

Projections of Housing Demand in Australia, 2006-2021

Narrative Report (DRAFT)

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BACKGROUND

This report provides a narrative description of results of the projection of future housing demand in the capital cities and balances of state for the eight States and Territories of Australia for the period, 2006-21. The baseline housing data for the projections is obtained from the 2006 Census of Population and Housing. The Estimated Resident Population data for 30 June 2006 form the baseline population data.

PROJECTION METHODOLOGY

The projections employ an innovative approach to projection of housing demand at the sub-national level. The methodology is detailed in McDonald, Kippen and Temple (2006). Here, we provide a short overview of the approach.

Individuals and households

Houses or, more precisely, dwellings, are occupied by households. Therefore, the projection of housing demand is equivalent to the projection of the number of future households. To project future households, for any given locality, we begin with the population of individuals described simultaneously by sex, single-year of age and individual household classification type (HCT). The categories of HCT that we use are shown in Definition 1. This population table is obtained from successive censuses, in this case, from the 2001 and 2006 Censuses.

Next, the population by age, sex and HCT at each census is adjusted so that it agrees with the Australian Bureau of Statistics' Estimated Resident Population (ERP) by age and sex for the particular locality and year. The adjusted 2006 population becomes the base for the projections. Data from the two censuses, 2001 and 2006, are used to measure age and sex specific net migration rates and transitions from one HCT category to another in the intercensal period, 2001-06.

We proceed by projecting individuals forward in time by sex, age and locality using location-specific estimates of future fertility, mortality and net annual migration. In the next stage, we apply probabilities that in ageing from age x to age $x+1$, a person will change his or her HCT. For example, as a 26 year-old woman living at home with parents ages to age 27, we consider the chances that she will move out and live alone, move into a group household, move in with a partner with no children, move in with a partner and child, become a sole parent, or experience no change in her household circumstances. The probabilities that we use are location-specific and take account of the simultaneous effects of migration upon HCT. For example, if in ageing from 26 to 27, our young woman also moves from a country town to a large city, we consider the association that this move will have with HCT transitions for that locality. For these projections, we

assume that the HCT transition probabilities by age, sex and locality remain the same throughout the projection period as they were in the period, 2001-06.

Table 1. Household Classification Types (HCT)

HCT Type	Definition
1	Parent in a couple family with co-resident children
2	Parent in a one-parent family
3	Child (any age) in a couple family with children
4	Child (any age) in a one-parent family
5	Partner in a couple family without children
6	A person living alone
7	Any person living with a couple family or a one-parent family, other than persons included in categories HCT1 – HCT5
8	A group household member, including households consisting of related persons where there was no couple family or sole parent family (eg. siblings living together)
9	A usual resident of a non-private dwelling.

Having obtained projections of individuals by location, sex, age and HCT for single calendar years from 2006 to 2021, we then collapse these persons into five household types using a simple procedure as shown in Definition 2. Individuals projected to be living in non-private dwellings (NPD) remain as individuals classified by sex, age and location.

Each household is tagged with the characteristics of a ‘household reference person’. For couple families, the household reference person is the female partner. For one parent families, it is the sole parent. For lone person households, it is the lone person. For group households, the age and sex of reference persons is obtained by using the distribution of the sex and age of persons listed as Person 1 in group households at the 2006 Census.

Dwellings

The final stage in the methodology is to attribute to each projected dwelling, a dwelling type (separate house, semi-detached, flat, other) and a tenure (owner/purchaser, public rental, private rental). To do this, we assume that dwelling type and tenure behaviour remain the same as observed at the 2006 Census within cells consisting of locality by household type and by age and sex of the reference person. For example, the 2006 Census provides the distribution of female lone persons aged 72 in the Hunter region by dwelling type and tenure type. We have assumed that this distribution (preferences and behaviour) remains unchanged from 2006 to 2021.

Table 2 – Household type derivation

Household Type	HCT Category
1. Couples with co-resident children	Number defined by HCT1 for females and subsuming all of HCT3 and part of HCT7.
2. One-parent families	Number defined by HCT2 for both sexes combined and subsuming all of HCT4 and part of HCT7.
3. Couples with no co-resident children	Number defined by HCT5 for females and subsuming the remainder of HCT7.
4. Lone person households	Number defined by HCT6 for both sexes combined.
5. Group households, including households consisting of related individuals	Number obtained by applying a region-specific factor of average size of such households to the numbers of both sexes in category HCT8.

HOUSING SUPPLY AND DEMAND

The projections provide the housing demand for occupied dwellings (by structure and tenure type) that would result from changing demographic and social trends (population size, births, deaths, international migration, internal migration, age structure changes and family and household formation and dissolution). These are all demand-side factors. The projections are not constrained by any supply-side factors such as availability of land, the number of vacant dwellings, construction of new dwellings and affordability. Our approach is to project housing demand on the basis of current and recent trends in demand inputs. These demand projections should then be assessed in supply terms, that is, the results from the projections of demand for housing can be compared with existing and planned supply of housing and assessments made of what corrections for demand-supply discrepancies need to be made. Where meeting demand would create supply difficulties, consideration would need to be given to how this demand is re-directed. Do the projected households maintain their dwelling preference but change their location or do they change their dwelling preference within the location. The fact that supply cannot meet housing preferences could also conceivably lead to the household not being formed at all.

CHANGES IN THE HOUSEHOLD SITUATION OF AUSTRALIANS, 1991-2006

An examination of net transition probabilities by age and sex for Australia in the three intercensal periods, 1991-96, 1996-2001 and 2001-06 reveals the following:

- The probabilities of remaining in the parents' home rose for young people aged 17-18 in the 2001-06 period compared with the 1996-01 period. The rise was more evident for young women.
- Between the 1991-96 and 1996-2001 periods for ages, 20-34, there was a distinct trend for young people to remain at home with parents rather than moving out into a couple relationship. However, for those aged 25-34, this movement was reversed in the 2001-06 period, that is, the probability of moving out and living in a couple relationship increased.
- Also in the age range 25-34, the probability of moving out of 'other' living arrangements (group houses, living alone) into a couple living arrangement increased considerably between the 1996-2001 period and the 2001-06 period. In agreement with this trend, the recent ABS Family Characteristics and Transitions Survey (ABS 2008) shows a very considerable drop in the incidence of group households between 1997 and 2007, from 6 per cent to 3 per cent.
- In the age range 35-59, the probability of being partnered fell from 1991-96 to 1996-01. However, in the 2001-06 period, this trend took a substantial turn in the other direction, that is, people were much more likely to partner or remain partnered. In agreement with this observation, the ABS Family Characteristics and Transitions Survey showed that, the proportion of children under age five that were living in a one parent family fell from 15.8 per cent in 1997 to 11.7 per cent in 2007.
- At ages, 60-84, there is a long term trend from the 1991-96 period and continuing strongly to the 2001-06 period for people to be living in a couple relationship rather than in other living arrangements.
- For all ages above 25 years, in the most recent intercensal period, there was a shift towards living as a couple away from other living arrangements. The ABS Family Characteristics and Transitions Survey showed that the proportion of households consisting of a couple without children increased from 24.5 per cent of all Australian households in 1997 to 28.8 per cent in 2007. In the same time frame, the proportion of lone person households remained unchanged at 25 per cent.
- The Australian birth rate rose between 2001 and 2006.

THE 2006-2021 PROJECTIONS: ASSUMPTIONS

The projections cover eight possible future scenarios that reflect different combinations of assumptions about future migration and future household transition probabilities. These scenarios are described below in Table 2. The assumptions that do not vary across the scenarios are set out in Table 1.

