



# Housing and Sustainable Development in the Canberra Region

**A Research Report for The Riverview Group's West Belconnen Housing Project**

Prepared by the Globalisation and Cities Research Program  
ANZSOG Institute for Governance at the University of Canberra  
December 2013





## Contents

Executive Summary .....	i
Methodology .....	xviii
Section 1: Canberra as a Competitive Region .....	1
1.1 Urban Competitiveness Index .....	1
1.2 Productivity .....	5
1.3 Liveability and affordability .....	11
Section 2: National People Movement .....	14
2.1 People movement between the Canberra region, major Australian cities, and the rest of the nation .....	14
2.2 Projected national people movement 2011 to 2041 .....	19
2.2.1 Inward people movement .....	19
2.2.2 Outward people movement .....	20
2.2.3 Net people movement .....	22
Section 3: Regional People Movement .....	23
3.1 People movement between the ACT and Surrounding region .....	23
3.2 Projected regional people movement 2011 to 2041 .....	26
3.2.1 People movement from the surrounding region to the ACT .....	26
3.2.2 People movement from the ACT to the surrounding region .....	27
3.3.3 Net people movement between the ACT and the surrounding region .....	28
Section 4: Social and Demographic Projections .....	30
4.1 Past to present .....	30
4.1.1 Population .....	30
4.1.2 Age .....	30
4.1.3 Gender .....	31
4.1.4 Age by gender .....	31
4.2 Projections .....	33
4.2.1 Projections for the ACT .....	33
4.2.2 Projections for the surrounding region .....	39
4.2.3 Total population projection .....	45
Section 5: Journey to Work .....	46
5.1 The ACT as a place of work .....	46
5.2 Mode share in Journey to Work .....	47
5.3 Distance to work .....	51
Section 6: Housing Choices .....	53
6.1 Present situation .....	53
6.1.1 Number and range of dwellings .....	53
6.1.2 People per dwelling .....	54
6.1.3 People per dwelling by dwelling type .....	56

6.1.4 Income .....	62
6.1.5 Median mortgage repayments and mortgage stress .....	64
6.1.6 Median rent payments and rental stress .....	68
6.2 Projections .....	72
6.2.1 Projections for the ACT .....	72
6.2.3 New dwelling projections relative to population projections .....	92
References .....	93

## List of Figures

### 1. Canberra as a Competitive Region

Figure 1.1 Major Australian Cities .....	1
Figure 1.2 Urban Competitiveness Index, population breakdown .....	2
Figure 1.3 Major Australian Cities Population Growth 2006 - 2011 .....	3
Figure 1.4 Major Australian Cities Employment Growth 2006 - 2011 .....	4
Figure 1.5 Major Australian Cities Proportional High Income Bracket Growth 2006 - 2011 .....	4
Figure 1.6 Major Australian Cities Labour Force Participation .....	5
Figure 1.7 Major Australian Cities High Level Qualifications .....	6
Figure 1.8 Major Australian Cities Research and Innovation .....	7
Figure 1.9 Major Australian Cities Knowledge Intensive Workers .....	8
Figure 1.10 Major Australian Cities Higher Level Occupation .....	8
Figure 1.11 Major Australian Cities .....	9
Figure 1.12 Major Australian Cities Proportion of Dwelling Paying a Higher Level of Rent .....	11
Figure 1.13 Major Australian Cities Rental Stress .....	12
Figure 1.14 Major Australian Cities Proportion of Dwelling Paying a Higher Level of Mortgage .....	13
Figure 1.15 Major Australian Cities Mortgage Stress .....	13

### 2. National People Movement

Figure 2.1 Canberra-Queanbeyan People Movement 2006-2011 .....	14
Figure 2.2 People Movement between Major Australian Cities 2006-2011 .....	15
Figure 2.3 People Movement between Major Cities and the rest of Australia 2006-2011 .....	15
Figure 2.4 People Moving to Canberra-Queanbeyan from the Major Australian Cities 2006-2011 .....	16
Figure 2.5 People Moving out of Canberra-Queanbeyan to the Major Australian Cities 2006-2011 .....	17
Figure 2.6 Net People Movement (Major Australian Cities) to and from Canberra-Queanbeyan 2006-2011 .....	18
Figure 2.7 People Movement from Overseas to Major Australian Cities 2006-2011 .....	18
Figure 2.8 Average Projected People Movement from the Major Australian Cities to Canberra-Queanbeyan .....	20
Figure 2.9 Average Projected People Movement from Canberra-Queanbeyan to the Major Australian Cities .....	21
Figure 2.10 Projected Net People Movement between Canberra-Queanbeyan and the Major Australian Cities .....	22

### 3. Regional People Movement

Figure 3.1 Regional People Movement 2006-2011 .....	23
Figure 3.2 People Movement from the Surrounding Region to the ACT 2006-2011 .....	23
Figure 3.3 People Movement out of the ACT to the Surrounding Region 2006-2011 .....	24
Figure 3.4 People Movement to and from the ACT 2006-2011 .....	24
Figure 3.5 Net People Movement to and from ACT and Surrounding Region 2006-2011 .....	25
Figure 3.6 Projected People Movement from the Surrounding Region to the ACT .....	27
Figure 3.7 Projected People Movement from the ACT to the Surrounding Region .....	28
Figure 3.8 Projected Net People Movement between the ACT and the Surrounding Region .....	29

#### 4 Social and Demographic Projections

Figure 4.1 Projections of age and gender cohorts as a proportion of the ACT population, using a business as usual approach, 2011-2041 .....	34
Figure 4.2 Age group projections (as a proportion of the total population) for the ACT based on shift-share analysis, for 2021, 2031, and 2041 .....	36
Figure 4.3 Gender projections for the ACT based on shift-share analysis, for 2021, 2031, and 2041 .....	37
Figure 4.4 Comparison of ACT population projections for 2021, 2031, and 2041 .....	38
Figure 4.5 Projections of age and gender cohorts as a proportion of the surrounding region population, using a business as usual approach, 2011-2041 .....	40
Figure 4.6 Age group projections for the surrounding region based on shift-share analysis, for 2021, 2031, and 2041 .....	42
Figure 4.7 Gender projections for the surrounding region based on shift-share analysis, for 2021, 2031, and 2041 .....	43
Figure 4.8 Comparison of surrounding region population projections, for 2021, 2031, 2036, and 2041 .....	44

#### 6. Housing Choices and Price

Figure 6.1 Average number of people per household, ACT and surrounding region, 1996-2011.....	56
Figure 6.2 Proportion of major ACT dwelling structure types populated by certain numbers of residents, 2011.....	58
Figure 6.3 Proportion of major surrounding region dwelling structure types populated by certain numbers of residents, 2011.....	61
Figure 6.4 Proportion of people in the ACT in major dwelling structure types, by age, Census night, 2011 .....	62
Figure 6.5 Income per household, ACT and surrounding region, 2011 .....	64
Figure 6.6 Monthly mortgage repayments per household, ACT and surrounding region, 2011 .....	66
Figure 6.7 Weekly rent payments per household, ACT and surrounding region, 2011.....	69
Figure 6.8 Projections of additional dwellings to be built in the ACT between 2011 and 2041 (using 2011 as a base year, valued at zero).....	82
Figure 6.9 Projected mix of new dwellings built in the ACT, 2011-2041 .....	82
Figure 6.10 Projections of additional dwellings to be built in the surrounding region between 2011 and 2041 (using 2011 as a base year, valued at zero).....	91
Figure 6.11 Projections of dwelling types as a proportion of new homes built in the surrounding region, 2011-2041 .....	91

## List of Tables

### 1. Canberra as Competitive Region

Table 1.1 Major Australian Cities Productivity Indicators.....	10
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### 2. National People Movement

Table 2.1 Projected People Movement from the Major Australian Cities to Canberra-Queanbeyan ...	20
Table 2.2 Projected People Movement from Canberra-Queanbeyan to the Major Australian Cities ...	21
Table 2.3 Average Projected Net People Movement between Canberra-Queanbeyan and the Major Australian Cities .....	22

### 3. Regional People Movement

Table 3.1 Average Projected People Movement from the Surrounding Region to the ACT .....	27
Table 3.2 Average Projected People Movement from the ACT to the Surrounding Region .....	28
Table 3.3 Average Projected Net People Movement between the ACT and the Surrounding Region	29

### 4. Social and Demographic Projections

Table 4.1 Population growth, ACT and surrounding region, 2001-2011. ....	30
Table 4.2 Age profile, ACT and surrounding region, 2001 and 2011 .....	30
Table 4.3 Age profile of people moving into the ACT and surrounding region, 2001-2011.....	31
Table 4.4 Change in gender profile, ACT and surrounding region, 2001 and 2011 .....	31
Table 4.5 Change in age groups by gender, ACT, 2001-2011 .....	32
Table 4.6 Change in age groups by gender, surrounding region, 2001-2011 .....	32
Table 4.7 Projections of age and gender for the ACT, using a business as usual approach.....	33
Table 4.8 Growth rate of age cohorts within the ACT and across Australia, 2001-2011.....	35
Table 4.9 Shift-share population projections for the ACT based on age groups, 2021, 2031 and 2041 .....	35
Table 4.10 Growth rate of gender cohorts within the ACT, 2001-2011 .....	36
Table 4.11 Shift-share population projections for the ACT based on gender, 2021, 2031 and 2041...	36
Table 4.12 ABS population predictions for the ACT, 2012-2041 .....	37
Table 4.13 ACT Government projections for the ACT population to 2041 .....	38
Table 4.14 Average of ACT population projections for 2021, 2031, and 2041 .....	39
Table 4.15 Projections of age and gender for the surrounding region, using a business as usual approach .....	39
Table 4.16 Growth rate of age cohorts within the surrounding region, 2001-2011.....	40
Table 4.17 Shift-share population projections for the region surrounding the ACT based on age groups, 2021, 2031 and 2041 .....	41
Table 4.18 Growth rate of gender cohorts within the surrounding region, 2001-2011 .....	42
Table 4.19 Shift-share population projections for the surrounding region based on gender, 2021, 2031 and 2041 .....	42
Table 4.20 NSW Department of Planning projections for the surrounding region's population to 2036 .....	43
Table 4.21 Average of population projections for the ACT and surrounding region, 2011-2041 .....	45

## 5. Journey to Work

Table 5.1 Place of residence of people working in the ACT, 2011 .....	46
Table 5.2 Place of work for employed people living in Belconnen and West Belconnen, 2011 .....	47
Table 5.3 Mode share of Journey to work travel to the ACT from the surrounding region, 2011 .....	48
Table 5.4 Mode share of Journey to work travel for people who live and work in the ACT, 2011.....	49
Table 5.5 Mode share of Journey to work travel for people who live in the West Belconnen area, 2011 .....	50
Table 5.6 Travel distance from surrounding LGAs to City Hill, ACT .....	51
Table 5.7 Total distance travelled from surrounding LGAs to the ACT for work (one-way) .....	51

## 6. Housing Choices and Prices

Table 6.1 Dwelling types in the ACT and surrounding region, 2011 .....	54
Table 6.2 People per dwelling, ACT and surrounding region, 2011 .....	54
Table 6.3 Average number of people per household, ACT and surrounding region, 2011 .....	55
Table 6.4 Average number of people per household, ACT 2011 .....	55
Table 6.5 Number of dwelling structure types containing certain numbers of residents, ACT, 2011 ...	57
Table 6.6 Proportion of dwelling structure types containing certain numbers of residents, ACT, 2011	58
Table 6.7 Number of dwelling structure types containing certain numbers of residents, surrounding region, 2011 .....	59
Table 6.8 Proportion of dwelling structure types containing certain numbers of residents, surrounding region, 2011 .....	60
Table 6.9 Income per household, ACT and surrounding region, 2011 .....	63
Table 6.10 Median weekly income per household, ACT and surrounding region, 1996-2011.....	64
Table 6.11 Monthly mortgage repayments per household, ACT and surrounding region, 2011 .....	66
Table 6.12 Median monthly mortgage repayments per household, ACT and surrounding region, 1996-2011 .....	67
Table 6.13 Median monthly mortgage repayments, ACT 2011 .....	67
Table 6.14 Percentage of households suffering mortgage stress, ACT and surrounding region, 2011 .....	68
Table 6.15 Weekly rent payments per household, ACT and surrounding region, 2011 .....	69
Table 6.16 Median monthly mortgage repayments, ACT 2011 .....	70
Table 6.17 Median weekly rental prices per household, ACT and surrounding region, 1996-2011 .....	70
Table 6.18 Percentage of dwellings suffering rental stress, ACT and surrounding region, 2011.....	71
Table 6.19 Numerical growth in dwelling numbers across the ACT, 2001-2011 .....	73
Table 6.20 Business as usual projections for the ACT based on dwelling stock, 2021, 2031 and 2041 .....	74
Table 6.21 Growth rate of dwelling structure types within the ACT and across Australia, 2001-2011.	75
Table 6.22 ACT dwelling number projections through shift-share analysis, 2011-2041.....	75
Table 6.23 Growth rate of dwellings across Australia, 2001-2011 .....	76
Table 6.24 National growth rate projections for the ACT based on dwelling stock, 2021, 2031 and 2041 .....	77
Table 6.25 Change in proportion of dwelling structure types across Australia, 2001-2011 .....	78
Table 6.26 National dwelling structure type growth rate projection to housing stock in the ACT for 2021, 2031 and 2041 .....	78
Table 6.27 Growth of dwelling numbers in the ACT, 2001-2011 .....	79
Table 6.28 2001-11 ACT growth rate projections for the ACT based on dwelling stock, 2021, 2031 and 2041 .....	80
Table 6.29 Comparison of all dwelling projections for the ACT to 2041 .....	81
Table 6.30 Numerical growth in dwelling numbers across the surrounding region, 2001-2011 .....	83

Table 6.31 Business as usual projections for the surrounding region, based on 2001-2011 growth in dwelling stock .....	84
Table 6.32 Growth rate of dwelling structure types within the surrounding region and across Australia, 2001-2011 .....	85
Table 6.33 Dwelling projections for the surrounding region, using shift share analysis .....	85
Table 6.34 National growth rate projections for the surrounding region .....	87
Table 6.35 National dwelling structure type growth rate projection to housing stock in the surrounding region for 2021, 2031 and 2041 .....	88
Table 6.36 Growth in dwelling numbers across the surrounding region, 2001-2011 .....	89
Table 6.37 2001-11 surrounding region growth rate projections for the surrounding region based on dwelling stock, 2021, 2031 and 2041 .....	89
Table 6.38 Comparison of all dwelling projections for the surrounding region to 2041 .....	90
Table 6.39 Average dwelling projections for ACT and surrounding region, 2011-2041 .....	92

## Executive Summary

This research has been undertaken by the ANZSOG Institute for Governance at the University of Canberra, through its Globalisation and Cities Research Program (GCRP). It aims to provide scoping studies for the Riverview Group's West Belconnen project. The research report includes studies at a national level, comparing the Canberra region (defined as the ACT plus the Queanbeyan Local Government Area (LGA)) with other major Australian cities. It also includes research at a regional level, comparing the ACT and surrounding region (defined as the Queanbeyan, Palerang, Yass Valley, Goulburn Mulwaree, Upper Lachlan, and Cooma-Monaro LGAs).

### Section 1

The comparative study of housing prices in the Canberra region and seventeen other major Australian cities (with populations of more than 100,000 people) reveals that Canberra-Queanbeyan's desirability is blighted by housing affordability issues. Canberra-Queanbeyan has the highest proportion of people with a high rate of monthly mortgage repayments compared to other major Australian cities. Canberra-Queanbeyan also had a considerably large proportion of people paying high levels of rent, ranking 5<sup>th</sup> of the 18 major cities.

Whilst housing affordability remains a considerable issue for Canberra-Queanbeyan, the city is considered to be one of the most economically competitive, productive and liveable urban centres in Australia. Canberra-Queanbeyan is the most competitive major Australian city with a population between 200,000 and 1 million, and is the fourth most competitive major Australian city overall. This has been achieved largely through productivity - Canberra-Queanbeyan leads the other 17 major Australian cities in most productivity indicators assessed.

### Section 2

At a national level people movement to the Canberra region from the 17 other major Australian cities with populations greater than 100,000 has been assessed. This movement from Australia's major cities demonstrates the Canberra region's attractiveness to people living in our urban centres. People movement from the Canberra region to the other 17 cities has also been measured to further understand the Canberra region's major counterparts and their competitive strengths. Projections on the people movement between Canberra-Queanbeyan and the other major cities have also been made from 2011 to 2041.

Around 47,800 people from across Australia moved to Canberra-Queanbeyan between 2006 and 2011, of which 31,100 were from one of the 17 other major cities. People that resided in Sydney (11,568) were the internal migration group most attracted to Canberra-Queanbeyan.

The Canberra region lost 43,900 people to other parts of Australia between 2006 and 2011, of which 27,800 were to Australia's major cities. Most outward migration from the Canberra region went to Sydney (7,178), Melbourne (5,611) and Brisbane (4,779).

The Canberra region attracted a net gain of 3,900 people from across Australia between 2006 and 2011, of which 3,300 were from Australia's major cities. The largest net gains to the Canberra region came from Sydney (+4,390), and Adelaide (+630). The largest net losses came from Brisbane (-1,390), the Gold Coast (-843) and Melbourne (-654).

Origin	People Moving to Canberra-Queanbeyan 2006 - 2011	People Moving Out of Canberra-Queanbeyan 2006 - 2011	Net People Movement to and from Canberra-Queanbeyan 2006 - 2011
Adelaide	2,149	1,518	631
Albury - Wodonga	596	412	184
Brisbane	3,389	4,779	-1,390
Cairns	368	348	20
Darwin	922	707	215
Geelong	162	142	20
Gold Coast - Tweed Heads	885	1,728	-843
Hobart	593	394	199
Launceston	143	95	48
Melbourne	4,957	5,611	-654
Newcastle - Maitland	1,029	844	185
Perth	1,812	1,634	178
Sunshine Coast	309	719	-410
Sydney	11,568	7,178	4,390
Toowoomba	365	232	133
Townsville	842	592	250
Wollongong	1,008	850	158
<b>Total</b>	<b>31,097</b>	<b>27,783</b>	<b>3,314</b>

People movement between Canberra-Queanbeyan and Australia's major cities of more than 100,000 population, 2006-2011

The projections of both inward and outward people movement between the major cities and the Canberra region reveal that the city is likely to continue to attract more people from, and lose at a comparatively slower rate to its urban competitors through to 2041. As a result the net gain in people movement between the Canberra region and Australia's other major cities has been projected to increase to around 9,500 between 2016 and 2021, and 22,600 between 2036 and 2041.

	Average Projected National People Movement					
	Major Australian Cities to Canberra-Queanbeyan		Canberra-Queanbeyan to the Major Australian Cities		Net Movement between Canberra-Queanbeyan and the Major Australian Cities	
	Count	Growth from previous five-year period	Count	Growth from previous five-year period	Count	Growth from previous five-year period
2001-2006	28,554		28,495		59	
2006-2011	31,097	2,543	27,782	-713	3,315	3,256
2011-2016	34,213	3,116	27,792	10	6,419	3,104
2016-2021	37,545	3,332	28,001	208	9,544	3,125
2021-2026	41,112	3,567	28,406	405	12,706	3,162
2026-2031	44,933	3,821	29,009	604	15,924	3,218
2031-2036	49,030	4,097	29,816	806	19,214	3,290
2036-2041	53,426	4,396	30,831	1,016	22,595	3,381

Projected people movement between Canberra-Queanbeyan and Australia's major cities of more than 100,000 population, 2011-2041

### Section 3

At a regional level this research has addressed people movement between the ACT and the surrounding region between 2006 and 2011, to identify recent trends in regional people movement. The ACT lost 1,793 more people than it gained from the surrounding region, while the Yass Valley had the largest net gain in people at 955.

The ACT attracted more people (5,558) than any individual LGA in the surrounding region, with Queanbeyan (3,344) a distant second. Queanbeyan (2,795) and the Yass Valley (1,852) were the most attractive places to move to for former ACT residents.

The ACT also experienced the largest loss in people movement (7,351) when compared to its regional counterparts. It was followed by Queanbeyan (3,759) and Palerang (1,489). People from Queanbeyan (2,805) were the most likely in the surrounding region to move to the ACT.

Regional People Movement 2006-2011									
Destination	Origin							Gain from Region	Win - Loss: Region
	ACT	Cooma-Monaro	Goulburn Mulwaree	Palerang	Queanbeyan	Upper Lachlan Shire	Yass Valley		
ACT	-	390	376	892	2,805	158	937	5,558	- 1,793
Cooma-Monaro	373	-	4	26	93	-	14	510	18
Goulburn Mulwaree	519	27	-	111	135	302	53	1,147	483
Palerang	1,641	16	49	-	566	9	54	2,335	846
Queanbeyan	2,795	49	52	353	-	21	74	3,344	- 415
Upper Lachlan Shire	171	3	153	31	30	-	45	433	- 94
Yass Valley	1,852	7	30	76	130	37	-	2,132	955
Loss to Region	7,351	492	664	1,489	3,759	527	1,177	-	-

People movement between the ACT and LGAs within the surrounding region, 2006-2011

Regional people movement projections suggest the ACT is going to gradually attract more people from, and lose less people to, the surrounding region, between 2011 and 2041. The ACT could attract

nearly 3,000 more people from the surrounding region than it loses to the surrounding region between 2036 and 2041.

	Average Projected Regional People Movement					
	Surrounding Region to the ACT		ACT to the Surrounding Region		Net Movement between the ACT and Surrounding Region	
	Count	Growth from previous five-year period	Count	Growth from previous five-year period	Count	Growth from previous five-year period
2001-2006	4,880		7,594		-2,714	
2006-2011	5,558	678	7,351	-243	-1,793	921
2011-2016	6,427	869	7,487	136	-1,060	733
2016-2021	7,357	930	7,665	178	-308	752
2021-2026	8,356	999	7,889	224	467	775
2026-2031	9,433	1,077	8,164	274	1,269	802
2031-2036	10,598	1,165	8,493	329	2,105	836
2036-2041	11,862	1,264	8,881	388	2,981	876

Projected people movement between the ACT and the Surrounding Region, 2011-2041

#### Section 4

The populations of the ACT and the surrounding region both grew at a rate of 15.31 per cent between 2001 and 2011. This took the combined population of the ACT and surrounding region to 468,396.

	2001	2011	Growth
<b>ACT</b>	309,242	356,587	15.31%
<b>Surrounding region</b>	96,960	111,809	15.31%
<b>Total</b>	406,202	468,396	15.31%

Population growth, ACT and surrounding region, 2001-2011

The age profile of the ACT is younger than in the surrounding region, despite the surrounding region having a greater proportion of children aged under fifteen. The ACT has a higher proportion of its population aged between 15 and 34, while the surrounding region has a higher proportion of residents aged 35-64, and 65 and over.

An ageing population is a major issue within the ACT and the surrounding region (although this is also occurring nationally). The table below shows an increase in the proportion of the population aged 35-64 and 65 and over between 2001 and 2011, in contrast to declining proportions of people aged 0-14 and 15-34. The impacts of an ageing population will be felt more in the surrounding region, with its substantially lower proportion of residents in the 15-34 age range.

Area	Age group	0-14		15-34		35-64		65+	
	Year	2001	2011	2001	2011	2001	2011	2001	2011
ACT	Number	64,626	66,285	98,326	112,692	119,855	139,470	26,435	38,140
	Percentage of population	20.90%	18.60%	31.80%	31.60%	38.80%	39.10%	8.60%	10.70%
Surrounding region	Number	21,514	22,504	24,421	26,004	39,605	47,931	11,420	15,370
	Percentage of population	22.20%	20.10%	25.20%	23.30%	40.90%	42.90%	11.80%	13.80%
Total	Number	86,140	88,789	122,747	138,696	159,460	187,401	37,855	53,510
	Percentage of population	21.21%	18.96%	30.22%	29.61%	39.26%	40.01%	9.32%	11.42%

Age profile, ACT and surrounding region, 2001 and 2011

Gender balances vary between the ACT and the surrounding region. The ACT has slightly more females than males, with a 2011 ratio of 50.53 per cent female to 49.47 per cent male. This was after a gender balance of 50.80: 49.20 in 2001. The surrounding region has slightly more males, with a 2011 gender ratio of 50.15 per cent male to 49.85 per cent female. This was after a fractionally larger gender imbalance of 50.20: 49.80 in 2001.

Area	Year	2001		2011		Change	
	Gender	Male	Female	Male	Female	Male	Female
ACT	Count	152,013	157,229	176,416	180,170	24,403	22,941
	Percentage	49.20%	50.80%	49.47%	50.53%	51.54%	48.46%
Surrounding region	Count	48,629	48,331	56,067	55,742	7,438	7,411
	Percentage	50.20%	49.80%	50.15%	49.85%	50.09%	49.91%
Total	Count	200,642	205,560	232,483	235,912	31,841	30,352
	Percentage	49.39%	50.61%	49.63%	50.37%	51.20%	48.80%

Gender profile, ACT and surrounding region, 2001 and 2011

Based on data between 2001 and 2011, a number of projections have been made to estimate the future population, and demographic mix, of the ACT and surrounding region.

ACT population projections:

Business as usual scenario: If the same number of people in the same age and/or gender groups moved to the ACT within subsequent ten year periods as they did between 2001 and 2011, the ACT would end up with a population of around 498,600 by 2041.

Shift-share by age scenario: Using projections based on the growth of key age groups, the ACT could have a population of 575,500 by 2041. This projection would also see the proportion of ACT residents aged 65 or over nearly double, from 10.7 per cent in 2011 to 19.9 per cent by 2041.

Shift-share by gender scenario: Using projections based on the growth of males and females, the ACT could have a population as high as 546,800 by 2041. This projection would also see males overtake females as the ACT's dominant gender.

The shift-share projections appear aggressive compared to previous projections made by the ACT Government (494,400 by 2041), but are modest compared to latest projections by the Australian Bureau of Statistics (as high as 666,700 by 2041, as shown in the ABS Series A projection). Using an average of seven projections on the ACT's population, the ACT could have around 425,500 residents by 2021, and 557,800 by 2041.

Projection model	Base year*	2021	2031	2041
Business as usual	356,586	403,930	451,274	498,618
Shift-share by age	356,587	414,466	486,008	575,488
Shift-share by gender	356,586	411,195	474,186	546,848
ABS Series A	375,076	458,560	560,590	666,737
ABS Series B	375,076	444,710	520,412	593,236
ABS Series C	375,076	431,088	482,937	528,992
ACT Government	363,764	414,367	457,300	494,389
<b>Average</b>		<b>425,474</b>	<b>490,387</b>	<b>557,758</b>

Average of ACT population projections for 2021, 2031, and 2041

\*= base year of 2011. ABS projections have a base year of 2012

#### Surrounding region population projections:

Business as usual scenario: If the same number of people in the same age and/or gender groups moved to the surrounding region within subsequent ten year periods as they did between 2001 and 2011, the surrounding region would end up with a population of around 156,400 by 2041.

Shift-share by age scenario: Using projections based on the growth of key age groups, the surrounding region could have a population as high as 179,600 by 2041.

Shift-share by gender scenario: Using projections based on the growth of males and females, the surrounding region could have a population as high as 171,400 by 2041.

After 2026, the shift-share projections appear aggressive compared to previous projections made by the NSW Government (154,200 by 2036). Using an average of the above projections, the surrounding region could have a population of around 129,400 by 2021, and 167,000 by 2041.

Projection method	2011	2016	2021	2026	2031	2036	2041
Business as usual	111,809	119,234	126,658	134,083	141,507	148,932	156,356
Shift-share by age	111,809	120,866	129,923	141,037	152,151	165,867	179,583
Shift-share by gender	111,809	120,371	128,932	138,805	148,677	160,062	171,447

NSW Planning	116,700*	124,200	132,000	139,600	147,100	154,200	160,801^
Average		121,167	129,378	138,381	147,359	157,265	167,047

Comparison of surrounding region population projections, for 2021, 2031, 2036, and 2041

\*= projected population

^= estimate, based on growth from previous five year periods

Combining the average projections for the ACT and surrounding region produces a possible population of around 554,700 by 2021, and 724,800 by 2041.

Projected population	2011	2021	2031	2041
<b>ACT</b>	356,587	425,474	490,387	557,758
<b>Surrounding region</b>	111,809	129,378	147,359	167,047
<b>Total</b>	468,396	554,852	637,746	724,805

Average of population projections for the ACT and surrounding region for 2021, 2031 and 2041

## Section 5

At the time of the 2011 Census, more than 214,000 people worked in the ACT. Of these, 186,000 also lived in the ACT, while 22,700 lived in the surrounding region. Of those who lived in the surrounding region, 13,200 lived in the Queanbeyan LGA, while most of the remaining 9,500 lived in areas in the surrounding region that were further from Central Canberra than the proposed West Belconnen residential development.

Place of residence	Number of people working in the ACT	Percentage of all people working in the ACT
<b>ACT</b>	<b>186,048</b>	<b>86.90%</b>
Queanbeyan	13,230	6.18%
Palerang	3,917	1.83%
Yass Valley	3,679	1.72%
Goulburn Mulwaree	903	0.42%
Cooma-Monaro	596	0.28%
Upper Lachlan Shire	347	0.16%
<b>Surrounding region total</b>	<b>22,672</b>	<b>10.59%</b>
ACT + Surrounding region	208,720	97.49%
Elsewhere in Australia	5,371	2.51%
<b>Total number of ACT based jobs</b>	<b>214,091</b>	<b>100.00%</b>

Place of residence of people working in the ACT, 2011

Private vehicles are the most common mode of transport used for work trips in the ACT, by residents in both the ACT and surrounding region. At the time of the 2011 Census, people living in the surrounding region were more likely to use a car to get to work in the ACT than ACT residents. ACT residents who worked in the ACT were much more likely to use active or public transport than commuters from the surrounding region.

Mode of transport	ACT		Surrounding region		West Belconnen total*	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Car, as driver</b>	116,042	62.40%	17,157	75.70%	8,566	67.40%
<b>Did not go to work</b>	19,904	10.70%	2,203	9.70%	1,446	11.38%
<b>Car, as passenger</b>	13,136	7.10%	1,700	7.50%	996	7.84%
<b>Bus</b>	10,774	5.80%	309	1.40%	655	5.15%
<b>Walked only</b>	7,785	4.20%	95	0.40%	92	0.72%
<b>Worked at home</b>	5,127	2.80%	114	0.50%	266	2.09%
<b>Bicycle</b>	4,597	2.50%	109	0.50%	83	0.65%
<b>Motorbike/scooter</b>	1,735	0.90%	214	0.90%	149	1.17%
<b>Not stated</b>	1,334	0.70%	189	0.80%	65	0.51%
<b>Truck</b>	1,163	0.60%	141	0.60%	100	0.79%
<b>Other</b>	757	0.40%	57	0.30%	27	0.21%
<b>Bus, car as driver</b>	697	0.40%	51	0.20%	61	0.48%
<b>Bus, car as passenger</b>	718	0.40%	51	0.20%	97	0.76%
<b>Car as driver, car as passenger</b>	551	0.30%	134	0.60%	32	0.25%
<b>Car as driver, bicycle</b>	239	0.10%	36	0.20%	14	0.11%

Journey to work figures for people who work in the ACT and live in the ACT, surrounding region, or West Belconnen, 2011. \* West Belconnen refers to the six suburbs of Charnwood, Dunlop, Higgins, Holt, Latham, and Macgregor, as defined at the SA2 level in the 2011 Australian Census.

One objective for the proposed West Belconnen development will be to encourage more of its future residents to use public and/or active transport. Residents in the six suburbs closest to the proposed development (Charnwood, Dunlop, Higgins, Holt, Latham, and Macgregor) who also work within the ACT, were more likely to use a private car to get to work than the ACT average, and less likely to use a bus or a form of active transport. However, residents in those six suburbs were also more likely to combine bus and car use to get to work, suggesting locals are prepared to use park and ride facilities. Residents in the six suburbs closest to the proposed development are more reliant on public and active transport, and less reliant on private cars, than in the surrounding region.

The proposed West Belconnen development is also relatively close to major employment centres. Queanbeyan is the only LGA in the surrounding region with a similar travel distance to Canberra's civic centre when compared to the West Belconnen development area (around 15.5km, depending on route). The proposed West Belconnen development is also close to employment nodes in the Belconnen Town Centre and Kippax group centre, which implies the possibility of future residents in

the West Belconnen development area being able to travel to these centres by public or active transport.

## Section 6

Most dwellings across the ACT and the surrounding region are separate or detached homes. They comprise 70.5 per cent of the ACT's 2011 dwelling stock, and 81.9 per cent of the surrounding region's 2011 dwelling stock. Semi-detached, row or terrace homes on a single storey were the next most common type of dwelling across both the ACT (9.3%) and the surrounding region (5.7%).

Dwelling Structure 2011	ACT		Surrounding region		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Separate house	102,621	70.5%	40,824	81.9%	143,445	73.4%
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	9.3%	2,865	5.7%	16,386	8.4%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	5.5%	990	2.0%	9,061	4.6%
Flat, unit or apartment in a one or two storey block	6,621	4.6%	2,210	4.4%	8,831	4.5%
Flat, unit or apartment in a three storey block	7,361	5.1%	1,048	2.1%	8,409	4.3%
Flat, unit or apartment in a four or more storey block	6,132	4.2%	555	1.1%	6,687	3.4%
Flat, unit or apartment attached to a house	439	0.3%	78	0.2%	517	0.3%
Caravan, cabin, houseboat	328	0.2%	647	1.3%	975	0.5%
Improvised home, tent, sleepers out	36	0.0%	197	0.4%	233	0.1%
House or flat attached to a shop, office, etc.	39	0.0%	217	0.4%	256	0.1%
Not stated	56	0.0%	62	0.1%	118	0.1%
Not applicable	247	0.2%	168	0.3%	415	0.2%
<b>Total</b>	<b>145,472</b>	<b>100.0%</b>	<b>49,861</b>	<b>100.0%</b>	<b>195,333</b>	<b>100.0%</b>

Dwelling structure types in the ACT and surrounding region, 2011

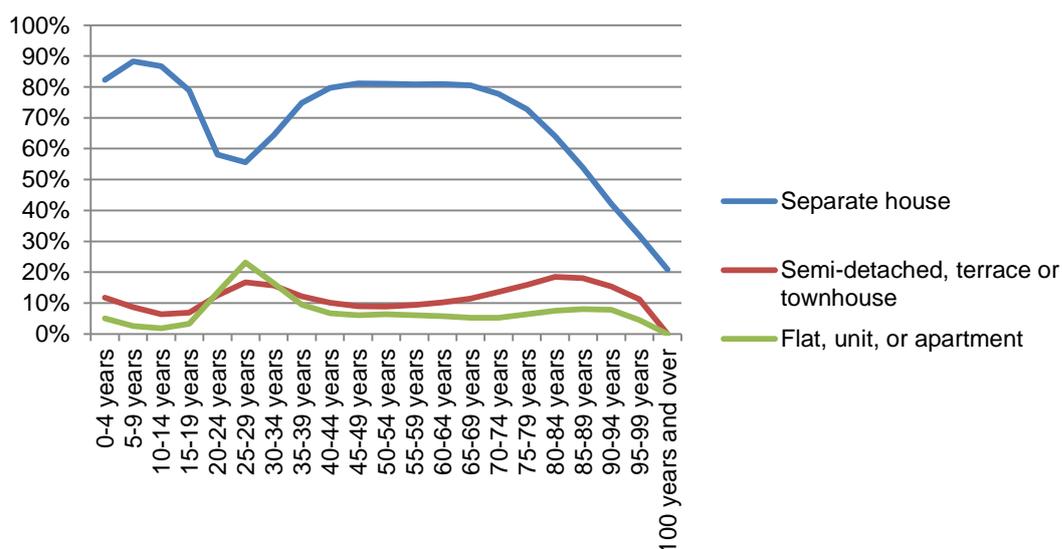
More than half of all dwellings across the ACT and the surrounding region contain only one or two occupants. Dwellings in the ACT were proportionately more likely to have three or four residents, while proportions for five, six and seven residents were very similar between the ACT and the surrounding region.

Number of people per dwelling	ACT		Surrounding region		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
One person	30,248	20.8%	10,776	21.6%	41,024	21.0%
Two persons	43,765	30.1%	14,263	28.6%	58,028	29.7%
Three persons	22,580	15.5%	6,100	12.2%	28,680	14.7%
Four persons	21,460	14.8%	6,136	12.3%	27,596	14.1%
Five persons	8,168	5.6%	2,789	5.6%	10,957	5.6%
Six persons	2,395	1.6%	828	1.7%	3,223	1.7%
Seven persons	525	0.4%	215	0.4%	740	0.4%
Eight or more persons	287	0.2%	114	0.2%	401	0.2%
Not applicable	16,046	11.0%	8,638	17.3%	24,684	12.6%
<b>Total</b>	<b>145,474</b>	<b>100.0%</b>	<b>49,859</b>	<b>100.0%</b>	<b>195,333</b>	<b>100.0%</b>

People per dwelling, ACT and surrounding region, 2011

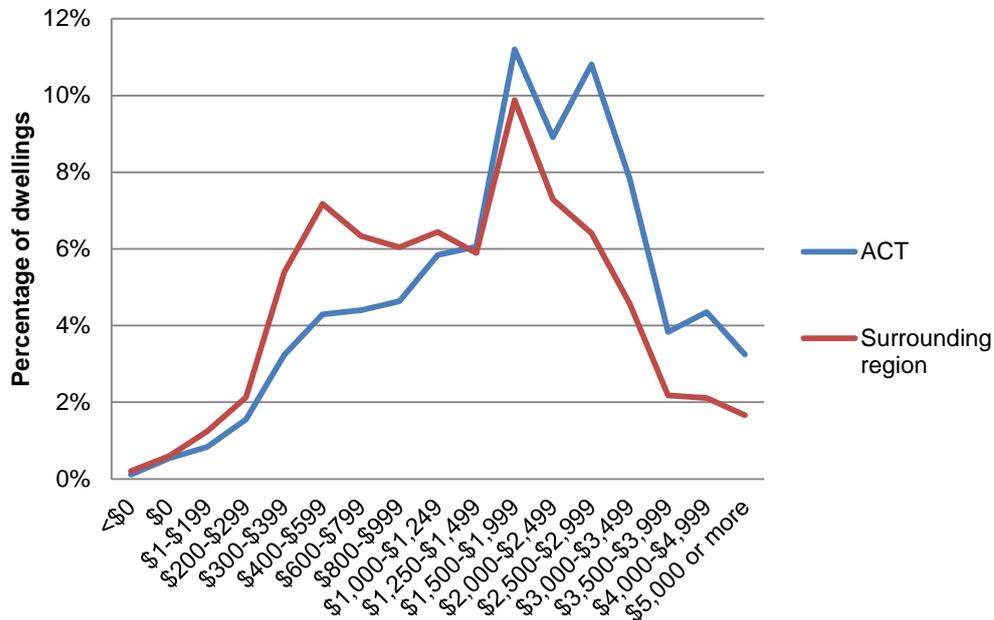
On average, households in the ACT were found to have 2.6 residents, with the highest numbers in the Gungahlin (2.9) and Tuggeranong (2.8) districts. Households in the surrounding region averaged 2.5 people per household, led by the Palerang and Yass Valley LGAs (both 2.7).

By age, people in the ACT were more likely to live in a detached home between the ages of 0-19 and 35-79. The proportion of people in these age groups in a detached home was higher than the proportion of the whole ACT population living in a detached home. Semi-detached dwellings such as terraces and townhouses were more popular among the 25-34 and 75-94 age groups, and flats units and apartments were more popular among those in the 25-34 age groups only.



Proportion of people in major dwelling structure types by age, ACT, 2011

Household income across the ACT is much higher than in the surrounding region. Median incomes in the ACT came in at around \$1,920 per week, with Palerang the best of the surrounding LGAs at \$1,813.



