*Occupied Private Dwelling:* An occupied private dwelling is a private dwelling occupied by one or more people. A private dwelling is normally a house, flat, or even a room. It can also be a caravan, houseboat, tent, or a house attached to an office, or rooms above a shop.

*Unoccupied Private Dwellings:* These are structures built specifically for living purposes which are habitable, but unoccupied on census night. Vacant houses, holiday homes, huts and cabins (other than seasonal workers' quarters) are counted as unoccupied dwellings. Also included are newly completed dwellings not yet occupied, dwellings which are vacant because they are due for demolition or repair, and dwellings to let.

*Non-Private Dwellings (NPDs):* NPDs are those dwellings, not included above, that provide a communal or transitory type of accommodation. NPDs include hotels, motels, guest houses, prisons, religious and charitable institutions, defence establishments, hospitals and other communal dwellings.

**Flat, unit or apartment** This category includes all dwellings in blocks of flats, units or apartments. These dwellings do not have their own private grounds and usually share a common entrance foyer or stairwell. This category also includes flats attached to houses such as granny flats, and houses converted into two or more flats. For the 2001 Census there have been some changes to classification procedures for private apartments within non-private dwellings. This may result in changes to the counts of private dwellings in some areas.

**Home Loan Repayments (monthly) dollar values (HLRD)** This variable records the housing loan repayments being paid by a household to purchase the dwelling in which it was enumerated (also applicable to caravans). The census collects this information in single dollars up to \$9,999. However, for practical purposes this information is recoded to a specific number of ranges for standard census products. *See also* Dwelling Structure (STRD), Household Type (HHTD), Tenure Type (TEND).

**House or flat attached to a shop, office, etc.** This category includes a house or flat attached to a shop, office, factory or any other non-residential structure.

**Household** A household is defined as a group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household, and who make common provision for food or other essentials for living; or a person living in a dwelling who makes provision for his/her own food and other essentials for living, without combining with any other person.

**Improvised home, tent, sleepers out** This category includes sheds, tents, humpies and other improvised dwellings, occupied on census night. It includes caravans occupied on census night and located in roadside parking areas. It also includes people sleeping on park benches or in other 'rough' accommodation (the traditional definition of homeless people).

**Intelligent Character Recognition (ICR)** The 2001 Census data were processed using Intelligent Character Recognition (ICR) technology. Specialised computer software is used to interpret the handwriting on images taken of each page of the census form. Once recognised,

answers to the questions were then coded to the appropriate category of the relevant classification. The 1996 Census was processed using Optical Mark Recognition (OMR) technology which was not capable of processing handwritten responses.

**Non-Private Dwelling (NPD)** This variable identifies the type of non-private dwelling in which people were enumerated on census night. Non-private dwellings are establishments which provide a communal type of accommodation. Examples of categories are Hotel, motel; Boarding house, private hotel; Public hospital (not psychiatric); and Childcare institution. *See also* Dwelling, Dwelling Location (DLOD), Dwelling Structure (STRD), Dwelling Type (DWTD).

**Occupied Private Dwelling** The premises occupied by a household on census night.

**Post Enumeration Survey (PES)** Since the 1966 Census, each census has been followed by a Post Enumeration Survey (PES), conducted by specially trained interviewers. Each state and territory is included, and a sample of two-thirds of 1% of private dwellings is chosen for the survey. The main purpose of the PES is to measure the extent of undercount and overcount in the Census. For further information see *Information Paper: 2001 Census of Population and Housing, Data Quality - Undercount* (cat. no. 2940.0).

**Relative Standard Error (RSE)** The error innate in collections which use only a part, rather than the whole population, expressed as a percentage of the figure. Only estimates with RSEs less than 25% are considered sufficiently reliable for most statistical purposes and for those with an RSE greater than 25% caution should be exercised in their use. *See also* Sampling Error (SE).

For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

**Sampling Error (SE)** Estimates derived from information obtained from occupants of a sample of dwellings are subject sampling variability. That is, they may differ from figures that would have been obtained had all households been included in a collection. *See also* Relative Standard Error (RSE).