Table 1. Projection assumptions that do not vary across the eight scenarios

Input	Assumption
Fertility	Age –specific fertility rates were calculated for each region for the year, 2006. These rates were assumed to remain constant throughout the projection period. McDonald and Kippen (2008) have suggested that constant fertility is the most likely result for Australia in the next decade.
Mortality	Abridged life tables for each region were calculated from 2001-06 mortality data. The rate of change in Australian expectations of life from 1991 to 2006 was obtained and annualised. This annual rate of change was then applied year by year to the expectation of life in each region with the rate of change being reduced by five per cent each year.
Dwelling Type	The 2006 distributions of dwelling type by region, type of household and age of the reference person were assumed to remain constant throughout the projection period.
Tenure Type	The 2006 distributions of tenure type by region, dwelling type, type of household and age of the reference person were assumed to remain constant across the projection period.

Table 2. Description of eight projection scenarios

Scenario	Migration	Household transition probabilities
1	Age and sex specific net migration rates (international and internal combined) for each region as observed in the 2001-06 period are maintained.	Age, sex and region specific probabilities for the period, 2001-06, are assumed to remain constant across the projection period.
2	International migration is set at 230,000 per annum from 2008 onwards. Shares to States and Territories of international migration and rates of internal migration are equated to those used by ABS in its medium projection.	Same as Scenario 1
3*	International migration is set at 180,000 per annum from 2008 onwards. Shares to States and Territories of international migration and rates of internal migration are equated to those used by ABS in its medium projection	Same as Scenario 1
4	The assumptions here are the same as Scenario 3 except that, over time, increasingly higher proportions of international migrants are assumed to go to Queensland and Western Australia (see Table 3)	Same as Scenario 1
5	Same as Scenario 1	The annualized rate of change in transition probabilities from 1996-2001 to 2001-06 is continued forward but reduced at the rate of 5% per annum until 2015. From 2016 to 2012, the rates remain constant.
6	Same as Scenario 2	Same as Scenario 5
7	Same as Scenario 3	Same as Scenario 5
8	Same as Scenario 4	Same as Scenario 5

* Note Scenario 3 has the same assumptions as the 2008 ABS population projections (medium).

Table 3 indicates the variations across the scenarios in the shares of net international migration going to each state and territory.

Table 3. Assumed shares of net international migration, States and Territories

State or Territory	Shares of net international migration (%)	
	ABS assumption: Scenarios 1-3 and 5-7	Alternative assumption, achieved by 2021 by linear change from 2006: Scenarios 4 and 8
New South Wales	31.5	29
Victoria	26.5	24
Queensland	19.0	23
South Australia	6.5	5
Western Australia	14.5	17
Tasmania	0.8	0.8
Northern Territory	0.6	0.6
A.C.T.	0.6	0.6

With net overseas migration set at 180,000, the assumed levels of annual net migration for each geographic unit in 2021 are shown in Table 4 for Scenarios 3 and 7 compared with Scenarios 4 and 8.

Table 4. Assumed levels of annual net migration (international and internal combined), Capital Cities and Balances of State, 2021.

Region	Annual net migration (international + internal)	
	Scenarios 3 and 7	Scenarios 4 and 8
Sydney	18467	14144
Balance of NSW	18233	18056
Melbourne	35595	31341
Balance of Victoria	5605	5359
Brisbane	23826	28105
Balance of Queensland	37874	40795
Adelaide	6376	3912
Balance of South Australia	2324	2088
Perth	23438	27479
Balance of WA	5152	5621
Hobart	839	839
Balance of Tasmania	101	101
Northern Territory	580	580
ACT	1580	1580
South East Queensland*	48693	57438

* South East Queensland includes the statistical divisions of Brisbane, Gold Coast, Sunshine Coast and West Moreton and Toowoomba Regional Council (Cambooya Shire - Pt A, Crow's Nest Shire - Pt A, Jondaryan Shire - Pt A, Rosalie Shire - Pt A, and Toowoomba City).

In Victoria, South Australia, Western Australia and Tasmania, net migration is considerably higher for the capital cities than for the balances of state. In New South Wales, Sydney and Balance of NSW have similar levels of net migration while in Queensland, net migration to Brisbane is lower than net migration to the Balance of Queensland. In Queensland, this result is due to substantial growth in areas of South East Queensland outside of Brisbane. Interestingly, in numerical terms, net migration is very much higher to Melbourne than to any other capital city, although not nearly as high as migration to South East Queensland.

PROJECTION RESULTS

The outcomes of the projections are described by focusing upon Scenario 3, the scenario that is equivalent to the ABS population projections. In each result section, the outcomes from Scenario 3 will be described and then variations from Scenario 3 will be discussed. The tables shown in the text will relate to outcomes from Scenario 3 while the tables showing outcomes for other scenarios are shown in the Appendix Tables. All tables show results for the capital city and the balance of the state. However, because of its particular interest, all tables also show results for South East Queensland (defined in the note to Table 4).

Demographic inputs and outcomes

Table 5 shows the variations across states and territories in the total fertility rate and expectations of life for men and women. These are both assumed inputs to the projections.

Fertility rates range from 2.24 children per woman in the Balance of Tasmania down to a low of 1.68 in the ACT. Rates are somewhat lower in the capital cities than in the balances of state. It is important to note that variations in the fertility rate have only a marginal impact on housing projections over a 15-year period as the additional child does not generally lead to an additional dwelling. However, the birth of the first child may have a bearing upon the type of dwelling that the parents occupy.

Expectations of life for men range from a high of 79.9 years in the ACT to a low of 72.8 years in the Northern Territory. Expectations of life in the capital cities are generally a little higher than those in the balances of state. Similar differences apply to expectations of life for women. Mortality affects housing demand primarily at the older ages. Besides the extension of life in general, the most important effect in relation to housing is the rise in joint survival for couples at older ages.

In Scenario 3, population growth is highest in Balance of Queensland, Brisbane and Perth all of which experience increases in population of 32-35 per cent from 2006 to 2021. In Scenario 2, with a higher level of migration to Australia, the growth in these three regions is 36-40 per cent. With increased shares of international migration going to Queensland and Western Australia (Scenario 4), the impact on the population growth of these three

high growth regions is small compared to Scenario 3. Capital city growth rates are lowest for Sydney, Adelaide and Hobart with 14-18 per cent increases from 2006 to 2021 (Scenario 3), about half the growth for Brisbane and Perth. Melbourne's growth is intermediate at 25 per cent. South East Queensland (36%) grows a little more rapidly than Brisbane and more rapidly than any other region shown in the table.

In general, population growth rates are lower with Scenario 1 because international migration to Australia is lower in this scenario than in any of the other scenarios. However, in relation to Queensland, Scenario 1 provides the highest population growth rates reflecting high levels of interstate migration to Queensland in the 2001-06 period.

Based on the proportion of the population aged 65 and over, the oldest region in Australia in 2006 was the Balance of New South Wales with 16.1 per cent aged 65 and over. The movement of young people from the country to the city affects the age distributions of all state balances but, in NSW, there is probably an additional effect due to retirement migration out of Sydney to coastal areas. Hobart is the oldest of the cities with 14.2 per cent aged 65 and over. Except for Tasmania, the capital cities are noticeably younger than their balances of state. The Northern Territory and the ACT are much younger than all of the other geographical regions. South East Queensland's population is noticeably older than that of Brisbane in both 2006 and 2021.

The extent of further ageing of populations by 2021 is related to the level of ageing in 2006; the older places in 2006 get older faster. This means that the balances of state are much older in 2021 than in 2006 with around 22-23 per cent of their populations aged 65 and over. With the exceptions of Hobart and Adelaide, the capital cities remain relatively young in 2021 with the proportion aged 65 and over being 14-16 per cent.

Table 5. Demographic inputs and outcomes, projections to 2021, States and Territories, Scenario 3

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.18	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.25	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.12	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.32	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.35	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.15	79.02	83.54
8. SA B	2.16	15.32	22.67	1.14	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.35	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.14	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.07	78.28	82.86
13. NT	2.19	4.63	10.11	1.25	72.82	78.08
14. ACT	1.68	9.53	14.99	1.21	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.36	79.31	83.75

Outcomes by household type

Table 6 shows the ratio of the number households in 2021 compared to the number in 2006, for each region and each household type. The patterns of changes in household type broadly reflect both population growth and the extent of ageing of the population in a region.