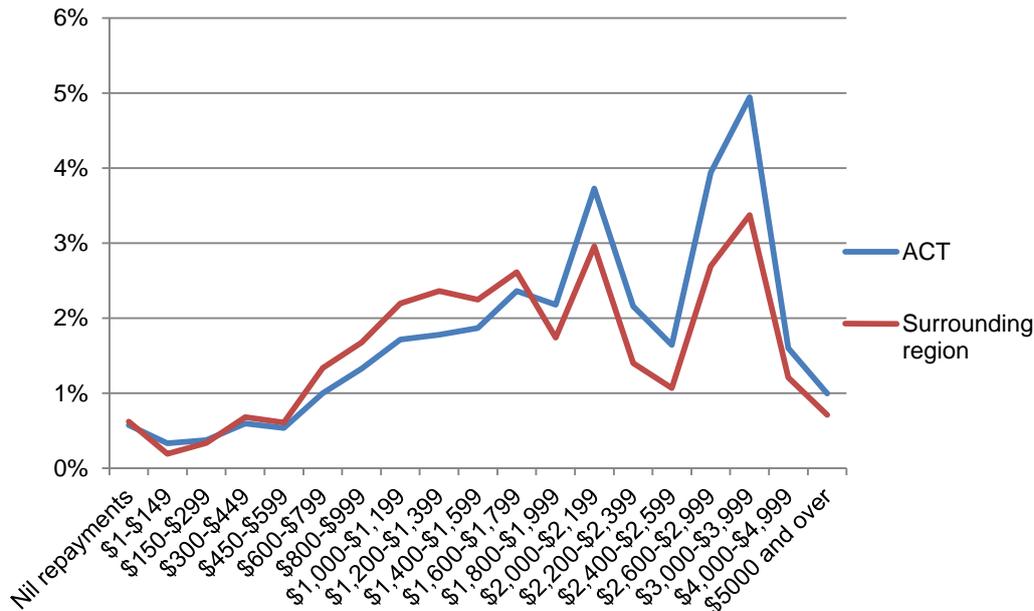
Income per household, ACT and surrounding region, 2011

Historically, median incomes have risen by 117 per cent in the ACT between 1996 and 2011, and between 72 per cent (Goulburn Mulwaree) and 150 per cent (Queanbeyan) in the surrounding region.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$886	\$1,100	\$1,507	\$1,920	116.7%
<b>Cooma-Monaro</b>	\$546	\$679	\$833	\$943	72.7%
<b>Goulburn Mulwaree</b>	\$572	\$704	\$842	\$981	71.5%
<b>Palerang</b>	\$729	\$962	\$1,285	\$1,813	148.7%
<b>Queanbeyan</b>	\$664	\$881	\$1,180	\$1,657	149.5%
<b>Upper Lachlan</b>	\$477	\$658	\$725	\$943	97.7%
<b>Yass Valley</b>	\$669	\$888	\$1,164	\$1,625	142.9%

Median weekly income per household, ACT and surrounding region, 1996-2011

Mortgage repayments across the ACT are much higher than in the surrounding region. Median repayments in the ACT came in at around \$2,167 per month, although they were even higher in South Canberra (\$2,544) and Gungahlin (\$2,300). Palerang (\$2,165) and Queanbeyan and Yass Valley (both \$2,000) had the highest monthly mortgage repayments in the surrounding region.



Monthly mortgage repayments per dwelling, ACT and surrounding region, 2011

Historically, median monthly mortgage repayments have risen by 135 per cent in the ACT between 1996 and 2011, and between 99 per cent (Cooma-Monaro) and 150 per cent (Palerang) in the surrounding region. Queanbeyan and the Yass Valley were the only areas studied where median household income grew at a faster rate than median mortgage repayments.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$ 923	\$ 953	\$1,500	\$2,167	134.8%
<b>Cooma-Monaro</b>	\$ 654	\$ 690	\$1,029	\$1,300	98.8%
<b>Goulburn Mulwaree</b>	\$ 756	\$ 780	\$1,187	\$1,517	100.7%
<b>Palerang</b>	\$ 867	\$1,000	\$1,560	\$2,165	149.7%
<b>Queanbeyan</b>	\$ 867	\$ 931	\$1,491	\$2,000	130.7%
<b>Upper Lachlan</b>	\$ 650	\$ 740	\$1,083	\$1,460	124.6%
<b>Yass Valley</b>	\$ 867	\$ 953	\$1,408	\$2,000	130.7%

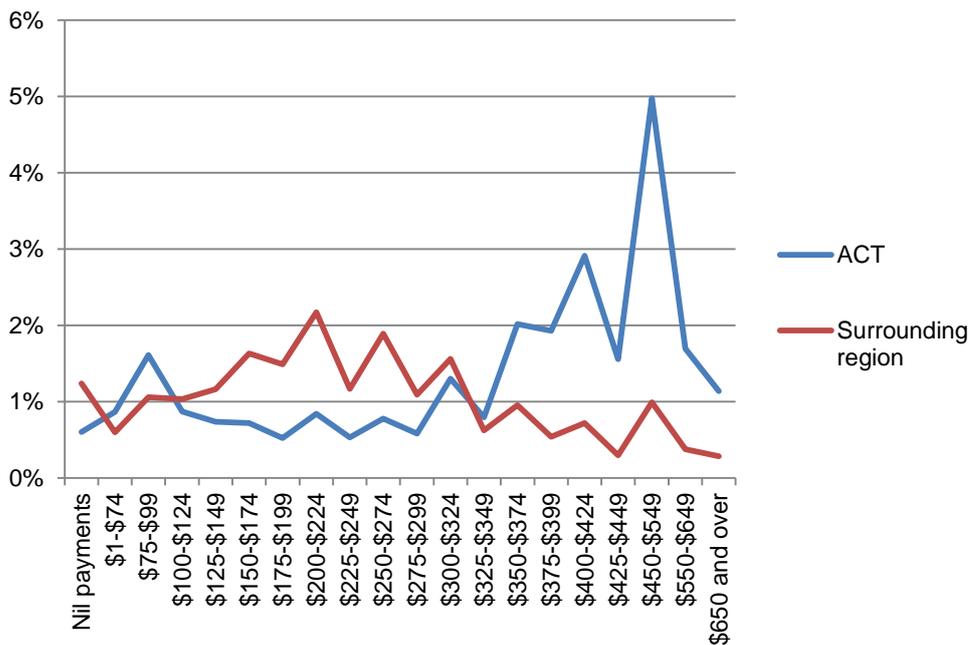
Median monthly mortgage repayments per household, ACT and surrounding region, 1996-2011

Mortgage stress (defined as spending more than 30 per cent of one's household income on mortgage repayments) was proportionately less common in the ACT, with only 7.8 per cent of ACT dwellings found to be suffering from mortgage stress at the time of the 2011 Census. Cooma-Monaro (7.0%) was the only LGA in the surrounding region with a lower level of mortgage stress. The ACT's relatively lower levels of mortgage stress are in spite of its higher median mortgage repayments, and reflect the higher average incomes of ACT residents.

Area	Proportion of dwellings suffering from mortgage stress
<b>ACT</b>	<b>7.8%</b>
Cooma-Monaro	7.0%
Goulburn Mulwaree	7.9%
Palerang	10.4%
Queanbeyan	8.9%
Upper Lachlan Shire	7.9%
Yass Valley	9.5%
<b>Surrounding Region</b>	<b>8.6%</b>

Percentage of dwellings suffering mortgage stress, ACT and surrounding region, 2011

Much like mortgage repayments, rental prices were also considerably higher in the ACT than the surrounding region. Median weekly rent in the ACT came in at \$380 per week. The highest median rents in the surrounding region were in Queanbeyan (\$285 per week) and Palerang and Yass Valley (both \$250 per week).



Weekly rent payments per dwelling, ACT and surrounding region, 2011

Historically, median weekly rental prices have risen by 153 per cent in the ACT between 1996 and 2011, and between 85 per cent (Goulburn Mulwaree) and 163 per cent (Yass Valley) in the surrounding region. Median rent payments increased at a greater rate than median incomes across the ACT and surrounding region between 1996 and 2011, and at a greater rate than mortgage repayments in the ACT and most parts of the surrounding region over the same period.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$150	\$165	\$260	\$380	153.3%
<b>Cooma-Monaro</b>	\$95	\$100	\$135	\$180	89.5%
<b>Goulburn Mulwaree</b>	\$100	\$120	\$150	\$185	85.0%
<b>Palerang</b>	\$100	\$120	\$175	\$250	150.0%
<b>Queanbeyan</b>	\$110	\$120	\$185	\$285	159.1%
<b>Upper Lachlan</b>	\$56	\$70	\$90	\$140	150.0%
<b>Yass Valley</b>	\$95	\$105	\$150	\$250	163.2%

Median weekly rental prices per household, ACT and surrounding region, 1996-2011

Rental stress is defined as spending more than 30 per cent of one's household income on home rental charges. Despite having lower mortgage stress, the ACT was found to have higher rental stress than the surrounding region. Eight per cent of dwellings in the ACT were found to be suffering rental stress at the time of the 2011 Census, compared to around 6.3 per cent across the surrounding region.

Area	Proportion of dwellings suffering from rental stress
<b>ACT</b>	<b>8.0%</b>
<b>Cooma-Monaro</b>	8.2%
<b>Goulburn Mulwaree</b>	9.0%
<b>Palerang</b>	3.5%
<b>Queanbeyan</b>	8.9%
<b>Upper Lachlan Shire</b>	3.7%
<b>Yass Valley</b>	4.7%
<b>Surrounding Region</b>	<b>6.3%</b>

Percentage of dwellings suffering rental stress, ACT and surrounding region, 2011

#### Dwelling number projections for the ACT

Business as usual scenario: If the same number of dwellings in the same dwelling structure types were built in the ACT within subsequent ten year periods as they did between 2001 and 2011, the ACT would end up with around 218,600 dwellings by 2041.

Shift-share by dwelling structure type scenario: Using projections based on the growth of key dwelling structure groups, the ACT could have as many as 291,400 dwellings by 2041. This aggressive scenario was borne by a 240% growth in the development of units built in blocks of four or more storeys between 2001 and 2011, being projected to a 100% growth rate in subsequent ten year periods to 2041.

Growth consistent with that experienced across Australia between 2001 and 2011: Using projections based on the growth rates of dwelling structure types across Australia (17.9%), the ACT could have 171,200 dwellings by 2021 and 238,000 dwellings by 2041.

Growth consistent with that experienced in the ACT between 2001 and 2011: Using projections based on the total percentage growth of the ACT's dwelling stock between 2001 and 2011 (20.15%), the ACT could have 174,400 dwellings by 2021 and 251,800 dwellings by 2041.

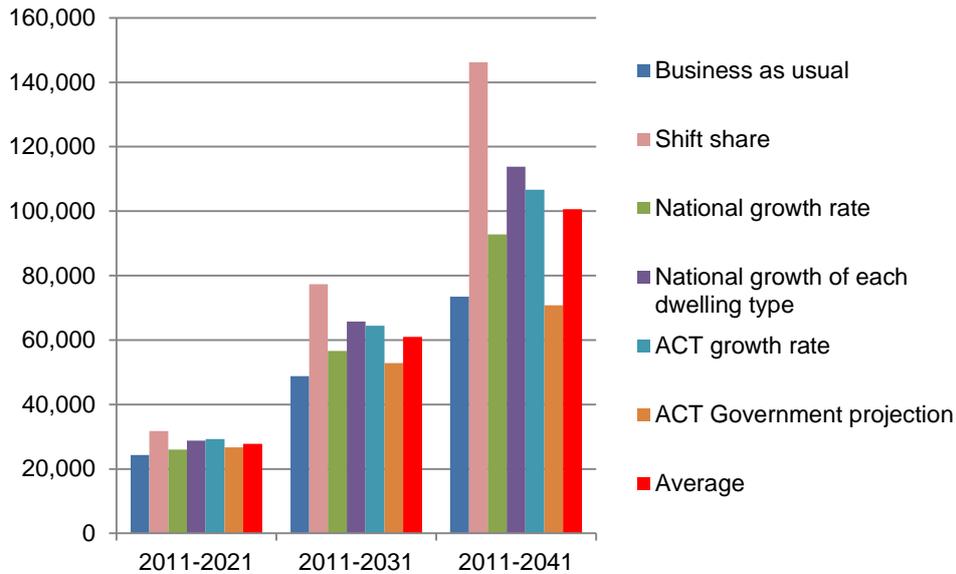
The shift-share projection appears quite high compared to other projections made in this study and by the ACT Government. However the ACT Government's projections appear conservative as they expect a slowing in the growth of new dwelling construction beyond 2030 (refer to the Environmental and Sustainable Development Directorate's Housing background paper at [http://timetotalk.act.gov.au/storage/Planning\\_Background07\\_Housing.pdf](http://timetotalk.act.gov.au/storage/Planning_Background07_Housing.pdf)). This results in the ACT Government's projection ranking lower than the business as usual approach by 2041.

	<b>2011 (base year)</b>	<b>2021</b>	<b>2031</b>	<b>2041</b>
Business as usual	145,169	169,519	193,986	218,632
Shift share	145,169	176,888	222,481	291,381
National growth rate (17.9067% over ten years)	145,169	171,164	201,814	237,953
National growth of each dwelling type	145,169	173,989	210,857	258,919
ACT growth rate (20.15% over ten years)	145,169	174,426	209,581	251,819
ACT Government projection	144,813*	171,896	198,064	215,995
<b>Average</b>		<b>172,980</b>	<b>206,131</b>	<b>245,783</b>

Comparison of all dwelling projections for the ACT to 2041

\*= projected figure, based on a 2006 base year

An average of the six projections produces a scenario of 173,000 dwellings in the ACT by 2021, and 245,800 by 2041. This equates to 27,800 new dwellings between 2011 and 2021, and 100,600 between 2011 and 2041.



Projections of additional dwellings to be built in the ACT between 2011 and 2041 (using 2011 as a base year, valued at zero).

Of the new dwellings to be built in the ACT between 2011 and 2041, it is projected that around 35-40 per cent will be detached dwellings, and 35-40 per cent flats, units or apartments.

#### Dwelling number projections for the surrounding region

Business as usual scenario: If the same number of dwellings in the same dwelling structure types were built in the surrounding region within subsequent ten year periods as they did between 2001 and 2011, the surrounding region would end up with around 72,500 dwellings by 2041.

Shift-share by dwelling structure type: Using projections based on the growth of key dwelling structure groups, the surrounding region could have as many as 87,400 dwellings by 2041. This aggressive scenario was borne by a 70% growth in the development of units built in blocks of four or more storeys between 2001 and 2011, being projected into subsequent ten year periods.

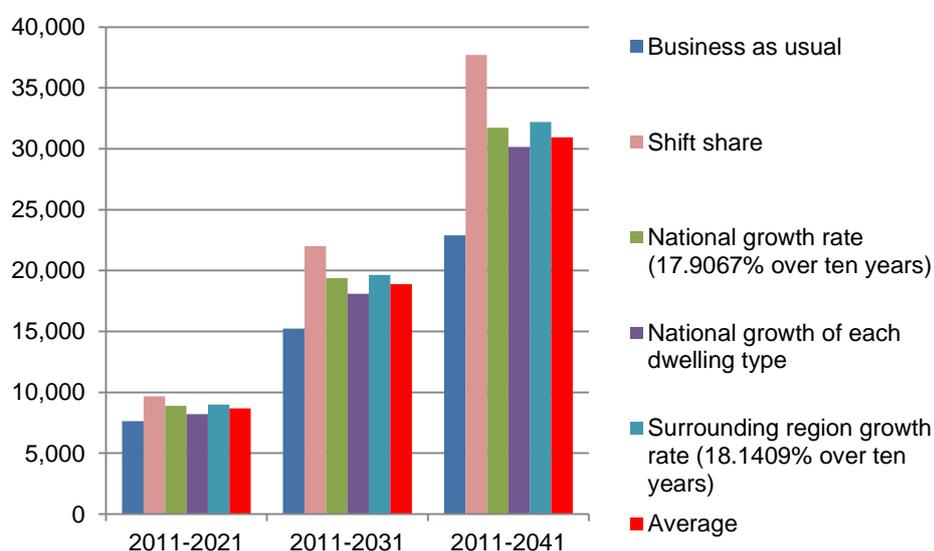
Growth consistent with that experienced across Australia between 2001 and 2011: Using projections based on the growth rates of dwelling structure types across Australia, the surrounding region could have between 79,800 and 81,400 dwellings by 2041.

Growth consistent with that experienced in the surrounding region between 2001 and 2011: Using projections based on the total percentage growth of the surrounding region dwelling stock between 2001 and 2011, the surrounding region could have 81,800 dwellings by 2041.

	2011 (base year)	2021	2031	2041
Business as usual	49,631	57,252	64,873	72,527
Shift share	49,631	59,310	71,618	87,353
National growth rate (17.9067% over ten years)	49,631	58,518	68,996	81,353
National growth of each dwelling type	49,631	57,823	67,724	79,781
Surrounding region growth rate (18.1409% over ten years)	49,631	58,635	69,273	81,838
<b>Average</b>	<b>49,631</b>	<b>58,308</b>	<b>68,497</b>	<b>80,570</b>

Comparison of dwelling projections for the surrounding region to 2041

Using an average of the above projections, the surrounding region could see the creation of around 8,700 new dwellings between 2011 and 2021, and 30,900 between 2011 and 2041. Seventy seven per cent of new dwellings in the surrounding region between 2011 and 2041 are projected to be detached dwellings, with seventeen per cent projected to be semi-detached.



Projections of additional dwellings to be built in the surrounding region between 2011 and 2041 (using 2011 as a base year, valued at zero)

Combining the average projections for the ACT and surrounding region produces a possible dwelling stock of around 231,300 by 2021, and 326,400 by 2041. This would see the creation of around 36,500 new dwellings across the ACT and surrounding region between 2011 and 2021, and 131,550 between 2011 and 2041.

New dwelling projections 2011-2041	2011	2021	2031	2041
ACT	145,169	172,980	206,131	245,783
Surrounding region	49,631	58,308	68,497	80,570
<b>Total</b>	<b>194,800</b>	<b>231,288</b>	<b>274,627</b>	<b>326,353</b>

Average of projections for dwelling stock in the ACT and surrounding region between 2011 and 2041

When compared against the population projections shown in section 4, these projections would result in a continuation of the downward trend in the number of people per dwelling.

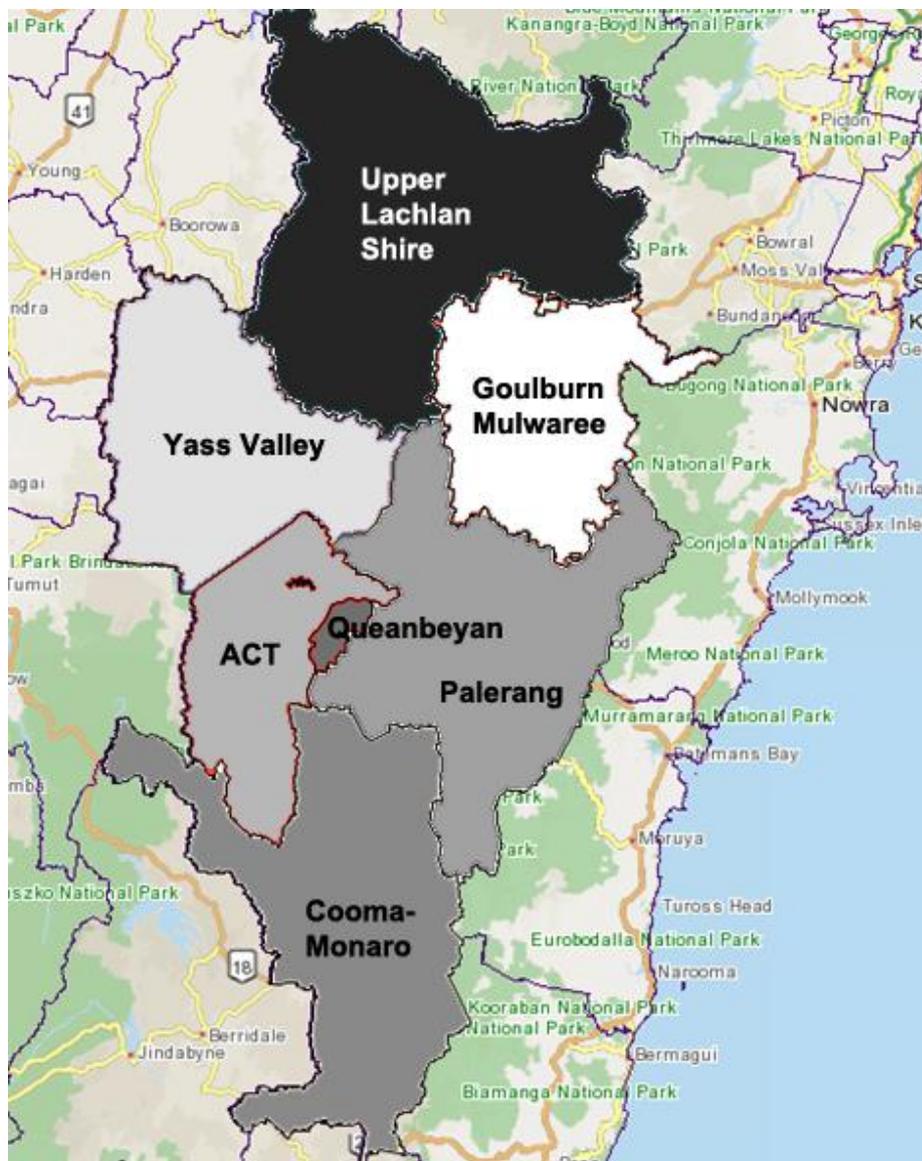
## Methodology

The purpose of this report is to provide scoping studies for The Riverview Group's proposed West Belconnen housing project. It includes research at a national level, comparing the Canberra region with other major Australian cities. It also includes research at a regional level, comparing the ACT and the surrounding region. Our assessment of housing and sustainable development over the next 30 years in the Canberra region is captured primarily through the use of ABS Census data.

### Spatial Scale

The Canberra Region is defined as the ACT plus the Queanbeyan Local Government Area (LGA).

The ACT and surrounding region is defined as the ACT plus the Queanbeyan, Palerang, Yass Valley, Goulburn Mulwaree, Upper Lachlan, and Cooma-Monaro LGAs.



## Section 1 – Canberra as a competitive region

An Urban Competitiveness Index (UCI) has been included in this report, to compare the growth of Australia's 18 major cities of more than 100,000 people. It uses the indicators of employment growth, population growth and income growth. The UCI is calculated by the total sum of the three indicators for each given city, and is supplemented by a range of productivity, sustainability, and liveability indicators. Each indicator is based on ABS Census data.

Selected data from the Urban Competitiveness Index includes:

UCI Indicator – Population Growth:

- Population growth is calculated by the usual resident growth between 2006 and 2011.

UCI Indicator – Employment Growth:

- Employment growth is based on place of work between 2006 and 2011.

UCI Indicator – High Income Growth:

- High income growth is defined by the growth in the proportion of people with a total personal income of \$104,000 or more annually. The income indicator is calculated by using usual resident data between 2006 and 2011.

Productivity Indicator – Labour Force Qualifications

- Labour force qualifications are an indicator of productivity because highly educated and trained people drive innovation in cities. They are measured by calculating the proportion of people with higher levels of qualifications - defined as a Postgraduate Degree, Graduate Diploma and Graduate Certificate, and/or Bachelor Degree - as classified in the Australian Standard Classification of Education (ASCED 2001).

Productivity Indicator – Research and Innovation

- Innovation and research has been included as a proxy for productivity as new products, processes and organisational methods are key drivers of productivity. Research and innovation is defined by the proportion of people working in the following industry groups:
  1. P – Tertiary Education
  2. M691 – Scientific Research Services
  3. M695 – Market Research and Statistical Services

Research and innovation industries are classified by the Australian and New Zealand Standard Classification (ANZSIC 2006).

Productivity Indicator – Knowledge Intensive Industry

- Knowledge intensive industries are another way of capturing the level of innovation in a city. Knowledge intensive industries are calculated by the proportion of people working within the following industry groups:
  1. J - Information Media and Telecommunications
  2. K - Financial and Insurance Services
  3. L - Rental, Hiring and Real Estate Services
  4. M - Professional, Scientific and Technical Services

Knowledge intensive industries are classified by the Australian and New Zealand Standard Classification (ANZSIC 2006).

#### Productivity Indicator – Higher Level of Occupation

- Higher level of occupation has been calculated by the proportion of people employed as a manager, or professional, as classified in the Australian and New Zealand Standard Classification of Occupations (ANZSCO 2006).

#### Productivity Indicator – Information Technology

- The quality of internet is essential infrastructure with a heavy bearing for productivity. Information technology is calculated by the proportion of dwellings with a broadband connection.

#### Liveability – Cost of Living

- Cost of living is calculated in two parts: high rent and high mortgage. High rent is calculated by the proportion of occupied private dwellings paying rent greater than \$374 per week. High mortgage is calculated by the proportion of occupied private dwellings paying mortgage greater than \$2,999 per month.

### **Section 1 – Housing Affordability Data**

- Households where monthly mortgage payments are 30%, or greater, of household income
- Households where weekly rent payments are 30%, or greater, of household income

### **Section 2 – National People Movement**

People movement between Australia's major cities has been captured using the ABS 2011 census datasets on people movement in 2006-2011, using the ABS Five Years Usual Residence Indicator. This section includes inwards and outwards people movement to and from the Canberra Region.

### **Section 3 – Regional People Movement**

Regional People Movement has been captured using the ABS 2011 census datasets on people movement in 2006-2011, using the ABS Five Years Usual Residence Indicator. This section includes inwards and outwards people movement to and from the ACT to surrounding LGAs.

## **Section 4 – Social/ demographic projections**

Data sets relating to ten-year demographic and social change (2001-2011) in the ACT and surrounding region include:

- ACT Population 2001
- ACT Population 2011
- Surrounding Region Population 2001
- Surrounding Region Population 2011
- ACT Age Cohorts 2001
- ACT Age Cohorts 2011
- Surrounding Region Age Cohorts 2001
- Surrounding Region Age Cohorts 2011
- ACT Gender Cohorts 2001
- ACT Gender Cohorts 2011
- Surrounding Region Gender Cohorts 2001
- Surrounding Region Gender Cohorts 2011

These data sets were the basis for shift-share population projections to 2021, 2031, and 2041.

## **Section 5 – Journey to Work**

The Journey to Work patterns of people from the ACT and surrounding region who work in the ACT, have been assessed through the use of 2011 Census data. It includes topics such as mode(s) of transport used to commute to work, and comparing Place of Residence and Place of Work data.

Median travel distances of workers commuting from the surrounding region to the ACT have also been estimated, by using the council chambers of each LGA in the surrounding region as a starting point for Journey to Work trips, and City Hill in Civic as the finishing point.

## **Section 6 – Housing choices and prices**

This section is based on ABS 2011 dwelling data including:

- Dwelling type ACT and Region
- People per dwelling ACT and Region
- Median income ACT and Region
- Median rent ACT and Region
- Median mortgage ACT and Region
- Households where mortgage payments are 30%, or greater, of household income
- Households where rent payments are 30%, or greater, of household income

### Projection Analysis (in sections 3, 4, and 6)

A shift-share analysis is employed to analyse the trends and changes in population over a set amount of time. In the case of this research, it analyses projected changes over three ten year timeframes (2011-2021, 2021-2031 and 2031-2041). It evaluates the independence of local population compared to that of a region or nation, thereby identifying the bearing of local events on the population. It reveals the retrospective source of growth for a local population by dividing the analysis into three components, the national shift, the population mix, and the regional shift. The three components are discussed in the table below.

Formula <sup>1</sup>	Description
$\text{National Share} = \frac{\text{ilocal}_j^t \cdot \text{AUS}^t / \text{AUS}^{t-1}}{\text{ilocal}_j^{t-1} \cdot \text{AUS}^{t-1} / \text{AUS}^{t-1}}$	This is a measure of how much the population in the local area <i>j</i> increased as a result of growth in the national population between the years 2001 and 2011.
$\text{Population Mix} = \left( \frac{\text{ilocal}_j^t \cdot \text{iAUS}^t / \text{iAUS}^{t-1}}{\text{ilocal}_j^{t-1} \cdot \text{iAUS}^{t-1} / \text{iAUS}^{t-1}} \right) - \text{NS}$	The population mix ascertains the pace of growth in each local area when compared to national growth rates.
$\text{Regional Shift} = \frac{\text{ilocal}_j^t \cdot \text{iAUS}^t / \text{iAUS}^{t-1}}{\text{ilocal}_j^{t-1} \cdot \text{iAUS}^{t-1} / \text{iAUS}^{t-1}} - \frac{\text{ilocal}_j^t \cdot \text{AUS}^t / \text{AUS}^{t-1}}{\text{ilocal}_j^{t-1} \cdot \text{AUS}^{t-1} / \text{AUS}^{t-1}}$	This reveals which local areas are leading or lagging. A leading local area is defined by one that has a growth rate that is greater than its Australian growth rate. Whereas a lagging local area is one that has a growth rate less than the national level.

These three elements are combined to form an overall figure of growth across a given area over a set time frame. In the case of population growth between the ACT and the surrounding region (Section 3), this analysis has been carried out on people movement figures over five year periods. In the cases of demographic projections (Section 4) and dwelling structure type projections (Section 6), this has been carried out over a ten year period, using growth rates in relevant components (namely age and gender in Section 4, and dwelling structure types – such as separate homes, semi-detached dwellings, and units and apartments – in Section 6).

Projections based on shift-share analysis anticipate growth from previous years (which has been relatively high across the ACT and surrounding region compared to Australia as a whole) to continue

<sup>1</sup>Explanation of Shift-share subscripts and formulae:

- $\text{ilocal}_j^{t-1}$  number of people in the local area *j* at the beginning of the analysis period (t-1)
- $\text{ilocal}_j^t$  number of people in the local area at the end of the analysis period (t)
- $\text{AUS}^{t-1}$  total number of people in the nation at the beginning of the analysis period (t-1)
- $\text{AUS}^t$  total number of people in the nation at the end of the analysis period (t)
- $\text{iAUS}^{t-1}$  number of people, nationwide, in given field at the beginning of the analysis period (t-1)
- $\text{iAUS}^t$  number of people, nationwide, in given field at the end of the analysis period (t)

into the future. As such, projections based on shift-share analysis are likely to be aggressive, and at the upper-end of a range of potential outcomes. Such projections do not account for unforeseen circumstances, such as a substantial economic slowdown, or reduction in life expectancy ages, that could render them unreasonably high. Given the strong recent growth of the ACT and surrounding region, and its potential to attract further people and industry, projections based on shift-share analysis should be considered as one of many possibilities.





## Section 1: Canberra as a Competitive Region

The Canberra region is one of the most economically competitive and liveable urban centres in Australia. A comparison on a range of factors between the Canberra region and Australia's 17 other cities with populations greater than 100,000 (refer to Figure 1.1), provides a backdrop for the Canberra region as a desirable place to live and work. This desirability is blighted, however, by housing affordability issues. Canberra region's competitiveness could be enhanced if affordability issues are addressed; housing affordability is an issue of strategic importance for the Canberra region's sustainable development in economic, social and environmental dimensions.

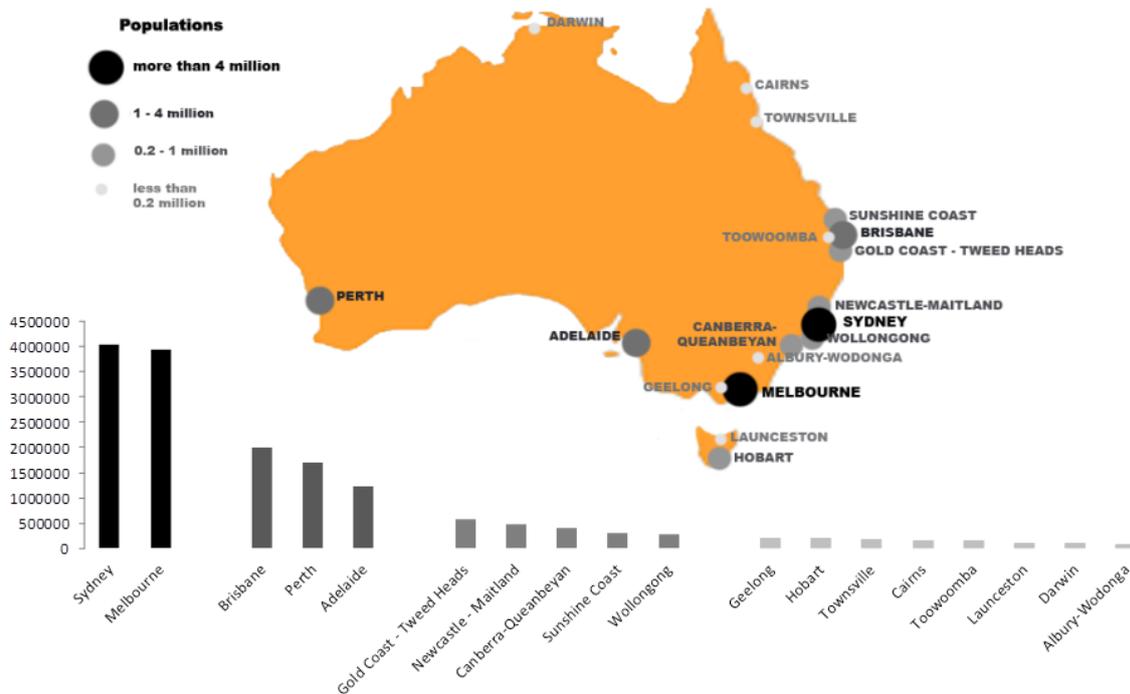


Figure 1.1 Major Australian Cities

### 1.1 Urban Competitiveness Index

The Urban Competitiveness Index (UCI) provides Australian urban leaders and citizens with evidence-based understanding of the competitive strengths and weaknesses of their cities. The UCI measures the competitiveness of Australian major cities with a population of more than 100,000. In so doing, it measures the determinants of urban competitiveness for Australian cities within the three dimensions of productivity, sustainability and liveability. The UCI is a composite index based on the weighting on the cities' progress in population, employment and income.

Canberra-Queanbeyan leads the UCI for cities with a population of 200,000 to 1 million (refer to Figure 1.2). The region's UCI score 0.29 is the fourth highest in the country behind cities like Perth

who enjoyed the highest score due to a 16.0 per cent increase in employment between 2006 and 2011.

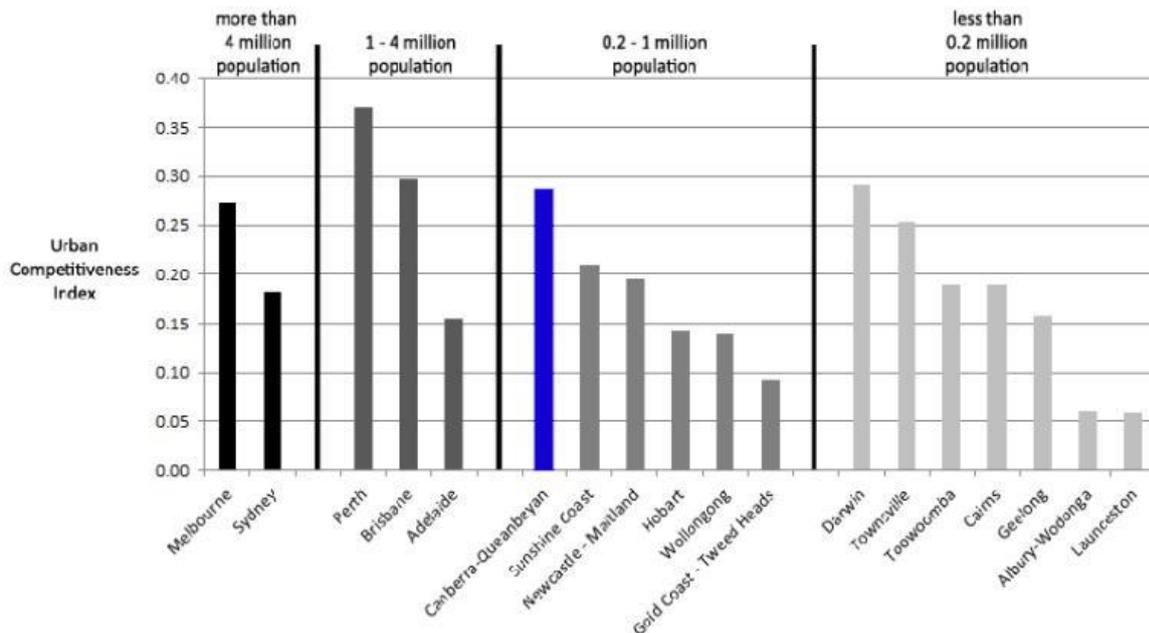


Figure 1.2 Urban Competitiveness Index, population breakdown

Population growth is an indicator of a city's competitiveness, as a fast-growing population in a city shows its capacity to attract people and business. All 18 of Australia's major cities experienced population growth between 2006 and 2011 (refer to Figure 1.3). Perth (14.1%) experienced the highest rate of growth, with its population rising from 1.5 million to 1.7 million people. Melbourne (13.9%) was a close second, followed by the four Queensland cities of Brisbane (13.6%), Cairns (13.5%), Toowoomba (13%) and Townsville (12.8%). Canberra-Queanbeyan's population grew at a stable rate of 2.0% a year (a total of 10%) between 2006 and 2011. The Canberra-Queanbeyan growth rate placed it as the 9<sup>th</sup> fastest growing major city in Australia. Whilst Launceston (3.5%) and Wollongong (4.7%) had the lowest rates of growth, and were the only two cities to grow by less than five per cent.

Melbourne had the largest numerical increase in population, with almost 0.5 million people added to the city between 2006 and 2011. Sydney had the second largest numerical increase despite having a moderate growth rate (11th), due to its comparatively larger population base in 2006. In Canberra-Queanbeyan the population grew from 359,300 people in 2006 to 394,578 people in 2011.

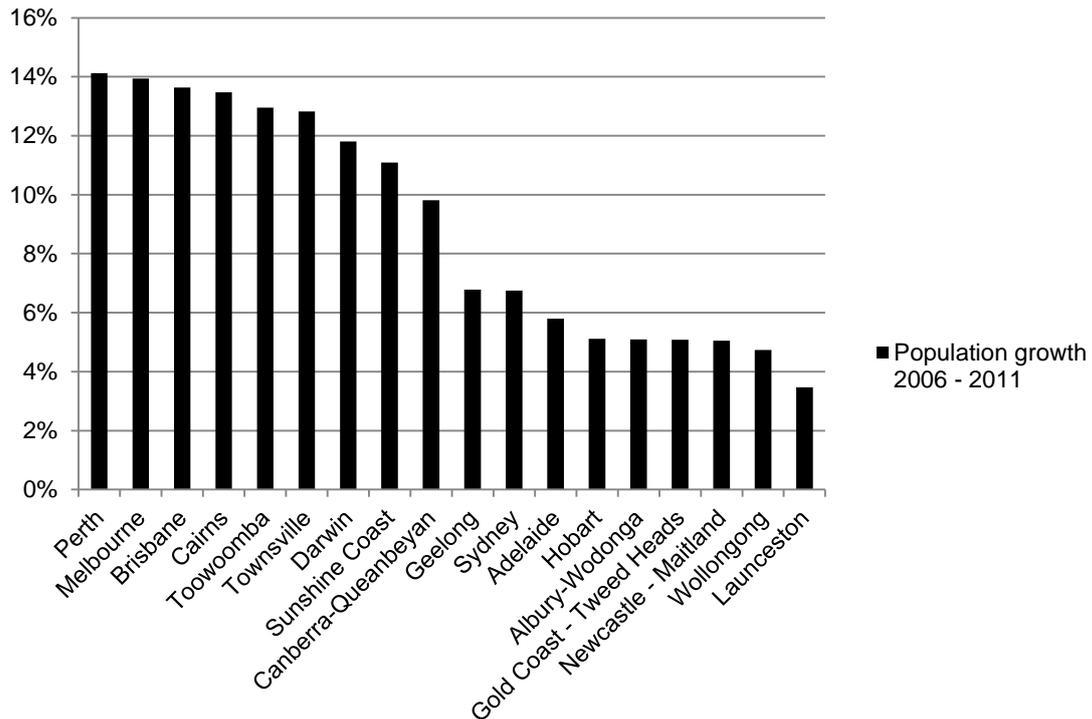


Figure 1.3 Major Australian Cities Population Growth 2006 - 2011

Employment growth is another indicator of a city's competitiveness. Growth in the number of people employed in a city shows its capacity to create jobs and opportunities for both people and businesses.

All but one of Australia's 18 major cities experienced employment growth between 2006 and 2011. Again Perth (16%) experienced the highest rate of growth, with an extra 102,131 new job opportunities created. Darwin (11.3%) was a distant second, followed by Brisbane (11%) and Canberra-Queanbeyan (10.7%). However, Melbourne again had the largest numerical increase in employment growth, creating 137,594 extra jobs between 2006 and 2011. Sydney (+100,175) was third behind Perth, despite again ranking 11<sup>th</sup> in its proportion of growth.