For further information about sampling variability refer to the Additional Information contained in *Australian Housing Survey, 1999* (cat. no. 4182.0) or *Income Distribution Australia, 1999-2000* (cat. no. 6523.0).

**Special Indigenous Form (SIF)** The standard form used for the enumeration of Indigenous communities. Information was collected via interview.

**Survey of Income and Housing Costs (SIHC)** The survey collected information on income and characteristics of income units and persons resident in private dwellings throughout Australia in 1999-2000.

**System created record (SCR)** A record created during census processing for a person for whom a census form has not been received but where the collector believed the dwelling was occupied on census night. SCRs have values imputed for age, sex, marital status and usual residence only. Values for other variables are set to 'Not Stated' or 'Not Applicable', depending on the imputed value for age.

**Tenure Type (TEND)** Tenure type describes whether a household, is purchasing, rents or owns, the dwelling in which it was enumerated on census night, or whether the household occupies it under another arrangement. Tenure type is derived from the responses to a series of questions. The TEND category 'Being purchased under a rent/buy scheme' refers to households who are both purchasing some equity in the dwelling, and paying rent for the remainder. 'Being occupied under a life tenure scheme' refers to households or individuals who have a 'life tenure' contract to live in the dwelling but usually do not have any equity in the dwelling. This is a common arrangement in retirement villages. Tenure Type (TEND) is applicable to all occupied private dwellings. *See also* Landlord Type (LLDD).

**Unoccupied Private Dwelling** A premises intended for living purposes which is habitable but unoccupied on census night.

## NOTE

For more information about the terms, definitions and descriptions of categories in this paper refer to the *2001 Census Dictionary* (cat. no. 2901.0).

## REFERENCE LIST

*Australian Social Trends*, 2001 (cat. no. 4102.0)

*Australian Housing Survey*, 1999 (cat. no. 4182.0)

*Income Distribution Australia, 1999-2000* (cat. no. 6523.0)

ABS Census Working Paper 99/3, *1996 Census Data Quality: Housing*

## Census Papers

### 2001 Census Papers:

- 03/04 *2001 Census: Income*
- 03/03 *2001 Census: Computer and Internet Use*
- 03/02 *2001 Census: Housing*
- 03/01b *2001 Census: Ancestry - Detailed Paper*
- 03/01a *2001 Census: Ancestry - First and Second Generation Australians*
- 02/03 *2001 Census: Form Design Testing*
- 02/02 *Report on Testing of Disability Questions for Inclusion in the 2001 Census*
- 02/01 *2001 Census: Digital Geography Technical Information Paper*

### 1996 Census Working Papers:

- 00/4 *1996 Census Data Quality: Income*
- 00/3 *1996 Census Data Quality: Industry*
- 00/2 *1996 Census Data Quality: Qualification Level and Field of Study*
- 00/1 *1996 Census Data Quality: Journey to Work*
- 99/6 *1996 Census Data Quality: Occupation*
- 99/4 *1996 Census: Review of Enumeration of Indigenous Peoples in the 1996 Census*
- 99/3 *1996 Census Data Quality: Housing*
- 99/2 *1996 Census: Labour Force Status*
- 99/1 *1996 Census: Industry Data Comparison*
- 97/1 *1996 Census: Homeless Enumeration Strategy*
- 96/3 *1996 Census of Population and Housing: Digital Geography Technical Information Paper*
- 96/2 *1996 Census Form Design Testing Program*

### 1991 Census Working Papers:

- 96/1 *Income*
- 95/1 *Housing*
- 94/4 *Ancestry*
- 94/3 *Disability*
- 94/2 *Education*
- 94/1 *Labour Force Status*
- 93/6 *Aboriginal/Torres Strait Islander Counts*
- 93/5 *Public Communications*
- 93/4 *Comparison of Census and PES Responses*
- 93/3 *Posted-in Forms*
- 93/2 *Self Coding*
- 93/1 *Sequencing Instructions*

These papers are available on the ABS web site at <<http://www.abs.gov.au>>. From the ABS home page, select **Census -> (Census Information) Fact Sheets and Census Papers -> (Other Publications) Census Papers**.

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