Couple families with children grow most in Brisbane and the Balance of Queensland (both 28%) closely followed by Perth (26%). Then there is a drop to the next band of cities, Sydney, Melbourne and Canberra, where the number of couple families with children grows by 15-16 per cent. In Adelaide and Hobart, there is little growth in this household type and in the balances of state (with the exception of Queensland), the number of families with children tends to fall over the projection period. There are no regions in which the number of couples with children grows faster than the growth of all households. Households consisting of families with children grow more rapidly in South East Queensland than any region shown in the table (31-33%).

The growth of one parent families is broadly similar to the growth of two-parent families with children in most regions, sometimes a little lower, sometimes a little higher.

Reflecting the national trends towards living as a couple described above, households consisting of couple families without children grow much more rapidly than those with children in all regions. In all regions (except Balance of Victoria), the growth of couple families without children is greater than the growth of all households. In the balance of Queensland and in its overlapping South East Queensland region, households consisting of couples without children grow in number by about 50 per cent in the 15-year period of the projection.

Reflecting the ageing of the population, the number of lone person households grows faster than any other household type in all the regions shown in the table. Growth of this household type is highest in the balance of Western Australia (70%), in the Northern Territory (65%) and in the balance of Queensland (64%). There is quite a difference between Sydney (31%) and Melbourne (51%) in the growth of this household type.

Consistent with the national trend away from group household living, the number of group households grows more slowly than total households in all regions except Melbourne. Group households grow more slowly than any other household type in South East Queensland, the only region for which this was the case.

Table 6. Ratios of households in 2021 to households in 2006 by household type and region, Scenario 3

	Ratio of Households in 2021 to Households in 2006						
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	Persons in NPDS
1. NSW CC	1.15	1.13	1.26	1.31	1.20	1.22	1.29
2. NSW B	1.03	1.04	1.28	1.49	1.22	1.23	1.38
3. VIC CC	1.16	1.28	1.29	1.51	1.32	1.30	1.43
4. VIC B	0.99	1.06	1.25	1.46	1.16	1.21	1.34
5. QLD CC	1.28	1.28	1.40	1.48	1.28	1.36	1.38
6. QLD B	1.28	1.24	1.52	1.64	1.29	1.44	1.43
7. SA CC	1.07	1.09	1.21	1.32	1.14	1.19	1.32
8. SA B	0.98	1.07	1.25	1.49	1.20	1.22	1.50
9. WA CC	1.26	1.32	1.44	1.57	1.30	1.40	1.53
10. WA B	1.11	1.14	1.47	1.70	1.25	1.38	1.39
11. TAS CC	1.04	1.07	1.27	1.38	1.07	1.20	1.06
12. TAS B	0.92	1.01	1.21	1.40	1.10	1.16	1.41
13. NT	1.14	1.19	1.36	1.65	1.31	1.33	1.27
14. ACT	1.16	1.16	1.31	1.53	1.19	1.29	1.18
15. SEQ	1.33	1.31	1.47	1.55	1.30	1.42	1.44

The varying levels of migration shown in Scenarios 1, 2 and 4 change the numeric growth of each household type but do not change the distribution of household types within each region.

On the other hand, changing the assumption relating to the projection of household transition probabilities does alter the distribution of household types with the extent of the alteration varying by region. This can be seen by comparing the results of Scenario 3 with those of Scenario 7. The largest changes in the growth rates of different household types due to changes in the household transition assumptions apply in Queensland and Western Australia as shown in Table 7. The table shows that the growth in total households is hardly affected at all by the change in household transition assumptions but the growth of each household type is affected relatively significantly. The direction of change is that couple families grow more rapidly under Scenario 7 than under Scenario 3 while lone person and group households grow more slowly. This occurs because the trend towards coupling described above is projected to continue under Scenario 7 while Scenario 3 holds all transitions constant at the 2001-06 levels. It seems that this difference is more accentuated in Queensland and Western Australia.

Table 7. Ratios of numbers of households in 2021 to the numbers in 2006 by household type, Queensland and Western Australia, Scenario3 and Scenario 7 compared.

Region	Scenario	Ratio of numbers of households in 2021 to numbers in 2006					
		2 parent families	1 parent families	Couples without children	Lone persons	Group Households	Total
Brisbane	3	1.28	1.28	1.40	1.48	1.28	1.36
Brisbane	7	1.38	1.18	1.45	1.30	1.18	1.35
Bal. of Qld	3	1.28	1.24	1.52	1.64	1.29	1.44
Bal. of Qld.	7	1.38	1.18	1.58	1.44	1.08	1.42
SEQ	3	1.33	1.31	1.47	1.55	1.30	1.42
SEQ	7	1.35	1.32	1.47	1.53	1.21	1.42
Perth	3	1.26	1.32	1.44	1.57	1.30	1.40
Perth	7	1.30	1.26	1.48	1.51	1.26	1.40
Bal. of WA	3	1.11	1.14	1.47	1.70	1.25	1.38
Bal. of WA	7	1.13	1.15	1.47	1.65	1.15	1.37

Demand for additional dwellings

Table 8 shows the numbers of additional dwellings for the whole of the 15-year period that would be required to meet projected demand under Scenarios 1, 2, 3 and 4. Under Scenario 3 (consistent with the 2008 ABS projections), the total new dwellings required for Australia as a whole over the 15-year period from 2006 to 2021 would be 2,309,000 or 154,000 per annum. The total number would be 2,583,000 (172,000 per annum) if net overseas migration was 230,000 per annum (Scenario 2). This means that an additional 50,000 immigrants (net) per annum leads to an additional 18,000 dwellings per annum. Under Scenario 3, the largest numbers of additional dwellings would be required in South East Queensland (31,000 per annum) and in Melbourne (29,000 per annum). An additional 23,000 dwellings per annum would be required in Sydney and 16,000 per annum in Perth.

Scenario 1 assumes that age and sex specific migration rates will remain the same as they were on average over the years, 2001-06. The level of net overseas migration for this period was lower than the levels assumed in the other scenarios however rates of migration to South East Queensland were higher in that period than is assumed in the other scenarios. The result is that Scenario 1 implies a smaller number of additional dwellings for Australia as a whole when compared with other scenarios but a higher number in South East Queensland. The main offset is a much smaller number of dwellings required in New South Wales under Scenario 1.

Under Scenario 4, the total number of dwellings required for Australia is the same as the requirement under Scenario 3, but the distribution across the states changes because Scenario 4 assumes a higher level of movement to Queensland and Western Australia. However, the assumptions made under Scenario 4 do not have as much impact on the

dwelling requirement in South East Queensland as a 50,000 annual increase in net overseas migration to Australia (Scenario 2).

Table 8 clearly shows the sensitivity of the projections to assumed levels of overseas and inter-regional migration. The authors consider that new research needs to be conducted on methods to project future levels of migration.

Table 8. Additional dwellings required, 2006-2021, Scenarios 1, 2, 3 and 4

Region	Additional dwellings required, 2006-2021 (thousands)			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Sydney	228	428	348	334
Balance of NSW	168	241	237	237
Melbourne	431	498	430	417
Balance of Victoria	103	119	115	114
Brisbane	294	280	250	262
Balance of Queensland	463	409	388	397
Adelaide	68	106	88	83
Balance of SA	36	40	38	37
Perth	204	275	239	252
Balance of WA	61	84	80	81
Hobart	15	18	17	17
Balance of Tasmania	22	19	18	18
Northern Territory	18	26	24	24
ACT	26	39	38	37
AUSTRALIA	2137	2583	2309	2310
South East Queensland	563	520	458	484

Pair-wise comparisons of Scenarios 1 and 5, 2 and 6, 3 and 7 and 4 and 8 indicate the impact on demand for additional dwellings of changes in the assumptions about household transition probabilities. All the comparisons produce a similar result, that is, that about 3,000 fewer dwellings per annum would be required under Scenarios 5-8 than under Scenarios 1-4. This means that when the trends in household formation and dissolution from 1996-2001 to 2001-06 are projected forward slightly more large households are formed and the dwelling requirement is a little lower. As shown in Table 7, Scenarios 5-8 produce fewer lone person households than is the case with Scenarios 1-4.