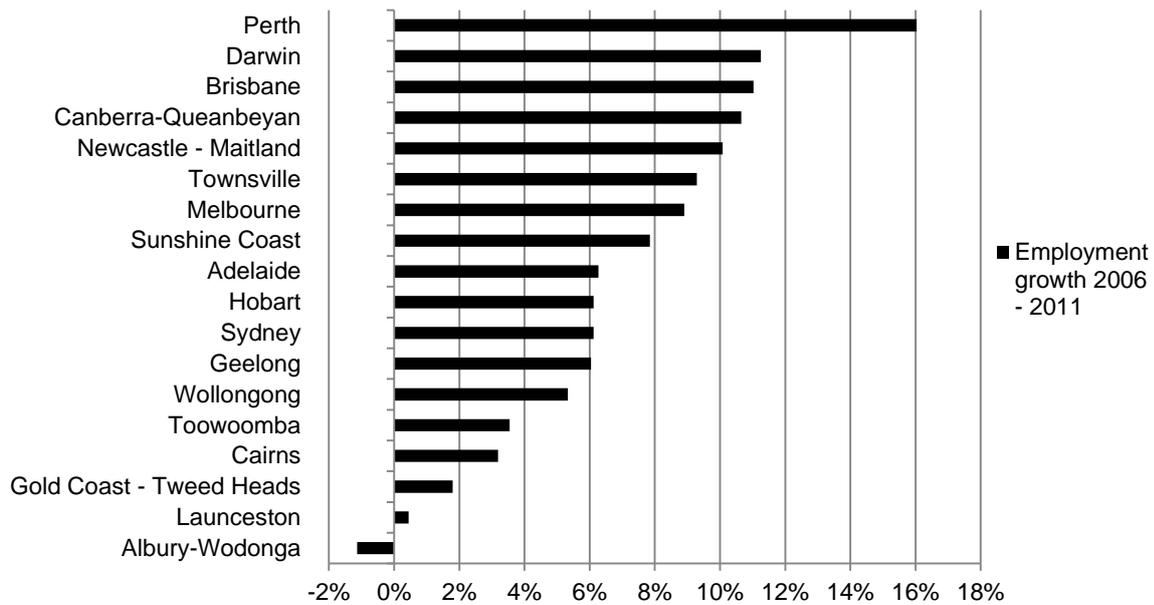


Figure 1.4 Major Australian Cities Employment Growth 2006 - 2011

Growth in the proportion of people earning higher incomes gives an indication of a city's progress in attracting globally mobile talent, workers in high-paying and high-level jobs, and in attracting high-value-added services. This is of increasing importance in a post-industrial economy, which has become increasingly reliant on white-collar service industries.

Canberra-Queanbeyan had the highest proportional growth in people earning a high income between 2006 and 2011. The region progressed more than any other city in Australia in attracting people with a higher level of income. Canberra-Queanbeyan had a proportional growth of people earning a high income of 8.2% which equates to 18,853 people between 2006 and 2011. Perth, Darwin and Sydney had the next highest proportional growth in the number of people with high incomes.

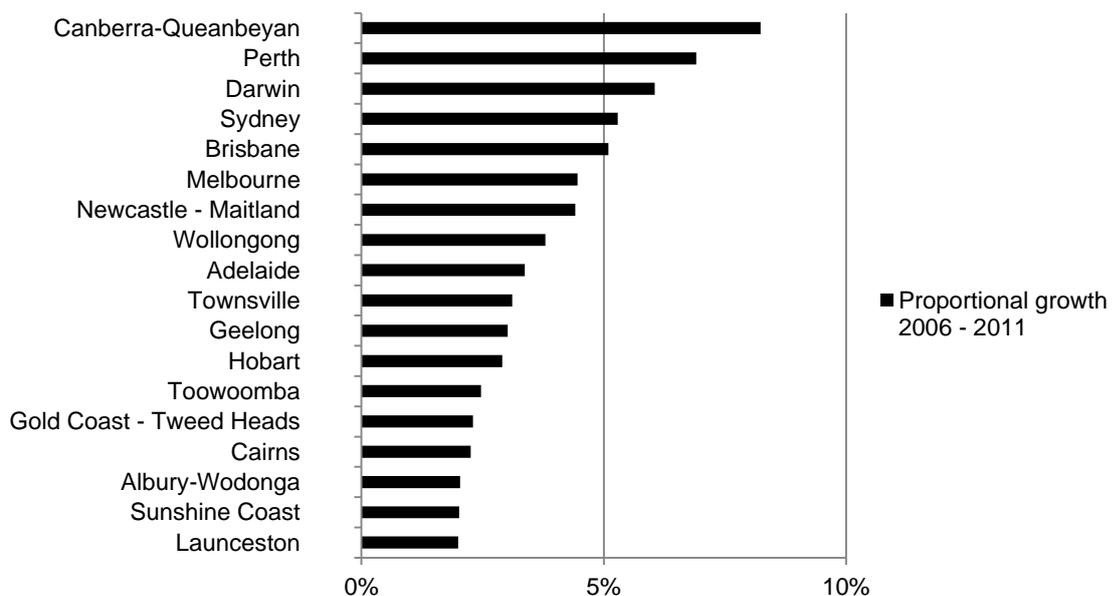


Figure 1.5 Major Australian Cities Proportional High Income Bracket Growth 2006 - 2011

## 1.2 Productivity

Cities are centres of economic activity, attracting people, business, commerce and trade nationally and globally. In order for a city to successfully attract investment and maximise its' contribution to the global economy, it needs to operate efficiently. Canberra-Queanbeyan is leading the Australia's major cities in its level of productivity. The city is the most efficient in maximising its capability as an economic hub, leading the other 17 major Australian cities in major productivity indicators.

A factor of productivity a city can achieve is the participation of people in the labour force. A larger proportion of people in the labour force leads to a larger capacity for higher levels of productivity and in turn a more competitive city. Only Darwin (72%) and Canberra-Queanbeyan (71%) managed a participation rate above 70%. The Canberra-Queanbeyan region had the second highest participation rate of the 18 cities studied. Queensland's Sunshine Coast and Toowoomba had the lowest proportions of people participating in the work force. Participation rates were quite even between many of the major cities, with only a 9% gap between the Sunshine Coast and Darwin.

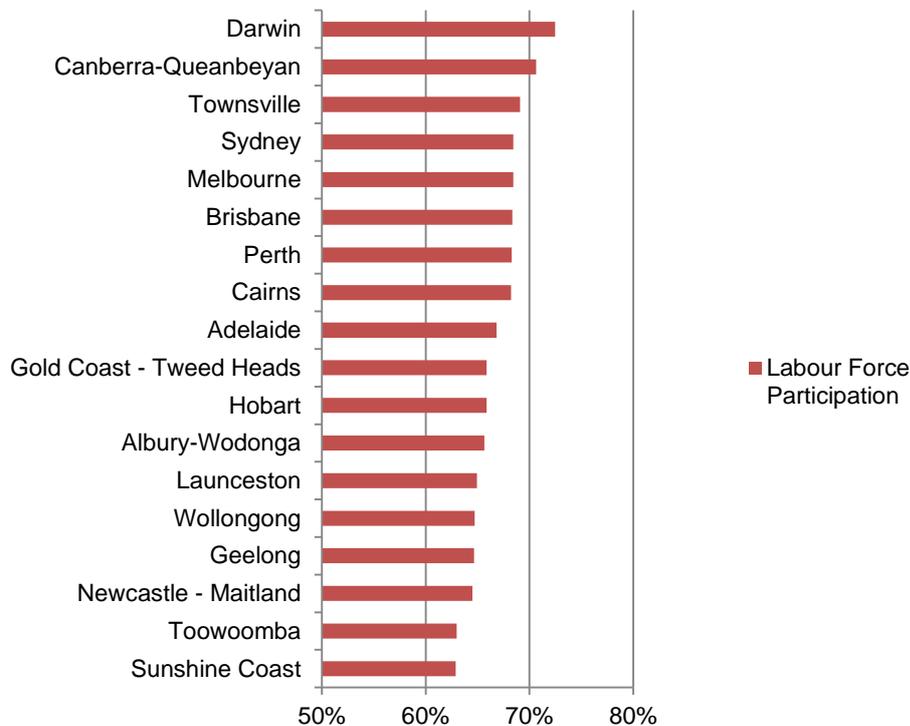


Figure 1.6 Major Australian Cities Labour Force Participation

Higher education and the qualifications that stem from it play a fundamental role in driving Australia's productivity and innovation. Workers with high levels of qualifications have been defined in this study as people who have an undergraduate university degree or above. This group of people can help maximise productivity through driving innovation and in turn increasing Australia's prominence in the Asian Century. Canberra-Queanbeyan had the highest proportion of people with higher levels of qualifications - over 25% of its residents had a Bachelor's Degree, Graduate Diploma or Graduate Certificate, or a Postgraduate Degree. Sydney was a distant second - 6 percentage points behind Canberra-Queanbeyan - however Sydney had the highest number of people with higher levels of qualifications at 823,771. State and territory capital cities made up the top eight positions in this category.

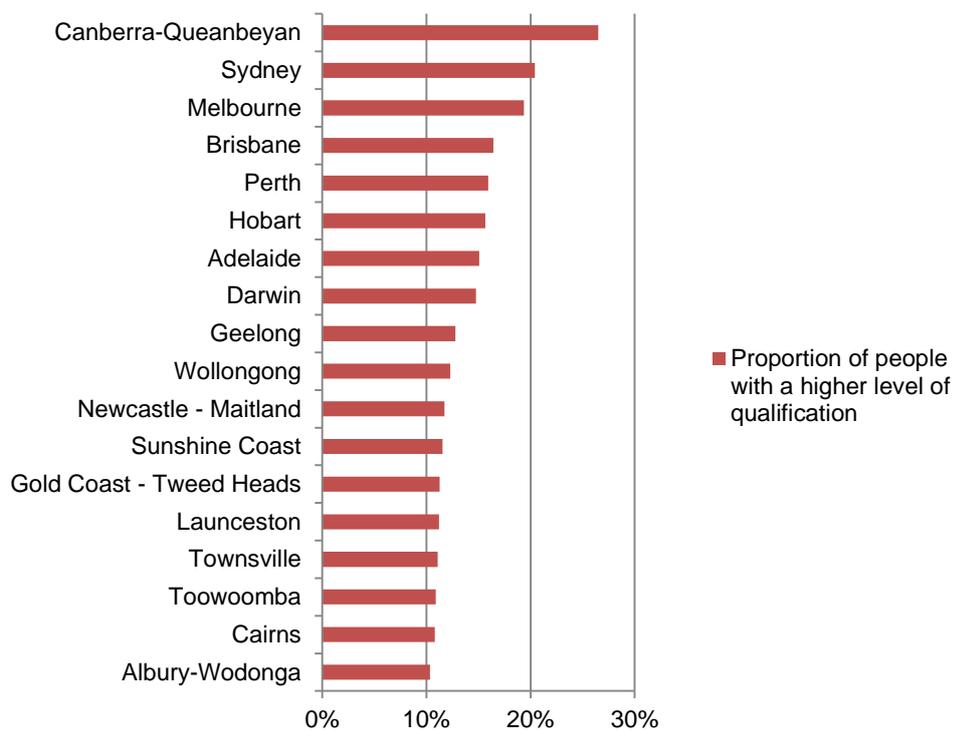


Figure 1.7 Major Australian Cities High Level Qualifications

Innovation and research are essential to the growth of productivity in Australia's cities. New products, processes and organisational methods are the drivers of productivity. Innovation and research are particularly powered by people working in fields such as academia and scientific research. As such, the proportion of these workers across Australia's major cities has been adopted as a measure of productivity. Canberra-Queanbeyan had the highest share of people working in research and innovation related industries (5.9%). This was considerably higher than the proportion of people working in research and innovation in the second-ranked city of Wollongong (4.2%).

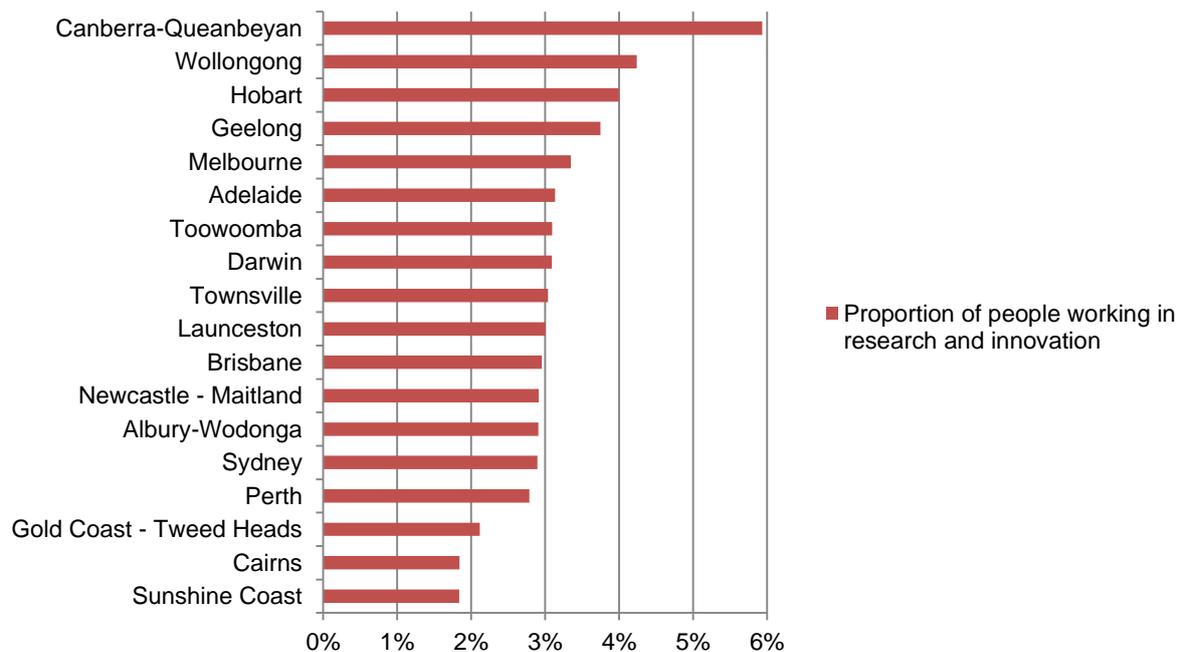


Figure 1.8 Major Australian Cities Research and Innovation

Measuring the size of knowledge intensive industries within a given city is another way of capturing the level of innovation that drives productivity. Knowledge intensive industries include fields such as finance and insurance, legal and regulatory services, and other professional services. These industries are a major contributor to the Australian and global economy, as people in these industries drive affluence and competition, and subsequently enhance local market depth. Sydney comfortably had the highest proportion of knowledge intensive workers within its workforce. Twenty three per cent or more than 400,000 people were employed in knowledge intensive industries across Sydney. Melbourne (18.9%) ranked second, ahead of the other six State and Territory capitals. Canberra-Queanbeyan had a high proportion of people employed in knowledge intensive industries. The city had 15.2 per cent of its working population employed in knowledge intensive industries, placing it 5<sup>th</sup> out of the 18 major cities. This placed Canberra-Queanbeyan above Adelaide, Gold Coast-Tweed Heads and Newcastle-Maitland which all have a larger resident population base.

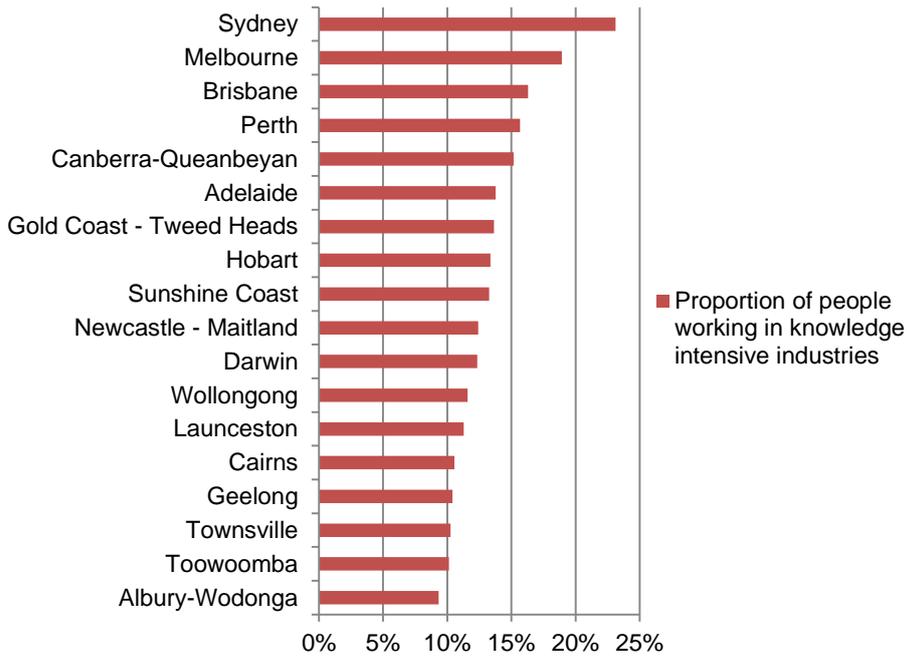


Figure 1.9 Major Australian Cites Knowledge Intensive Workers

The proportion of workers with high level occupations within a city is a further measure of potential productivity. People working in managerial or professional roles make important decisions on business strategy and productivity in the Australian economy. The location of workers in high level occupations also tend to reflect centres of command and control within a given region or country. Canberra-Queanbeyan comfortably had the highest proportion of people with a higher level of occupation. Forty-seven per cent of the Canberra region’s workforce, or 96,937 of its workers, were in managerial or professional roles. The capital cities again made up the top eight rankings, with Sydney (2nd, 42%) and Melbourne (3rd, 39%) home to the highest numbers of people employed in higher level occupations.

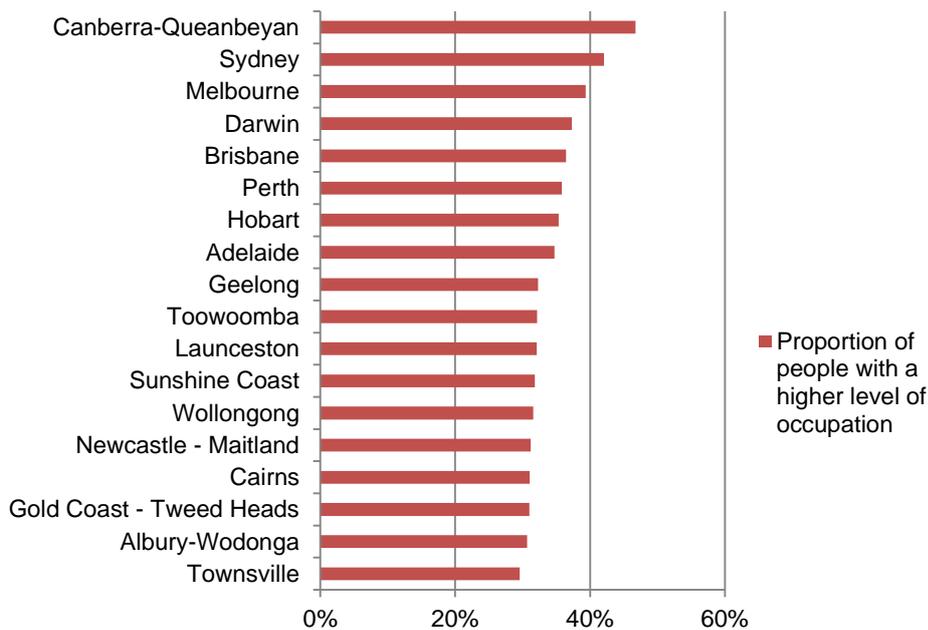


Figure 1.10 Major Australian Cities Higher Level Occupation

The internet is essential infrastructure for the Australian productivity. The quality and accessibility of internet services in our cities directly impacts on their ability to be productive. The standard of information technology services in Australia's major cities has been measured, through the proportion of dwellings with a broadband connection. Canberra-Queanbeyan was the most advanced major Australian city for broadband internet access, reaching 69.7% of dwellings. It was closely followed by Brisbane (67.4%) and Sydney (66.4%). Results in this category were relatively even, with only a 15% gap between Canberra-Queanbeyan and the bottom-ranked Launceston (54.9%). Many of Queensland's regional cities rated well in this category, particularly the Sunshine Coast (6th, 61.1%) and Townsville (7th, 60.7%).

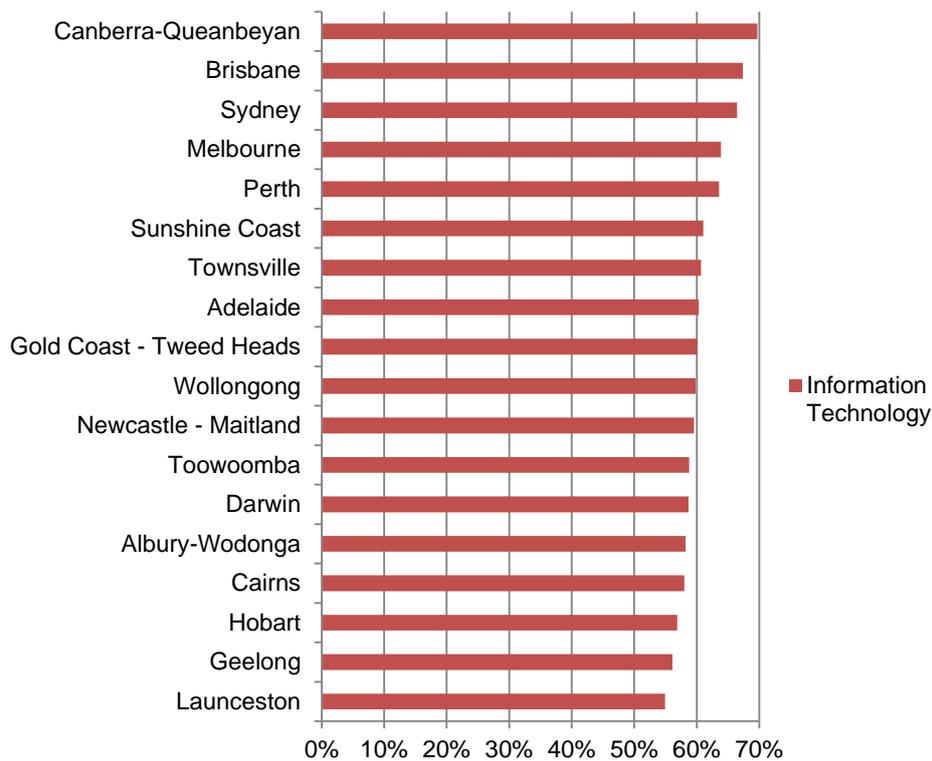


Figure 1.11 Major Australian Cities



Productivity Indicators										
	Labour Force Qualifications		Research and Innovation		Knowledge Intensive Industry		Higher Level of Occupation		Information Technology	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Adelaide</b>	182,926	15%	16,093	3%	70,704	14%	178,312	35%	320,007	60%
<b>Albury-Wodonga</b>	8,618	10%	1,093	3%	3,503	9%	11,514	31%	21,166	58%
<b>Brisbane</b>	328,973	16%	26,043	3%	143,633	16%	321,394	36%	536,056	67%
<b>Cairns</b>	16,897	11%	1,153	2%	6,596	11%	19,423	31%	41,257	58%
<b>Canberra-Queanbeyan</b>	104,546	26%	12,300	6%	31,453	15%	96,937	47%	112,642	70%
<b>Darwin</b>	14,859	15%	1,376	3%	5,497	12%	16,614	37%	24,048	59%
<b>Geelong</b>	26,949	13%	2,965	4%	8,229	10%	25,556	32%	53,730	56%
<b>Gold Coast - Tweed Heads</b>	65,338	11%	4,398	2%	28,355	14%	64,444	31%	157,126	60%
<b>Hobart</b>	32,505	16%	3,569	4%	11,920	13%	31,526	35%	53,196	57%
<b>Launceston</b>	11,778	11%	1,222	3%	4,586	11%	13,047	32%	26,085	55%
<b>Melbourne</b>	762,987	19%	56,295	3%	318,790	19%	661,790	39%	1,031,916	64%
<b>Newcastle - Maitland</b>	55,124	12%	5,417	3%	23,121	12%	58,014	31%	120,189	60%
<b>Perth</b>	272,821	16%	20,586	3%	115,741	16%	264,808	36%	458,311	64%
<b>Sunshine Coast</b>	35,438	12%	1,943	2%	14,022	13%	33,630	32%	86,971	61%
<b>Sydney</b>	823,771	20%	50,212	3%	401,561	23%	730,006	42%	1,041,749	66%
<b>Toowoomba</b>	16,475	11%	1,865	3%	6,111	10%	19,375	32%	37,170	59%
<b>Townsville</b>	19,333	11%	2,180	3%	7,360	10%	21,212	30%	44,273	61%
<b>Wollongong</b>	33,923	12%	3,871	4%	10,570	12%	28,836	32%	68,420	60%

Table 1.1 Major Australian Cities Productivity Indicators

### 1.3 Liveability and affordability

Liveability is the measure of a cities standard of living. It attracts new business and investments, boosting the cities competitiveness off the back of local economy growth and social cohesion. Canberra-Queanbeyan is a desirable place to live and work, but the city's liveability is blighted by housing affordability issues that could enhance the overall competitiveness if addressed.

The cost of living has a heavy impact on the liveability of a city. The high cost of basic necessities such as housing and food directly affect the day-to-day lives of people living in any given area. High costs for these necessities can have a negative bearing on society, often leading to further marginalisation of groups already disadvantaged or at risk of disadvantage.

High rental prices have been adopted as one of several proxies in this study to measure the cost of living in Australia's 18 largest cities. High cost of rent for this study has been classified as the proportion of private dwellings paying more than \$374 per week in rent. Launceston (3.3%) and Albury-Wodonga (4.4%) had the lowest proportion of dwellings paying more than \$374 a week for rent. Hobart (5th, 6.8%) had the lowest proportion of high rental prices of the eight capital cities. Darwin (23.2%) had the highest proportion of dwellings paying greater than \$374 per week for rent. It was followed by Gold Coast-Tweed Heads (19.8%) and Sydney (19.1%).

Seventeen per cent of Canberra-Queanbeyan's private dwellings are paying a high level of weekly rent. This was the 5<sup>th</sup> highest proportion of the 18 major cities, more expensive than cities such as Perth, Melbourne and Adelaide.

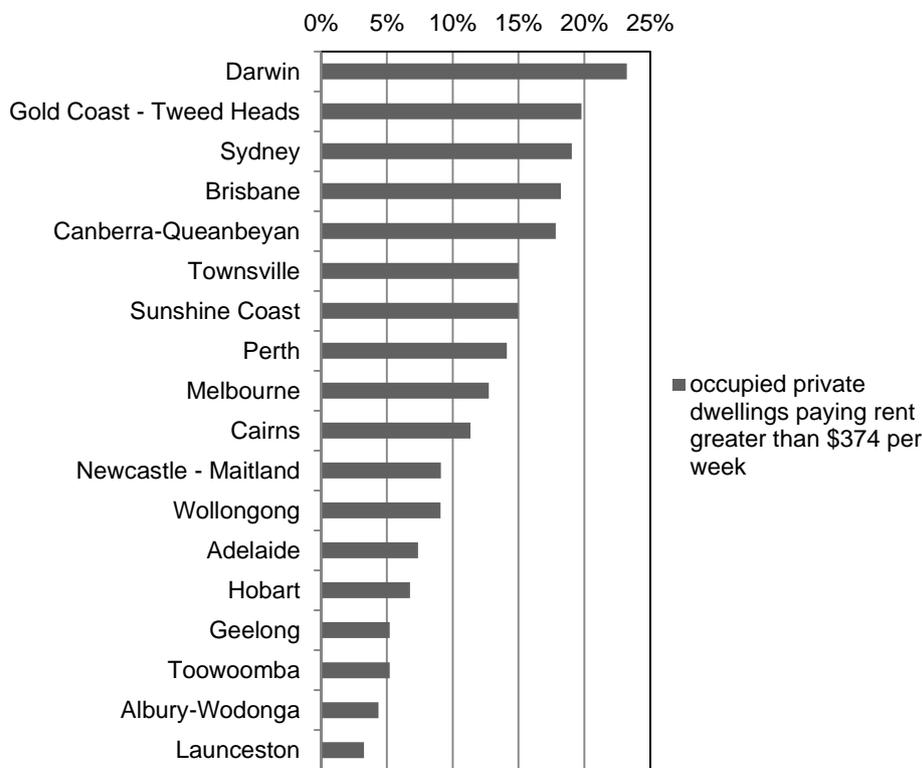


Figure 1.12 Major Australian Cities Proportion of Dwelling Paying a Higher Level of Rent

The proportion of households where rent payments are 30%, or greater, of household income has been adopted as the indicator of rental stress within the major Australian cities. Gold Coast – Tweed Heads had the highest proportion of households suffering from rental stress with 17% of households spending 30% or more of their household income on rent. At the other end of the scale Canberra-Queanbeyan has the smallest proportion of households where rent payments are 30%, or greater, of household income supported by the higher income. Only 8% of the region's households were suffering from rental stress in 2011.

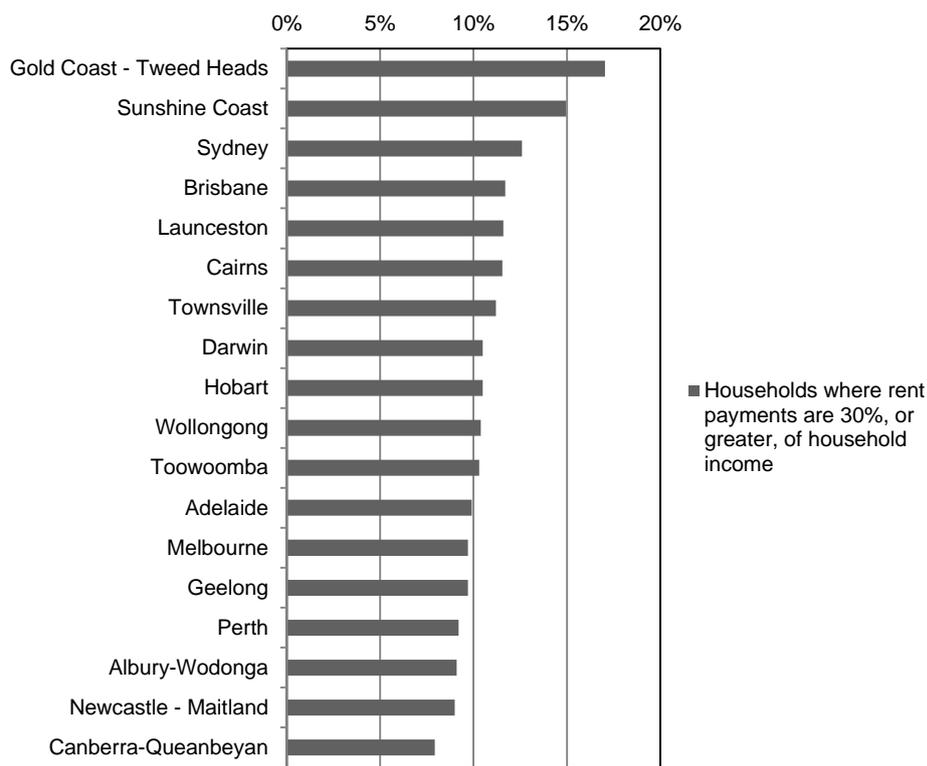


Figure 1.13 Major Australian Cities Rental Stress

Cost of living across the 18 cities has also been measured by the proportion of occupied private dwellings paying mortgage greater than \$2,999 per month. This level of payment has been classified as a higher level of mortgage repayment. Canberra-Queanbeyan outranked Sydney as the city with the largest proportion of dwellings paying greater than \$2,999 per month. Over 15 per cent of Canberra-Queanbeyan's private dwellings are paying a higher level of monthly mortgage. Canberra-Queanbeyan has the highest proportion of residents who pay the higher level of mortgage than any other major Australian city.

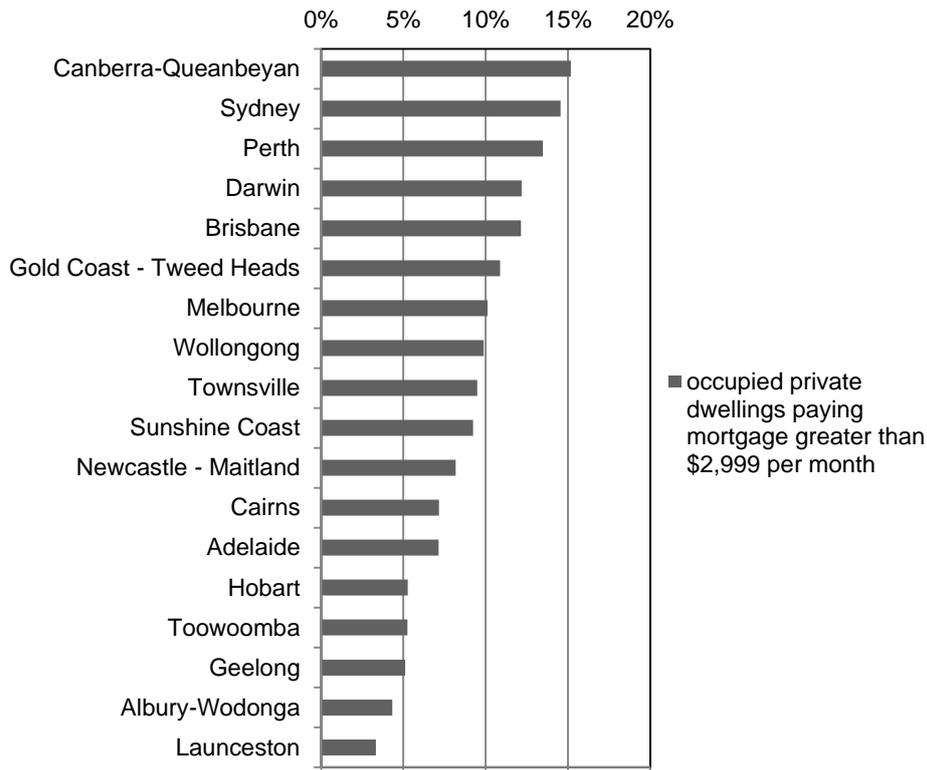


Figure 1.14 Major Australian Cities Proportion of Dwelling Paying a Higher Level of Mortgage

Another indicator of housing stress is the proportion of households where mortgage payments are 30%, or greater, of household income. This is a measure of the level of mortgage stress in the major Australian cities. Over 8% of households in the Canberra region are suffering from mortgage stress, which was the 13<sup>th</sup> highest of the major Australian cities. The cities of Launceston, Toowoomba, Albury-Wodonga, Hobart and Geelong all had less mortgage stress than the Canberra region. Gold Coast – Tweed Heads had the highest proportion of households suffering from mortgage and rental stress of the major cities.

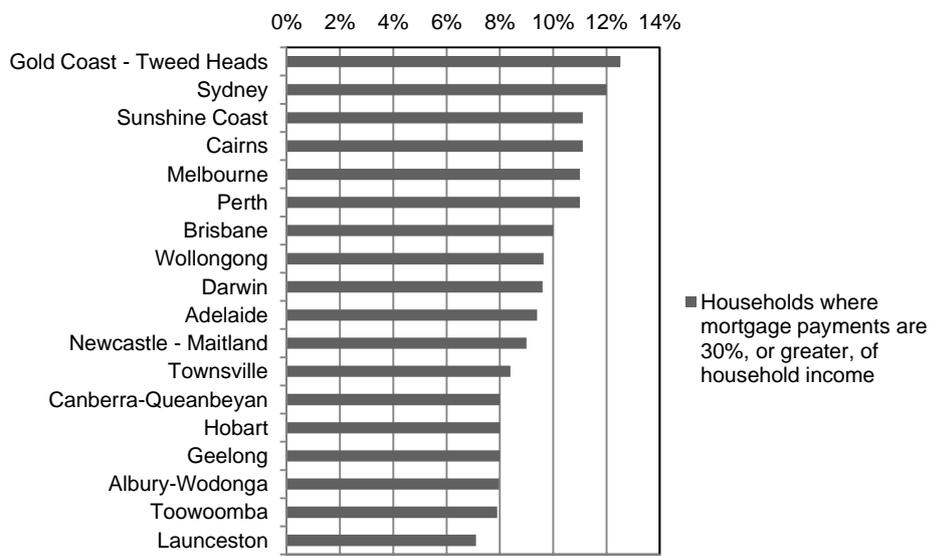


Figure 1.15 Major Australian Cities Mortgage Stress



## Section 2: National People Movement

People movement to and from the Canberra region occurs on many levels. This includes between major urban centres, to regional and remote areas, and intakes of people from overseas.

At the national level, this report assesses people movement between the Canberra region and Australia's 17 other major cities with populations greater than 100,000, as well as between the Canberra region and the rest of Australia as a whole. Measuring the movement between the Canberra region and Australia's other major cities will show the Canberra region's attractiveness to people living in many of our urban centres. The implications of people movement into and out of the Canberra region will aid in discussions regarding the provision of housing and housing affordability in the ACT.

### 2.1 People movement between the Canberra region, major Australian cities, and the rest of the nation

The Canberra region attracted more people from the other major Australian cities than from regional Australia between 2006 and 2011. The Canberra region attracted 31,097 people from the other major cities; the 6<sup>th</sup> highest amongst Australia's 18 major cities between 2006 and 2011 (refer also to figure 2.2). More than 47,000 people migrated from elsewhere in Australia (including the 31,097 from other major cities) to the Canberra region in the same five year period (refer also to figure 2.3).

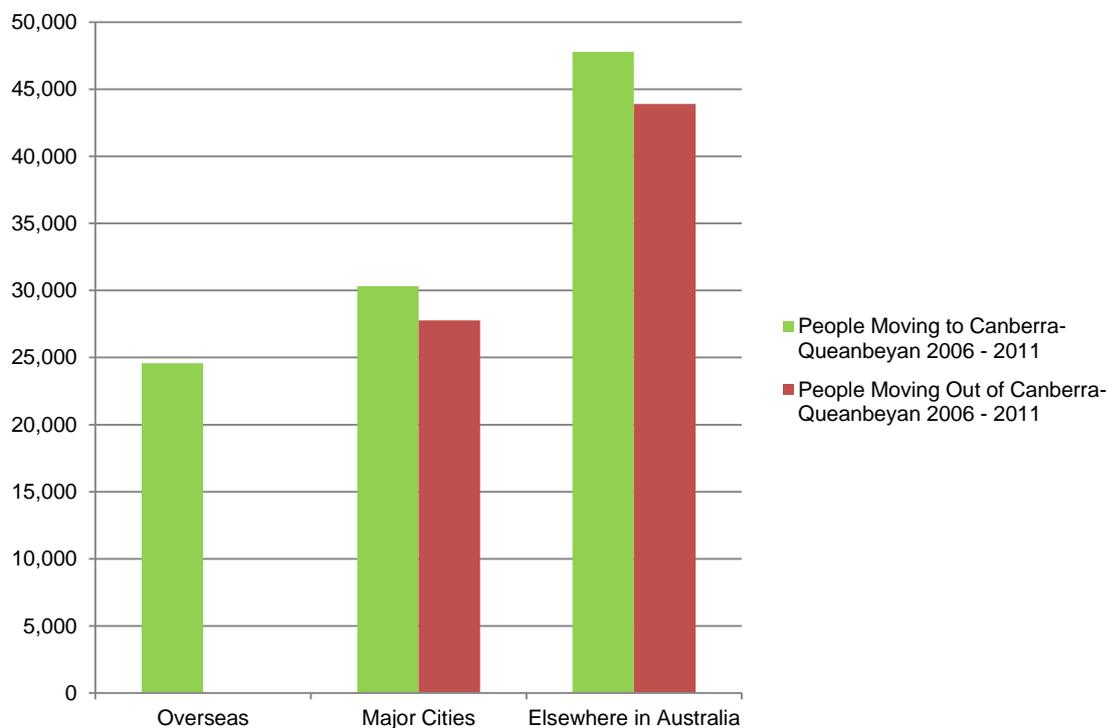


Figure 2.1 Canberra-Queanbeyan People Movement 2006-2011

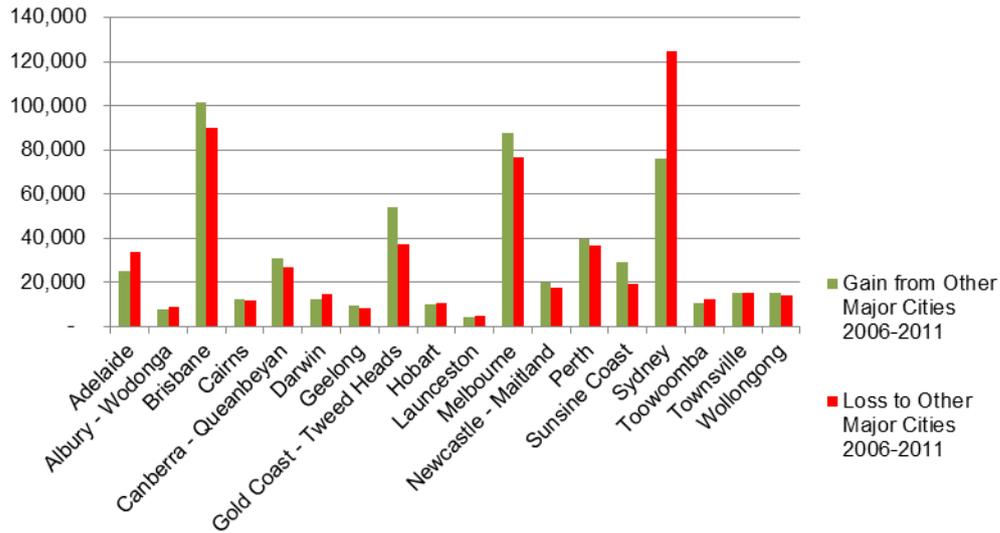


Figure 2.2 People Movement between Major Australian Cities 2006-2011

The Canberra region gained more people from Australia’s other major cities between 2006 and 2011 than it lost. As mentioned earlier, Canberra-Queanbeyan attracted 31,097 new residents from Australia’s other major cities. However it only lost 27,783 people to its urban counterparts over the same period, for a net gain of 3,314 people.