Overall, the projections show that future housing demand is quite sensitive to changes in assumptions about migration both overseas and internal but not very sensitive to changes in assumptions about rates of household formation and dissolution.

Demand by dwelling type

Table 9 shows the ratio of dwellings required in 2021 to the number of dwellings in 2006 according to dwelling type. The main conclusion here seems to be additional demand for flats compared to other dwelling types outside of the cities. This is particularly the case in South Australia, Western Australia and Tasmania. For example, in the balance of

Western Australia, the demand for additional separate houses is projected to be 36 per cent but the demand for additional flats is 52 per cent. The equivalent comparison in the balance of South Australia is 21 per cent compared to 37 per cent. There is also a projected higher demand for flats in the balance of Victoria compared to other dwelling types. In Western Australia, the projected demand for both semi-detached dwellings and flats is much higher than that for separate dwellings in both Perth and the balance of Western Australia.

Variations in the assumptions relating to household formation and dissolution have an effect on demand for dwelling type in some regions more than others. The largest variation is in the future demand for flats. The projected percentage increase in demand for flats based on Scenarios 3 and 7 were: for Brisbane, 37 per cent and 29 per cent; for Perth, 48 per cent and 45 per cent; for Balance of Western Australia, 52 per cent and 49 per cent; and for Balance of South Australia, 37 per cent and 29 per cent. In other regions, the differences were not as large. These differences are driven by projected differences in household types. It seems that some regions are more subject to variation in future household type than others.

The projected high demand for flats outside of the cities no doubt reflects the greater ageing of the populations outside of the cities but it also reflects the low base, that is, the relative dearth of flat accommodation outside of the cities in 2006.

Table 9. Ratios of dwellings in 2021 to dwellings in 2006 by dwelling type and region, Scenario 3

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Separate Houses	Semi-Detached	Flats
1. NSW CC	1.22	1.22	1.22	1.21
2. NSW B	1.23	1.22	1.28	1.28
3. VIC CC	1.30	1.29	1.32	1.35
4. VIC B	1.21	1.20	1.26	1.29
5. QLD CC	1.36	1.36	1.37	1.37
6. QLD B	1.44	1.43	1.46	1.44
7. SA CC	1.19	1.18	1.22	1.22
8. SA B	1.22	1.21	1.28	1.37
9. WA CC	1.40	1.39	1.45	1.48
10. WA B	1.38	1.36	1.47	1.52
11. TAS CC	1.20	1.20	1.21	1.21
12. TAS B	1.16	1.15	1.25	1.24
13. NT	1.33	1.31	1.37	1.35
14. ACT	1.29	1.29	1.29	1.29
15. SEQ	1.42	1.41	1.43	1.42

Demand by tenure type

Table 10 shows the projected demand for dwellings in relation to their tenure under Scenario 3. The main conclusions from the table are that, in most regions, the demand for public rental dwellings increases more than the demand for all dwellings and the demand for private rental dwellings increases less than the demand for all dwellings.

The regions in which the demand for public housing is projected to rise most compared to the demand for all dwellings are Melbourne (37% for public; 30% for all), Adelaide (24% for public; 19% for all), Perth (53% for public, 40% for all), and Balance of South Australia (29% for public, 22% for all). This means that, in these localities, household types shift over the projection period towards those that are more likely to be public renters. Note that changing income levels within household types are not taken into account in making these estimates. If, for example, lone aged persons were to be wealthier in 2021 than they were in 2006, then the demand for public housing might not be as high.

Regions in which the additional demand for private rental dwellings is well below the additional demand for all dwellings by 2021 include all of the balances of state as well as South East Queensland, Hobart, Northern Territory, and the ACT.

In all regions, the projected demand for owner/purchaser dwellings is higher than or equal to the projected demand of all dwellings. Affordability is not taken into account in making these projections.

Table 10. Ratios of dwellings in 2021 to dwellings in 2006 by tenure type and region, Scenario 3

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.22	1.23	1.21	1.18
2. NSW B	1.23	1.25	1.24	1.17
3. VIC CC	1.30	1.30	1.37	1.29
4. VIC B	1.21	1.22	1.25	1.15
5. QLD CC	1.36	1.38	1.39	1.31
6. QLD B	1.44	1.47	1.46	1.35
7. SA CC	1.19	1.19	1.24	1.15
8. SA B	1.22	1.23	1.29	1.16
9. WA CC	1.40	1.41	1.53	1.35
10. WA B	1.38	1.42	1.42	1.25
11. TAS CC	1.20	1.22	1.20	1.11
12. TAS B	1.16	1.17	1.18	1.09
13. NT	1.33	1.36	1.50	1.26
14. ACT	1.29	1.32	1.33	1.20
15. SEQ	1.42	1.44	1.45	1.35

If the alternative household formation and dissolution assumptions are made, the demand for public and private rental dwellings is lower (comparing Scenario 3 and Scenario 7). The regions for which this effect is largest are shown in Table 11. In these regions, Scenario 7 yields a lower total demand than Scenario 3 but all of the reduction relates to rental dwellings.

Table 11. Ratios of dwellings in 2021 to dwellings in 2006 by tenure type, selected regions, Scenario 3 and Scenario 7

Region	Tenure type	Ratio of 2021 demand to 2006 demand	
		Scenario 3	Scenario 7
Brisbane	Total	1.36	1.35
	Owner/purchaser	1.38	1.39
	Public rental	1.39	1.31
	Private rental	1.31	1.26
Perth	Total	1.40	1.40
	Owner/purchaser	1.41	1.41
	Public rental	1.53	1.49
	Private rental	1.35	1.34
Balance of SA	Total	1.22	1.20
	Owner/purchaser	1.23	1.22
	Public rental	1.29	1.25
	Private rental	1.16	1.11
Balance of Tas.	Total	1.16	1.14
	Owner/purchaser	1.17	1.17
	Public rental	1.18	1.12
	Private rental	1.09	1.03

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APPENDIX TABLES

Appendix Table A1: Demographic Parameters

Scenario 1						
Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.11	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.07	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.25	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.10	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.38	78.97	83.40
6. QLD B	1.91	13.06	18.78	1.42	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.10	79.02	83.54
8. SA B	2.16	15.32	22.67	1.13	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.29	79.36	84.06
10. WA B	2.28	11.84	20.30	1.17	79.11	83.26
11. TAS CC	2.01	14.24	19.48	1.12	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.10	78.28	82.86
13. NT	2.19	4.63	10.11	1.16	72.82	78.08
14. ACT	1.68	9.53	14.99	1.13	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.45	79.31	83.75

Scenario 2						
Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.78	1.23	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.29	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.12	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.36	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.37	78.83	83.74
7. SA CC	1.70	15.00	19.02	1.18	79.02	83.54
8. SA B	2.16	15.32	22.67	1.15	78.97	83.56
9. WA CC	1.85	11.74	16.05	1.40	79.36	84.06
10. WA B	2.28	11.84	20.29	1.28	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.16	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.08	78.28	82.86
13. NT	2.19	4.63	10.11	1.27	72.82	78.08
14. ACT	1.68	9.53	14.98	1.22	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.42	79.31	83.75

Scenario 3

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.18	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.25	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.12	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.32	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.35	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.15	79.02	83.54
8. SA B	2.16	15.32	22.67	1.14	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.35	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.14	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.07	78.28	82.86
13. NT	2.19	4.63	10.11	1.25	72.82	78.08
14. ACT	1.68	9.53	14.99	1.21	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.36	79.31	83.75

Scenario 4

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.17	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.24	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.11	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.33	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.36	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.13	79.02	83.54
8. SA B	2.16	15.32	22.67	1.13	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.37	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.14	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.07	78.28	82.86
13. NT	2.19	4.63	10.11	1.25	72.82	78.08
14. ACT	1.68	9.53	14.99	1.21	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.39	79.31	83.75

Scenario 5

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.11	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.07	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.25	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.10	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.38	78.97	83.40
6. QLD B	1.91	13.06	18.78	1.42	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.10	79.02	83.54
8. SA B	2.16	15.32	22.67	1.13	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.29	79.36	84.06
10. WA B	2.28	11.84	20.30	1.17	79.11	83.26
11. TAS CC	2.01	14.24	19.48	1.12	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.10	78.28	82.86
13. NT	2.19	4.63	10.11	1.16	72.82	78.08
14. ACT	1.68	9.53	14.99	1.13	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.45	79.31	83.75

Scenario 6

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.78	1.23	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.29	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.12	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.36	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.37	78.83	83.74
7. SA CC	1.70	15.00	19.02	1.18	79.02	83.54
8. SA B	2.16	15.32	22.67	1.15	78.97	83.56
9. WA CC	1.85	11.74	16.05	1.40	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.16	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.08	78.28	82.86
13. NT	2.19	4.63	10.11	1.27	72.82	78.08
14. ACT	1.68	9.53	14.98	1.22	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.42	79.31	83.75

Scenario 7

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.18	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.25	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.12	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.32	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.35	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.15	79.02	83.54
8. SA B	2.16	15.32	22.67	1.14	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.35	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.14	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.07	78.28	82.86
13. NT	2.19	4.63	10.11	1.25	72.82	78.08
14. ACT	1.68	9.53	14.99	1.21	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.36	79.31	83.75

Scenario 8

Region	TFR 2006	% aged 65+ 2006	% aged 65+ 2021	Ratio of Population 2021-2006	e0m	e0f
1. NSW CC	1.74	11.98	14.79	1.17	79.31	83.66
2. NSW B	1.97	16.08	22.75	1.14	78.39	83.12
3. VIC CC	1.69	12.55	15.35	1.24	79.61	83.75
4. VIC B	1.99	15.59	22.32	1.11	78.55	83.23
5. QLD CC	1.75	10.87	14.05	1.33	78.97	83.40
6. QLD B	1.91	13.06	18.79	1.36	78.83	83.74
7. SA CC	1.70	15.00	19.03	1.13	79.02	83.54
8. SA B	2.16	15.32	22.67	1.13	78.97	83.56
9. WA CC	1.85	11.74	16.06	1.37	79.36	84.06
10. WA B	2.28	11.84	20.29	1.26	79.11	83.26
11. TAS CC	2.01	14.24	19.47	1.14	77.58	82.80
12. TAS B	2.24	14.83	22.74	1.07	78.28	82.86
13. NT	2.19	4.63	10.11	1.25	72.82	78.08
14. ACT	1.68	9.53	14.99	1.21	79.90	84.02
15. SEQ	1.76	12.14	16.00	1.39	79.31	83.75

Appendix Table A2: Household Growth

Scenario 1							
	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.08	1.06	1.19	1.23	1.13	1.14	1.21
2. NSW B	0.97	0.98	1.20	1.41	1.16	1.17	1.30
3. VIC CC	1.16	1.28	1.29	1.51	1.32	1.30	1.43
4. VIC B	0.97	1.04	1.23	1.43	1.14	1.19	1.31
5. QLD CC	1.34	1.34	1.47	1.55	1.34	1.42	1.44
6. QLD B	1.36	1.32	1.61	1.73	1.37	1.52	1.52
7. SA CC	1.04	1.05	1.17	1.28	1.10	1.14	1.27
8. SA B	0.97	1.06	1.24	1.48	1.19	1.21	1.49
9. WA CC	1.21	1.26	1.38	1.50	1.25	1.34	1.47
10. WA B	1.04	1.06	1.37	1.58	1.17	1.29	1.30
11. TAS CC	1.02	1.05	1.24	1.35	1.05	1.18	1.04
12. TAS B	0.95	1.03	1.24	1.43	1.13	1.18	1.45
13. NT	1.07	1.11	1.27	1.54	1.23	1.24	1.18
14. ACT	1.08	1.08	1.22	1.42	1.11	1.20	1.09
15. SEQ	1.42	1.40	1.57	1.65	1.39	1.51	1.53

Scenario 2							
	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.20	1.17	1.31	1.37	1.25	1.27	1.34
2. NSW B	1.03	1.05	1.28	1.50	1.23	1.24	1.38
3. VIC CC	1.20	1.32	1.33	1.57	1.37	1.35	1.48
4. VIC B	1.00	1.07	1.26	1.47	1.17	1.21	1.34
5. QLD CC	1.32	1.32	1.45	1.53	1.32	1.40	1.42
6. QLD B	1.31	1.27	1.54	1.66	1.32	1.46	1.46
7. SA CC	1.11	1.12	1.25	1.36	1.18	1.22	1.36
8. SA B	0.99	1.08	1.25	1.50	1.21	1.23	1.51
9. WA CC	1.32	1.37	1.50	1.64	1.36	1.46	1.60
10. WA B	1.13	1.15	1.49	1.72	1.27	1.40	1.41
11. TAS CC	1.06	1.09	1.28	1.40	1.08	1.22	1.08
12. TAS B	0.93	1.02	1.22	1.41	1.11	1.16	1.42
13. NT	1.16	1.21	1.38	1.68	1.34	1.35	1.29
14. ACT	1.17	1.17	1.32	1.54	1.20	1.30	1.19
15. SEQ	1.39	1.36	1.53	1.61	1.36	1.48	1.49

Scenario 3

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.15	1.13	1.26	1.31	1.20	1.22	1.29
2. NSW B	1.03	1.04	1.28	1.49	1.22	1.23	1.38
3. VIC CC	1.16	1.28	1.29	1.51	1.32	1.30	1.43
4. VIC B	0.99	1.06	1.25	1.46	1.16	1.21	1.34
5. QLD CC	1.28	1.28	1.40	1.48	1.28	1.36	1.38
6. QLD B	1.28	1.24	1.52	1.64	1.29	1.44	1.43
7. SA CC	1.07	1.09	1.21	1.32	1.14	1.19	1.32
8. SA B	0.98	1.07	1.25	1.49	1.20	1.22	1.50
9. WA CC	1.26	1.32	1.44	1.57	1.30	1.40	1.53
10. WA B	1.11	1.14	1.47	1.70	1.25	1.38	1.39
11. TAS CC	1.04	1.07	1.27	1.38	1.07	1.20	1.06
12. TAS B	0.92	1.01	1.21	1.40	1.10	1.16	1.41
13. NT	1.14	1.19	1.36	1.65	1.31	1.33	1.27
14. ACT	1.16	1.16	1.31	1.53	1.19	1.29	1.18
15. SEQ	1.33	1.31	1.47	1.55	1.30	1.42	1.44

Scenario 4

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.14	1.12	1.25	1.30	1.19	1.21	1.28
2. NSW B	1.03	1.04	1.27	1.49	1.22	1.23	1.38
3. VIC CC	1.15	1.27	1.28	1.50	1.31	1.29	1.42
4. VIC B	0.99	1.06	1.25	1.46	1.16	1.20	1.33
5. QLD CC	1.30	1.30	1.42	1.50	1.30	1.38	1.40
6. QLD B	1.29	1.25	1.53	1.65	1.30	1.45	1.44
7. SA CC	1.06	1.08	1.20	1.31	1.13	1.18	1.31
8. SA B	0.98	1.07	1.24	1.49	1.20	1.22	1.49
9. WA CC	1.28	1.34	1.46	1.59	1.32	1.42	1.55
10. WA B	1.12	1.14	1.48	1.70	1.26	1.39	1.40
11. TAS CC	1.04	1.07	1.26	1.37	1.06	1.20	1.06
12. TAS B	0.92	1.01	1.21	1.40	1.10	1.16	1.41
13. NT	1.15	1.19	1.36	1.66	1.32	1.33	1.27
14. ACT	1.16	1.15	1.30	1.52	1.18	1.28	1.17
15. SEQ	1.35	1.33	1.50	1.57	1.33	1.44	1.46