Between 2006 and 2011, Canberra-Queanbeyan lost the 7<sup>th</sup> highest number of people to the rest of Australia (43,901), when compared to other major Australian cities. However this was still 3,889 less than the 47,790 people the Canberra region gained from across Australia over the same period.

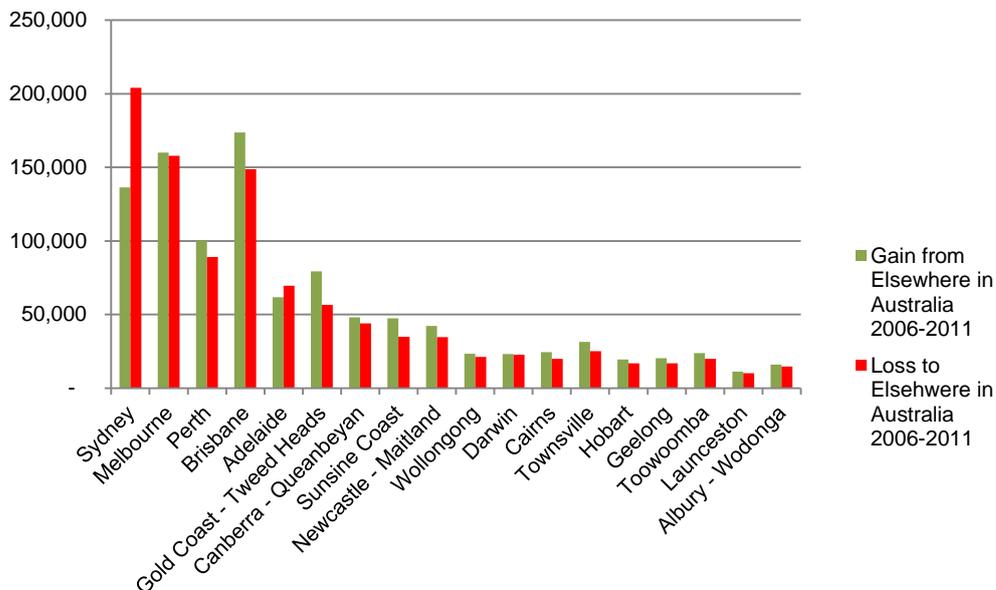


Figure 2.3 People Movement between Major Cities and the rest of Australia 2006-2011

Canberra-Queanbeyan attracted more people from Sydney than from any other major city in Australia between 2006 and 2011. More than 11,000 Sydney residents moved to Canberra-Queanbeyan,

accounting for more than 37.2% of the total people movement from the other major cities (refer to figure 2.5). This was more than double the people movement from Melbourne, which lost 4,957 people to the Canberra region during the five year period. The proportion of people moving from the other 17 major cities to Canberra-Queanbeyan on most part was strongly correlated to each city's population base. However, there were a few exceptions to this such as the city Albury-Wodonga - who lost the 11<sup>th</sup> most (596) people to Canberra-Queanbeyan despite being the smallest of the 17 other major cities. This disproportionate gain of people from Albury-Wodonga could be due to its geographical proximity (3<sup>rd</sup> closest major city) to the Canberra region. Another exception to people loss of the major cities and population base is the small number of people moving from the Sunshine Coast to the Canberra region.

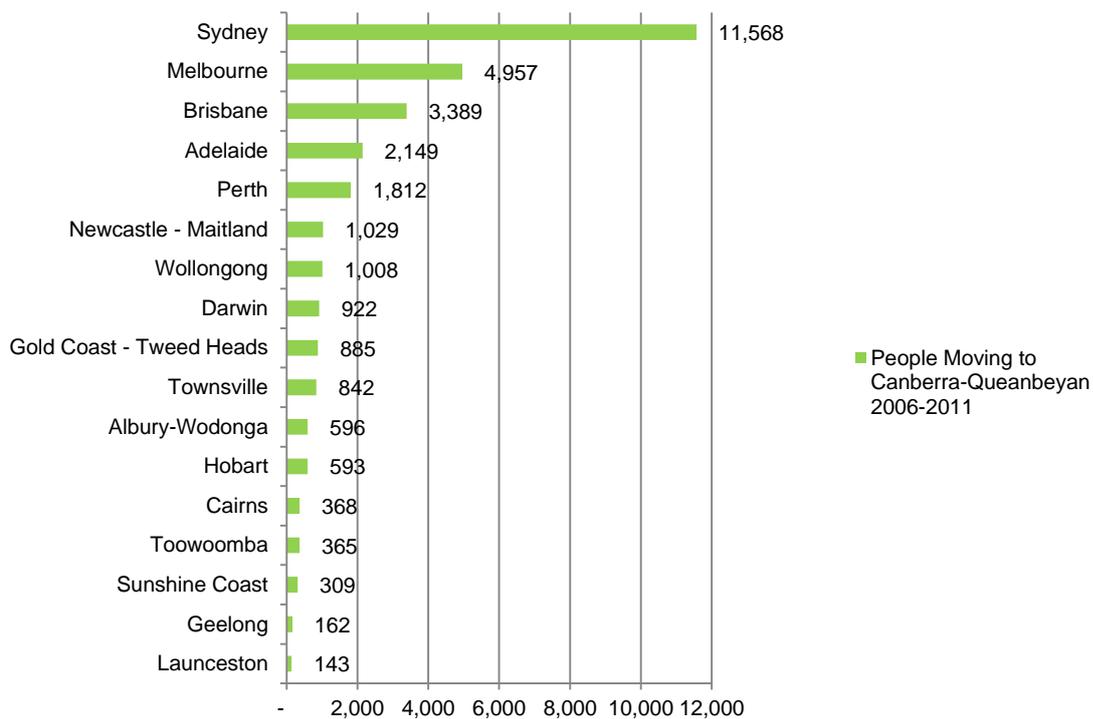


Figure 2.4 People Moving to Canberra-Queanbeyan from the Major Australian Cities 2006-2011

Canberra-Queanbeyan lost more people to Sydney than any other major city in Australia between 2006 and 2011. This accounted for more than 25.8% of the total people movement out of Canberra-Queanbeyan to the other major cities. Melbourne again had the second largest proportion of people movement, gaining 5,611 people from the Canberra region. It was followed by Brisbane (4,779) Gold Coast-Tweed Heads (1,728) and Perth (1,634).

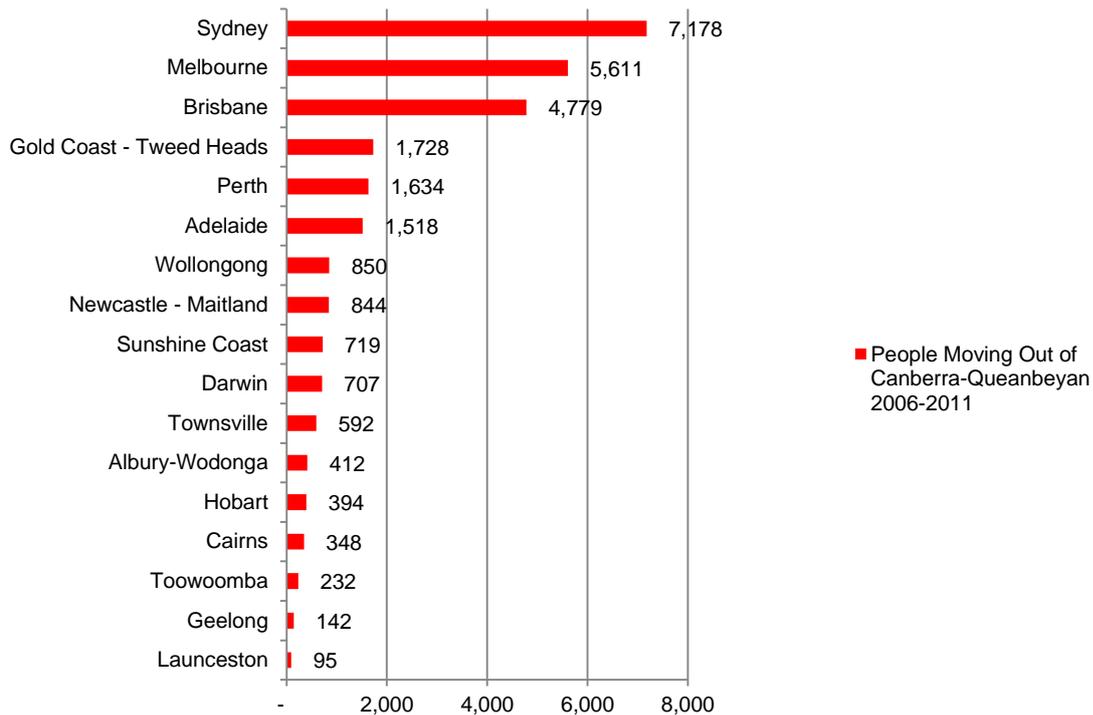


Figure 2.5 People Moving out of Canberra-Queanbeyan to the Major Australian Cities 2006-2011

Net people movement into and out of Canberra-Queanbeyan demonstrates the overall people movement gains from, and losses to, each of the other major cities in Australia. Canberra-Queanbeyan gained more people than it lost from 13 of the 17 other major cities, with most of these coming from Sydney. (+4,390 people). Adelaide (+631) was a distant second, followed by Townsville (+250). Canberra-Queanbeyan had a net gain from all of the predominately New South Wales based major cities of Sydney, Newcastle-Maitland (185), Albury-Wodonga (184), and Wollongong (158).

Canberra-Queanbeyan also had some significant net losses in people movement to the four of the seventeen major cities. Brisbane (-1,390 people) was the largest net beneficiary of people movement from Canberra, followed by Gold Coast-Tweed Heads (-843) and Melbourne (-654). Three of the four cities to receive net gains of people movement from the Canberra region were in Queensland.

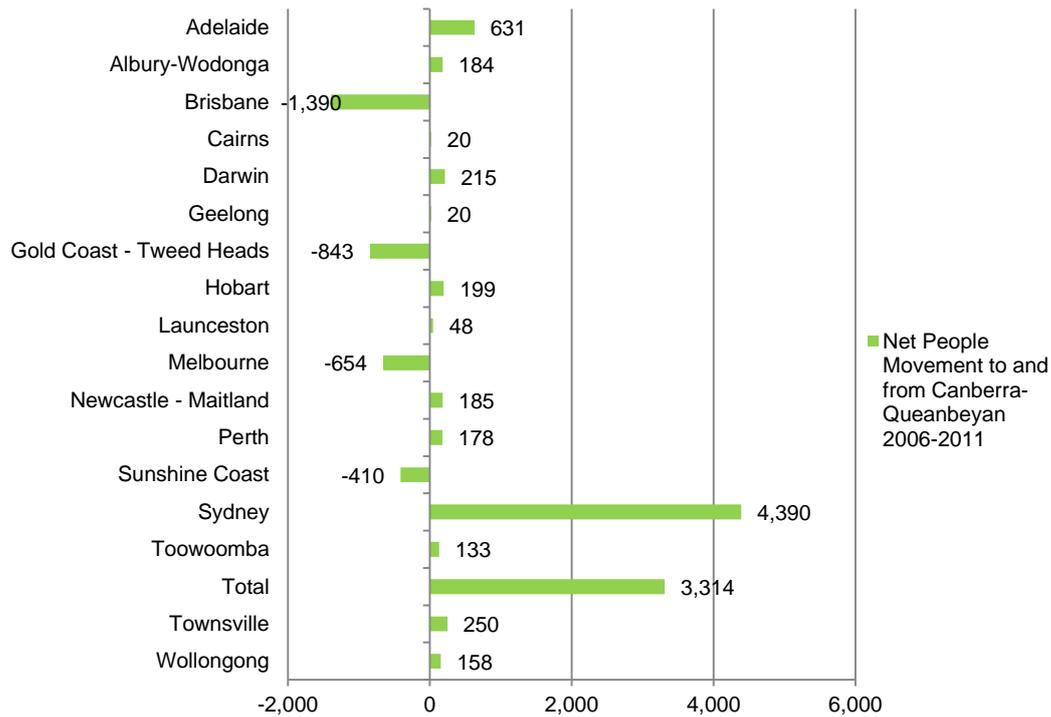


Figure 2.6 Net People Movement (Major Australian Cities) to and from Canberra-Queanbeyan 2006-2011

The Canberra region also attracted a considerable share (24,589) of people from overseas. This placed the Canberra region 7<sup>th</sup> among Australia's 18 major cities in attracting new residents from overseas between 2006 and 2011. Data was not available on the number of people moving from Canberra to overseas destinations.

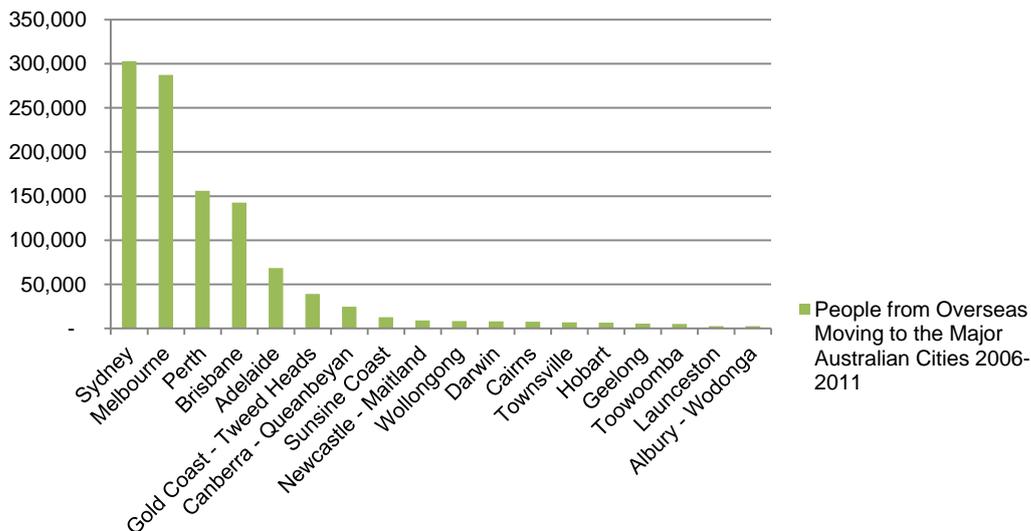


Figure 2.7 People Movement from Overseas to Major Australian Cities 2006-2011

## 2.2 Projected national people movement 2011 to 2041

Projections of people movement between the Canberra region and Australia's other major cities have been made, to offer an insight into future internal migration trends for the Canberra region. Each of the five projections consider a mix of local and national growth rates, with the fifth (an average of the first four) to be considered as the most likely scenario.

The projection models used to assess people movement between the Canberra region and Australia's other major cities are as follows:

- 1 Business as usual: This projection assumes the exact same number of people moving between the major cities and the Canberra region between 2006 and 2011. This will be applied in each subsequent five year period to 2041.
- 2 Shift share projection: This projection takes into account a mix of local and national growth rates between 2001-2006 and 2006-2011.
- 3 National growth rate projection: This estimates the total people movement for the Canberra region and the major cities, assuming that the number of people moving will increase at the same rate as the total people movement between the Canberra region and elsewhere in Australia between 2001-2006 and 2006-2011. The movement from elsewhere in Australia to the Canberra region in this period grew by 5.2% whilst the movement out of the Canberra region grew by 10.2%.
- 4 Regional growth rate projection: This estimates the total people movement between the Canberra region and other major Australian cities, assuming that the number of people moving will increase at the same rate as the people movement between the major cities and Canberra-Queanbeyan between 2006 and 2011. The movement to the Canberra region grew by 8.9%, whilst the movement out of the region to the major cities dropped by 2.5% between 2001-2006 and 2006-2011.
- 5 Average Projection: This estimates the total people movement between the Canberra region and the major cities, using the average of the four aforementioned projection techniques.

### 2.2.1 Inward people movement

The average projection of inward people movement from the major Australian cities to Canberra-Queanbeyan reveals that the city is going to continue to attract people from its urban competitors in the future. Between 2001 and 2006 Canberra-Queanbeyan attracted 28,554 people from the 17 other major cities. This increased to 31,097 people between 2006 and 2011, an increase of 2,543 from 2001-2006. This upward growth trend is projected to continue with Canberra-Queanbeyan set to attract 37,545 people between 2016 and 2021 (an increase of 6,448 from 2006-2011), and 53,426 between 2036 and 2041 (an increase of 24,872 from 2006-2011). These projections only capture the people moving from the 17 other major cities in Australia. By 2036 to 2041 the shift-share analysis reveals that Canberra-Queanbeyan could attract as many as 73,364 people from the other major Australian cities. This is plausible with the nation's population predicted to grow particularly in urban

areas, where the majority of the existing population resides. Canberra-Queanbeyan could potentially be an attractive alternative to Australia's larger cities such as Sydney, which will grapple with population and congestion issues. This shift share is a particularly aggressive model with some of the more moderate projections predicting Canberra-Queanbeyan to attract as few as 46,234 people between 2036 and 2041.

	2001-2006	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2031-2036	2036-2041
<b>Based on Shift-Share Projections</b>	28,554	31,097	36,636	42,711	49,370	56,661	64,639	73,364
<b>Based on National Growth Rate</b>	28,554	31,097	32,707	34,402	36,184	38,058	40,030	42,103
<b>Based on Regional Growth Rate</b>	28,554	31,097	33,866	36,883	40,167	43,745	47,640	51,883
<b>Based on Business as Usual</b>	28,554	31,097	33,640	36,183	38,726	41,269	43,812	46,355
<b>Based on the Average</b>	28,554	31,097	34,212	37,545	41,112	44,933	49,030	53,426

Table 2.1 Projected People Movement from the Major Australian Cities to Canberra-Queanbeyan

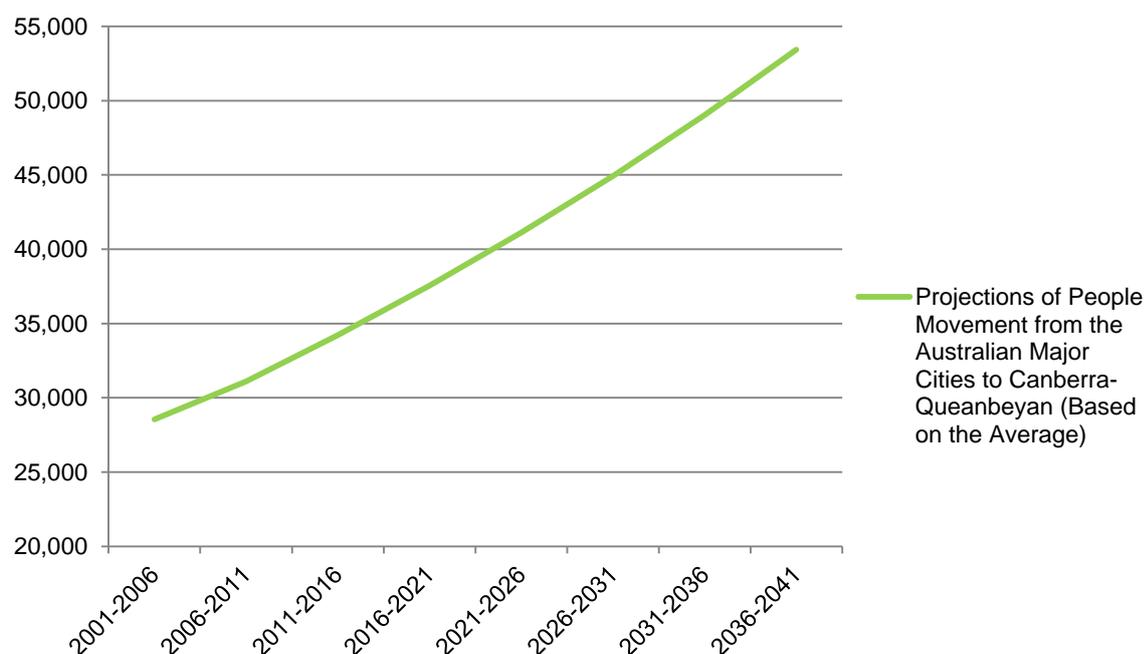


Figure 2.8 Average Projected People Movement from the Major Australian Cities to Canberra-Queanbeyan

### 2.2.2 Outward people movement

The analysis of people moving out of Canberra-Queanbeyan to the major Australian cities predicts that the city will be gradually less become attractive to existing residents. The analysis projects Canberra-Queanbeyan residents will become slightly more tempted by the other major cities in Australia over the coming years. Between 2001 and 2006, 28,495 people left Canberra-Queanbeyan to live in one of the other major cities. This dropped to 27,783 people over the next five years between 2006 and 2011. This decrease in people leaving the Canberra region for the other major cities is not

projected to continue. According to the analysis, a slight increase of outward people movement is predicted through to 2036-2041 when 30,831 people are expected to leave the city.

	2001-2006	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2031-2036	2036-2041
<b>Based on Shift-Share Projections</b>	28,495	27,779	26,391	25,486	25,033	25,005	25,385	26,159
<b>Based on National Growth Rate</b>	28,495	27,783	30,620	33,746	37,191	40,988	45,173	49,785
<b>Based on Regional Growth Rate</b>	28,495	27,783	27,089	26,412	25,752	25,109	24,481	23,869
<b>Based on Business as Usual</b>	28,495	27,783	27,071	26,359	25,647	24,935	24,223	23,511
<b>Based on the Average</b>	28,495	27,782	27,793	28,001	28,406	29,009	29,816	30,831

Table 2.2 Projected People Movement from Canberra-Queanbeyan to the Major Australian Cities

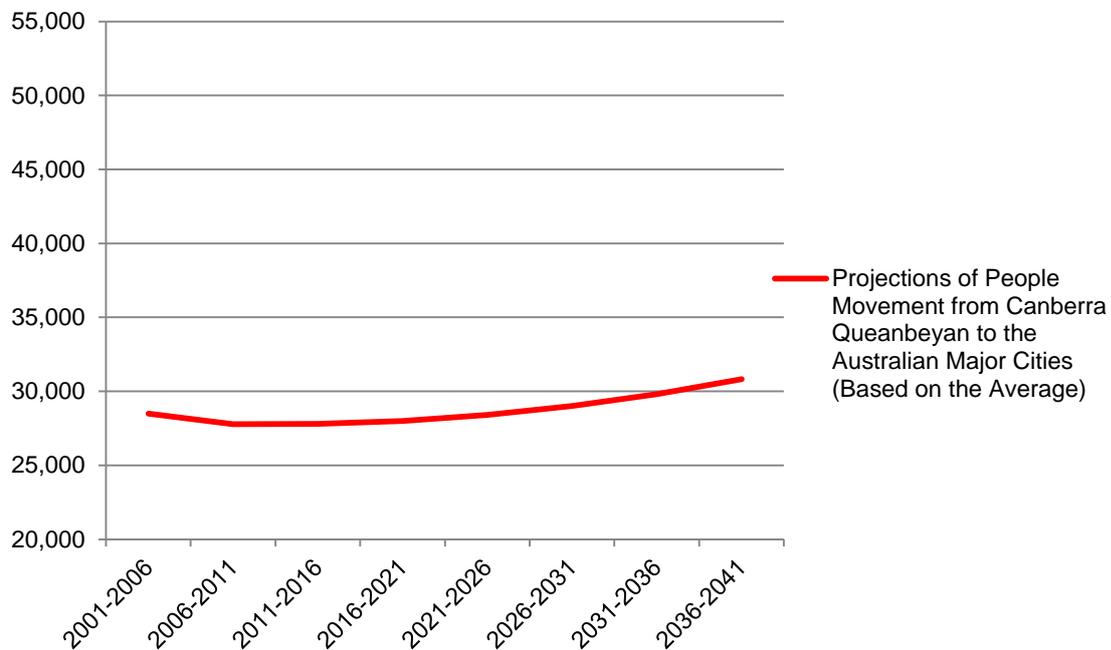


Figure 2.9 Average Projected People Movement from Canberra-Queanbeyan to the Major Australian Cities

### 2.2.3 Net people movement

Comparison of the average projections for the people movement between the major Australian cities and Canberra-Queanbeyan reveals the net growth from people movement for the Canberra region. In recent years Canberra-Queanbeyan has attracted more people from the major cities than it has lost, with a net gain of 59 people between 2001 and 2006, and 3,315 people between 2006 and 2011. This growth is predicted to continue with projected increases in net people movement over each of the 5 year periods through to 2041. By 2036 to 2041 the analysis reveals that Canberra-Queanbeyan could attract as many as 22,595 more people than it loses to the other major cities.

Timeframe	Net people movement	Growth from previous five-year period
2001-2006	59	
2006-2011	3,315	3,256
2011-2016	6,419	3,104
2016-2021	9,544	3,125
2021-2026	12,706	3,162
2026-2031	15,924	3,218
2031-2036	19,214	3,290
2036-2041	22,595	3,381

Table 2.3 Average Projected Net People Movement between Canberra-Queanbeyan and the Major Australian Cities

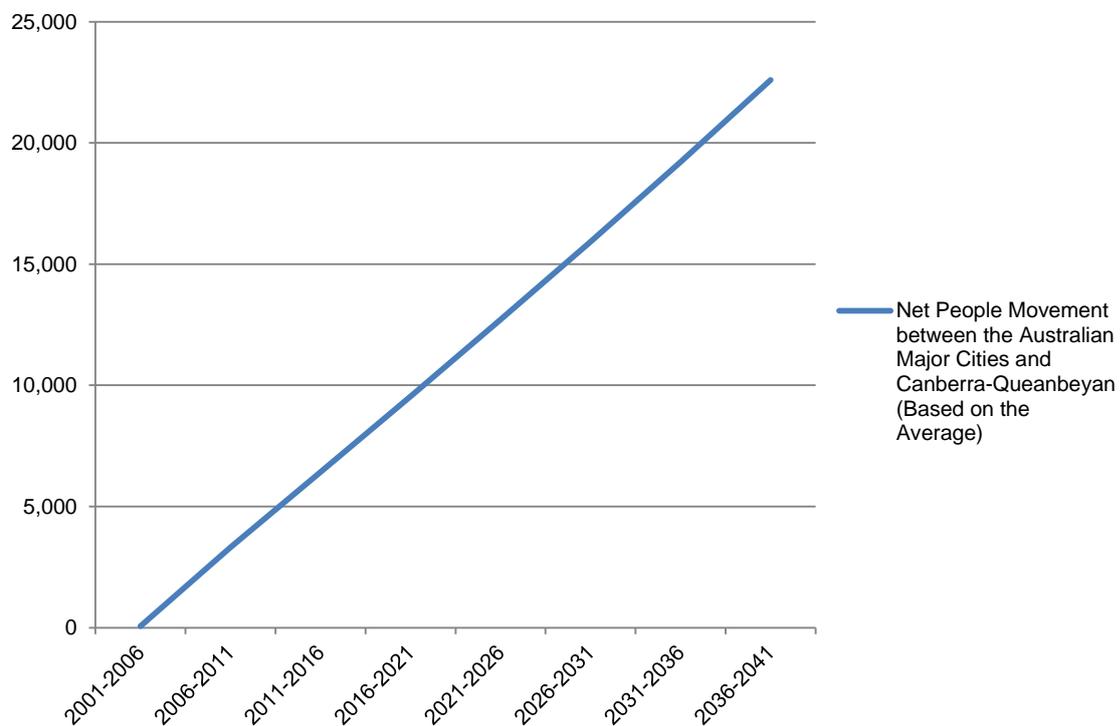


Figure 2.10 Projected Net People Movement between Canberra-Queanbeyan and the Major Australian Cities

### Section 3: Regional People Movement

People movement also occurs within the ACT and surrounding LGAs (including Queanbeyan, Palerang, Yass Valley, Goulburn Mulwaree, Upper Lachlan, and Cooma-Monaro). The number of people moving to the ACT from surrounding LGAs, as well as people moving from the ACT to these surrounding LGAs will help identify the patterns of regional people movement, and the implications this has for housing provision and the efficient use of resources.

#### 3.1 People movement between the ACT and Surrounding region

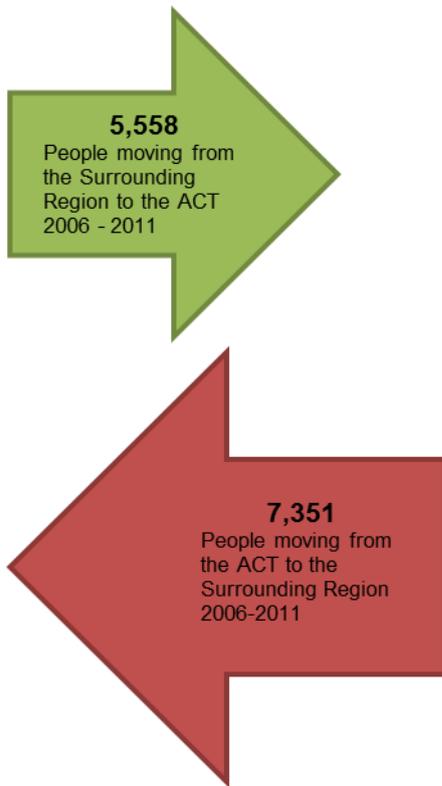


Figure 3.1 Regional People Movement 2006-2011

The ACT lost more people to the surrounding LGAs than it gained between 2006 and 2011 (refer to figure 3.1). The ACT attracted 5,558 people from the surrounding region; this was significantly less than the amount the territory lost to the surrounding LGAs. The ACT lost 7,351 people to the surrounding LGAs, which amounts to a total net loss of 1,793 people over the five year period.

The ACT attracted more people from Queanbeyan than any of the other surrounding LGAs between 2006 and 2011 (refer to figure 3.2). More than half (50.5%) of the people that the ACT attracted from the surrounding region had previously resided in Queanbeyan, this amounts to 2,805 people. The ACT attracted its second largest share (16.9%) of people from the Yass Valley. The Yass Valley lost 937 people to the ACT, slightly more than the 892 people that moved from Palerang to the ACT between 2006 and 2011. Whilst the remaining LGAs of Upper Lachlan Shire, Cooma-Monaro and Goulburn Mulwaree had proportionally smaller losses, with a combined share of 16.6% of the total people movement from the surrounding region to the ACT.

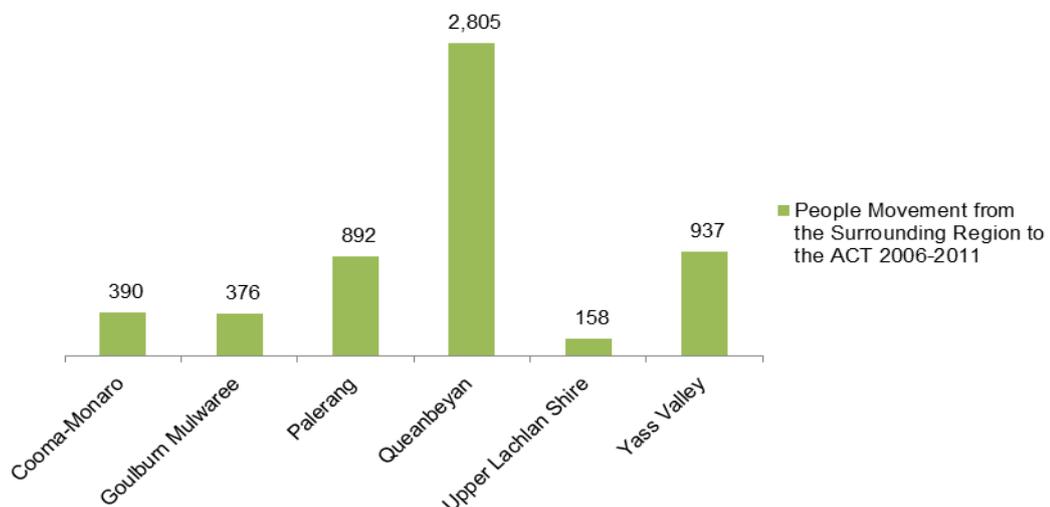


Figure 3.2 People Movement from the Surrounding Region to the ACT 2006-2011

The ACT lost more people to Queanbeyan than any of the other surrounding LGAs between 2006 and 2011 (refer to figure 3.4). Queanbeyan gained 2,795 people from the ACT over the five year period. The Yass Valley again attracted the second largest proportion of people movement with 1,852 from the ACT moving to the Yass Valley. The distribution of the proportion of people movement out of ACT to the surrounding region mirrored the inward people movement to the ACT discussed above (refer to figure 3.5). This is highlighted with the Yass Valley edging out Palerang in terms of people movement and the significantly smaller proportions of people from areas including Cooma-Monaro, Goulburn Mulwaree and Upper Lachlan Shire.

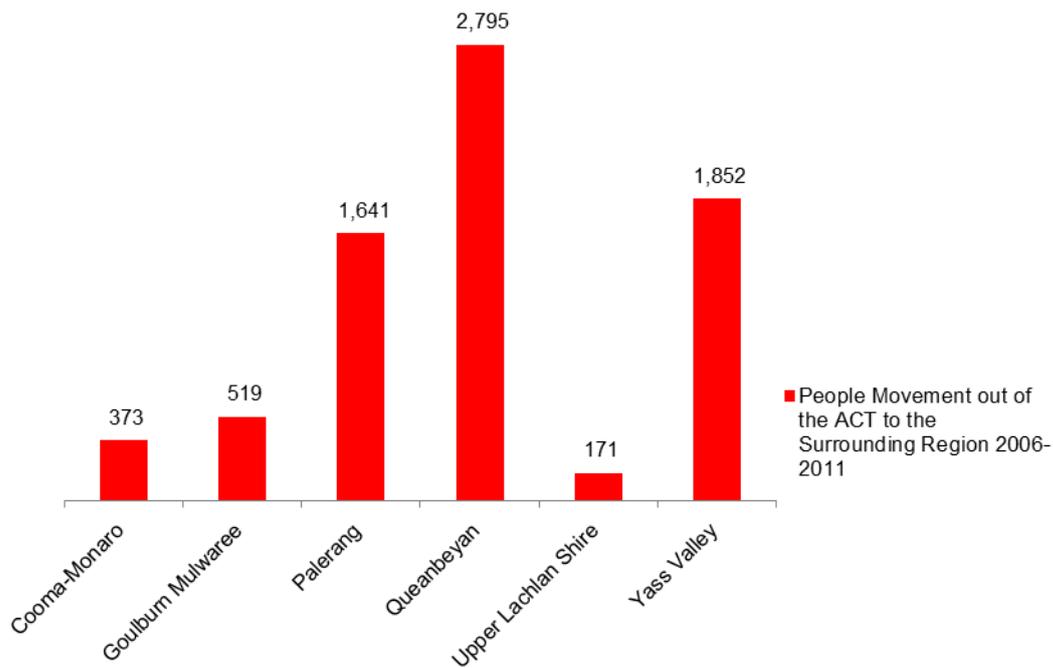


Figure 3.3 People Movement out of the ACT to the Surrounding Region 2006-2011

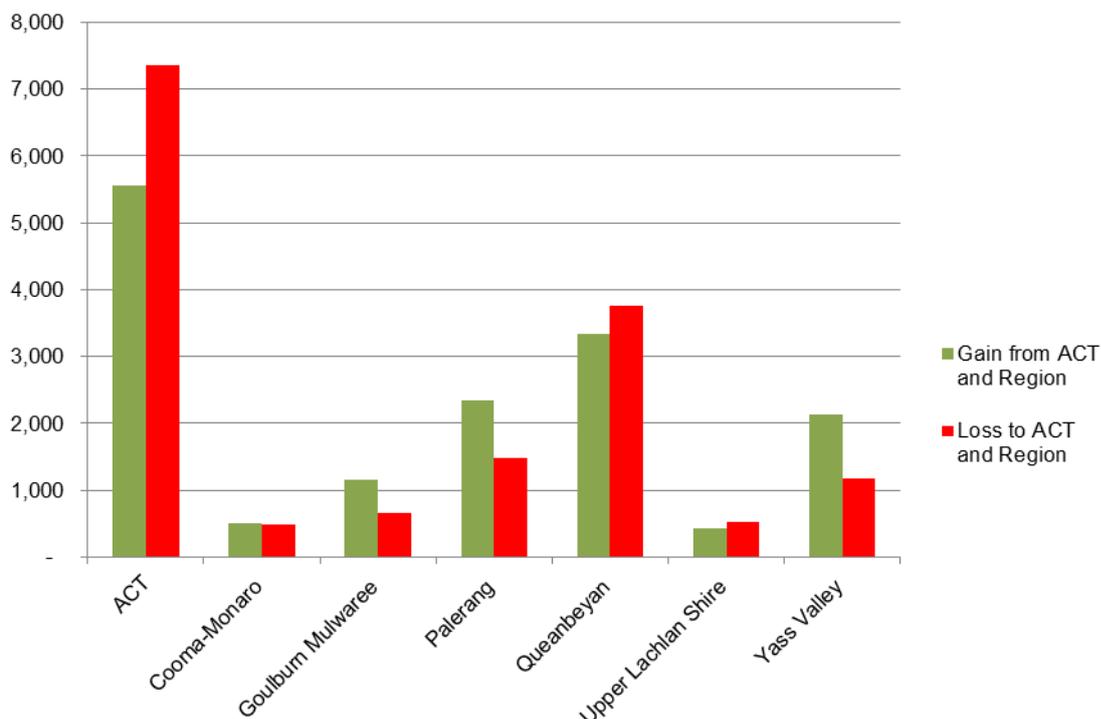


Figure 3.4 People Movement to and from the ACT 2006-2011

The net people movement to and from the ACT and surrounding region shows the net people movement win or loss of each of the surrounding LGAs and the ACT itself. The ACT experienced the largest net loss in people movement between 2006 and 2011. The ACT attracted 5,558 people from the surrounding LGAs between 2006 and 2011, however during the same period the ACT lost 1,793 more people than it gained. Queanbeyan had the second largest net loss, with 415 more people leaving Queanbeyan than it managed to attract. The Yass Valley had the largest net gain; the area attracted 2,132 people whilst only losing 1,177 people during the five year period. Palerang attracted the second largest net gain with 846 more people moving to Palerang than those moving out.