Scenario 5

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.07	1.06	1.16	1.26	1.18	1.14	1.21
2. NSW B	1.00	0.96	1.22	1.36	1.11	1.16	1.27
3. VIC CC	1.18	1.25	1.29	1.50	1.32	1.30	1.41
4. VIC B	0.99	1.02	1.23	1.40	1.13	1.18	1.29
5. QLD CC	1.45	1.24	1.52	1.37	1.24	1.41	1.36
6. QLD B	1.46	1.25	1.67	1.52	1.14	1.50	1.38
7. SA CC	1.08	1.01	1.17	1.22	1.13	1.14	1.26
8. SA B	1.01	1.05	1.25	1.38	1.04	1.19	1.42
9. WA CC	1.25	1.21	1.41	1.45	1.21	1.34	1.44
10. WA B	1.05	1.07	1.37	1.54	1.08	1.28	1.25
11. TAS CC	1.05	1.02	1.24	1.29	1.08	1.16	1.02
12. TAS B	1.01	0.99	1.27	1.31	0.97	1.17	1.37
13. NT	0.98	1.16	1.18	1.67	1.33	1.23	1.23
14. ACT	1.09	1.02	1.20	1.39	1.26	1.19	1.13
15. SEQ	1.44	1.42	1.57	1.64	1.29	1.51	1.49

Scenario 6

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.19	1.18	1.29	1.39	1.30	1.26	1.35
2. NSW B	1.06	1.02	1.29	1.44	1.18	1.23	1.34
3. VIC CC	1.23	1.29	1.33	1.55	1.37	1.35	1.46
4. VIC B	1.02	1.04	1.26	1.44	1.15	1.21	1.32
5. QLD CC	1.43	1.22	1.50	1.35	1.22	1.39	1.34
6. QLD B	1.40	1.20	1.60	1.46	1.10	1.44	1.33
7. SA CC	1.15	1.08	1.25	1.31	1.21	1.22	1.34
8. SA B	1.02	1.06	1.27	1.40	1.05	1.21	1.44
9. WA CC	1.36	1.32	1.54	1.58	1.31	1.46	1.56
10. WA B	1.13	1.15	1.47	1.65	1.15	1.37	1.34
11. TAS CC	1.08	1.06	1.28	1.33	1.11	1.20	1.05
12. TAS B	0.99	0.98	1.24	1.28	0.96	1.15	1.35
13. NT	1.07	1.27	1.28	1.81	1.45	1.34	1.34
14. ACT	1.18	1.11	1.30	1.51	1.37	1.30	1.23
15. SEQ	1.40	1.38	1.53	1.59	1.26	1.47	1.45

Scenario 7

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.14	1.13	1.24	1.34	1.25	1.21	1.29
2. NSW B	1.06	1.02	1.29	1.44	1.18	1.22	1.34
3. VIC CC	1.18	1.25	1.29	1.50	1.32	1.30	1.41
4. VIC B	1.01	1.04	1.25	1.43	1.15	1.20	1.31
5. QLD CC	1.38	1.18	1.45	1.30	1.18	1.35	1.30
6. QLD B	1.38	1.18	1.58	1.44	1.08	1.42	1.31
7. SA CC	1.12	1.05	1.22	1.27	1.17	1.18	1.30
8. SA B	1.02	1.06	1.26	1.39	1.05	1.20	1.43
9. WA CC	1.30	1.26	1.48	1.51	1.26	1.40	1.50
10. WA B	1.13	1.15	1.47	1.65	1.15	1.37	1.34
11. TAS CC	1.07	1.04	1.26	1.31	1.10	1.19	1.03
12. TAS B	0.99	0.97	1.24	1.28	0.95	1.14	1.34
13. NT	1.05	1.25	1.26	1.79	1.42	1.32	1.32
14. ACT	1.17	1.10	1.29	1.50	1.35	1.28	1.22
15. SEQ	1.35	1.32	1.47	1.53	1.21	1.42	1.40

Scenario 8

	Ratio of Households in 2021 to Households in 2006						Persons in NPDS
	2 parent families	1 parent families	Coupled without children	Lone Person	Group Households	Total Households	
1. NSW CC	1.13	1.12	1.23	1.33	1.24	1.21	1.28
2. NSW B	1.06	1.02	1.29	1.44	1.18	1.22	1.34
3. VIC CC	1.17	1.24	1.28	1.49	1.31	1.29	1.40
4. VIC B	1.01	1.04	1.25	1.43	1.14	1.20	1.31
5. QLD CC	1.40	1.20	1.47	1.32	1.20	1.37	1.32
6. QLD B	1.39	1.18	1.59	1.45	1.09	1.43	1.31
7. SA CC	1.11	1.03	1.20	1.26	1.16	1.17	1.29
8. SA B	1.01	1.05	1.26	1.39	1.04	1.20	1.43
9. WA CC	1.32	1.28	1.50	1.54	1.28	1.42	1.52
10. WA B	1.13	1.15	1.48	1.66	1.16	1.38	1.34
11. TAS CC	1.07	1.04	1.26	1.31	1.10	1.18	1.03
12. TAS B	0.99	0.97	1.23	1.27	0.95	1.14	1.34
13. NT	1.06	1.25	1.26	1.79	1.43	1.32	1.32
14. ACT	1.16	1.10	1.29	1.49	1.35	1.28	1.21
15. SEQ	1.37	1.35	1.50	1.56	1.23	1.44	1.42

Appendix Table A3: Dwelling Growth

Scenario 1						
Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006				
		Total	Separate Houses	Semi- Detached	Flats	
1. NSW CC	228351	1.14	1.14	1.14	1.14	
2. NSW B	168019	1.17	1.16	1.21	1.21	
3. VIC CC	430917	1.30	1.29	1.32	1.35	
4. VIC B	103095	1.19	1.18	1.24	1.27	
5. QLD CC	294042	1.42	1.42	1.43	1.43	
6. QLD B	462846	1.52	1.51	1.54	1.52	
7. SA CC	68312	1.14	1.14	1.17	1.18	
8. SA B	36450	1.21	1.20	1.27	1.36	
9. WA CC	203792	1.34	1.33	1.39	1.41	
10. WA B	60530	1.29	1.27	1.38	1.42	
11. TAS CC	15009	1.18	1.18	1.19	1.19	
12. TAS B	21594	1.18	1.18	1.28	1.27	
13. NT	17612	1.24	1.22	1.28	1.26	
14. ACT	25889	1.20	1.20	1.20	1.20	
15. SEQ	562560	1.51	1.51	1.52	1.52	

Scenario 2						
Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006				
		Total	Separate Houses	Semi- Detached	Flats	
1. NSW CC	427905	1.27	1.27	1.27	1.26	
2. NSW B	240965	1.24	1.23	1.28	1.28	
3. VIC CC	497696	1.35	1.33	1.37	1.40	
4. VIC B	119028	1.21	1.21	1.27	1.30	
5. QLD CC	279742	1.40	1.40	1.41	1.41	
6. QLD B	409425	1.46	1.45	1.48	1.46	
7. SA CC	105749	1.22	1.22	1.25	1.26	
8. SA B	39547	1.23	1.22	1.29	1.38	
9. WA CC	274723	1.46	1.44	1.51	1.54	
10. WA B	84084	1.40	1.38	1.50	1.54	
11. TAS CC	18238	1.22	1.22	1.23	1.23	
12. TAS B	19366	1.16	1.16	1.26	1.24	
13. NT	25673	1.35	1.33	1.39	1.37	
14. ACT	39239	1.30	1.30	1.30	1.30	
15. SEQ	520214	1.48	1.47	1.48	1.48	

Scenario 3

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	347772	1.22	1.22	1.22	1.21
2. NSW B	237428	1.23	1.22	1.28	1.28
3. VIC CC	430356	1.30	1.29	1.32	1.35
4. VIC B	114876	1.21	1.20	1.26	1.29
5. QLD CC	249661	1.36	1.36	1.37	1.37
6. QLD B	388055	1.44	1.43	1.46	1.44
7. SA CC	88353	1.19	1.18	1.22	1.22
8. SA B	37901	1.22	1.21	1.28	1.37
9. WA CC	239322	1.40	1.39	1.45	1.48
10. WA B	80019	1.38	1.36	1.47	1.52
11. TAS CC	16866	1.20	1.20	1.21	1.21
12. TAS B	18395	1.16	1.15	1.25	1.24
13. NT	24127	1.33	1.31	1.37	1.35
14. ACT	37593	1.29	1.29	1.29	1.29
15. SEQ	457498	1.42	1.41	1.43	1.42

Scenario 4

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	333655	1.21	1.21	1.21	1.20
2. NSW B	236801	1.23	1.22	1.28	1.28
3. VIC CC	417350	1.29	1.28	1.31	1.34
4. VIC B	114067	1.20	1.20	1.26	1.29
5. QLD CC	262466	1.38	1.38	1.39	1.39
6. QLD B	397199	1.45	1.44	1.47	1.45
7. SA CC	82806	1.18	1.17	1.21	1.21
8. SA B	37377	1.22	1.21	1.28	1.36
9. WA CC	251569	1.42	1.41	1.47	1.50
10. WA B	81428	1.39	1.37	1.48	1.53
11. TAS CC	16649	1.20	1.20	1.21	1.21
12. TAS B	18241	1.16	1.15	1.25	1.23
13. NT	24372	1.33	1.32	1.38	1.35
14. ACT	36878	1.28	1.28	1.29	1.28
15. SEQ	484250	1.44	1.44	1.45	1.45

Scenario 5

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	225969	1.14	1.14	1.16	1.17
2. NSW B	159859	1.16	1.15	1.19	1.19
3. VIC CC	432768	1.30	1.29	1.32	1.35
4. VIC B	100758	1.18	1.17	1.23	1.27
5. QLD CC	285273	1.41	1.42	1.37	1.35
6. QLD B	445124	1.50	1.51	1.48	1.43
7. SA CC	65193	1.14	1.13	1.15	1.16
8. SA B	33584	1.19	1.19	1.23	1.28
9. WA CC	202789	1.34	1.33	1.37	1.39
10. WA B	59284	1.28	1.27	1.36	1.39
11. TAS CC	13772	1.16	1.16	1.17	1.17
12. TAS B	19448	1.17	1.16	1.21	1.18
13. NT	17015	1.23	1.20	1.30	1.29
14. ACT	25071	1.19	1.19	1.19	1.24
15. SEQ	560789	1.51	1.51	1.51	1.49

Scenario 6

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	425264	1.26	1.26	1.28	1.29
2. NSW B	232304	1.23	1.22	1.26	1.26
3. VIC CC	499614	1.35	1.34	1.36	1.39
4. VIC B	116635	1.21	1.20	1.26	1.30
5. QLD CC	271100	1.39	1.40	1.35	1.34
6. QLD B	392403	1.44	1.45	1.42	1.37
7. SA CC	102414	1.22	1.21	1.23	1.24
8. SA B	36638	1.21	1.21	1.24	1.30
9. WA CC	273631	1.46	1.45	1.50	1.51
10. WA B	78683	1.37	1.36	1.45	1.49
11. TAS CC	16960	1.20	1.20	1.21	1.21
12. TAS B	17255	1.15	1.14	1.19	1.16
13. NT	25023	1.34	1.31	1.42	1.41
14. ACT	38350	1.30	1.29	1.29	1.35
15. SEQ	518488	1.47	1.47	1.48	1.45

Scenario 7

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	345235	1.21	1.21	1.23	1.24
2. NSW B	228791	1.22	1.22	1.26	1.26
3. VIC CC	432207	1.30	1.29	1.32	1.35
4. VIC B	112498	1.20	1.19	1.25	1.29
5. QLD CC	241286	1.35	1.36	1.31	1.29
6. QLD B	371313	1.42	1.43	1.40	1.35
7. SA CC	85118	1.18	1.18	1.19	1.20
8. SA B	35015	1.20	1.20	1.24	1.29
9. WA CC	238274	1.40	1.39	1.43	1.45
10. WA B	78683	1.37	1.36	1.45	1.49
11. TAS CC	15605	1.19	1.18	1.19	1.19
12. TAS B	16298	1.14	1.14	1.18	1.16
13. NT	23487	1.32	1.29	1.40	1.39
14. ACT	36713	1.28	1.28	1.28	1.33
15. SEQ	455839	1.42	1.42	1.42	1.40

Scenario 8

Region	Increment to Total Dwellings (2006-21)	Ratio of Dwellings in 2021 to Dwellings in 2006			
		Total	Separate Houses	Semi- Detached	Flats
1. NSW CC	331137	1.21	1.20	1.22	1.23
2. NSW B	228168	1.22	1.22	1.26	1.26
3. VIC CC	419188	1.29	1.28	1.31	1.34
4. VIC B	111692	1.20	1.19	1.25	1.29
5. QLD CC	253978	1.37	1.38	1.33	1.31
6. QLD B	380336	1.43	1.44	1.41	1.36
7. SA CC	79604	1.17	1.16	1.18	1.19
8. SA B	34498	1.20	1.19	1.23	1.29
9. WA CC	250507	1.42	1.41	1.46	1.47
10. WA B	80086	1.38	1.36	1.46	1.50
11. TAS CC	15391	1.18	1.18	1.19	1.19
12. TAS B	16147	1.14	1.14	1.18	1.15
13. NT	23730	1.32	1.29	1.40	1.39
14. ACT	36002	1.28	1.27	1.28	1.33
15. SEQ	482562	1.44	1.44	1.44	1.42

Appendix Table A4: Dwelling by Tenure Growth

Scenario 1

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.14	1.15	1.13	1.11
2. NSW B	1.17	1.18	1.17	1.10
3. VIC CC	1.30	1.30	1.37	1.29
4. VIC B	1.19	1.20	1.23	1.13
5. QLD CC	1.42	1.44	1.46	1.37
6. QLD B	1.52	1.56	1.54	1.43
7. SA CC	1.14	1.15	1.19	1.10
8. SA B	1.21	1.22	1.29	1.15
9. WA CC	1.34	1.35	1.46	1.30
10. WA B	1.29	1.33	1.33	1.17
11. TAS CC	1.18	1.20	1.18	1.09
12. TAS B	1.18	1.20	1.20	1.12
13. NT	1.24	1.27	1.40	1.18
14. ACT	1.20	1.22	1.23	1.12
15. SEQ	1.51	1.54	1.55	1.44

Scenario 2

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.27	1.28	1.26	1.23
2. NSW B	1.24	1.26	1.25	1.17
3. VIC CC	1.35	1.35	1.42	1.34
4. VIC B	1.21	1.23	1.26	1.16
5. QLD CC	1.40	1.42	1.44	1.35
6. QLD B	1.46	1.50	1.48	1.37
7. SA CC	1.22	1.23	1.27	1.18
8. SA B	1.23	1.23	1.30	1.17
9. WA CC	1.46	1.47	1.59	1.41
10. WA B	1.40	1.44	1.44	1.27
11. TAS CC	1.22	1.24	1.22	1.13
12. TAS B	1.16	1.18	1.18	1.10
13. NT	1.35	1.38	1.52	1.28
14. ACT	1.30	1.33	1.34	1.21
15. SEQ	1.48	1.50	1.51	1.41