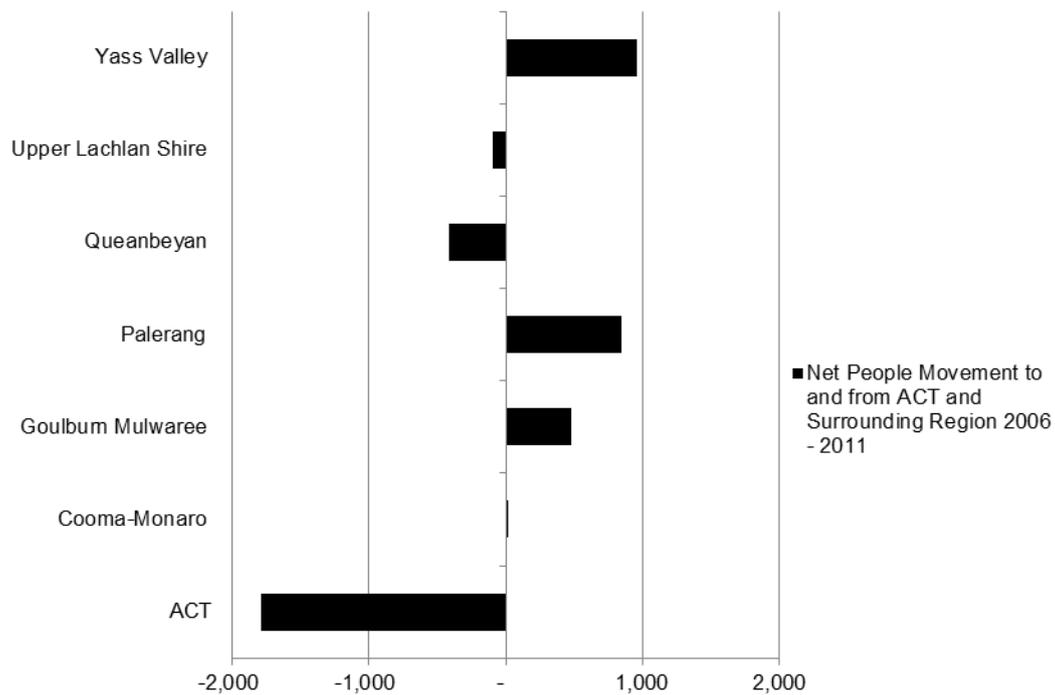


Figure 3.5 Net People Movement to and from ACT and Surrounding Region 2006-2011

### 3.2 Projected regional people movement 2011 to 2041

Projections of people movement between the ACT and the surrounding region have been made, to offer an insight into future internal migration trends for the ACT. Each of the five projections consider a mix of local and national growth rates, with the fifth (an average of the first four) to be considered as the most likely scenario.

The projection models used to assess people movement between the ACT and surrounding region are as follows:

- 1 Business as usual: This projection assumes the exact same number of people will be moving between the surrounding region and the ACT as they did between 2006 and 2011. This will be applied in each subsequent five year period to 2041.
- 2 Shift share projection: This projection takes into account a mix of local and national growth rates.
- 3 National growth rate projection: This estimates the total people movement for the Canberra region and the surrounding region, assuming that the number of people moving will increase at the same rate as the total people movement between the Canberra region and elsewhere in Australia between 2006 and 2011. The movement from elsewhere in Australia to the Canberra region grew by 5.2% whilst the movement out of the Canberra region grew by 10.2% between 2006 and 2011.
- 4 Regional growth rate projection: This projects the total people movement between the ACT and the surrounding region, assuming that the number of people moving will increase at the same rate as the people movement between the surrounding region and the ACT between 2006 and 2011. The movement to the ACT grew by 13.9%, whilst the movement out of the region to the major cities dropped by 3.2% between 2006 and 2011.
- 5 Average Projection: This projects the total people movement between the ACT and the surrounding region, using the average of the four aforementioned projection techniques.

#### 3.2.1 People movement from the surrounding region to the ACT

The analysis of inward people movement from the surrounding region to the ACT reveals that the territory is going to continue to gradually attract more people from its regional neighbours through to 2041. The average projection continues on from the growth in people movement from the surrounding region to the ACT experienced in recent years - attracting 7,357 people between 2016 and 2021, and 11,862 between 2036 and 2041.

Timeframe	Inward people movement	Growth from previous five-year period
2001-2006	4,880	
2006-2011	5,558	678
2011-2016	6,427	869
2016-2021	7,357	930

<b>2021-2026</b>	8,356	999
<b>2026-2031</b>	9,433	1,077
<b>2031-2036</b>	10,598	1,165
<b>2036-2041</b>	11,862	1,264

Table 3.1 Average Projected People Movement from the Surrounding Region to the ACT

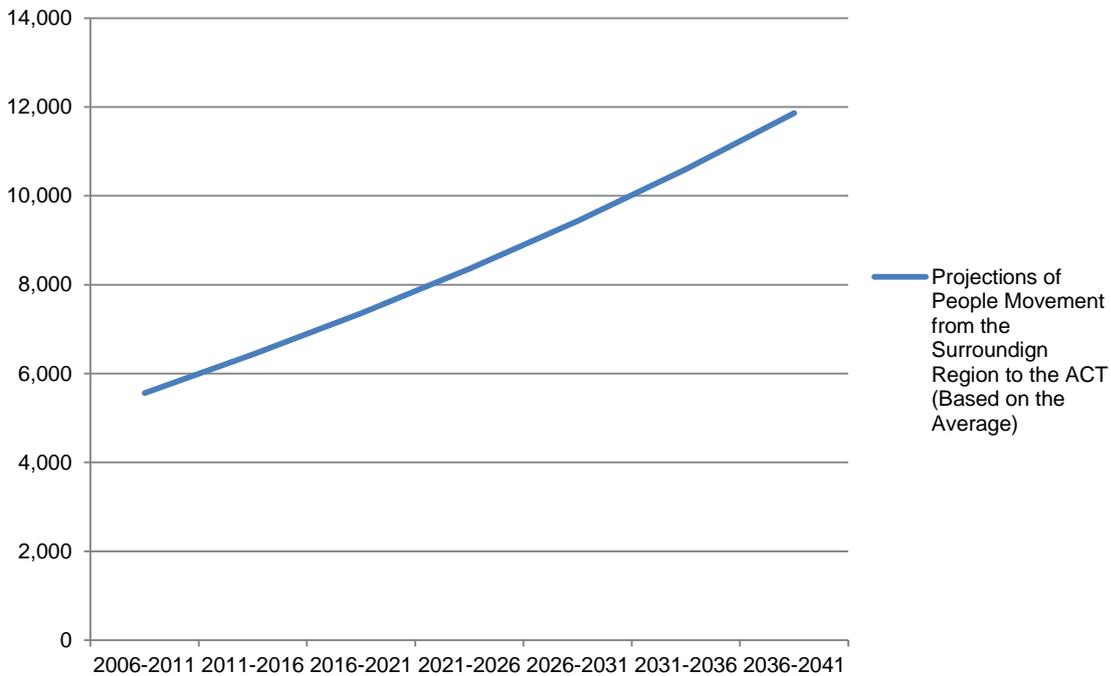


Figure 3.6 Projected People Movement from the Surrounding Region to the ACT

All projection techniques from which this average has been drawn also predicted a growth in the number of people attracted to the ACT from the surrounding region. The projections based on the national growth rate and business as usual were the most moderate of the projections, with predictions of around 9,000 people from the surrounding region moving to the ACT between 2036 and 2041. Both the average growth rate and the projection based on the regional growth rate produced similar results, with around 12,000 people expected to move from the surrounding region to the ACT between 2036 and 2041.

### 3.2.2 People movement from the ACT to the surrounding region

Over the next 30 years the number of people moving out of the ACT to the surrounding region is expected to gradually increase according to the analysis. The surrounding region is expected to become increasingly attractive to people living in the ACT, this is a contradiction to the recent trend reflected in the existing data of outgoing people movement from the ACT between 2001 to 2006, and 2006 to 2011. Between 2001 and 2006 7,594 people moved from the surrounding region into the ACT. This fell to 7,351 people between 2006 and 2011.

The gradual increase of people moving out of the ACT to the surrounding region wasn't consistent

across all projection methods. Whilst the shift-share and national growth rate projection have predicted an increase in people movement from the surrounding region, the other projections have predicted a slight decline in people moving out of the ACT. According to the projections, the ACT could lose from 5,893 to 13,173 people to the surrounding region by 2041.

Timeframe	Outward people movement	Growth from previous five-year period
2001-2006	7,594	
2006-2011	7,351	-243
2011-2016	7,487	136
2016-2021	7,665	178
2021-2026	7,889	224
2026-2031	8,164	275
2031-2036	8,493	329
2036-2041	8,881	388

Table 3.2 Average Projected People Movement from the ACT to the Surrounding Region

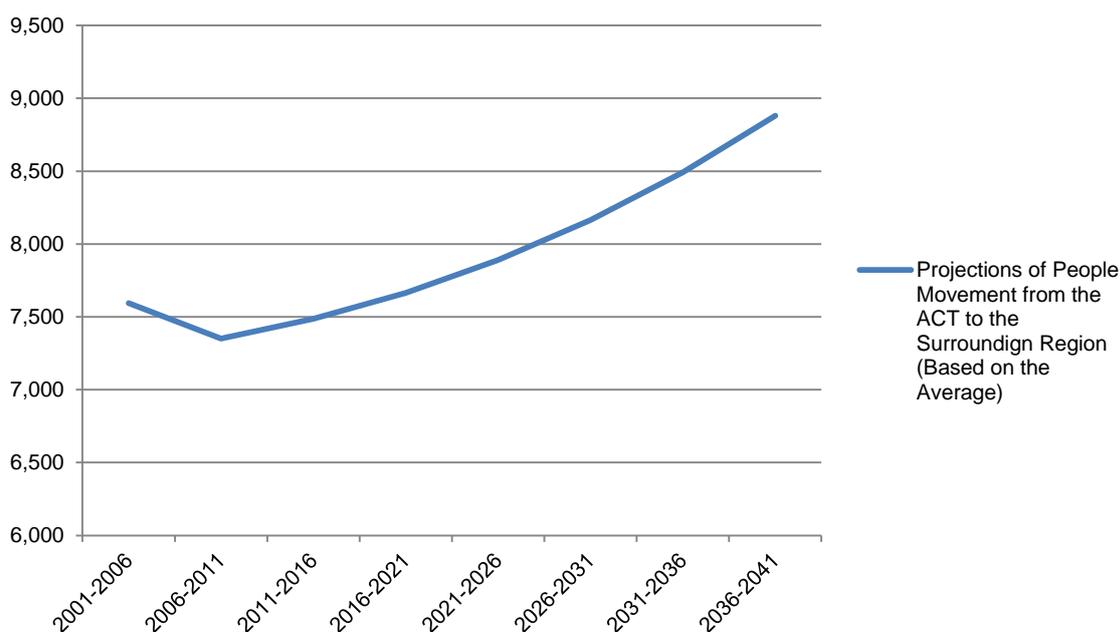


Figure 3.7 Projected People Movement from the ACT to the Surrounding Region

### 3.3.3 Net people movement between the ACT and the surrounding region

The analysis projects the surrounding region to gain people from the ACT at a slower rate than it is projected to lose people to the ACT. The net growth the ACT receives from the surrounding region is estimated by comparing the inward and outward people movement average projections. In recent years the ACT has experienced a net loss in people to the surrounding region (-1,793 between 2006 and 2011). This is less than the 2,714 people lost to the surrounding region between 2001 and 2006.

The surrounding region is gradually attracting less people than it is losing to the ACT according to the average projection. The ACT is becoming increasingly attractive to residents in the surrounding region, with a gradual increase in net people movement through to 2041. By 2036 to 2041 the analysis predicts that the ACT could attract as many as 2,981 more people than it loses to the surrounding region.

Timeframe	Net people movement	Growth from previous five-year period
2001-2006	-2,714	
2006-2011	-1,793	921
2011-2016	-1,060	733
2016-2021	-308	752
2021-2026	467	775
2026-2031	1,269	802
2031-2036	2,105	836
2036-2041	2,981	876

Table 3.3 Average Projected Net People Movement between the ACT and the Surrounding Region

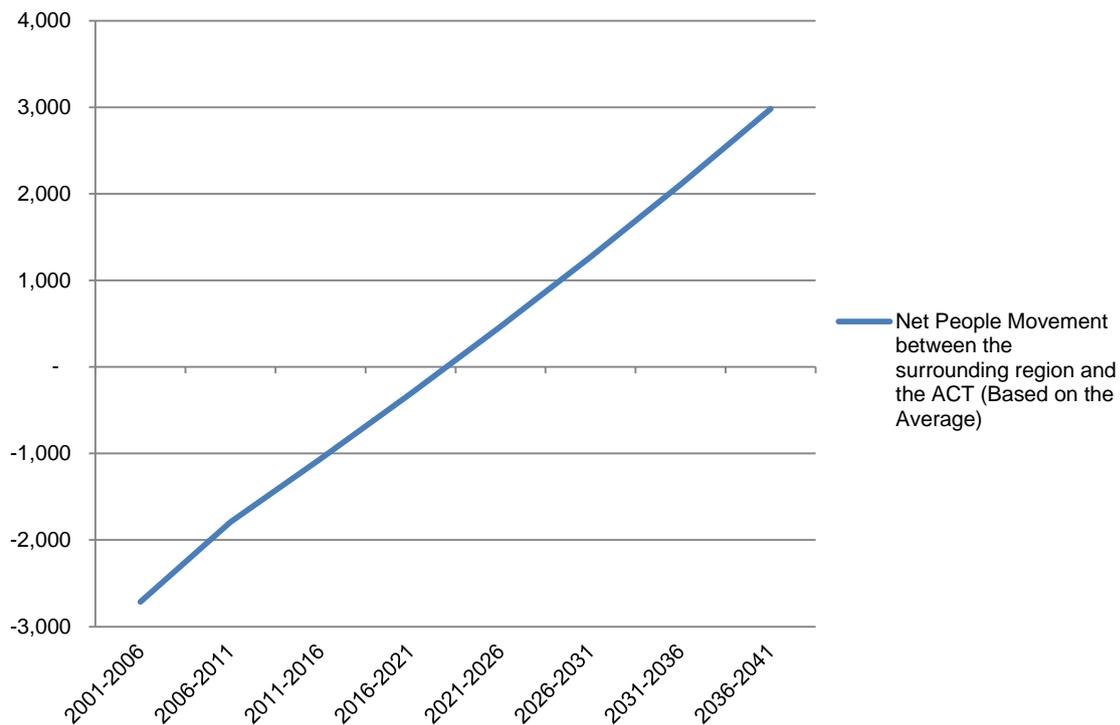


Figure 3.8 Projected Net People Movement between the ACT and the Surrounding Region

## Section 4: Social and Demographic Projections

The ACT and surrounding region will undergo substantial demographic changes and population growth between now and 2041. Based on Census figures from 2001-2011, we can expect an ageing population and further demand for new homes in both the ACT and surrounding region.

### 4.1 Past to present

Before making projections on future demographic make-up of the ACT and surrounding region, this report will provide a current snapshot of local population, age and gender characteristics, and how they have changed between 2001 and 2011.

#### 4.1.1 Population

The ACT's population grew from 309,242 in 2001, to 356,587 in 2011. This represented a 15.3 per cent increase in population over the ten years to 2011.

The combined population of the region surrounding the ACT (which, in 2011, included the LGAs of Cooma-Monaro, Goulburn-Mulwaree, Palerang, Queanbeyan, Upper Lachlan and Yass Valley) grew from 96,960 in 2001, to 111,809 in 2011. This also represented a 15.3 per cent increase in population over the ten years to 2011.

	2001	2011	Growth
<b>ACT</b>	309,242	356,587	15.31%
<b>Surrounding region</b>	96,960	111,809	15.31%

Table 4.1 Population growth, ACT and surrounding region, 2001-2011.

#### 4.1.2 Age

The ACT experienced an ageing population between 2001 and 2011. In 2011 the proportion of ACT residents in the 0-14 and 15-34 age groups was lower than in 2001. In 2011 the proportion of ACT residents in the 35-64 and 65 and over age groups was higher than in 2001.

The surrounding region also experienced an ageing population, with growth in the 35-64 and 65 and over age groups. .

Area	Age group	0-14		15-34		35-64		65+	
	Year	2001	2011	2001	2011	2001	2011	2001	2011
<b>ACT</b>	<b>Number</b>	64,626	66,285	98,326	112,692	119,855	139,470	26,435	38,140
	<b>Percentage of population</b>	20.9%	18.6%	31.8%	31.6%	38.8%	39.1%	8.6%	10.7%
<b>Surrounding region</b>	<b>Number</b>	21,514	22,504	24,421	26,004	39,605	47,931	11,420	15,370
	<b>Percentage of population</b>	22.2%	20.1%	25.2%	23.3%	40.9%	42.9%	11.8%	13.8%

Table 4.2 Age profile, ACT and surrounding region, 2001 and 2011

Of the 47,345 additional people who moved to the ACT between 2001 and 2011, 41.4 per cent were aged 35-64. Those aged 15-34 (30.3%) formed the next largest age group of new residents, followed by those aged 65 or over (24.7%).

Of the 14,849 additional people who moved to surrounding region between 2001 and 2011, 56.1 per cent were aged between 35 and 64. Those aged 65 and over formed the next largest group (26.6%), followed by those aged 15-34 (10.7%).

Area		Age group				Total
		0-14	15-34	35-64	65+	
ACT	Number	1,659	14,366	19,615	11,705	47,345
	Percentage of total growth	3.5%	30.3%	41.4%	24.7%	100.0%
Surrounding region	Number	990	1,583	8,326	3,950	14,849
	Percentage of total growth	6.7%	10.7%	56.1%	26.6%	100.0%

Table 4.3 Age profile of people moving into the ACT and surrounding region, 2001-2011

#### 4.1.3 Gender

The gender balance of the ACT and the surrounding region has become more even in the ten years to 2011. Although there are still more females in the ACT, the percentage of the ACT population made up of males increased from 49.2 per cent in 2001 to 49.5 per cent in 2011. Although there are still more males in the region surrounding the ACT, the percentage of the surrounding region's population made up of females increased slightly from 49.80 per cent in 2001 to 49.85 per cent in 2011.

Area	Year	2001		2011		Change	
	Gender	Male	Female	Male	Female	Male	Female
ACT	Count	152,013	157,229	176,416	180,170	24,403	22,941
	Percentage	49.20%	50.80%	49.47%	50.53%	51.54%	48.46%
Surrounding region	Count	48,629	48,331	56,067	55,742	7,438	7,411
	Percentage	50.20%	49.80%	50.15%	49.85%	50.09%	49.91%

Table 4.4 Change in gender profile, ACT and surrounding region, 2001 and 2011

#### 4.1.4 Age by gender

There were only slight changes in gender balances by age across the ACT and surrounding region. In the ACT there were more males and females in 2011 than 2001 across all four age groups. Males increased their majorities in the 0-14 and 15-34 age groups, and reduced their minorities in the 35-64 and 65 and over groups.

Year		2001		2011		Change		
Age group	Gender	Number	Percentage of age group	Number	Percentage of age group	Number	Percentage of age group	Percentage of population growth
0-14	Male	32,921	50.94%	34,182	51.57%	1,261	0.63%	2.66%
	Female	31,705	49.06%	32,103	48.43%	398	-0.63%	0.84%
15-34	Male	49,198	50.04%	56,843	50.44%	7,645	0.41%	16.15%
	Female	49,128	49.96%	55,849	49.56%	6,721	-0.41%	14.20%
35-64	Male	58,282	48.63%	68,132	48.85%	9,850	0.22%	20.80%
	Female	61,573	51.37%	71,345	51.15%	9,772	-0.22%	20.64%
65+	Male	11,612	43.93%	17,260	45.26%	5,648	1.34%	11.93%
	Female	14,823	56.07%	20,872	54.74%	6,049	-1.34%	12.78%

Table 4.5 Change in age groups by gender, ACT, 2001-2011

There were fluctuations in gender growth between age groups across the surrounding region between 2001 and 2011. Males increased their slender majority in the 15-34 age group, and reduced their minority in the 65 and over group. Females reduced their minorities in the 0-14 and 35-64 age groups.

Year		2001		2011		Change		
Age group	Gender	Number	Percentage of age group	Number	Percentage of age group	Number	Percentage of age group	Percentage of population growth
0-14	Male	11,105	51.62%	11,534	51.25%	429	-0.36%	2.89%
	Female	10,409	48.38%	10,970	48.75%	561	0.36%	3.78%
15-34	Male	12,214	50.01%	13,132	50.50%	918	0.49%	6.18%
	Female	12,207	49.99%	12,871	49.50%	664	-0.49%	4.47%
35-64	Male	20,123	50.81%	24,215	50.52%	4,092	-0.29%	27.56%
	Female	19,482	49.19%	23,721	49.48%	4,239	0.29%	28.55%
65+	Male	5,187	45.42%	7,187	46.77%	2,000	1.35%	13.47%
	Female	6,233	54.58%	8,179	53.23%	1,946	-1.35%	13.11%

Table 4.6 Change in age groups by gender, surrounding region, 2001-2011

## 4.2 Projections

An insight into the future demographic make-up of the ACT and the surrounding region may provide useful details as to the types of people most likely to seek local homes in the future. To assist in this insight, four methods have been used to project the possible population and demographic make-up of the ACT and surrounding region, for the years 2021, 2031, and 2041:

- i. Business as usual
- ii. Shift-share analysis by age groups
- iii. Shift-share analysis by gender
- iv. Comparison with other existing projections

Projections (ii) and (iii) come with the following assumptions:

- Population growth across Australia remains at a consistent rate (14.59% over ten years), based on the population growth observed between the 2001 and 2011 Australian Censuses.
- Growth rates within individual age cohorts and gender cohorts (at both national and regional levels) remain at a consistent rate, based on the growth rates observed between the 2001 and 2011 Australian Censuses.

### 4.2.1 Projections for the ACT

The different models used do not vary greatly in their projections of population growth for the ACT in 2021. However their projections vary by increasing margins in 2031 and again in 2041.

#### 4.2.1.1 Business as usual

A business as usual approach assumes that the same numerical increase experienced in each age and gender group between 2001 and 2011, will continue in each subsequent ten year period in this study. Table 4.5 (previous page) shows the growth in each age and gender group in the ACT between 2001 and 2011. Projections of this change to 2041 are shown in table 4.7 (below):

Age group	Gender	2011	2021	2031	2041
0-14	Male	34,182	35,443	36,704	37,965
	Female	32,103	32,501	32,899	33,297
15-34	Male	56,843	64,488	72,133	79,778
	Female	55,849	62,570	69,291	76,012
35-64	Male	68,132	77,982	87,832	97,682
	Female	71,345	81,117	90,889	100,661
65+	Male	17,260	22,908	28,556	34,204
	Female	20,872	26,921	32,970	39,019
<b>Total</b>		356,586	403,930	451,274	498,618

Table 4.7 Projections of age and gender for the ACT, using a business as usual approach

The business as usual approach would see the ACT population exceeding 400,000 before 2021, and almost reach 500,000 by 2041. The largest contribution would be from the 35-64 age group – providing over 60,000 additional ACT residents between 2011 and 2041. Around 44,000 would be aged 15-34.

An area of concern to emerge from this projection (and others to follow) is the ageing of the ACT's population and low growth in the number of young residents. The business as usual approach forecasts the number of ACT residents aged 65 or over to almost double between 2011 and 2041, while the number of ACT residents aged under 15 will grow by less than ten per cent over the same period.

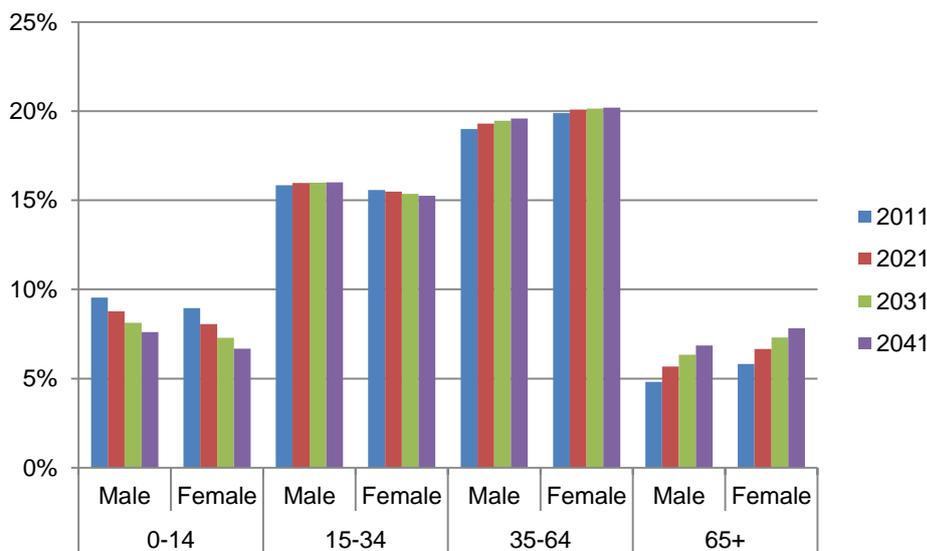


Figure 4.1 Projections of age and gender cohorts as a proportion of the ACT population, using a business as usual approach, 2011-2041

Projections from the business as usual approach would see those aged 35-64 slightly increase their stake as the largest age cohort in the ACT, from 38.9 per cent in 2011 to 39.8 per cent in 2041. The proportion of ACT residents aged 65 and over would rise significantly from 10.6 per cent in 2011 to 14.7 per cent in 2041. The proportion of ACT residents aged 15-34 would decline fractionally (from 31.4% in 2011 to 31.2% in 2041), while those aged 0-14 would make up much less of the ACT's population in 2041 (14.3%) than in 2011 (18.5%).

#### 4.2.1.2. Shift-share analysis by age groups

The shift-share analysis of four age groups (0-14, 15-34, 35-64, and 65 and over) was based on the following assumption of growth rates, based on figures from the 2001 and 2011 Australian Censuses:

Age group	Growth per decade	
	ACT	Australia
0-14 years	2.57%	5.92%
15-34 years	14.61%	10.28%
35-64 years	16.37%	18.36%
65 years and over	44.28%	27.05%

Table 4.8 Growth rate of age cohorts within the ACT and across Australia, 2001-2011

The figures show the ACT outpaced Australia's growth rate in the 15-34 and 65 and over age groups, but lagged in the 0-14 and 35-64 age groups.

Using a shift share analysis by age, it is projected that:

By 2021, this would result in an ACT population of 414,467, an increase of 16.23 per cent from 2011.

By 2031, this would result in an ACT population of 486,008, an increase of 17.26 per cent from 2021.

By 2041, this would result in an ACT population of 575,488, an increase of 18.41 per cent from 2031.

	2001	2011	2021	2031	2041
<b>0-14</b>	64,626	66,285	67,987	69,732	71,522
<b>15-34</b>	98,326	112,692	129,157	148,028	169,655
<b>35-64</b>	119,855	139,470	162,295	188,856	219,763
<b>65 and over</b>	26,435	38,140	55,028	79,393	114,547
<b>Total (number)</b>	309,242	356,587	414,466	486,008	575,488
<b>Population growth (%)</b>		15.31%	16.23%	17.26%	18.41%

Table 4.9 Shift-share population projections for the ACT based on age groups, 2021, 2031 and 2041

These figures also point to an increasingly aged population in the ACT over coming years. If the growth rates of the four age cohorts were to continue based on those shown in the 2001-11 data:

- The proportion of the ACT population in the 0-14 age group would steadily decline from 18.59 per cent (or 66,285 people) in 2011, to just 12.43 per cent (or 71,522 people) by 2041. This would see the number of ACT residents aged 0-14 increase by just 5,237 (or 7.9%) between 2011 and 2041.
- The proportion of the ACT population in the 15-34 age group would gradually decline from 31.60 per cent (or 112,692 people) in 2011, to 29.48 per cent (or 169,655 people) by 2041.
- The proportion of the ACT population aged 35-64 would increase slightly between 2011 (39.11%) and 2021 (39.16%), before declining slightly in 2031 (38.86%) and 2041 (38.19%).
- The proportion of the ACT population aged 65 or over would increase sharply over each ten year period, from a base of 10.70 per cent (or 38,140 people) in 2011, to 19.90 per cent (or 114,547 people) in 2041. This would see the number of ACT residents aged 65 or over more than triple in a thirty year period.

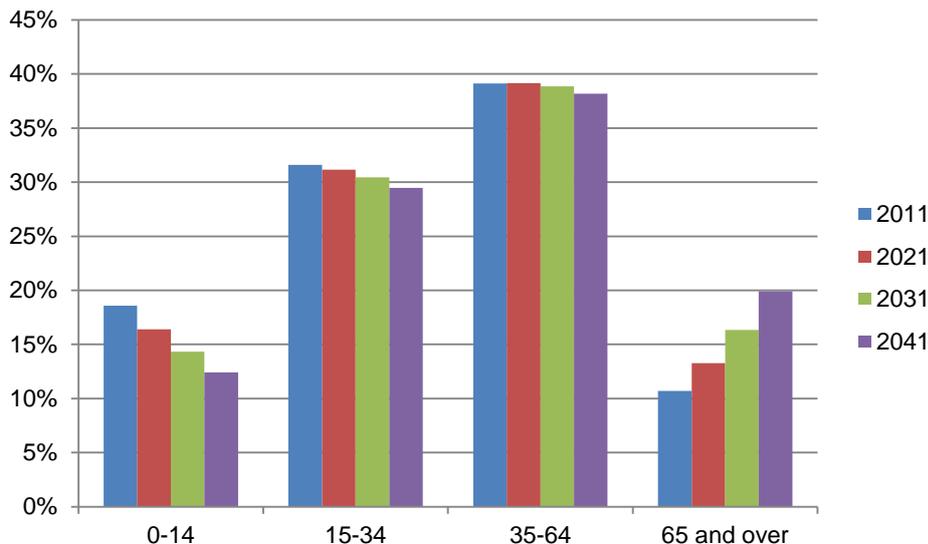


Figure 4.2 Age group projections (as a proportion of the total population) for the ACT based on shift-share analysis, for 2021, 2031, and 2041

#### 4.2.1.3. Shift-share analysis by gender

The shift-share analysis of the two genders (male and female) was based on the following assumed growth rates, based on figures from the 2001 and 2011 Australian Censuses:

Gender	Growth rate	
	ACT	Australia
Male	16.05%	14.71%
Female	14.59%	14.47%

Table 4.10 Growth rate of gender cohorts within the ACT, 2001-2011

The figures show the ACT outpaced Australia in growth among both genders between 2001 and 2011, particularly in the number of males.

Using a shift share analysis by gender, it is projected:

By 2021, this would result in an ACT population of 411,194, an increase of 15.31 per cent from 2011.

By 2031, this would result in an ACT population of 474,186, an increase of 15.32 per cent from 2021.

By 2041, this would result in an ACT population of 546,848, an increase of 15.32 per cent from 2031.

	2001	2011	2021	2031	2041
<b>Male</b>	152,013	176,416	204,736	237,603	275,746
<b>Female</b>	157,229	180,170	206,458	236,582	271,102
<b>Total (number)</b>	309,242	356,586	411,195	474,186	546,848
<b>Population growth (%)</b>		15.310%	15.314%	15.319%	15.324%

Table 4.11 Shift-share population projections for the ACT based on gender, 2021, 2031 and 2041

These figures suggest a stable population growth rate of around 15.3 per cent per decade. They also suggest a slight change in the gender balance of the ACT, from having slightly more females in 2021 (206,458 females to 204,736 males), to there being more males in 2031 and 2041.

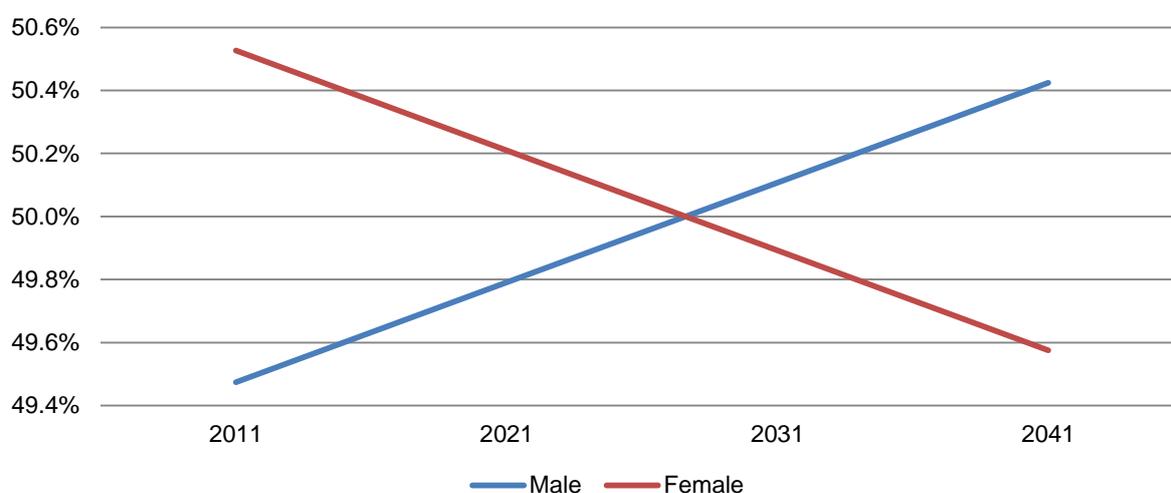


Figure 4.3 Gender projections for the ACT based on shift-share analysis, for 2021, 2031, and 2041

#### 4.2.1.4. Existing projections

The ACT also has population projections created by the Australian Bureau of Statistics and the ACT Government respectively.

ABS projections at a state and Territory level have been made to 2101. Its latest projections for the ACT, released in November 2013, can be found at

[http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3222.0Main%20Features142012%20\(base\)%20to%202101?opendocument&tabname=Summary&prodno=3222.0&issue=2012%20\(base\)%20to%202101&num=&view=](http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3222.0Main%20Features142012%20(base)%20to%202101?opendocument&tabname=Summary&prodno=3222.0&issue=2012%20(base)%20to%202101&num=&view=)

The ABS projections are based on three different scenarios, including different assumptions on fertility rates, net overseas migration and life expectancy. For the ACT, these led to projected populations ranging from 431,088 to 458,560 by 2021, and between 528,992 and 666,737 by 2041. By comparison, ABS projections made five years earlier only projected a 2041 ACT population of between 373,600 and 572,850.

ABS Projections		2012 (base year)	2021	2031	2041
Series A	Male	49.77%	49.79%	49.80%	49.85%
	Female	50.23%	50.21%	50.20%	50.15%
	<b>Total</b>	<b>375,076</b>	<b>458,560</b>	<b>560,590</b>	<b>666,737</b>
Series B	Male	49.77%	49.78%	49.76%	49.77%
	Female	50.23%	50.22%	50.24%	50.23%
	<b>Total</b>	<b>375,076</b>	<b>444,710</b>	<b>520,412</b>	<b>593,236</b>
Series C	Male	49.77%	49.77%	49.72%	49.70%
	Female	50.23%	50.23%	50.28%	50.30%
	<b>Total</b>	<b>375,076</b>	<b>431,088</b>	<b>482,937</b>	<b>528,992</b>

Table 4.12 ABS population predictions for the ACT, 2012-2041

Both Series A and Series B projections are considerably higher than those projected by shift-share analysis. The ABS also projects the gender balance of the ACT to remain slightly female dominant, with only Series A projecting a proportional increase of males within the ACT's population.

ACT Government projections have also been made, based on ABS data, to the year 2059. These projections (the most recent of which were released in 2011) can be found at <http://www.cmd.act.gov.au/policystrategic/actstats/projections/act>,

Projections using the ACT Government model were modest compared to both the shift-share analysis and the most recent ABS projections. It has foreseen an ACT population of 414,367 by 2021, rising to 494,389 people by 2041. It should be noted, however, that the ACT Government model assumes a net interstate migration gain of zero, and net overseas migration to the ACT of only 1,500 per year from 2016. People movement trends to the ACT shown earlier in this report, suggest such assumptions are very conservative.

	2021	2031	2041
<b>Male</b>	208,264	231,577	252,263
<b>Female</b>	206,103	225,723	242,126
<b>Total</b>	414,367	457,300	494,389

Table 4.13 ACT Government projections for the ACT population to 2041

Both shift-share projections, the outcome of a business as usual approach and the projections of the ABS and ACT Government are compared in the figure below.

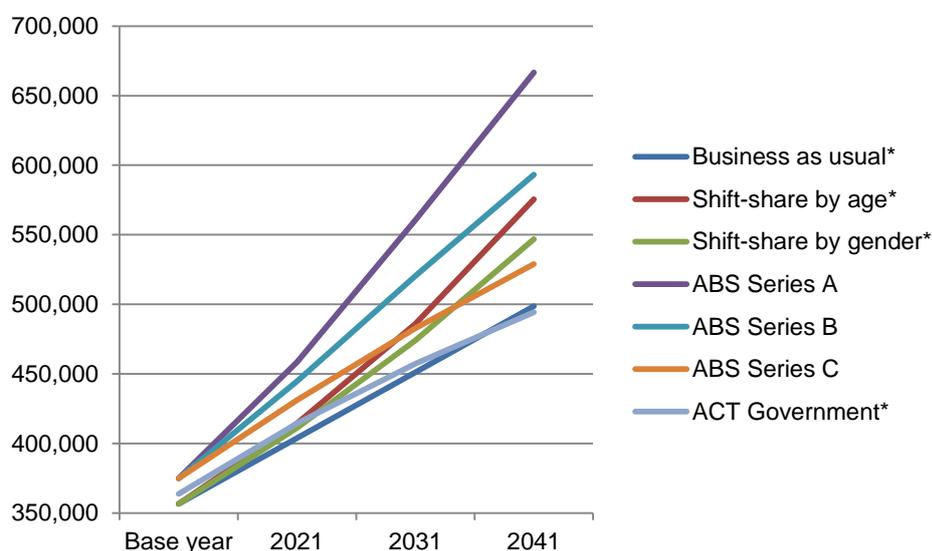


Figure 4.4 Comparison of ACT population projections for 2021, 2031, and 2041

The average of the seven above projections indicates that the ACT could have a population of around 425,500 by 2021, and 557,800 by 2041.

Projection model	Base year*	2021	2031	2041
Business as usual	356,586	403,930	451,274	498,618
Shift-share by age	356,587	414,466	486,008	575,488
Shift-share by gender	356,586	411,195	474,186	546,848
ABS Series A	375,076	458,560	560,590	666,737
ABS Series B	375,076	444,710	520,412	593,236
ABS Series C	375,076	431,088	482,937	528,992
ACT Government	363,764	414,367	457,300	494,389
<b>Average</b>	<b>365,536</b>	<b>425,474</b>	<b>490,387</b>	<b>557,758</b>

Table 4.14 Average of ACT population projections for 2021, 2031, and 2041

\* = Base year of 2011. ABS series projections had a base year of 2012

There are a number of factors pointing to the ability of the ACT to experience substantial population growth between now and 2041. Population growth experienced in the ACT between 2001 and 2011 (particularly from other major Australian cities and from overseas), and the high potential for industry growth, land release, and urban infill, suggests there is large scope for the ACT to further increase its population growth rate into the future.

#### 4.2.2 Projections for the surrounding region

Much like the figures for the ACT, projections for the surrounding region showed signs of divergence as they move further into the future.

##### 4.2.2.1 Business as usual approach

A business as usual approach assumes that the same numerical increase experienced in each age and gender group between 2001 and 2011, will continue in each subsequent ten year period in this study. Table 4.6 shows the growth in each age and gender group in the surrounding region between 2001 and 2011. Projections to 2041 are shown in table 4.14 (below):

Age group	Gender	2011	2021	2031	2041
0-14	Male	11,534	11,963	12,392	12,821
	Female	10,970	11,531	12,092	12,653
15-34	Male	13,132	14,050	14,968	15,886
	Female	12,871	13,535	14,199	14,863
35-64	Male	24,215	28,307	32,399	36,491
	Female	23,721	27,960	32,199	36,438
65+	Male	7,187	9,187	11,187	13,187
	Female	8,179	10,125	12,071	14,017
<b>Total</b>		111,809	126,658	141,507	156,356

Table 4.15 Projections of age and gender for the surrounding region, using a business as usual approach

The business as usual approach would see the surrounding region's population pass 125,000 before 2021, and reach 156,356 by 2041. Most new residents would be from the 35-64 age group – providing almost 25,000 additional residents between 2011 and 2041. Only 4,746 new residents between 2011 and 2041 would be aged 15-34.

An ageing population, and low growth in the numbers of young residents, are also issues for the surrounding region. The business as usual approach forecasts the number of surrounding region residents aged 65 or over to jump from 15,366 in 2011 to 27,204 in 2041, while the number of residents aged under 15 will only grow from 22,504 to 25,474 over the same period.