Scenario 3

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.22	1.23	1.21	1.18
2. NSW B	1.23	1.25	1.24	1.17
3. VIC CC	1.30	1.30	1.37	1.29
4. VIC B	1.21	1.22	1.25	1.15
5. QLD CC	1.36	1.38	1.39	1.31
6. QLD B	1.44	1.47	1.46	1.35
7. SA CC	1.19	1.19	1.24	1.15
8. SA B	1.22	1.23	1.29	1.16
9. WA CC	1.40	1.41	1.53	1.35
10. WA B	1.38	1.42	1.42	1.25
11. TAS CC	1.20	1.22	1.20	1.11
12. TAS B	1.16	1.17	1.18	1.09
13. NT	1.33	1.36	1.50	1.26
14. ACT	1.29	1.32	1.33	1.20
15. SEQ	1.42	1.44	1.45	1.35

Scenario 4

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.21	1.22	1.20	1.17
2. NSW B	1.23	1.25	1.24	1.17
3. VIC CC	1.29	1.29	1.36	1.28
4. VIC B	1.20	1.22	1.25	1.15
5. QLD CC	1.38	1.40	1.41	1.33
6. QLD B	1.45	1.48	1.47	1.36
7. SA CC	1.18	1.18	1.22	1.13
8. SA B	1.22	1.22	1.29	1.16
9. WA CC	1.42	1.43	1.55	1.37
10. WA B	1.39	1.43	1.43	1.26
11. TAS CC	1.20	1.22	1.20	1.11
12. TAS B	1.16	1.17	1.17	1.09
13. NT	1.33	1.36	1.50	1.26
14. ACT	1.28	1.31	1.32	1.19
15. SEQ	1.44	1.47	1.47	1.38

Scenario 5

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.14	1.15	1.14	1.11
2. NSW B	1.16	1.18	1.15	1.08
3. VIC CC	1.30	1.30	1.36	1.29
4. VIC B	1.18	1.19	1.20	1.12
5. QLD CC	1.41	1.45	1.37	1.32
6. QLD B	1.50	1.56	1.47	1.36
7. SA CC	1.14	1.15	1.16	1.09
8. SA B	1.19	1.21	1.24	1.11
9. WA CC	1.34	1.35	1.43	1.28
10. WA B	1.28	1.33	1.32	1.15
11. TAS CC	1.16	1.19	1.14	1.07
12. TAS B	1.17	1.19	1.15	1.06
13. NT	1.23	1.25	1.44	1.17
14. ACT	1.19	1.21	1.20	1.13
15. SEQ	1.51	1.54	1.56	1.43

Scenario 6

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.26	1.27	1.26	1.23
2. NSW B	1.23	1.25	1.22	1.15
3. VIC CC	1.35	1.35	1.41	1.34
4. VIC B	1.21	1.22	1.23	1.15
5. QLD CC	1.39	1.43	1.35	1.30
6. QLD B	1.44	1.50	1.41	1.30
7. SA CC	1.22	1.23	1.24	1.16
8. SA B	1.21	1.23	1.26	1.12
9. WA CC	1.46	1.47	1.55	1.40
10. WA B	1.37	1.42	1.41	1.24
11. TAS CC	1.20	1.23	1.18	1.11
12. TAS B	1.15	1.18	1.13	1.04
13. NT	1.34	1.36	1.56	1.27
14. ACT	1.30	1.32	1.30	1.22
15. SEQ	1.47	1.50	1.52	1.39

Scenario 7

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.21	1.22	1.21	1.19
2. NSW B	1.22	1.25	1.21	1.14
3. VIC CC	1.30	1.30	1.36	1.29
4. VIC B	1.20	1.22	1.23	1.14
5. QLD CC	1.35	1.39	1.31	1.26
6. QLD B	1.42	1.48	1.38	1.28
7. SA CC	1.18	1.19	1.20	1.13
8. SA B	1.20	1.22	1.25	1.11
9. WA CC	1.40	1.41	1.49	1.34
10. WA B	1.37	1.42	1.41	1.24
11. TAS CC	1.19	1.21	1.16	1.09
12. TAS B	1.14	1.17	1.12	1.03
13. NT	1.32	1.34	1.54	1.25
14. ACT	1.28	1.31	1.29	1.21
15. SEQ	1.42	1.45	1.46	1.34

Scenario 8

Region	Ratio of Dwellings in 2021 to Dwellings in 2006			
	Total	Owner/ Purchasers	Public Renters	Private Renters
1. NSW CC	1.21	1.22	1.20	1.18
2. NSW B	1.22	1.25	1.21	1.14
3. VIC CC	1.29	1.29	1.35	1.28
4. VIC B	1.20	1.21	1.22	1.14
5. QLD CC	1.37	1.41	1.33	1.27
6. QLD B	1.43	1.49	1.39	1.29
7. SA CC	1.17	1.18	1.19	1.12
8. SA B	1.20	1.22	1.25	1.11
9. WA CC	1.42	1.43	1.51	1.36
10. WA B	1.38	1.43	1.42	1.24
11. TAS CC	1.18	1.21	1.16	1.09
12. TAS B	1.14	1.17	1.12	1.03
13. NT	1.32	1.34	1.54	1.26
14. ACT	1.28	1.30	1.28	1.21
15. SEQ	1.44	1.47	1.48	1.36

Appendix Table A5: HCT Distribution, 2006.

	2 Parent Families	1 Parent Families	Couples with out children	Lone Person Households	Group Households
1. NSW CC	0.359	0.117	0.244	0.239	0.042
2. NSW B	0.290	0.122	0.289	0.269	0.029
3. VIC CC	0.344	0.112	0.247	0.251	0.046
4. VIC B	0.295	0.110	0.290	0.275	0.028
5. QLD CC	0.330	0.120	0.267	0.231	0.052
6. QLD B	0.301	0.117	0.300	0.242	0.039
7. SA CC	0.290	0.119	0.266	0.289	0.036
8. SA B	0.287	0.099	0.315	0.279	0.020
9. WA CC	0.321	0.111	0.265	0.266	0.037
10. WA B	0.306	0.105	0.305	0.259	0.025
11. TAS CC	0.287	0.128	0.263	0.282	0.040
12. TAS B	0.284	0.113	0.300	0.278	0.025
13. NT	0.339	0.144	0.236	0.236	0.046
14. ACT	0.331	0.110	0.261	0.243	0.056
15. SEQ	0.315	0.120	0.280	0.235	0.050

Appendix Table A6: Dwelling Type Distribution, 2006.

	Separate House	Semi Detached	Flat	Other	Total	Owner Purchaser	Public Renter	Other Renter	Other
1. NSW CC	0.91	0.03	0.04	0.01	1.00	0.71	0.05	0.22	0.02
2. NSW B	0.86	0.05	0.07	0.02	1.00	0.71	0.04	0.22	0.02
3. VIC CC	0.76	0.10	0.14	0.01	1.00	0.73	0.03	0.23	0.01
4. VIC B	0.91	0.03	0.05	0.01	1.00	0.76	0.04	0.18	0.02
5. QLD CC	0.82	0.06	0.10	0.01	1.00	0.67	0.04	0.28	0.01
6. QLD B	0.81	0.07	0.10	0.02	1.00	0.66	0.03	0.28	0.02
7. SA CC	0.80	0.10	0.09	0.00	1.00	0.73	0.07	0.20	0.01
8. SA B	0.90	0.05	0.03	0.02	1.00	0.74	0.06	0.18	0.03
9. WA CC	0.82	0.10	0.07	0.01	1.00	0.73	0.03	0.23	0.01
10. WA B	0.88	0.06	0.04	0.03	1.00	0.66	0.06	0.25	0.04
11. TAS CC	0.85	0.05	0.08	0.01	1.00	0.73	0.06	0.20	0.01
12. TAS B	0.92	0.02	0.05	0.01	1.00	0.75	0.05	0.18	0.02
13. NT	0.72	0.09	0.14	0.04	1.00	0.49	0.08	0.38	0.04
14. ACT	0.78	0.12	0.09	0.00	1.00	0.69	0.08	0.22	0.01
15. SEQ	0.80	0.08	0.11	0.01	1.00	0.67	0.03	0.29	0.01