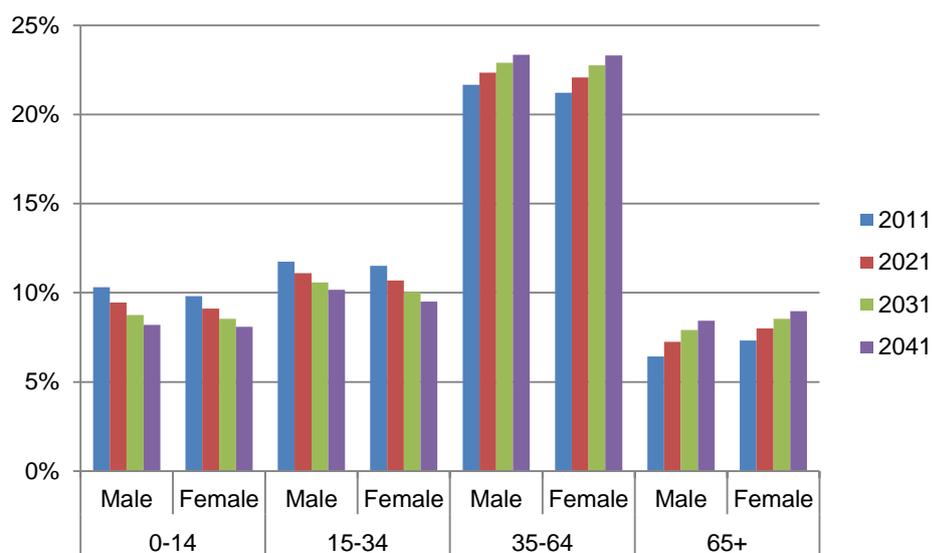


Figure 4.5 Projections of age and gender cohorts as a proportion of the surrounding region population, using a business as usual approach, 2011-2041

Projections from the business as usual approach would see those aged 35-64 increase their stake as the largest age cohort in the surrounding region, from 42.9 per cent in 2011 to 46.6 per cent in 2041. The proportion of surrounding region residents aged 65 and over would rise from 13.7 per cent in 2011 to 17.4 per cent in 2041. The proportion of surrounding region residents aged under 35 would decline from 43.4 per cent in 2011 to just 36.0 per cent in 2041.

#### 4.2.2.2 Shift-share analysis by age groups

The shift-share analysis of four age groups (0-14, 15-34, 35-64, and 65 and over) is based on the following assumption of growth rates, based on figures from the 2001 and 2011 Australian Censuses:

Age group	Growth rate	
	Surrounding region	Australia
0-14 years	4.60%	5.92%
15-34 years	6.48%	10.28%
35-64 years	21.02%	18.36%
65 years and over	34.59%	27.05%

Table 4.16 Growth rate of age cohorts within the surrounding region, 2001-2011

The figures show the surrounding region outpaced Australia in growth in the 35-64 and 65 and over age groups, but lagged in the 0-14 and 15-34 age groups.

Using a shift share analysis by age, it is projected that:

By 2021, this would result in a surrounding region population of 129,923, an increase of 16.20 per cent from 2011.

By 2031, this would result in a surrounding region population of 152,150, an increase of 17.11 per cent from 2021.

By 2041, this would result in a surrounding region population of 179,583, an increase of 18.03 per cent from 2031.

	2001	2011	2021	2031	2041
<b>0-14</b>	21,514	22,504	23,540	24,623	25,756
<b>15-34</b>	24,421	26,004	27,690	29,484	31,396
<b>35-64</b>	39,605	47,931	58,007	70,202	84,960
<b>65 and over</b>	11,420	15,370	20,686	27,841	37,471
<b>Total (number)</b>	96,960	111,809	129,923	152,150	179,583
<b>Population growth (%)</b>		15.31%	16.20%	17.11%	18.03%

Table 4.17 Shift-share population projections for the region surrounding the ACT based on age groups, 2021, 2031 and 2041

These figures also point to an increasingly aged population in the surrounding region over coming decades. If the growth rates of the four age cohorts were to continue in line with the age group shift-share analysis:

- The proportion of the surrounding region's population in the 0-14 age group would steadily decline from 20.13 per cent (or 22,504 people) in 2011, to just 14.34 per cent (or 25,756 people) by 2041. This would see the number of surrounding region residents aged 0-14 increase by just 3,252 (or 14.4%) between 2011 and 2041.
- The proportion of the surrounding region's population in the 15-34 age group would steadily decline from 23.26 per cent (or 26,004 people) in 2011, to 17.48 per cent (or 31,396 people) by 2041.
- The proportion of the surrounding region's population aged 35-64 would increase from 42.87 per cent (or 47,931 people) in 2011, to 47.31 per cent (or 84,960 people) in 2041. This represents a 77 per cent increase in the number of people aged 35-64 living in the surrounding region over 30 years.
- The proportion of the surrounding region's population aged 65 or over would increase sharply over each ten year period, from a base of 13.75 per cent (or 15,370 people) in 2011, to 20.87 per cent (or 37,471 people) in 2041. This would see the number of residents in the surrounding region aged 65 or over more than double in a thirty year period.

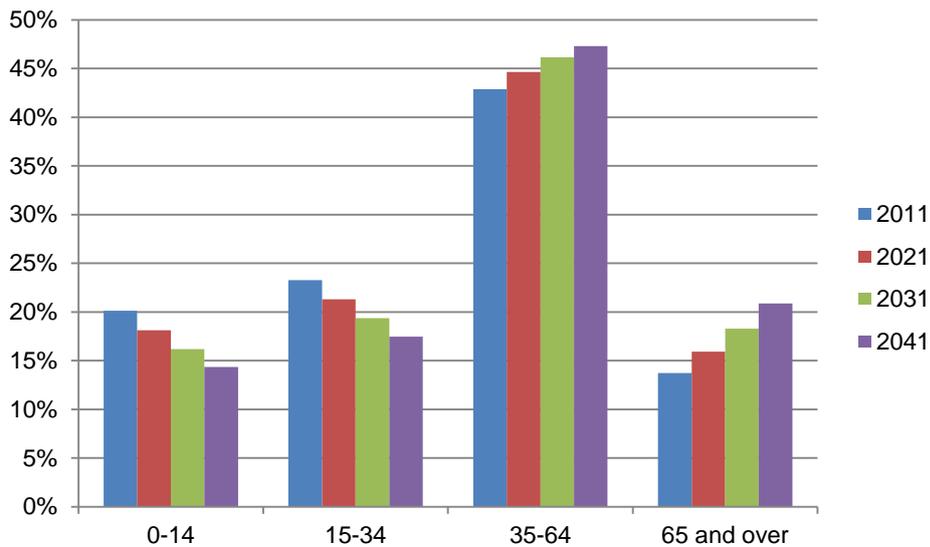


Figure 4.6 Age group projections for the surrounding region based on shift-share analysis, for 2021, 2031, and 2041

#### 4.2.2.3 Shift-share analysis by gender

The shift-share analysis of the two genders (male and female) was based on the following assumption of growth rates, based on figures from the 2001 and 2011 Australian Censuses:

Age group	Growth rate	
	Surrounding region	Australia
Male	15.30%	14.71%
Female	15.33%	14.47%

Table 4.18 Growth rate of gender cohorts within the surrounding region, 2001-2011

The figures show the surrounding region outpaced Australia in population growth among both genders. This growth was much more balanced than experienced in the ACT, where the male population increased by 16.0 per cent and females by 14.6 per cent.

The application of a shift-share projection by gender to the surrounding region would lead to a consistent growth rate of 15.31 per cent over each subsequent ten year period, creating a surrounding region population of 128,932 by 2021, 148,677 by 2031, and 171,447 by 2041.

	2001	2011	2021	2031	2041
<b>Male</b>	48,629	56,067	64,643	74,530	85,930
<b>Female</b>	48,331	55,742	64,289	74,147	85,517
<b>Total (number)</b>	96,960	111,809	128,932	148,677	171,447
<b>Population growth (%)</b>		15.31%	15.31%	15.31%	15.31%

Table 4.19 Shift-share population projections for the surrounding region based on gender, 2021, 2031 and 2041

These figures suggest minimal change in the gender balance of the surrounding region. The gender split is expected to remain slightly male dominated, despite the ratio of men to women falling from 50.15 per cent to 49.85 per cent in 2011, to 50.12 per cent to 49.88 per cent in 2041.

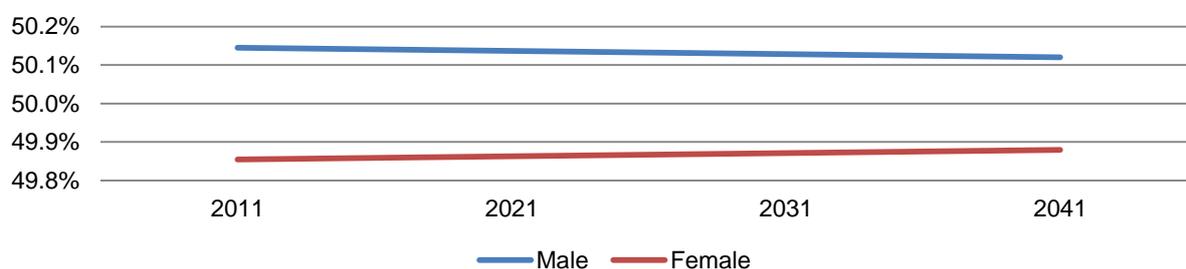


Figure 4.7 Gender projections for the surrounding region based on shift-share analysis, for 2021, 2031, and 2041

#### 4.2.2.4 Existing projections

The region surrounding the ACT also has a population projection, although it only extends to the year 2036.

The projections made by New South Wales Department of Planning in 2010, include every Local Government Area (LGA) in NSW, including the six LGAs comprising the surrounding region. These projections can be found in the publication “New South Wales Statistical Local Area Population Projections, 2006-2036”, which can be found at <http://www.planning.nsw.gov.au/Portals/0/SettingTheDirection/NSW%20SLA%20and%20LGA%20Population%20Projections%202006%20and%202036%20March%202010.pdf>. Figures for the six LGAs that comprise the surrounding region are summarised in the table 4.19 below. Among the Department’s findings were the likelihood of areas to the north and east of Canberra being among the fastest-growing in NSW, and the likelihood of LGAs with smaller populations (such as Cooma-Monaro) experiencing only modest growth.

	2011 (projected)	2021	2031	2036
<b>Cooma-Monaro</b>	10,300	10,400	10,500	10,500
<b>Goulburn-Mulwaree</b>	27,400	27,900	28,200	28,200
<b>Palerang</b>	14,300	17,300	20,300	21,900
<b>Queanbeyan</b>	42,400	51,600	60,900	65,400
<b>Upper Lachlan</b>	7,300	7,300	7,200	7,100
<b>Yass Valley</b>	15,000	17,500	20,000	21,100
<b>TOTAL</b>	116,700	132,000	147,100	154,200

Table 4.20 NSW Department of Planning projections for the surrounding region’s population to 2036

Projections using the NSW Department of Planning model forecast a higher population than both shift share analyses up to 2021 (132,000 people compared to 129,923 and 128,932), but a lower population for 2031 (147,100 people compared to 152,151 and 148,677). Although starting from a higher 2011 base point, the NSW Department of Planning projections show a slower rate of

population growth than both shift-share analyses. Projections using the business as usual approach were the lowest of the four projections considered.

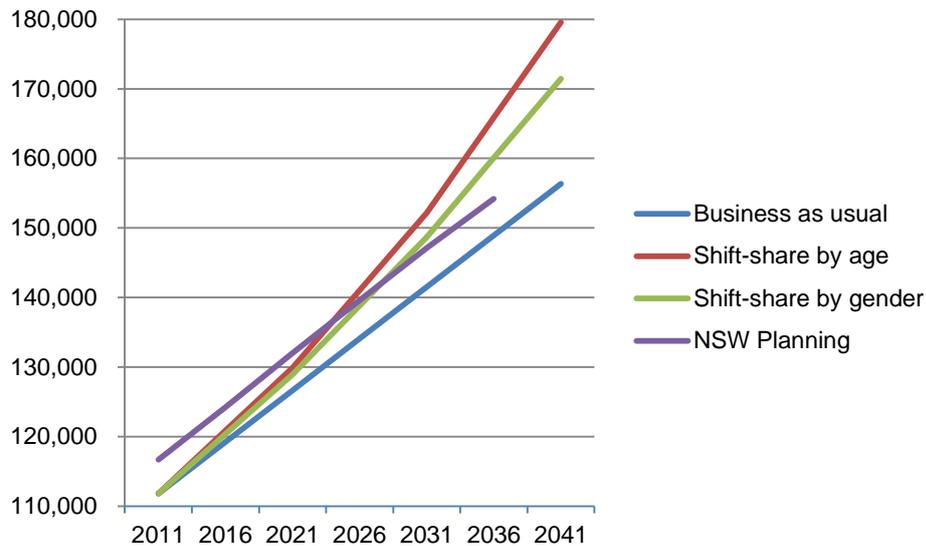


Figure 4.8 Comparison of surrounding region population projections, for 2021, 2031, 2036, and 2041

The average of the four above projections indicates that the surrounding region could have a population of around 129,400 by 2021, and 167,000 by 2041.

The population growth of the surrounding region is partly dependent on circumstances in the ACT. If the ACT's property prices are deemed too high or land sizes too small, it could lead to a large number of people choosing to live in the surrounding region. New South Wales Government plans such as the *Sydney Canberra corridor regional strategy 2006-31* (available online at [http://www.planning.nsw.gov.au/plansforaction/pdf/sydcancorridor\\_regional\\_strategy\\_final.pdf](http://www.planning.nsw.gov.au/plansforaction/pdf/sydcancorridor_regional_strategy_final.pdf)), point to Queanbeyan as a key driver in the future growth of the surrounding region, however the strategy also notes Queanbeyan's strong interdependence with the ACT.

Infrastructure development and the creation of new towns and suburbs are also likely to influence future growth in the surrounding region. New housing estates are under construction or being planned in the Queanbeyan LGA, such as those at Googong and Tralee. Access to increased water supplies, and proximity to nationally significant road and rail infrastructure have led to new industries establishing themselves in the Goulburn area – possibly paving the way for future jobs and population growth there. The planned duplication of the Barton Highway could also see Yass become a more attractive place to live for people currently working in the ACT.

Conversely it should also be noted that there is potential for the ACT to attract more residents from the surrounding region (as shown in Section 3 of this report). This could undermine population growth in the surrounding region, particularly in relation to the aggressive growth rates projected by shift-share by age analysis.

#### 4.2.3 Total population projection

Based on the averages of the population projections presented in sections 4.2.1. and 4.2.2., the ACT and surrounding region could have a combined population of 554,852 by 2021 (an increase of 86,456 from 2011). This could expand to a population of 637,746 by 2031, and 724,805 by 2041. This would see the population of the ACT and surrounding region increase by 54.7 per cent, or 256,409 people, over 30 years.

<b>Population projection 2011-41</b>	<b>2011</b>	<b>2021</b>	<b>2031</b>	<b>2041</b>
<b>ACT</b>	356,587	425,474	490,387	557,758
<b>Surrounding region</b>	111,809	129,378	147,359	167,047
<b>Total</b>	468,396	554,852	637,746	724,805

Table 4.21 Average of population projections for the ACT and surrounding region, 2011-2041

## Section 5: Journey to Work

The ACT employs more than 20,000 people who live outside the ACT. The ability to accommodate more of these people in the ACT could have substantial benefits to the sustainable development of the ACT and surrounding region. It could also lead to reduced transport costs for such residents, with many of them currently relying on cars for their interstate work commute.

### 5.1 The ACT as a place of work

Approximately 214,100 people were listed as working in the ACT at the time of the 2011 Census. Of these, 186,050 lived in the ACT, representing 86.9 per cent of all people who worked in the ACT. A further 22,670 lived in the surrounding region, representing 10.6 per cent of all people who worked in the ACT.

More than half of all people who commute into the ACT from the surrounding region for work come from the Queanbeyan Local Government Area (LGA). More than 13,000 people who live in Queanbeyan are employed in the ACT, making up 6.2 per cent of all people who work in the ACT. Substantial numbers of ACT workers also commute from Palerang (3,917 people, 1.8%) and Yass Valley (3,679 people, 1.7%).

Place of residence	Number of people working in the ACT	Percentage of all people working in the ACT
<b>ACT</b>	<b>186,048</b>	<b>86.90%</b>
Queanbeyan	13,230	6.18%
Palerang	3,917	1.83%
Yass Valley	3,679	1.72%
Goulburn Mulwaree	903	0.42%
Cooma-Monaro	596	0.28%
Upper Lachlan Shire	347	0.16%
<b>Surrounding region total</b>	<b>22,672</b>	<b>10.59%</b>
ACT + Surrounding region	208,720	97.49%
Elsewhere in Australia	5,371	2.51%
<b>Total number of ACT based jobs</b>	<b>214,091</b>	<b>100.00%</b>

Table 5.1 Place of residence of people working in the ACT, 2011

Of the 186,000 people who lived and worked in the ACT, 14,032 lived and worked in the Belconnen area. This represented 28.4 per cent of all Belconnen residents who stated they had a job at the time of the 2011 Census. In all, 95.7 per cent of employed people living in the Belconnen area worked in the ACT.

By comparison, 4,227 people who lived in West Belconnen (defined, for the purposes of this research, as the suburbs of Charnwood, Dunlop, Higgins, Holt, Latham, and Macgregor), worked in the Belconnen area. This represented 28.8 per cent of all West Belconnen residents who stated they had a job at the time of the 2011 Census – more than across Belconnen as a whole.

Proportionately more employed people living in West Belconnen also worked in the ACT (95.9%) when compared to all employed persons living in Belconnen. However West Belconnen residents were less likely to work in North Canberra or South Canberra than people across all of Belconnen, and were more likely to work in more distant employment centres within the ACT such as Fyshwick, Woden, Gungahlin and Tuggeranong.

Place of work (SA3 level)	Place of residence			
	Belconnen		West Belconnen	
	Number	Percentage	Number	Percentage
<b>Belconnen</b>	14,032	28.35%	4,227	28.85%
<b>North Canberra</b>	13,650	27.59%	3,598	24.55%
<b>South Canberra</b>	5,233	10.57%	1,492	10.18%
<b>Fyshwick - Pialligo - Hume</b>	3,786	7.65%	1,263	8.62%
<b>Woden</b>	2,748	5.55%	867	5.92%
<b>Gungahlin</b>	2,391	4.83%	768	5.24%
<b>Tuggeranong</b>	1,004	2.03%	313	2.14%
<b>Other ACT</b>	4,514	9.12%	1,559	10.64%
<b>Queanbeyan</b>	651	1.32%	231	1.58%
<b>Goulburn - Yass</b>	132	0.27%	31	0.21%
<b>Other</b>	1,348	2.72%	305	2.08%
<b>Total</b>	<b>49,489</b>	<b>100.00%</b>	<b>14,654</b>	<b>100.00%</b>

Table 5.2 Place of work for employed people living in Belconnen and West Belconnen, 2011

\*West Belconnen is defined as the suburbs of Charnwood, Dunlop, Higgins, Holt, Latham and Macgregor, as defined at the SA2 level in the 2011 Census. Place of work is defined by SA3 spatial level in the Australian Census

If such place of residence-place of work patterns were to continue in future developments in West Belconnen, it may cause additional strain on major roads such as Belconnen Way, Southern Cross Drive, William Hovell Drive, William Slim Drive, and John Gorton Drive / Tuggeranong Parkway, that link West Belconnen to the ACT's town centres.

## 5.2 Mode share in Journey to Work

Cars were by far the main form of transport used by workers from within and outside the ACT to get to work. More than five in every six workers (83.8%) who commute to the ACT from the surrounding region do so as a driver and/or passenger in a car. This includes 17,157 (or 75.7% of all ACT-bound commuters from the surrounding region) who drove themselves. Only 1.4 per cent of workers from the

surrounding region used a bus (as single travel method) to get to work in the ACT, although this figure was higher in Yass (2.1%) and Queanbeyan (1.6%). Also, only 0.9 per cent used active transport (walking or cycling) to get to work in the ACT – although this was dominated by cyclists (96 persons) and walkers (47 persons) from Queanbeyan. A further 9.7 per cent of ACT- employed workers from the surrounding region did not go to work on Census day, while 0.5 per cent worked from home.

<b>Mode of transport</b>	<b>Number of people</b>	<b>Percentage of people from the surrounding region who work in the ACT</b>
<b>Car, as driver</b>	17,157	75.7%
<b>Did not go to work</b>	2,203	9.7%
<b>Car, as passenger</b>	1,700	7.5%
<b>Bus</b>	309	1.4%
<b>Motorbike/scooter</b>	214	0.9%
<b>Not stated</b>	189	0.8%
<b>Truck</b>	141	0.6%
<b>Car as driver, car as passenger</b>	134	0.6%
<b>Worked at home</b>	114	0.5%
<b>Bicycle</b>	109	0.5%
<b>Walked only</b>	95	0.4%
<b>Other</b>	57	0.3%
<b>Bus, car as driver</b>	51	0.2%
<b>Bus, car as passenger</b>	51	0.2%
<b>Car as driver, bicycle</b>	36	0.2%

Table 5.3 Mode share of Journey to work travel to the ACT from the surrounding region, 2011

While car is still the dominant mode of transport in the ACT, it is less so than in the surrounding region. Nearly seven in every ten ACT residents (69.7%) who commute to work in the ACT do so as a driver and/or passenger in a car. This includes 116,042 (or 62.4% of all people who live and work in the ACT) who drove themselves. Buses were more popular in the ACT than in the surrounding region, with 5.8 per cent of work trips using a bus (as single travel method) to get to work, and a further 0.76 per cent combining car and bus use. Active transport was also more common within the ACT, with 4.2 per cent walking and 2.5 per cent riding a bike. A further 10.7 per cent of people who lived and worked in the ACT did not go to work on the Census day, while 2.8 per cent worked from home.

Mode of transport	Number of people	Percentage of people who live and work in the ACT
Car, as driver	116,042	62.40%
Did not go to work	19,904	10.70%
Car, as passenger	13,136	7.10%
Bus	10,774	5.80%
Walked only	7,785	4.20%
Worked at home	5,127	2.80%
Bicycle	4,597	2.50%
Motorbike/scooter	1,735	0.90%
Not stated	1,334	0.70%
Truck	1,163	0.60%
Other	757	0.40%
Bus, car as driver	697	0.40%
Bus, car as passenger	718	0.40%
Car as driver, car as passenger	551	0.30%
Car as driver, bicycle	239	0.10%

Table 5.4 Mode share of Journey to work travel for people who live and work in the ACT, 2011

A concern for future developments in the ACT is the take-up of public and active transport. While buses (as single travel method) make up 5.8 per cent of work trips for people who live and work in the ACT as a whole, they only make up 4.6 per cent of commuter trips from Macgregor and 3.9 per cent of commuter trips from Dunlop – two of Belconnen’s most recently developed or expanded suburbs. Furthermore, the prevalence of active transport (walking or cycling) for commuting is substantially lower in west Belconnen than the ACT as a whole.

Mode of transport	Suburb of residence					
	Dunlop		Macgregor		West Belconnen total*	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Car, as driver</b>	2,421	70.60%	1,931	69.26%	8,566	67.40%
<b>Did not go to work</b>	350	10.21%	303	10.87%	1,446	11.38%
<b>Car, as passenger</b>	298	8.69%	195	6.99%	996	7.84%
<b>Bus</b>	135	3.94%	129	4.63%	655	5.15%
<b>Worked at home</b>	47	1.37%	69	2.47%	266	2.09%
<b>Motorbike/scooter</b>	40	1.17%	23	0.82%	149	1.17%
<b>Truck</b>	18	0.52%	16	0.57%	100	0.79%
<b>Bus, car as passenger</b>	22	0.64%	26	0.93%	97	0.76%
<b>Walked only</b>	10	0.29%	12	0.43%	92	0.72%
<b>Bicycle</b>	12	0.35%	16	0.57%	83	0.65%
<b>Not stated</b>	19	0.55%	13	0.47%	65	0.51%
<b>Bus, car as driver</b>	18	0.52%	13	0.47%	61	0.48%
<b>Car as driver, car as passenger</b>	12	0.35%	9	0.32%	32	0.25%
<b>Other</b>	9	0.26%	7	0.25%	27	0.21%
<b>Car as driver, bicycle</b>	4	0.12%	5	0.18%	14	0.11%
<b>TOTAL for key modes</b>	3,415	99.59%	2,767	99.25%	12,649	99.53%
<b>TOTAL (all modes)</b>	3,429	100.00%	2,788	100.00%	12,709	100.00%

Table 5.5 Mode share of Journey to work travel for people who live in the West Belconnen area, 2011

\*West Belconnen includes figures for the suburbs of Charnwood, Dunlop, Higgins, Holt, Latham and Macgregor, as defined at the SA2 spatial level used in the 2011 Australian Census.

Another consideration for the West Belconnen area is its higher proportion of people (compared to the ACT average) who use both a car (as a driver or passenger), and a bus on the same journey, to get to work. More than 1.2 per cent of West Belconnen residents travelled to work by either the “bus, car as driver”, or “bus, car as passenger” methods, compared to only 0.8 per cent for the ACT generally. This suggests that park and ride facilities, and an attractive bus timetable with routes to suit residents’ needs, could be of use within or at close proximity to any new residential development in the West Belconnen area.

The proportion of people in the West Belconnen area who work from home (2.1%) is substantially higher than in the surrounding region (0.5%), but lower than in the ACT as a whole (2.8%). Given West Belconnen’s location on the fringe of Canberra’s urban area, and increasing communications and technological advances, it may also be worth exploring ways to foster an increased ability for future West Belconnen residents to work from home or close by. This could include, but is not limited to, the creation of a community centre with child care facilities and office space for lease. Such efforts could also position the West Belconnen development area to take advantage of high-speed broadband connections, and position the area as a local digital hub.

### 5.3 Distance to work

The distance travelled by workers from LGAs in the surrounding region has been assessed to show how far people are prepared to travel to work in the ACT. This has been done on the following assumptions:

- The starting point of the work journey has been measured as the Council chambers of each relevant LGA
- The finishing point of the work journey has been measured as City Hill in Canberra's Civic Centre

Based on the above assumptions, the average distances to work in the ACT from surrounding LGAs are as follows:

LGA	Average travel distance to ACT (km)
Queanbeyan	15.3
Palerang	40.2
Yass Valley	58.5
Goulburn Mulwaree	90.2
Upper Lachlan Shire	112
Cooma-Monaro	116

Table 5.6 Travel distance from surrounding LGAs to City Hill, ACT

As a comparison, the distance from Strathnairn Gallery (within the proposed West Belconnen development area) to City Hill is between 14.5 and 16.5 kilometres (depending on route), and two of the ACT's longest commutes – from Banks to City Hill and from the Gungahlin Town Centre to the Tuggeranong Town Centre - come in at 28-30 and 30-31 kilometres respectively.

If we further assume, based on the modal share data shown earlier, that around 10 per cent of ACT-employed workers from each LGA do not make the journey to work on a given weekday, we get the following cumulative travel figures:

LGA	Number of ACT-employed workers (90%) who travel to work	Total distance travelled by ACT-employed workers from the surrounding region who travel to work (km)
Queanbeyan	11,906	182,162
Palerang	3,526	141,745
Yass Valley	3,311	193,694
Goulburn Mulwaree	812	73,242
Upper Lachlan Shire	312	34,944
Cooma-Monaro	536	62,176
<b>TOTAL</b>	<b>20,403</b>	<b>687,963</b>
<b>Average travel distance for ACT-employed workers from the surrounding region</b>	Only those who travelled	33.72
	Including those who did not travel	30.35

Table 5.7 Total distance travelled from surrounding LGAs to the ACT for work (one-way)

While we are not suggesting here that each person from outside the ACT travels to work in the ACT on their own, the combined travel distance of each worker from the surrounding region coming to the ACT for work (one-way) is around 688,000 kilometres per weekday (or 505,000 if the Queanbeyan LGA is excluded). The ability to build more housing and communities encouraging these workers to also live in the ACT, could substantially reduce travel distances. This would have flow-on effects to personal spending on fuel, car maintenance, environmental emissions, and time spent with family and friends or on recreation.

## Section 6: Housing Choices

Housing price and the availability of a range of housing options, have a large bearing on an area's attractiveness to prospective workers and residents. Communities with a mix of housing prices and types, which are also close to important amenities, are likely to be the most attractive to the widest range of people.

### 6.1 Present situation

Before making projections on future housing needs for the ACT and surrounding region, this report provides a current snapshot of the affordability and range of choices on offer in the local market.

#### 6.1.1 Number and range of dwellings

In 2011 the ACT contained 145,474 dwellings. Most (102,621, or 70.5%) of these dwellings were separate houses. A further 9.3 per cent were semi-detached, row or terrace houses on a single level, and 5.5 per cent were semi-detached, row or terrace houses on two or more levels. Nearly one in seven dwellings (23,927 or 13.8%) was part of a flat, unit, or apartment complex. Only one third of one per cent of dwellings in the ACT were classed as flats or apartments attached to another structure, such as a shop, office, or house.

In 2011 the surrounding region contained 49,859 dwellings. These were located primarily in the Queanbeyan (16,129) and Goulburn-Mulwaree (12,771) LGAs. With the lower densities of most regional and rural communities, it is not surprising that the surrounding region has a higher proportion of separate houses (40,824, or 81.9%) than the ACT. Semi-detached homes make up only 7.7 per cent of dwellings in the surrounding region, much less than in the ACT. Less than one in thirteen dwellings (3,813 or 7.6%) was part of a flat, unit, or apartment complex. The surrounding region did have a greater proportion of dwellings (such as flats) attached to another structure such as shop, office or house (295 or 0.6%), and proportionately more caravans and cabins (647 or 1.3%).

Dwelling Structure 2011	ACT		Surrounding region		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Separate house	102,621	70.5%	40,824	81.9%	143,445	73.4%
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	9.3%	2,865	5.7%	16,386	8.4%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	5.5%	990	2.0%	9,061	4.6%
Flat, unit or apartment in a one or two storey block	6,621	4.6%	2,210	4.4%	8,831	4.5%
Flat, unit or apartment in a three storey block	7,361	5.1%	1,048	2.1%	8,409	4.3%
Flat, unit or apartment in a four or more storey block	6,132	4.2%	555	1.1%	6,687	3.4%

<b>Flat, unit or apartment attached to a house</b>	439	0.3%	78	0.2%	517	0.3%
<b>Caravan, cabin, houseboat</b>	328	0.2%	647	1.3%	975	0.5%
<b>Improvised home, tent, sleepers out</b>	36	0.0%	197	0.4%	233	0.1%
<b>House or flat attached to a shop, office, etc.</b>	39	0.0%	217	0.4%	256	0.1%
<b>Not stated</b>	56	0.0%	62	0.1%	118	0.1%
<b>Not applicable</b>	247	0.2%	168	0.3%	415	0.2%
<b>Total</b>	145,472	100.0%	49,861	100.0%	195,333	100.0%

Table 6.1 Dwelling types in the ACT and surrounding region, 2011

### 6.1.2 People per dwelling

More than half of all dwellings across the ACT and the surrounding region contain only one or two occupants. In the ACT, 20.8 per cent of dwellings contain only one person and 30.1 per cent contain two people. In the surrounding region 21.6 per cent of homes contain only one person, and 28.6 per cent contain two people.

The ACT was more likely to have dwellings containing two, three, or four occupants. Fifteen point five per cent of dwellings in the ACT were home to three people, and 14.8 per cent were home to four people. In the surrounding region only 12.2 per cent of dwellings were home to three people, and 12.3 per cent home to four. Proportional figures for dwellings containing five, six, seven, and eight or more occupants were almost identical between the ACT and the surrounding region.

Number of people per dwelling	ACT		Surrounding region		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>One person</b>	30,248	20.8%	10,776	21.6%	41,024	21.0%
<b>Two persons</b>	43,765	30.1%	14,263	28.6%	58,028	29.7%
<b>Three persons</b>	22,580	15.5%	6,100	12.2%	28,680	14.7%
<b>Four persons</b>	21,460	14.8%	6,136	12.3%	27,596	14.1%
<b>Five persons</b>	8,168	5.6%	2,789	5.6%	10,957	5.6%
<b>Six persons</b>	2,395	1.6%	828	1.7%	3,223	1.7%
<b>Seven persons</b>	525	0.4%	215	0.4%	740	0.4%
<b>Eight or more persons</b>	287	0.2%	114	0.2%	401	0.2%
<b>Not applicable</b>	16,046	11.0%	8,638	17.3%	24,684	12.6%
<b>Total</b>	145,474	100.0%	49,859	100.0%	195,333	100.0%

Table 6.2 People per dwelling, ACT and surrounding region, 2011

In 2011, the Australian Bureau of Statistics found an average of 2.6 people lived in each ACT household. Of the six LGAs that make up the surrounding region, only Palerang (2.7) and Yass Valley (2.7) had a higher average number of residents per household.

Area	Average people per household
<b>ACT</b>	<b>2.6</b>
Cooma-Monaro	2.3
Goulburn Mulwaree	2.4
Palering	2.7
Queanbeyan	2.5
Upper Lachlan Shire	2.4
Yass Valley	2.7
<b>Surrounding Region</b>	<b>2.5</b>

Table 6.3 Average number of people per household, ACT and surrounding region, 2011

A breakdown of areas within the ACT found the Gungahlin district had the highest average number of people per household, at 2.9. As the most recently built district of the ACT, this offers some insight on what could be expected in future residential developments in the ACT:

Area	Average people per household
Gungahlin	2.9
Tuggeranong	2.8
Cotter-Namadgi	2.7
Belconnen	2.6
Weston Creek	2.5
Woden	2.4
South Canberra	2.3
North Canberra	2.2
Fyshwick-Pialligo-Hume	1.8
<b>ACT Total</b>	<b>2.6</b>

Table 6.4 Average number of people per household, ACT 2011

The Tuggeranong Valley had the next highest average number of residents per household (2.8), while Belconnen (4<sup>th</sup>, 2.6 people per household) matched the ACT average.

When compared to figures dating back to 1996, the average number of people per household has fallen in most cases in the ACT and across the surrounding region. The most notable decreases in average people per household have occurred in Cooma-Monaro, Upper Lachlan, and Goulburn Mulwaree.

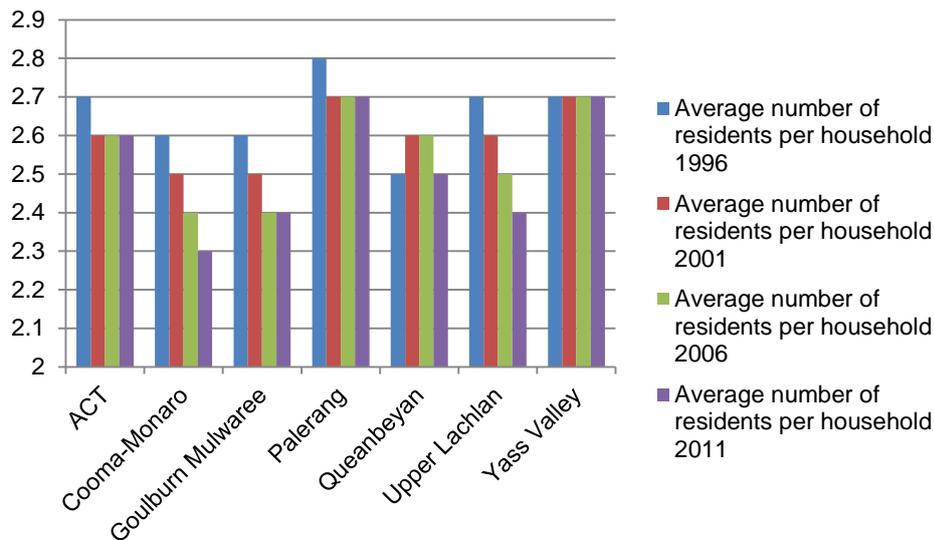


Figure 6.1 Average number of people per household, ACT and surrounding region, 1996-2011

### 6.1.3 People per dwelling by dwelling type

Given the data shown in sections 6.1.1. and 6.1.2. of this report, it will not be surprising that most dwellings across all dwelling types were only occupied by one or two persons. This section of the report aims to look a little deeper, to see the types of dwelling structures more commonly sought after among different numbers of occupants.

#### 6.1.3.1. Dwellings and numbers of occupants in the ACT

Of all separate homes in the ACT at the time of the 2011 Census, 45 per cent were occupied by only one or two residents, 18.9 per cent by four residents, and 17.6 per cent by three residents.

Semi-detached homes of one storey made up 9.3 per cent of dwellings in the ACT in 2011. Of these, 38.2 per cent had only one resident, 30.1 per cent had two residents, and 10.8 per cent three residents.

Semi-detached homes of two or more storeys made up 5.5 per cent of dwellings in the ACT in 2011. Of these, 32.5 per cent had two residents, 21.9 per cent one resident, and 18.6 per cent three residents.

Dwelling structure type	Regular number of occupants								
	1	2	3	4	5	6	7	8+	N/A
<b>Separate house</b>	15,482	30,774	18,025	19,357	7,600	2,270	483	269	8,359
<b>Semi-detached, row or terrace house, townhouse etc. with one storey</b>	5,158	4,064	1,455	874	243	55	22	7	1,642
<b>Semi-detached, row or terrace house, townhouse etc. with two or more storeys</b>	1,770	2,620	1,498	741	223	58	13	11	1,138
<b>Flat, unit or apartment in a one or two storey block</b>	2,770	1,828	540	198	46	8	0	0	1,231

Flat, unit or apartment in a three storey block	2,757	2,301	581	154	31	3	4	0	1,530
Flat, unit or apartment in a four or more storey block	1,978	1,989	433	106	17	3	0	0	1,610
Flat, unit or apartment attached to a house	179	109	24	16	3	0	0	0	109
Caravan, cabin, houseboat	123	49	10	4	4	0	0	0	137
Improvised home, tent, sleepers out	5	4	0	0	0	0	0	0	26
House or flat attached to a shop, office, etc.	11	10	6	0	0	3	0	0	9
Not stated	16	15	8	10	0	0	0	0	9
Not applicable	0	0	0	0	0	0	0	0	245
<b>TOTAL</b>	<b>30,249</b>	<b>43,763</b>	<b>22,580</b>	<b>21,460</b>	<b>8,167</b>	<b>2,400</b>	<b>522</b>	<b>287</b>	<b>16,045</b>

Table 6.5 Number of dwelling structure types containing certain numbers of residents, ACT, 2011

Flats, units or apartments in a one or two storey block made up 4.6 per cent of dwellings in the ACT in 2011. Of these, 41.8 per cent contained only one resident, 27.6 per cent two residents, and 8.2 per cent three residents.

Flats, units or apartments in a three storey block made up 5.1 per cent of dwellings in the ACT in 2011. Of these, 37.5 per cent contained one resident, 31.3 per cent two residents, and 7.9 per cent three residents.

Flats, units or apartments in a four or more storey block made up 4.2 per cent of dwellings in the ACT in 2011. Of these, 32.4 per cent contained two residents, 32.2 per cent one resident, and 7.1 per cent three residents.

Dwelling structure type	Regular number of occupants								
	1	2	3	4	5	6	7	8+	N/A
Separate house	15.09%	29.99%	17.56%	18.86%	7.41%	2.21%	0.47%	0.26%	8.15%
Semi-detached, row or terrace house, townhouse etc. with one storey	38.15%	30.06%	10.76%	6.46%	1.80%	0.41%	0.16%	0.05%	12.14%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	21.93%	32.46%	18.56%	9.18%	2.76%	0.72%	0.16%	0.14%	14.10%
Flat, unit or apartment in a one or two storey block	41.84%	27.61%	8.16%	2.99%	0.69%	0.12%	0.00%	0.00%	18.59%
Flat, unit or apartment in a three storey block	37.45%	31.26%	7.89%	2.09%	0.42%	0.04%	0.05%	0.00%	20.79%
Flat, unit or apartment in a four or more storey block	32.24%	32.42%	7.06%	1.73%	0.28%	0.05%	0.00%	0.00%	26.24%
Flat, unit or apartment attached to a house	40.68%	24.77%	5.45%	3.64%	0.68%	0.00%	0.00%	0.00%	24.77%
Caravan, cabin, houseboat	37.61%	14.98%	3.06%	1.22%	1.22%	0.00%	0.00%	0.00%	41.90%
Improvised home, tent, sleepers out	14.29%	11.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	74.29%
House or flat attached to a shop, office, etc.	28.21%	25.64%	15.38%	0.00%	0.00%	7.69%	0.00%	0.00%	23.08%

Table 6.6 Proportion of dwelling structure types containing certain numbers of residents, ACT, 2011

Not surprisingly, a separate house was proportionately the most common major dwelling structure type of choice for households of four or more residents. For instance, 7.4 per cent of separate homes contained five residents, compared to 2.8 per cent of semi-detached homes of two or more storeys, and 1.8 per cent of semi-detached homes of one storey.

Flats, units and apartments in a one or two storey block were proportionately more likely to contain only one resident. Forty one point eight per cent of flats, units or apartments in a one or two storey block contained only one resident, compared to 38.2 per cent of semi-detached houses of one storey.

Semi-detached dwellings of two or more storeys were proportionately more likely to contain two or three residents. Thirty two point five per cent of semi-detached dwellings in the ACT had two residents, just ahead of flats, units and apartments in a block of four or more storeys (32.4%). Only 18.6 per cent of semi-detached dwellings in the ACT had three residents, followed by separate houses (17.6%).

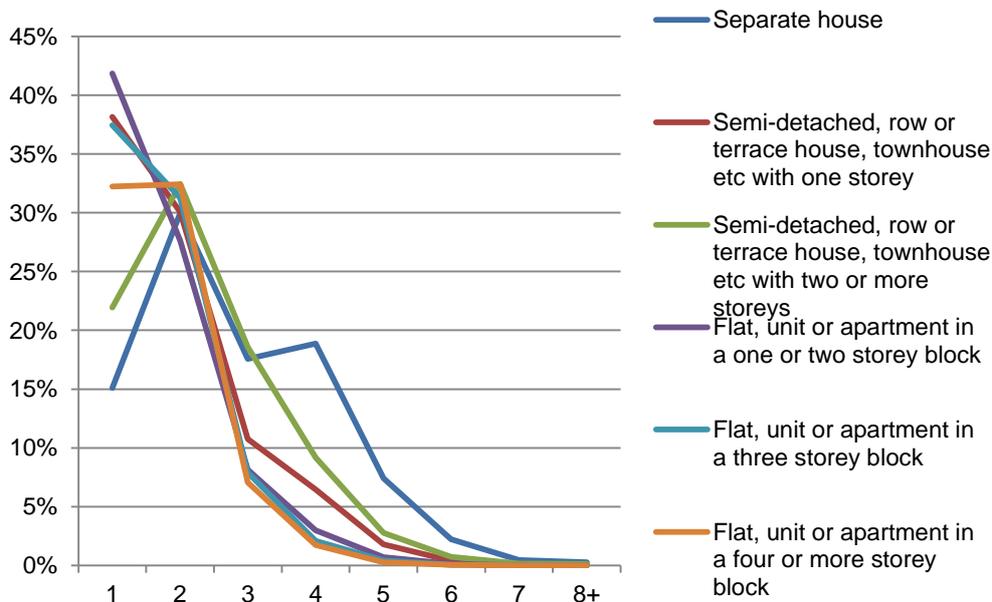


Figure 6.2 Proportion of major ACT dwelling structure types populated by certain numbers of residents, 2011

The figure above shows the popularity of different dwelling structure types among households with different numbers of occupants. Flats, units, and apartments, as well as single level semi-detached homes, are generally preferred among those living alone, while separate houses and semi-detached homes of two or more storeys were more popular among households with three or more residents.

### 6.1.3.2. Surrounding region

As shown earlier, detached houses made up 81.9 per cent of dwellings in the surrounding region. Due to its dominance of the surrounding region's dwelling stock, separate houses made up numerically more households within each number of residents group. Even in one person households, there were

more people living alone in a separate house (7,093) than in a semi-detached townhouse of one storey (1,214).

Dwelling structure type	Regular number of occupants								
	1	2	3	4	5	6	7	8+	N/A
<b>Separate house</b>	7,093	12,276	5,455	5,790	2,687	793	215	110	6,407
<b>Semi-detached, row or terrace house, townhouse etc. with one storey</b>	1,214	720	251	125	45	6	3	4	496
<b>Semi-detached, row or terrace house, townhouse etc. with two or more storeys</b>	299	303	126	69	20	11	0	0	166
<b>Flat, unit or apartment in a one or two storey block</b>	1,162	393	117	64	13	6	0	0	456
<b>Flat, unit or apartment in a three storey block</b>	488	239	61	29	5	3	0	0	223
<b>Flat, unit or apartment in a four or more storey block</b>	225	129	30	19	3	0	0	0	147
<b>Flat, unit or apartment attached to a house</b>	30	18	8	3	0	0	0	0	18
<b>Caravan, cabin, houseboat</b>	173	99	16	18	0	0	0	0	344
<b>Improvised home, tent, sleepers out</b>	17	18	7	6	8	0	0	0	141
<b>House or flat attached to a shop, office, etc.</b>	57	51	20	10	6	3	0	0	66
<b>Not stated</b>	18	18	8	4	4	0	0	0	4
<b>Not applicable</b>	0	0	0	0	0	0	0	0	171
<b>TOTAL</b>	10,776	14,264	6,099	6,137	2,791	822	218	114	8,639

Table 6.7 Number of dwelling structure types containing certain numbers of residents, surrounding region, 2011

Of all separate homes in the surrounding region at the time of the 2011 Census, 30.1 per cent were occupied by only two residents, 17.4 per cent by one resident, and 14.2 per cent by four residents.

Semi-detached homes of one storey were most likely to contain only one resident (42.4%), ahead of two residents (25.1%) and three residents (8.8%).

Semi-detached homes of two or more storeys were most likely to contain two residents (30.5%), ahead of one resident (30.1%) and three residents (12.7%).

Flats, units or apartments in a one or two storey block were most likely to contain only one resident (52.6%), ahead of two residents (17.8%), and three residents (5.3%).

Flats, units or apartments in a three storey block were most likely to contain only one resident (46.6%), followed by two residents (22.8%) and three residents (5.8%).

Flats, units or apartments in a four or more storey block were most likely to contain only one resident (40.7%), followed by two residents (23.3%) and three residents (5.4%).

Dwelling structure type	Regular number of occupants								
	1	2	3	4	5	6	7	8+	N/A
Separate house	17.37%	30.07%	13.36%	14.18%	6.58%	1.94%	0.53%	0.27%	15.69%
Semi-detached, row or terrace house, townhouse etc. with one storey	42.39%	25.14%	8.76%	4.36%	1.57%	0.21%	0.10%	0.14%	17.32%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	30.08%	30.48%	12.68%	6.94%	2.01%	1.11%	0.00%	0.00%	16.70%
Flat, unit or apartment in a one or two storey block	52.56%	17.77%	5.29%	2.89%	0.59%	0.27%	0.00%	0.00%	20.62%
Flat, unit or apartment in a three storey block	46.56%	22.81%	5.82%	2.77%	0.48%	0.29%	0.00%	0.00%	21.28%
Flat, unit or apartment in a four or more storey block	40.69%	23.33%	5.42%	3.44%	0.54%	0.00%	0.00%	0.00%	26.58%
Flat, unit or apartment attached to a house	38.96%	23.38%	10.39%	3.90%	0.00%	0.00%	0.00%	0.00%	23.38%
Caravan, cabin, houseboat	26.62%	15.23%	2.46%	2.77%	0.00%	0.00%	0.00%	0.00%	52.92%
Improvised home, tent, sleepers out	8.63%	9.14%	3.55%	3.05%	4.06%	0.00%	0.00%	0.00%	71.57%
House or flat attached to a shop, office, etc.	26.76%	23.94%	9.39%	4.69%	2.82%	1.41%	0.00%	0.00%	30.99%

Table 6.8 Proportion of dwelling structure types containing certain numbers of residents, surrounding region, 2011

A separate house was proportionately the most common major dwelling structure type of choice for households of three or more residents across the surrounding region. For instance, 13.4 per cent of separate homes contained three residents, compared to 12.7 per cent of semi-detached homes of two or more storeys, and 8.8 per cent of semi-detached homes of one storey. It should be pointed out that the sizeable majority of separate houses in the surrounding region may have prevented some residents from choosing an alternative dwelling structure type

Flats, units and apartments in a one or two storey block were proportionately more likely to contain only one resident. Fifty two point six per cent of flats units or apartments in a one or two storey block contained only one resident, followed by flats units or apartments as part of a three storey block (46.6%) and semi-detached houses of one storey (42.4%).

Semi-detached dwellings of two or more storeys were proportionately more likely to contain two residents. Thirty point five per cent of semi-detached dwellings of two or more storeys in the surrounding region had two residents. It was followed by separate houses (30.1%), and semi-detached dwellings of one storey (25.1%).

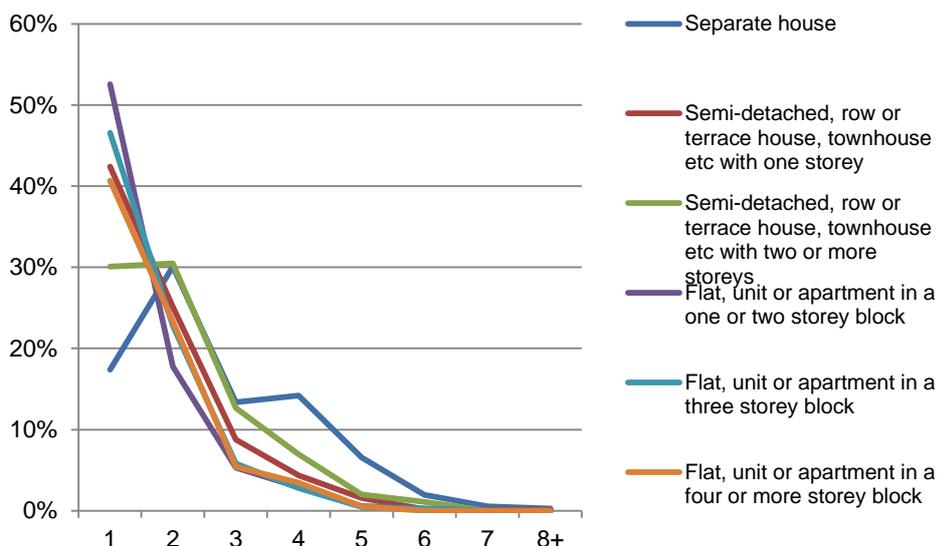


Figure 6.3 Proportion of major surrounding region dwelling structure types populated by certain numbers of residents, 2011

The figure above shows the popularity of different dwelling structure types among households of different sizes. Flats units and apartments, as well as single level semi-detached homes, are generally preferred among those living alone in the surrounding region, while separate houses and semi-detached homes of two or more storeys were more popular among households with three or more residents.

This breakdown of dwelling structure type by number of residents for the surrounding region is quite similar to that of the ACT (as shown in figure 6.1). The major difference was that the surrounding region had higher proportions of single-person dwellings.

#### 6.1.3.3. Dwellings and age of occupants

The age of people residing in certain types of homes across the ACT has also been gathered, to show how people of certain life stages are drawn to certain dwelling structure types. For the purposes of this analysis, dwellings will be broken down into three major types: separate houses; semi-detached, terrace or townhouses; and flats, units and apartments. Age groups are in brackets of five years, starting from 0-4.

All age groups were assessed to see if they were over-represented in any of the three major dwelling structure types. Over-representation in this case is defined as having a greater proportion of a given age group in a particular type of dwelling structure, than is the case across all people in the ACT on Census night 2011. As shown in table 6.1, the relative proportion of the ACT population in the three main dwelling structure types was:

- Detached dwellings: 70.54%
- Semi-detached, terrace or townhouse dwellings: 14.84%

- Flat, unit, or apartment dwellings (excluding those attached to a shop): 13.83%.

As an example, if 82.3% of ACT residents aged 0-4 live in a detached home, they are considered over-represented in a detached home as detached homes make up only 70.5% of the ACT's housing stock.

Detached homes were the most likely to attract above average proportions of people in the 0-19, and 35-79 age groups. This ranged from 72.8 per cent of 75-79 year olds, to 88.3% of 5-9 year olds.

Semi-detached, terrace or townhouse homes attracted above average proportions among the 25-34 and 75-94 age groups. Eighteen point five per cent of ACT residents aged 80-84, and one in six aged 25-29, lived in a semi-detached home.

Flats, units and apartments attracted above average proportions in the 25-34 age range only. Almost 1 in 4 (23.1%) of those aged 25-29, and 16.4% of those aged 30-34, lived in a flat, unit or apartment.

Flats, units and apartments were unpopular among residents aged 0-19 and 40-79. The proportion of people in these age ranges living in flats, units or apartments was less than half of the 13.83 per cent market share enjoyed by flats, units and apartments in the ACT at the time of the 2011 Census.

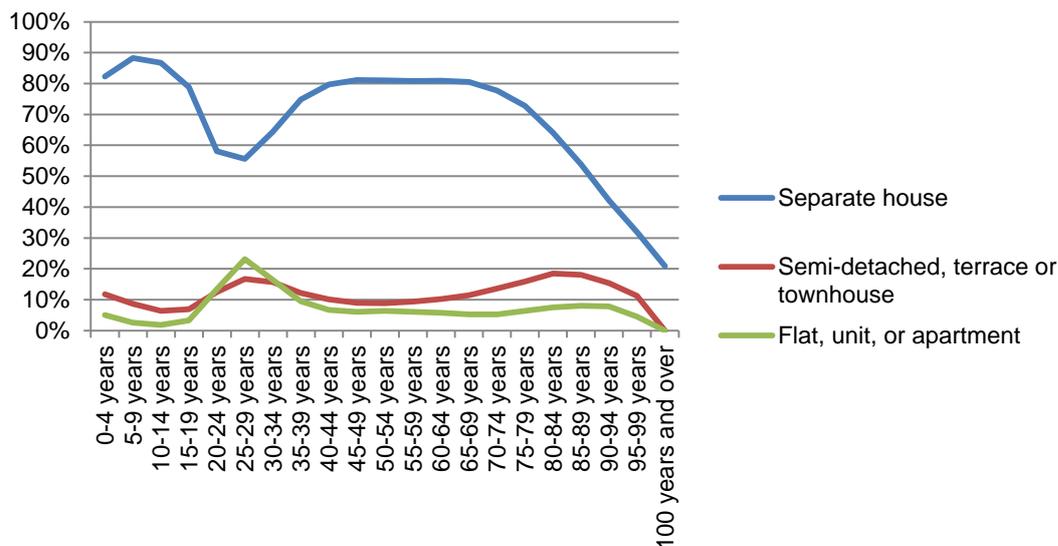


Figure 6.4 Proportion of people in the ACT in major dwelling structure types, by age, Census night, 2011

#### 6.1.4 Income

Earnings among households in the ACT are considerably higher than those in the surrounding region. In the ACT, 50.2 per cent of households earned more than \$1,500 per week, compared to only 34.1 per cent of those in the surrounding region.

The ACT had a proportionately higher number of households in each income group above \$1,250 per week. The most common income bracket in the ACT was \$1,500 - \$1,999 per week (16,298 or 11.2% of ACT dwellings). The largest difference between the ACT and the surrounding region was in the

\$2,500 - \$2,999 per week income bracket (10.8% of ACT households compared to 6.4% in the surrounding region).

The surrounding region had a proportionately higher number of households in each income group below \$1,250 per week. The most common income bracket in the surrounding region was \$1,500 - \$1,999 per week (4,926 or 9.9% of households). The largest difference between the surrounding region and the ACT was in the \$400 - \$599 per week income bracket (7.2% of surrounding region households compared to 4.3% in the ACT).

Weekly income	ACT		Surrounding region		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
<\$0	168	0.1%	102	0.2%	270	0.1%
\$0	788	0.5%	296	0.6%	1,084	0.6%
\$1-\$199	1,214	0.8%	621	1.2%	1,835	0.9%
\$200-\$299	2,262	1.6%	1,063	2.1%	3,325	1.7%
\$300-\$399	4,707	3.2%	2,688	5.4%	7,395	3.8%
\$400-\$599	6,244	4.3%	3,577	7.2%	9,821	5.0%
\$600-\$799	6,408	4.4%	3,156	6.3%	9,564	4.9%
\$800-\$999	6,743	4.6%	3,013	6.0%	9,756	5.0%
\$1,000-\$1,249	8,504	5.8%	3,210	6.4%	11,714	6.0%
\$1,250-\$1,499	8,818	6.1%	2,938	5.9%	11,756	6.0%
\$1,500-\$1,999	16,298	11.2%	4,926	9.9%	21,224	10.9%
\$2,000-\$2,499	12,970	8.9%	3,637	7.3%	16,607	8.5%
\$2,500-\$2,999	15,729	10.8%	3,196	6.4%	18,925	9.7%
\$3,000-\$3,499	11,380	7.8%	2,276	4.6%	13,656	7.0%
\$3,500-\$3,999	5,579	3.8%	1,085	2.2%	6,664	3.4%
\$4,000-\$4,999	6,334	4.4%	1,054	2.1%	7,388	3.8%
\$5,000 or more	4,717	3.2%	828	1.7%	5,545	2.8%
Partial income stated	10,349	7.1%	3,142	6.3%	13,491	6.9%
All incomes not stated	2,003	1.4%	1,114	2.2%	3,117	1.6%
Not applicable	14,258	9.8%	7,938	15.9%	22,196	11.4%
<b>Total</b>	<b>145,473</b>	<b>100.0%</b>	<b>49,860</b>	<b>100.0%</b>	<b>195,333</b>	<b>100.0%</b>

Table 6.9 Income per household, ACT and surrounding region, 2011

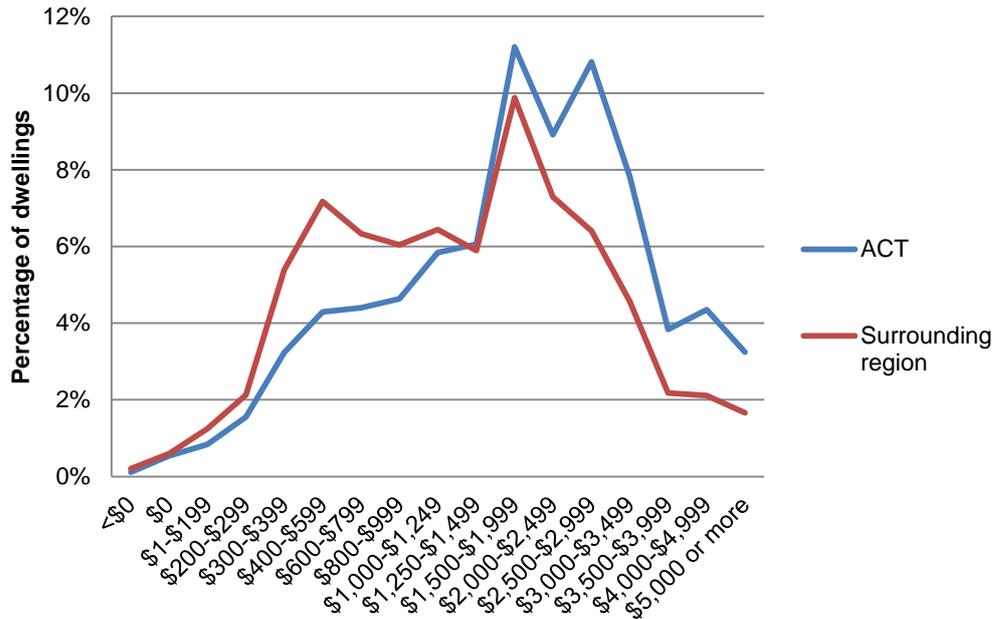


Figure 6.5 Income per household, ACT and surrounding region, 2011

In 2011, the Australian Bureau of Statistics found the ACT’s median household income to be \$1,920 per week. Of the six LGAs that make up the surrounding region, Palerang (\$1,813) and Queanbeyan (\$1,657) had the highest median weekly household incomes, albeit less than in the ACT.

Historical ABS data shows a substantial increase in median household income between 1996 and 2011. Median incomes increased by more than 140 per cent in Queanbeyan, Palerang and the Yass Valley between 1996 and 2011, and increased by 117 per cent in the ACT.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$886	\$1,100	\$1,507	\$1,920	116.7%
<b>Cooma-Monaro</b>	\$546	\$679	\$833	\$943	72.7%
<b>Goulburn Mulwaree</b>	\$572	\$704	\$842	\$981	71.5%
<b>Palerang</b>	\$729	\$962	\$1,285	\$1,813	148.7%
<b>Queanbeyan</b>	\$664	\$881	\$1,180	\$1,657	149.5%
<b>Upper Lachlan</b>	\$477	\$658	\$725	\$943	97.7%
<b>Yass Valley</b>	\$669	\$888	\$1,164	\$1,625	142.9%

Table 6.10 Median weekly income per household, ACT and surrounding region, 1996-2011

### 6.1.5 Median mortgage repayments and mortgage stress

Mortgage repayments among households in the ACT are considerably higher than those in the surrounding region. In the ACT, 21.2 per cent of households paid more than \$1,800 a month in mortgage repayments, compared to only 15.2 per cent of those in the surrounding region.

The ACT had a proportionately higher amount of households in each mortgage repayment group above \$1,800 per month. The most common mortgage repayment bracket in the ACT was \$3,000 - \$3,999 per month (7,197 or 4.9% of ACT households). The largest difference between the ACT and the surrounding region was also in the \$3,000 - \$3,999 per month mortgage repayment bracket (4.9% of ACT households compared to 3.4% in the surrounding region).

The surrounding region had a proportionately higher amount of households in each mortgage repayment bracket between \$300 and \$1,799 per month. The most common mortgage repayment bracket in the surrounding region was also \$3,000 - \$3,999 per month (1,683 or 3.4%). The largest difference between the surrounding region and the ACT was in the \$1,200 - \$1,399 per month mortgage bracket (2.4% of surrounding region households compared to 1.8% in the ACT).

It should be noted that the majority of households in both the ACT and surrounding region did not appear to have mortgages owing on them at the time of the 2011 Census. This is shown by the 65.2 per cent of ACT households and 68.5 per cent of surrounding region households that were deemed “not applicable” in this category.

Monthly mortgage repayments	ACT		Surrounding region		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Nil repayments	835	0.6%	310	0.6%	1,145	0.6%
\$1-\$149	484	0.3%	95	0.2%	579	0.3%
\$150-\$299	545	0.4%	168	0.3%	713	0.4%
\$300-\$449	865	0.6%	340	0.7%	1,205	0.6%
\$450-\$599	779	0.5%	303	0.6%	1,082	0.6%
\$600-\$799	1,452	1.0%	666	1.3%	2,118	1.1%
\$800-\$999	1,933	1.3%	835	1.7%	2,768	1.4%
\$1,000-\$1,199	2,495	1.7%	1,095	2.2%	3,590	1.8%
\$1,200-\$1,399	2,587	1.8%	1,178	2.4%	3,765	1.9%
\$1,400-\$1,599	2,717	1.9%	1,121	2.2%	3,838	2.0%
\$1,600-\$1,799	3,437	2.4%	1,302	2.6%	4,739	2.4%
\$1,800-\$1,999	3,171	2.2%	867	1.7%	4,038	2.1%
\$2,000-\$2,199	5,424	3.7%	1,475	3.0%	6,899	3.5%
\$2,200-\$2,399	3,136	2.2%	697	1.4%	3,833	2.0%
\$2,400-\$2,599	2,391	1.6%	532	1.1%	2,923	1.5%
\$2,600-\$2,999	5,735	3.9%	1,344	2.7%	7,079	3.6%
\$3,000-\$3,999	7,197	4.9%	1,683	3.4%	8,880	4.5%
\$4,000-\$4,999	2,326	1.6%	602	1.2%	2,928	1.5%
\$5000 and over	1,448	1.0%	354	0.7%	1,802	0.9%
Not stated	1,695	1.2%	743	1.5%	2,438	1.2%
Not applicable	94,820	65.2%	34,151	68.5%	128,971	66.0%

<b>Total</b>	145,472	100%	49,861	100%	195,333	100.0%
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Table 6.11 Monthly mortgage repayments per household, ACT and surrounding region, 2011

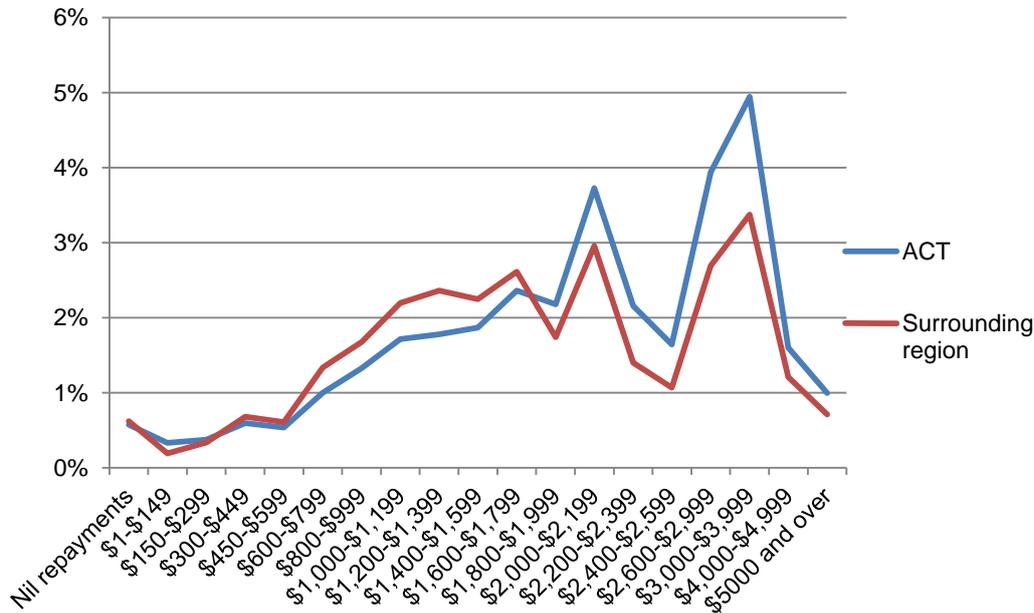


Figure 6.6 Monthly mortgage repayments per household, ACT and surrounding region, 2011

In 2011, the Australian Bureau of Statistics found the ACT's median monthly mortgage repayments to be \$2,167. Of the six LGAs that make up the surrounding region, Palerang (\$2,165) and Queanbeyan and Yass Valley (both \$2,000) have the highest median monthly mortgage repayments, only slightly below the median in the ACT.

Historical ABS data shows a substantial increase in median monthly mortgage repayments between 1996 and 2011. Median repayments increased by almost 150 per cent in Palerang, 135 per cent in the ACT, and 131 per cent in Queanbeyan and the Yass Valley. Queanbeyan and the Yass Valley were the only areas where median household income grew at a faster rate than median mortgage repayments.

These figures suggest that people in the ACT and most parts of the surrounding region are using proportionately more of their incomes on mortgage repayments than was the case in 1996.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$ 923	\$ 953	\$1,500	\$2,167	134.8%
<b>Cooma-Monaro</b>	\$ 654	\$ 690	\$1,029	\$1,300	98.8%
<b>Goulburn Mulwaree</b>	\$ 756	\$ 780	\$1,187	\$1,517	100.7%
<b>Palerang</b>	\$ 867	\$1,000	\$1,560	\$2,165	149.7%
<b>Queanbeyan</b>	\$ 867	\$ 931	\$1,491	\$2,000	130.7%
<b>Upper Lachlan</b>	\$ 650	\$ 740	\$1,083	\$1,460	124.6%

<b>Yass Valley</b>	\$ 867	\$ 953	\$1,408	\$2,000	130.7%
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Table 6.12 Median monthly mortgage repayments per household, ACT and surrounding region, 1996-2011

A breakdown of areas within the ACT found the Gungahlin district had the second highest median monthly mortgage repayment per household, at \$2,300. As the most recently built district of the ACT, this offers some insight on what could be expected in future residential developments in the ACT:

<b>Area</b>	<b>Median monthly mortgage repayment</b>
South Canberra	\$2,544
Gungahlin	\$2,300
Cotter-Namadgi	\$2,250
North Canberra	\$2,199
Woden	\$2,167
Weston Creek	\$2,145
Belconnen	\$2,050
Tuggeranong	\$2,000
Fyshwick-Pialligo-Hume	\$1,400
<b>TOTAL</b>	<b>\$2,167</b>

Table 6.13 Median monthly mortgage repayments, ACT 2011

South Canberra had the highest median monthly mortgage repayments per household (\$2,544), while Woden (5<sup>th</sup>, \$2,167 per household) matched the ACT average.

Mortgage stress is commonly defined as the spending of more than thirty per cent of personal or household gross income on household mortgage repayments. While the ACT has higher median mortgage repayments than the surrounding region, its higher median incomes mean the ACT generally experiences a lower level of mortgage stress.

In 2011, the Australian Bureau of Statistics found 7.8 per cent of ACT households had mortgage repayments worth 30 per cent or more of gross household income. Of the six LGAs that make up the surrounding region, only Cooma-Monaro (7.0%) had a lower level of mortgage stress. The highest levels were experienced in Palerang (10.4%) and Yass Valley (9.5%).

<b>Area</b>	<b>Proportion of dwellings suffering from mortgage stress</b>
<b>ACT</b>	<b>7.8%</b>
Cooma-Monaro	7.0%
Goulburn Mulwaree	7.9%
Palerang	10.4%
Queanbeyan	8.9%
Upper Lachlan Shire	7.9%
Yass Valley	9.5%
<b>Surrounding Region</b>	<b>8.6%</b>

Table 6.14 Percentage of households suffering mortgage stress, ACT and surrounding region, 2011

### 6.1.6 Median rent payments and rental stress

Rent payments among households in the ACT are considerably higher than those in the surrounding region. In the ACT, 17.0 per cent of households paid more than \$325 a week in rent, compared to only 4.8 per cent of those in the surrounding region.

The ACT had a proportionately higher amount of households in each rental bracket above \$325 per week. The most common rental bracket in the ACT was \$450 - \$549 per week (7,241 or 5.0% of ACT households). The largest difference between the ACT and the surrounding region was also in the \$450 - \$549 per week rental bracket (5.0% of ACT households compared to 1.0% in the surrounding region).

The surrounding region had a proportionately higher amount of households in each rental bracket between \$100 and \$324 per week. The most common rental bracket in the surrounding region was \$200 - \$224 per week (1,084 or 2.2% of households). The largest difference between the surrounding region and the ACT was also in the \$200 - \$224 per week rental bracket (2.2% of surrounding region households compared to 0.8% in the ACT).

It should be noted that the majority of homes in both the ACT and surrounding region did not appear to be in the rental market at the time of the 2011 Census. This is shown by the 72.1 per cent of ACT households and 78.3 per cent of surrounding region households that were deemed “not applicable” in this category.

Weekly rental payments	ACT		Surrounding region		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Nil payments</b>	879	0.6%	618	1.2%	1,497	0.8%
<b>\$1-\$74</b>	1,258	0.9%	298	0.6%	1,556	0.8%
<b>\$75-\$99</b>	2,344	1.6%	528	1.1%	2,872	1.5%
<b>\$100-\$124</b>	1,267	0.9%	515	1.0%	1,782	0.9%
<b>\$125-\$149</b>	1,073	0.7%	580	1.2%	1,653	0.8%
<b>\$150-\$174</b>	1,050	0.7%	813	1.6%	1,863	1.0%
<b>\$175-\$199</b>	760	0.5%	744	1.5%	1,504	0.8%
<b>\$200-\$224</b>	1,225	0.8%	1,084	2.2%	2,309	1.2%
<b>\$225-\$249</b>	774	0.5%	583	1.2%	1,357	0.7%
<b>\$250-\$274</b>	1,136	0.8%	943	1.9%	2,079	1.1%
<b>\$275-\$299</b>	848	0.6%	545	1.1%	1,393	0.7%
<b>\$300-\$324</b>	1,894	1.3%	779	1.6%	2,673	1.4%
<b>\$325-\$349</b>	1,156	0.8%	312	0.6%	1,468	0.8%
<b>\$350-\$374</b>	2,935	2.0%	477	1.0%	3,412	1.7%
<b>\$375-\$399</b>	2,807	1.9%	269	0.5%	3,076	1.6%

<b>\$400-\$424</b>	4,240	2.9%	359	0.7%	4,599	2.4%
<b>\$425-\$449</b>	2,268	1.6%	149	0.3%	2,417	1.2%
<b>\$450-\$549</b>	7,241	5.0%	495	1.0%	7,736	4.0%
<b>\$550-\$649</b>	2,468	1.7%	189	0.4%	2,657	1.4%
<b>\$650 and over</b>	1,654	1.1%	143	0.3%	1,797	0.9%
<b>Not stated</b>	1,302	0.9%	414	0.8%	1,716	0.9%
<b>Not applicable</b>	104,892	72.1%	39,025	78.3%	143,917	73.7%
<b>Total</b>	145,471	100%	49,862	100%	195,333	100.0%

Table 6.15 Weekly rent payments per household, ACT and surrounding region, 2011

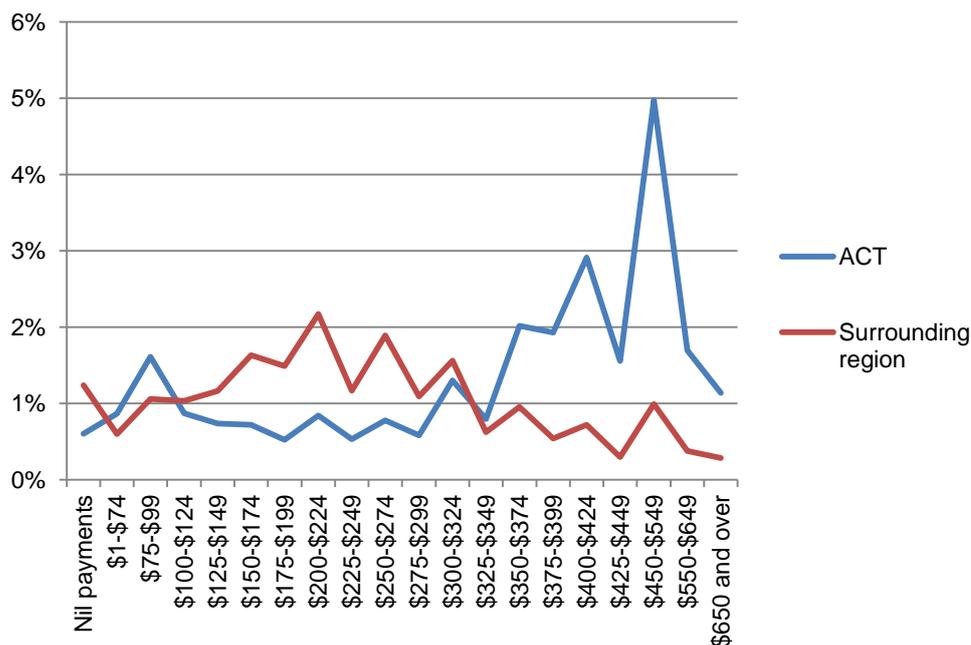


Figure 6.7 Weekly rent payments per household, ACT and surrounding region, 2011

In 2011, the Australian Bureau of Statistics found the ACT's median weekly rental price to be \$380. A breakdown of areas within the ACT found the Gungahlin district had the equal second highest median weekly rent payments per household, at \$400. As the most recently built district of the ACT, this offers some insight on what could be expected in future residential developments in the ACT.

Area	Median weekly rent repayment
South Canberra	\$430
Gungahlin	\$400
North Canberra	\$400
Belconnen	\$375
Tuggeranong	\$370
Woden	\$360
Weston Creek	\$346
Fyshwick-Pialligo-Hume	\$200

Cotter-Namadgi	\$170
<b>TOTAL</b>	<b>\$380</b>

Table 6.16 Median monthly mortgage repayments, ACT 2011

South Canberra had the highest median weekly rents per household (\$430), while Belconnen (4<sup>th</sup>, \$375) was closest to the ACT median.

Of the six LGAs that make up the surrounding region, Queanbeyan (\$285), and Palerang and Yass Valley (both \$250) have the highest median weekly rental prices, well below the median in the ACT.

Historical ABS data shows a substantial increase in median weekly rent repayments between 1996 and 2011. Median repayments increased by almost 163 per cent in the Yass Valley, 159 per cent in Queanbeyan, 153 per cent in the ACT, and 150 per cent in Palerang and Upper Lachlan. Median rent payments increased at a greater rate than median incomes across the ACT and all LGAs within the surrounding region between 1996 and 2011. Median rents also increased at a greater rate than median mortgage repayments in all areas except for Cooma-Monaro and Goulburn Mulwaree.

These figures suggest that it is becoming more difficult for ACT and surrounding region residents to pay home rental costs, reducing their ability to save for a deposit and loan for their own home.

	1996	2001	2006	2011	% Change 1996-2011
<b>ACT</b>	\$150	\$165	\$260	\$380	153.3%
<b>Cooma-Monaro</b>	\$95	\$100	\$135	\$180	89.5%
<b>Goulburn Mulwaree</b>	\$100	\$120	\$150	\$185	85.0%
<b>Palerang</b>	\$100	\$120	\$175	\$250	150.0%
<b>Queanbeyan</b>	\$110	\$120	\$185	\$285	159.1%
<b>Upper Lachlan</b>	\$56	\$70	\$90	\$140	150.0%
<b>Yass Valley</b>	\$95	\$105	\$150	\$250	163.2%

Table 6.17 Median weekly rental prices per household, ACT and surrounding region, 1996-2011

Rental stress is commonly defined as the spending of more than thirty per cent of personal or household gross income on household rental costs. While the ACT generally experiences a lower level of mortgage stress than the surrounding region, it experiences higher levels of rental stress than most LGAs in the surrounding region.

In 2011, the Australian Bureau of Statistics found 8.0 per cent of ACT households had rental costs worth 30 per cent or more of the household's gross income. Of the six LGAs that make up the surrounding region, Palerang (3.5%), Upper Lachlan (3.7%), and Yass Valley (4.7%) had lower levels of rental stress. Highest levels of rental stress exist in Goulburn-Mulwaree (9.0%) and Queanbeyan (8.9%).

Area	Proportion of dwellings suffering from rental stress
<b>ACT</b>	8.0%
Cooma-Monaro	8.2%
Goulburn Mulwaree	9.0%
Palerang	3.5%
Queanbeyan	8.9%
Upper Lachlan Shire	3.7%
Yass Valley	4.7%
<b>Surrounding Region</b>	<b>6.3%</b>

Table 6.18 Percentage of dwellings suffering rental stress, ACT and surrounding region, 2011

## 6.2 Projections

This report will now present housing projections for the years 2021, 2031, and 2041, based on components of a shift-share analysis as well as other projection scenarios. The shift share analysis considers growth rates at a local and national level, as well as within individual types of dwelling structures.

Five projections each have been undertaken for the ACT and surrounding region:

- 6 Business as usual: This projection assumes the exact same number and mix of dwelling structure types built in a given area between 2001 and 2011, will be built in each subsequent ten year period to 2041.
- 7 Shift share projection: This projection takes into account a mix of local and national growth rates of each dwelling structure type.
- 8 National growth rate projection: This projects total dwelling numbers for the ACT and surrounding region, assuming that the number of local dwellings increase at the same rate as they did across all dwellings in Australia between 2001 and 2011. Nationally, the number of dwellings across Australia increased by 17.9% between 2001 and 2011.
- 9 National dwelling structure type growth rate projection: This projects dwelling numbers for the ACT and surrounding region, assuming that the local numbers of each dwelling structure type increase at the same rate that dwelling structure type did nationally between 2001 and 2011. For instance, the number of separate houses across Australia grew by 15.55 per cent between 2001 and 2011, while the number of dwellings built as part of a unit or apartment block of four or more storeys in height increased nationally by 65.59 per cent.
- 10 Local growth rate projection: This projects total dwelling numbers for the ACT and surrounding region, assuming that the numbers of local dwellings increase at the same rate as they did across all dwellings in the same local area between 2001 and 2011. In the ACT the number of dwellings increased by 20.15% between 2001 and 2011. This projection would show a 20.15% increase in the number of dwellings in the ACT for each subsequent ten year period.

Dwelling structure types used in this analysis are the same as those referred to in section 6.1.1. of this report, which showed the number and range of dwellings in the ACT and surrounding region for 2011. Dwellings whose structure type has been classed as “not stated” or “not applicable” have been excluded from this analysis.

### 6.2.1 Projections for the ACT

Three of the five above projections offered only slight variations in the number and mix of dwellings to expect across the ACT in the future. The different models used did not vary greatly in their projections of population growth for the ACT in 2021, however their projections varied by increasing margins in 2031 and again in 2041.

### 6.2.1.1. Business as usual

This projection assumes the exact same number and mix of dwelling structure types built in the ACT between 2001 and 2011, will be built in each subsequent ten year period to 2041. The change in the number of dwellings built in the ACT between 2001 and 2011 is shown below:

	2001	2011	Change
Separate house	92,089	102,621	10,532
Semi-detached, row or terrace house, townhouse etc. with one storey	10,919	13,521	2,602
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	5,230	8,071	2,841
Flat, unit or apartment in a one or two storey block	5,052	6,621	1,569
Flat, unit or apartment in a three storey block	4,637	7,361	2,724
Flat, unit or apartment in a four or more storey block	1,794	6,132	4,338
Flat, unit or apartment attached to a house	713	439	- 274
Caravan, cabin, houseboat	288	328	40
Improvised home, tent, sleepers out	58	36	- 22
House or flat attached to a shop, office, etc.	39	39	0
<b>Total</b>	<b>120,819</b>	<b>145,169</b>	<b>24,350</b>

Table 6.19 Numerical growth in dwelling numbers across the ACT, 2001-2011

Based on this business as usual approach:

By 2021, the ACT would be home to 169,519 dwellings;

By 2031, the ACT would be home to 193,986 dwellings; and

By 2041, the ACT would be home to 218,632 dwellings.

	2011	2021	2031	2041
Separate house	102,621	113,153	123,685	134,217
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	16,123	18,726	21,328
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	10,912	13,752	16,593
Flat, unit or apartment in a one or two storey block	6,621	8,190	9,759	11,328
Flat, unit or apartment in a three storey block	7,361	10,085	12,808	15,532
Flat, unit or apartment in a four or more storey block	6,132	10,470	14,809	19,147
Flat, unit or apartment attached to a house	439	165	0	0

Caravan, cabin, houseboat	328	368	408	448
Improvised home, tent, sleepers out	36	14	0	0
House or flat attached to a shop, office, etc.	39	39	39	39
TOTAL	145,169	169,519	193,986	218,632

Table 6.20 Business as usual projections for the ACT based on dwelling stock, 2021, 2031 and 2041

These figures are among the least aggressive of the projections for the ACT. They point to a 50.6 per cent increase in the ACT's dwelling numbers between 2011 and 2041:

- The number of detached houses in the ACT would increase from 102,621 in 2011 to 134,217 in 2041. This would see detached houses make up 43.2 per cent of new dwellings built in the ACT between 2011 and 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would steadily increase from a combined 21,592 in 2011 to 37,921 in 2041. This would see semi-detached, terrace or town houses comprise 22.4 per cent of new homes built in the ACT between 2011 and 2041.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would grow from a combined 20,114 in 2011 to 46,007 in 2041. This would see units and apartments make up 35.4 per cent of all new dwellings built in the ACT between 2011 and 2041.

#### 6.2.1.2. Shift share projection

The shift-share analysis of each dwelling structure type was based on the following assumption of growth rates, based on figures from the 2001 and 2011 Australian Censuses:

	ACT	Australia
Separate house	11.44%	15.55%
Semi-detached, row or terrace house, townhouse etc. with one storey	23.83%	19.36%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	54.31%	47.83%
Flat, unit or apartment in a one or two storey block	31.06%	17.97%
Flat, unit or apartment in a three storey block	58.74%	19.05%
Flat, unit or apartment in a four or more storey block	241.86%*	65.59%
Flat, unit or apartment attached to a house	-38.43%	-46.02%
Caravan, cabin, houseboat	13.89%	-2.73%

Improvised home, tent, sleepers out	-37.93%	-11.70%
House or flat attached to a shop, office, etc.	0.00%	-30.88%

Table 6.21 Growth rate of dwelling structure types within the ACT and across Australia, 2001-2011

\*A shift-share analysis involves the projection of growth in local dwelling structure types over successive time periods. As it is highly unlikely for the construction of unit blocks of four or more storeys to continue to grow at 242 per cent per decade (as they did between 2001 and 2011), we have assumed a more modest growth rate of 100% for that particular dwelling structure type.

Using this model:

By 2021, the ACT would be home to 176,888 dwellings;

By 2031, the ACT would be home to 222,481 dwellings; and

By 2041, the ACT would be home to 291,381 dwellings.

	2011	2021	2031	2041
Separate house	102,621	114,358	127,436	142,011
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	16,744	20,734	25,676
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	12,455	19,219	29,657
Flat, unit or apartment in a one or two storey block	6,621	8,677	11,372	14,904
Flat, unit or apartment in a three storey block	7,361	11,685	18,548	29,442
Flat, unit or apartment in a four or more storey block	6,132	12,264*	24,528*	49,056*
Flat, unit or apartment attached to a house	439	270	166	102
Caravan, cabin, houseboat	328	374	425	485
Improvised home, tent, sleepers out	36	22	14	9
House or flat attached to a shop, office, etc.	39	39	39	39
Total (by sum of structure types)	145,169	176,888	222,481	291,381

Table 6.22 ACT dwelling number projections through shift-share analysis, 2011-2041

\* =Projected growth capped at 100% per decade

The number and mix of dwellings in this projection appears unlikely, given it projects a sharp percentage growth in unit development that may not be sustainable into the future.

- This model suggests the number of detached houses in the ACT would increase modestly from 102,621 in 2011 to 142,011 in 2041. This is the second most modest of the estimates for the number of new detached homes in the ACT, behind only the business as usual approach. This model predicts detached homes to only make up 48.7 per cent of the ACT's housing stock in 2041, much lower than the 2011 level of more than 70 per cent.

- The number of terrace, townhouses, and other semi-detached dwellings would sharply increase from a combined 21,592 in 2011 to 55,333 in 2041. This would see the creation of more than double the number of semi-detached homes envisaged under the business as usual approach, and would see townhouses increase in prominence within the ACT's dwelling stock from 14.9 per cent in 2011 to 19.0 per cent in 2041.
- The main growth in this model comes from the large proportional growth in unit developments across the ACT between 2001 and 2011, being projected to future years. This would see the number of units in the ACT (excluding those attached to a house) grow from just 20,114 in 2011, to 32,626 in 2021, and as high as 93,402 in 2041. By 2041, this model predicts more than half of all units in the ACT will be in blocks of four or more storeys in height, and that units in blocks of four or more storeys in height will make up 16.8 per cent of the ACT's housing stock. This may sound high, but is not impossible when one considers ACT Government plans (such as the ACT Spatial Plan, available online at [http://apps.actpla.act.gov.au/spatialplan/5\\_implementation/5B\\_initiatives/index.htm](http://apps.actpla.act.gov.au/spatialplan/5_implementation/5B_initiatives/index.htm)) to support higher density development along major transport corridors, and around town centres.

#### 6.2.1.3. National Growth rate projection

This projection is based on the assumption that total dwelling stock across the ACT over future ten-year periods increases at the same rate as it did across Australia between 2001 and 2011. As demonstrated in the figure below, this national growth rate was found to be 17.9 per cent.

	2001	2011	Percentage change
Number of dwellings	7,723,145	9,106,106	17.9%

Table 6.23 Growth rate of dwellings across Australia, 2001-2011

If a growth rate of 17.9 per cent were applied to dwelling stock in the ACT:

By 2021, the ACT would be home to 171,164 dwellings;

By 2031, the ACT would be home to 201,814 dwellings; and

By 2041, the ACT would be home to 237,953 dwellings.

	2011	2021	2031	2041
Separate house	102,621	120,997	142,664	168,210
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	15,942	18,797	22,163
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	9,516	11,220	13,229
Flat, unit or apartment in a one or two storey block	6,621	7,807	9,205	10,853
Flat, unit or apartment in a three storey block	7,361	8,679	10,233	12,066

Flat, unit or apartment in a four or more storey block	6,132	7,230	8,525	10,051
Flat, unit or apartment attached to a house	439	518	610	720
Caravan, cabin, houseboat	328	387	456	538
Improvised home, tent, sleepers out	36	42	50	59
House or flat attached to a shop, office, etc.	39	46	54	64
Total	145,169	171,164	201,814	237,953

Table 6.24 National growth rate projections for the ACT based on dwelling stock, 2021, 2031 and 2041

Overall these figures are higher than the business as usual approach. However they also point to an unlikely mix of housing stock across the ACT into the future.

- This model shows the number of detached houses in the ACT to increase from 102,621 in 2011 to 168,210 in 2041. This would see detached houses continue to make up 70.7 per cent of all housing stock across the ACT. This continued high proportion of detached houses is unlikely, given the fact that detached houses fell as a proportion of the ACT's housing stock from 76.2 per cent in 2001 to 70.7 per cent in 2011.
- The number of terrace, townhouses, and other semi-detached dwellings would steadily increase from a combined 21,592 in 2011 to 35,392 in 2041.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would only grow from a combined 20,114 in 2011 to 32,970 in 2041, an increase of just 12,856 at an average of 2.1 per cent per year. Growth in the construction of unit and apartment blocks in the ACT has been much greater than this in recent years, and is likely to continue into the future through further medium- to high- density development along the Northbourne Avenue (North Canberra) and John Gorton Drive (Molonglo) corridors, and redevelopment within many of the ACT's town and group centres.

#### 6.2.1.4. National dwelling structure type growth rate projection

This projection is based on the assumption that the number of each dwelling structure type across the ACT over future ten-year periods increases at the same rate as it did for the corresponding dwelling structure type across Australia between 2001 and 2011. For instance, this would assume the number of dwellings defined as "flat, unit or apartment in a three storey block" will increase in the ACT by 19.05 per cent in each ten year period to 2041.

	2001	2011	Percentage change
Separate house	5,826,044	6,731,868	15.55%

Semi-detached, row or terrace house, townhouse etc. with one storey	451,451	538,836	19.36%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	248,182	366,877	47.83%
Flat, unit or apartment in a one or two storey block	536,663	633,085	17.97%
Flat, unit or apartment in a three storey block	264,781	315,233	19.05%
Flat, unit or apartment in a four or more storey block	225,924	374,111	65.59%
Flat, unit or apartment attached to a house	21,432	11,569	-46.02%
Caravan, cabin, houseboat	101,656	98,882	-2.73%
Improvised home, tent, sleepers out	16,429	14,506	-11.70%
House or flat attached to a shop, office, etc.	30,583	21,139	-30.88%

Table 6.25 Change in proportion of dwelling structure types across Australia, 2001-2011

Using this model:

By 2021, the ACT would be home to 173,989 dwellings;

By 2031, the ACT would be home to 210,857 dwellings; and

By 2041, the ACT would be home to 258,919 dwellings

	2011	2021	2031	2041
Separate house	102,621	118,576	137,012	158,315
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	16,138	19,262	22,990
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	11,931	17,637	26,072
Flat, unit or apartment in a one or two storey block	6,621	7,811	9,214	10,869
Flat, unit or apartment in a three storey block	7,361	8,764	10,433	12,421
Flat, unit or apartment in a four or more storey block	6,132	10,154	16,814	27,843
Flat, unit or apartment attached to a house	439	237	128	69
Caravan, cabin, houseboat	328	319	310	302
Improvised home, tent, sleepers out	36	32	28	25
House or flat attached to a shop, office, etc.	39	27	19	13
Total (by sum of structure types)	145,169	173,989	210,857	258,919

Table 6.26 National dwelling structure type growth rate projection to housing stock in the ACT for 2021, 2031 and 2041

This projection anticipates almost 21,000 extra dwellings across the ACT by 2041 compared to the flat national growth rate. It also points to a more likely mix of housing stock across the ACT, given the relative growth of detached homes, townhouses, and unit blocks:

- This model shows the number of detached houses in the ACT to increase from 102,621 in 2011 to 158,315 in 2041. This would see detached houses make up only 61.1 per cent of all housing stock across the ACT by 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would steadily increase from a combined 21,592 in 2011 to 49,062 in 2041, a growth of 27,470. This is almost double the figure of the previous model, and takes into account the rising number of town houses and similar semi-detached homes being built across the nation.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would grow from a combined 20,114 in 2011 to 51,134 in 2041, an increase of 31,020. While this growth rate is modest compared to that experienced in the ACT between 2001 and 2011, it is more sustainable into the future (particularly when compared to the shift-share analysis presented earlier).

#### 6.2.1.5. Local Growth rate projection

This projection is based on the assumption that total dwelling stock across the ACT over future ten-year periods increases at the same rate as it did across the ACT between 2001 and 2011. As demonstrated in the figure below, this local growth rate was found to be 20.15 per cent.

	2001	2011	Percentage change
Number of dwellings	120,819	145,169	20.15%

Table 6.27 Growth of dwelling numbers in the ACT, 2001-2011

If a growth rate of 20.15 per cent were applied to dwelling stock in the ACT:

By 2021, the ACT would be home to 174,426 dwellings;

By 2031, the ACT would be home to 209,581 dwellings; and

By 2041, the ACT would be home to 251,819 dwellings.

	2011	2021	2031	2041
Separate house	102,621	123,303	148,154	178,013
Semi-detached, row or terrace house, townhouse etc. with one storey	13,521	16,246	19,520	23,454
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	8,071	9,698	11,652	14,000
Flat, unit or apartment in a one or two storey block	6,621	7,955	9,559	11,485
Flat, unit or apartment in a three storey block	7,361	8,845	10,627	12,769
Flat, unit or apartment in a four or more storey block	6,132	7,368	8,853	10,637
Flat, unit or apartment attached to a house	439	527	634	762
Caravan, cabin, houseboat	328	394	474	569
Improvised home, tent, sleepers out	36	43	52	62
House or flat attached to a shop, office, etc.	39	47	56	68
Total	145,169	174,426	209,581	251,819

Table 6.28 2001-11 ACT growth rate projections for the ACT based on dwelling stock, 2021, 2031 and 2041

The total number of new dwellings in this model between 2011 and 2041 (106, 650) is not the highest of the estimates presented for consideration. However, like the flat national growth rate model, this model points to an unlikely mix of future housing stock across the ACT:

- This model suggests the number of detached houses in the ACT would increase from 102,621 in 2011 to 178,013 in 2041. Without opening up large tracts of new land not currently being considered for development (due to cost, environment or other constraints), it is unlikely that an extra 75,000 new detached homes would be built across the ACT between 2011 and 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would steadily increase from a combined 21,592 in 2011 to 37,454 in 2041.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would only grow from a combined 20,114 in 2011 to 34,891 in 2041. Growth in the construction of unit and apartment blocks in the ACT has been much greater than this in the ACT in recent years.

#### 6.2.1.6. Existing projections and comparison

The ACT Government has also made projections on the total number of dwellings likely to be needed in the ACT over coming years. Documents released by the Environment and Sustainable Development Directorate (available at

[http://www.actpla.act.gov.au/\\_data/assets/pdf\\_file/0003/25680/Planning\\_Background07\\_Housing.pdf](http://www.actpla.act.gov.au/_data/assets/pdf_file/0003/25680/Planning_Background07_Housing.pdf)

f) suggest an extra 65,000 dwellings (based on the 2006 dwelling stock of 131,271) would be needed across the ACT by 2030, to house an estimated population of 453,300. It also suggested an extra 117,000 would be needed by 2059, to house an estimated population of 557,400. These projections assume that all new dwellings built to 2059 will have what amounts to an average occupancy of just two residents per dwelling (based on the 2006 ACT population of 323,325 as stated in the Australian Census). This is not impossible given the phenomena of an ageing population, and high divorce rates. However projections involving an average of two people, fall well below the 2011 ACT residency rate of 2.6 people per dwelling.

If the growth in dwelling numbers forecasted by the ACT Government occurred at consistent rates between 2006-2030 and 2030-2059, it is projected that:

By 2021, the ACT would be home to 171,896 dwellings;

By 2031, the ACT would be home to 198,064 dwellings; and

By 2041, the ACT would be home to 215,995 dwellings.

This projection is lower than the previous models discussed for dwelling numbers in the ACT.

A projection based on the average of the six dwelling projections presented above (as shown in the table below), would result in the ACT having 172,980 dwellings by 2021, and 245,780 dwellings by 2041.

	<b>2011 (base year)</b>	<b>2021</b>	<b>2031</b>	<b>2041</b>
Business as usual	145,169	169,519	193,986	218,632
Shift share analysis	145,169	176,888	222,481	291,381
National growth rate (17.9067% over ten years)	145,169	171,164	201,814	237,953
National growth of each dwelling type	145,169	173,989	210,857	258,919
ACT growth rate (20.15% over ten years)	145,169	174,426	209,581	251,819
ACT Government projection	144,813*	171,896	198,064	215,995
<b>Average</b>		<b>172,980</b>	<b>206,131</b>	<b>245,783</b>

Table 6. 29 Comparison of all dwelling projections for the ACT to 2041

\*= projected figure, based on a 2006 base year

On average, this would require the construction of approximately 27,800 dwellings between 2011 and 2021, and 100,600 dwellings between 2011 and 2041

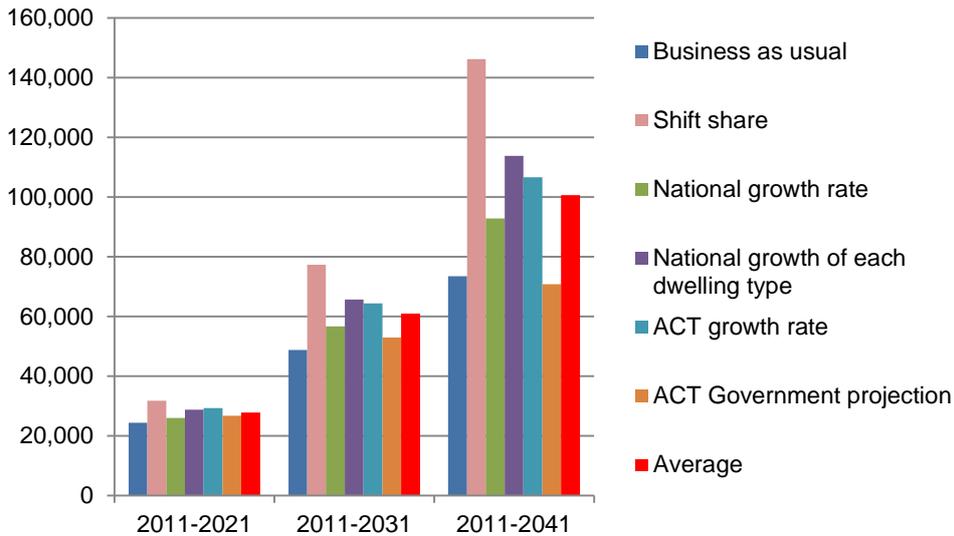


Figure 6.8 Projections of additional dwellings to be built in the ACT between 2011 and 2041 (using 2011 as a base year, valued at zero)

A further breakdown of dwellings to be built in the ACT by dwelling structure type, reveals a reduced dependence on detached homes. Using an average of the shift share analysis, national dwelling structure growth rate, and the business as usual approach, the ACT could have more new flats, units and apartments between 2011 and 2041 (38.7% of all new dwellings) than detached houses (38.0% of all new dwellings).

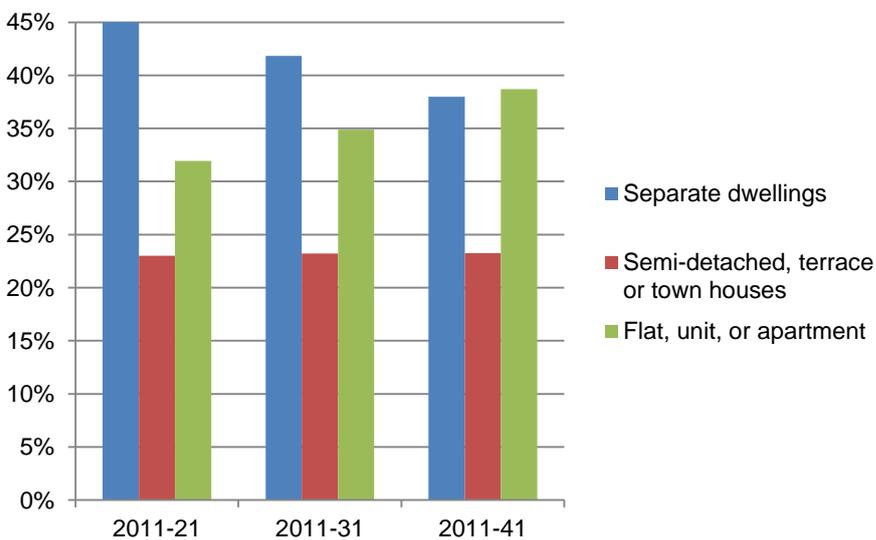


Figure 6.9 Projected mix of new dwellings built in the ACT, 2011-2041

The ACT Planning Strategy establishes a 50/50 policy for new housing development in the ACT – 50% of new housing is to be infill, 50% to be greenfield. Application of this policy, based on the average projection shown on the previous page, would mean that permission needs to be made for just over 50,000 new greenfield dwellings in the ACT between 2011 and 2041. It would be assumed,

based on development patterns in outer suburban areas of the ACT and other major cities, that future greenfield sites on the urban fringe would consist primarily of detached and semi-detached homes; with flats, units and apartments making up the bulk of urban infill activity.

#### 6.2.2. Surrounding region projections

Projections for the surrounding region have been carried out by treating the surrounding region as a whole. This is because (numerical) increases of dwelling structure types in some of the smaller LGAs within the surrounding region were too small to be reliably analysed in isolation.

##### 6.2.2.1. Business as usual

This projection assumes the exact same number and mix of dwelling structure types built in the surrounding region between 2001 and 2011, will be built in each subsequent ten year period to 2041. The change in the number of dwellings built in the surrounding region between 2001 and 2011 is shown below:

	2001	2011	Change
Separate house	34,329	40,824	6,495
Semi-detached, row or terrace house, townhouse etc. with one storey	1,954	2,865	911
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	750	990	240
Flat, unit or apartment in a one or two storey block	2,682	2,210	- 472
Flat, unit or apartment in a three storey block	969	1,048	79
Flat, unit or apartment in a four or more storey block	327	555	228
Flat, unit or apartment attached to a house	115	78	- 37
Caravan, cabin, houseboat	480	647	167
Improvised home, tent, sleepers out	164	197	33
House or flat attached to a shop, office, etc.	240	217	- 23
Total	42,010	49,631	7,621

Table 6.30 Numerical growth in dwelling numbers across the surrounding region, 2001-2011

Based on this business as usual approach:

By 2021, the surrounding region would be home to 57,252 dwellings;

By 2031, the surrounding region would be home to 64,873 dwellings; and

By 2041, the surrounding region would be home to 72,527 dwellings.

	2011	2021	2031	2041
Separate house	40,824	47,319	53,814	60,309
Semi-detached, row or terrace house, townhouse etc. with one storey	2,865	3,776	4,688	5,599
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	990	1,230	1,469	1,709
Flat, unit or apartment in a one or two storey block	2,210	1,738	1,266	794
Flat, unit or apartment in a three storey block	1,048	1,127	1,206	1,285
Flat, unit or apartment in a four or more storey block	555	783	1,011	1,239
Flat, unit or apartment attached to a house	78	41	4	0
Caravan, cabin, houseboat	647	814	981	1,148
Improvised home, tent, sleepers out	197	230	263	296
House or flat attached to a shop, office, etc.	217	194	171	148
Total	49,631	57,252	64,873	72,527

Table 6.31 Business as usual projections for the surrounding region, based on 2001-2011 growth in dwelling stock

These figures point to a 46.1 per cent increase in the surrounding region's dwelling numbers between 2011 and 2041:

- The number of detached houses in the surrounding region would increase from 40,824 in 2011 to 60,309 in 2041. This would see detached houses make up around 85 per cent of new dwellings built in the surrounding region between 2011 and 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would increase from a combined 3,855 in 2011 to 7,308 in 2041. This would see semi-detached, terrace or town houses comprise around 15 per cent of new homes built in the surrounding region between 2011 and 2041.
- The number of dwellings built as part of unit or apartment blocks of four or more storeys would more than double, from 555 to 1,239. This growth would occur mostly in the Queanbeyan area, given its proximity to the ACT.

#### 6.2.2.2. Shift share projection

The shift-share analysis of each dwelling structure type was based on the following assumption of growth rates, based on figures from the 2001 and 2011 Australian Censuses:

	Growth rate

	Surrounding region	Australia
Separate house	18.92%	15.55%
Semi-detached, row or terrace house, townhouse etc. with one storey	46.65%	19.36%
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	31.93%	47.83%
Flat, unit or apartment in a one or two storey block	-17.60%	17.97%
Flat, unit or apartment in a three storey block	8.14%	19.05%
Flat, unit or apartment in a four or more storey block	69.77%	65.59%
Flat, unit or apartment attached to a house	-32.17%	-46.02%
Caravan, cabin, houseboat	34.79%	-2.73%
Improvised home, tent, sleepers out	20.12%	-11.70%
House or flat attached to a shop, office, etc.	-9.58%	-30.88%

Table 6.32 Growth rate of dwelling structure types within the surrounding region and across Australia, 2001-2011

Using this model:

By 2021, the surrounding region would be home to 59,310 dwellings;

By 2031, the surrounding region would be home to 71,618 dwellings; and

By 2041, the surrounding region would be home to 87,353 dwellings.

	2011	2021	2031	2041
Separate house	40,824	48,548	57,733	68,656
Semi-detached, row or terrace house, townhouse etc. with one storey	2,865	4,202	6,162	9,037
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	990	1,306	1,723	2,273
Flat, unit or apartment in a one or two storey block	2,210	1,821	1,501	1,236
Flat, unit or apartment in a three storey block	1,048	1,133	1,226	1,325
Flat, unit or apartment in a four or more storey block	555	942	1,600	2,716
Flat, unit or apartment attached to a house	78	53	36	24
Caravan, cabin, houseboat	647	872	1,176	1,585
Improvised home, tent, sleepers out	197	237	284	341
House or flat attached to a shop, office, etc.	217	196	177	160
Total (by sum of structure types)	49,631	59,310	71,618	87,353

Table 6.33 Dwelling projections for the surrounding region, using shift share analysis

The total number of new dwellings in this model between 2011 and 2041 (37,722) is the highest of the estimates presented for consideration. It is largely reliant on the building of new detached homes and semi-detached dwellings such as townhouses:

- The number of detached houses in the surrounding region would increase from 40,824 in 2011 to 68,656 in 2041. This represents 27,832 new detached dwellings, or 928 per year between 2011 and 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would almost treble from a combined 3,855 in 2011 to 11,310 in 2041. This represents 7,455 new semi-detached dwellings, or 248 per year between 2011 and 2041.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would grow from a combined 3,813 in 2011 to 5,277 in 2041. This represents only 1,464 new units or apartments, or 49 per year between 2011 and 2041.

#### 6.2.2.3. National Growth rate projection

This projection is based on the assumption that total dwelling stock across the surrounding region over future ten-year periods increases at the same rate as it did across Australia between 2001 and 2011 (17.9067%).

If a growth rate of 17.9 per cent were applied to dwelling stock in the surrounding region:

By 2021, the surrounding region would be home to 58,518 dwellings;

By 2031, the surrounding region would be home to 68,997 dwellings; and

By 2041, the surrounding region would be home to 81,352 dwellings.

	2011	2021	2031	2041
Separate house	40,824	48,134	56,753	66,916
Semi-detached, row or terrace house, townhouse etc. with one storey	2,865	3,378	3,983	4,696
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	990	1,167	1,376	1,623
Flat, unit or apartment in a one or two storey block	2,210	2,606	3,072	3,622
Flat, unit or apartment in a three storey block	1,048	1,236	1,457	1,718
Flat, unit or apartment in a four or more storey block	555	654	772	910
Flat, unit or apartment attached to a house	78	92	108	128
Caravan, cabin, houseboat	647	763	899	1,061

Improved home, tent, sleepers out	197	232	274	323
House or flat attached to a shop, office, etc.	217	256	302	356
Total	49,631	58,518	68,997	81,352

Table 6.34 National growth rate projections for the surrounding region

These figures point to a 46 per cent increase in the surrounding region's dwelling numbers between 2011 and 2041:

- The number of detached houses in the surrounding region would increase from 40,824 in 2011 to 66,916 in 2041. This represents a growth of 26,092 dwellings, at an average of 870 dwellings per year. It would see detached houses continue to make up 82.3 per cent of dwellings in the surrounding region by 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would increase from a combined 3,855 in 2011 to 6,319 in 2041. This represents a growth of 2,464 dwellings, at an average of 82 dwellings per year.
- The number of dwellings built as part of unit or apartment blocks would increase from 3,813 in 2011 to 6,250 in 2041. This represents a growth of 2,437 dwellings, at an average of 81 dwellings per year.

#### 6.2.2.4. National dwelling structure type growth rate projection

This projection is based on the assumption that the number of each dwelling structure type across the surrounding region over future ten-year periods increases at the same rate as it did for the corresponding dwelling structure type across Australia between 2001 and 2011.

Using this model it is projected that:

By 2021, the surrounding region would be home to 57,823 dwellings;

By 2031, the surrounding region would be home to 67,725 dwellings; and

By 2041, the surrounding region would be home to 79,781 dwellings

	2011	2021	2031	2041
Separate house	40,824	47,171	54,505	62,980
Semi-detached, row or terrace house, townhouse etc. with one storey	2,865	3,420	4,081	4,872
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	990	1,463	2,163	3,198
Flat, unit or apartment in a one or two storey block	2,210	2,607	3,075	3,628

Flat, unit or apartment in a three storey block	1,048	1,248	1,485	1,768
Flat, unit or apartment in a four or more storey block	555	919	1,522	2,520
Flat, unit or apartment attached to a house	78	42	23	12
Caravan, cabin, houseboat	647	629	612	595
Improvised home, tent, sleepers out	197	174	154	136
House or flat attached to a shop, office, etc.	217	150	104	72
Total	49,631	57,823	67,724	79,781

Table 6.35 National dwelling structure type growth rate projection to housing stock in the surrounding region for 2021, 2031 and 2041

This projection anticipates almost 1,600 less dwellings across the surrounding by 2041 compared to the flat national growth rate. It anticipates detached homes to make up the bulk of new dwellings, although it also foreshadows an increase in the proportion of townhouses and units being built across the surrounding region:

- The number of detached houses in the surrounding region would increase from 40,824 in 2011 to 62,980 in 2041. This represents 22,156 new dwellings between 2011 and 2041, at an average of 739 per year. This projection would see detached houses make up around 73 per cent of all new dwellings built in the surrounding region between 2011 and 2041 - less than the 82 per cent of dwellings in the surrounding region that were detached homes in 2011.
- The number of terrace, townhouses, and other semi-detached dwellings would more than double from a combined 3,855 in 2011 to 8,070 in 2041. This represents 4,215 new dwellings between 2011 and 2041, at an average of 140 per year. This is considerably more than in the previous model, and takes into account the rising number of town houses and similar semi-detached homes being built across the nation.
- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would more than double from a combined 3,813 in 2011 to 7,917 in 2041. This represents 4,104 new dwellings between 2011 and 2041, at an average of 137 per year.

#### 6.2.2.5. Local Growth rate projection

This projection is based on the assumption that total dwelling stock across the surrounding region over future ten-year periods increases at the same rate as it did across the surrounding region between 2011 and 2011. As demonstrated in the figure below, this local growth rate was found to be 18.15 per cent.

	2001	2011	Percentage change
Number of dwellings	42,010	49,631	18.15%

Table 6.36 Growth in dwelling numbers across the surrounding region, 2001-2011

If a growth rate of 18.15 per cent were applied to dwelling stock in the surrounding region:

By 2021, the surrounding region would be home to 58,635 dwellings;

By 2031, the surrounding region would be home to 69,273 dwellings; and

By 2041, the surrounding region would be home to 81,838 dwellings.

	2011	2021	2031	2041
Separate house	40,824	48,230	56,979	67,316
Semi-detached, row or terrace house, townhouse etc. with one storey	2,865	3,385	3,999	4,724
Semi-detached, row or terrace house, townhouse etc. with two or more storeys	990	1,170	1,382	1,632
Flat, unit or apartment in a one or two storey block	2,210	2,611	3,085	3,644
Flat, unit or apartment in a three storey block	1,048	1,238	1,463	1,728
Flat, unit or apartment in a four or more storey block	555	656	775	915
Flat, unit or apartment attached to a house	78	92	109	129
Caravan, cabin, houseboat	647	764	903	1,067
Improvised home, tent, sleepers out	197	233	275	325
House or flat attached to a shop, office, etc.	217	256	303	358
<b>Total</b>	<b>49,631</b>	<b>58,635</b>	<b>69,273</b>	<b>81,838</b>

Table 6.37 2001-11 surrounding region growth rate projections for the surrounding region based on dwelling stock, 2021, 2031 and 2041

The total number of new dwellings in this model between 2011 and 2041 (32,207) is second only to the shift share projection discussed in section 6.2.2.2. However, like the flat national growth rate model, this flat local growth model points to an increasing dominance of detached dwellings across the surrounding region:

- This model suggests that the number of detached houses in the surrounding region would increase from 40,824 in 2011 to 67,316 in 2041. This represents 26,492 new detached dwellings, or almost 900 per year between 2011 and 2041.
- The number of terrace, townhouses, and other semi-detached dwellings would steadily increase from a combined 3,855 in 2011 to 6,357 in 2041. This represents 2,502 new semi-detached dwellings, or 83 per year between 2011 and 2041.

- The number of dwellings built as part of unit or apartment blocks (excluding those attached to a house) would grow from a combined 3,813 in 2011 to 6,287 in 2041. This represents 2,474 new units or apartments, or 82 per year between 2011 and 2041.

#### 6.2.2.6. Comparison of projections for the surrounding region

Overall the differences in projections for the surrounding region are much smaller than for the ACT. This is most likely due to the surrounding region experiencing more modest growth in the building of various dwelling types between 2001 and 2011, most notably its decline in the number of one and two storey units, and the substantial difference in the building growth of four or more storey apartment blocks (69.77% in the surrounding region compared to 241.86% in the ACT).

Based on an average of the above projections, it is likely that the surrounding region will hold around 58,300 dwellings by 2021, and 80,600 dwellings by 2041.

	<b>2011 (base year)</b>	<b>2021</b>	<b>2031</b>	<b>2041</b>
Business as usual	49,631	57,252	64,873	72,527
Shift share	49,631	59,310	71,618	87,353
National growth rate (17.9067% over ten years)	49,631	58,518	68,996	81,353
National growth of each dwelling type	49,631	57,823	67,724	79,781
Surrounding region growth rate (18.1409% over ten years)	49,631	58,635	69,273	81,838
<b>Average</b>	<b>49,631</b>	<b>58,308</b>	<b>68,497</b>	<b>80,570</b>

Table 6.38 Comparison of all dwelling projections for the surrounding region to 2041

This will require the building of approximately 8,700 new dwellings between 2011 and 2021, and 30,900 between 2011 and 2041.

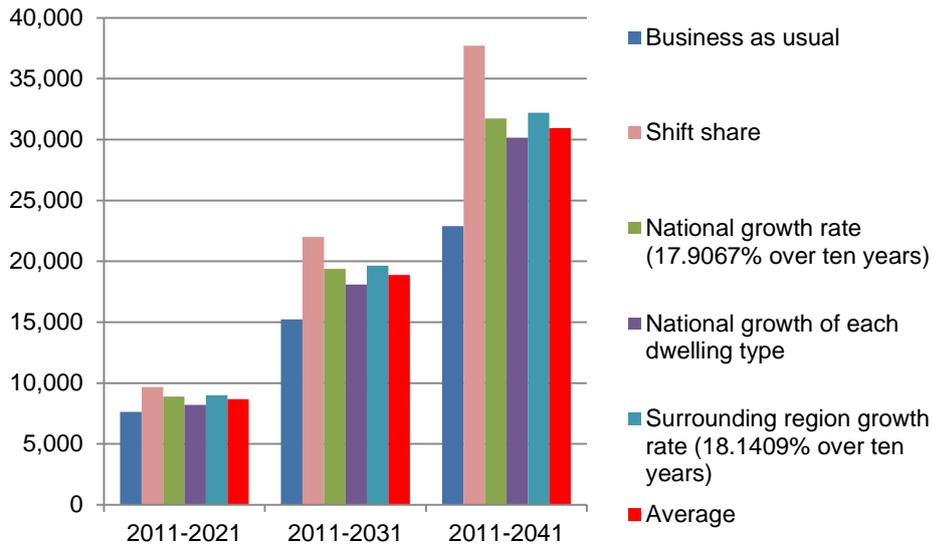


Figure 6.10 Projections of additional dwellings to be built in the surrounding region between 2011 and 2041 (using 2011 as a base year, valued at zero)

A further breakdown of dwellings to be built in the surrounding region by dwelling structure type, reveals little change in the reliance on detached homes. Using an average of the shift share analysis, national dwelling structure growth rate, and the business as usual approach, it is likely that the surrounding region will still have more than three quarters of new dwellings built between 2011 and 2041 made up of detached houses. The proportion of semi-detached homes is projected to rise from 15.0 to 16.7 per cent, while, flat, units and apartments are projected to increase from 3.1 per cent to 5.4 per cent over the same period.

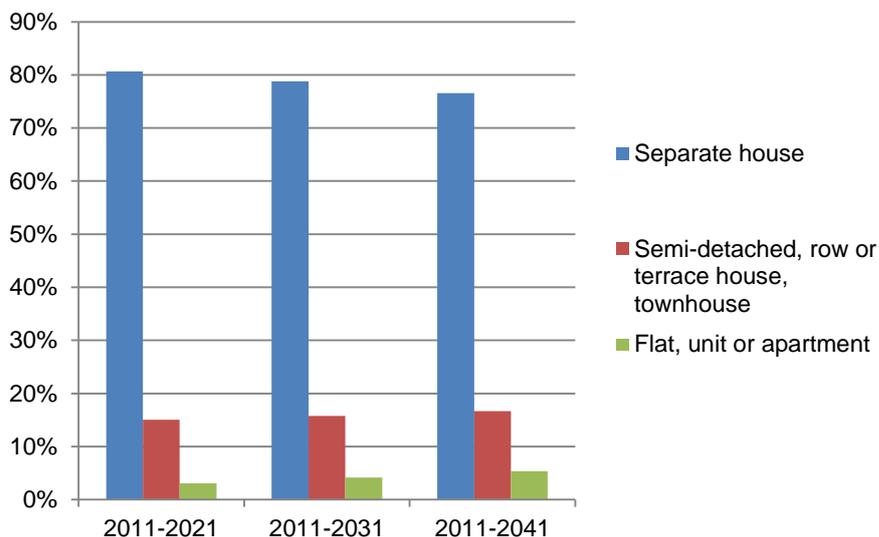


Figure 6.11 Projections of dwelling types as a proportion of new homes built in the surrounding region, 2011-2041

### 6.2.3 New dwelling projections relative to population projections

Combining the average of the dwelling projections for the ACT and surrounding region, produces a possible dwelling stock of around 231,300 by 2021, and 326,400 by 2041. This would see the creation of around 36,500 new dwellings across the ACT and surrounding region between 2011 and 2021, and 131,600 between 2011 and 2041.

<b>Dwelling projections 2011-2041</b>	<b>2011</b>	<b>2021</b>	<b>2031</b>	<b>2041</b>
ACT	145,169	172,980	206,131	245,783
Surrounding region	49,631	58,308	68,497	80,570
<b>Total</b>	<b>194,800</b>	<b>231,288</b>	<b>274,627</b>	<b>326,354</b>

Table 6.39 Average dwelling projections for ACT and surrounding region, 2011-2041

However given the average population gain of around 256,400 for the ACT and surrounding region between 2011 and 2041, this results in an average dwelling density of around 1.95 new residents per every new dwelling built between 2011 and 2041. This is well below the 2011 ACT level of 2.6 people per dwelling, but close to ACT Government projections of 2.0 people per new dwelling.

If the average of the population projections (approximately 724,800 across the ACT and surrounding region by 2041) were to come true, smaller projection figures for dwelling numbers would become more likely. This would include the business as usual approach (96,400 new dwellings across the ACT and surrounding region between 2011 and 2041, or 291,200 dwellings overall), which would result in the average number of people per dwelling falling to 2.49 by 2041. This would bring the people per dwelling figure closer to the steady declines in average people per dwelling experienced between 1996 and 2011.

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