



BACKGROUND PAPER 4: Employment - growth, change and location

What was said during Time to Talk Canberra 2030

The following goals were identified as a result of comments received during the Time to Talk Canberra 2030 conversations that emphasised the role of planning in encouraging work and prosperity in Canberra:

‘New jobs will come through employment opportunities in clean knowledge and service industries, including opportunities from the national broadband network.’

‘The community will build a sustainable long term economy not only as a national capital but as a regional hub. This strong economy will be based on government, policy, research, education, science, culture, sport, tourism and the provision of regional services.’

These goals are consistent with the ACT Government’s overarching policy, The Canberra Plan, that is ‘Our goal is to ensure that the ACT economy: is strong, resilient and diverse; meets the needs of the community; maintains sustainable economic growth; and promotes the ACT as the centre of a strong economic region.’

Definition of issue

Work is ‘Activities involving physical and/or mental effort. While a large part of this is in paid employment, or working for economic gain while self-employed, there are other forms of work. This is

recognised in the terms voluntary work, where people perform for charities or political parties, tasks other people are paid for, and housework, where people work for the welfare of their families.’¹

Role of strategic land use planning

Strategic land use planning’s role is to create an optimal arrangement of land uses that enables employment generating organisations to locate at appropriate places. It should also provide transport options which enable people to access diverse employment opportunities.

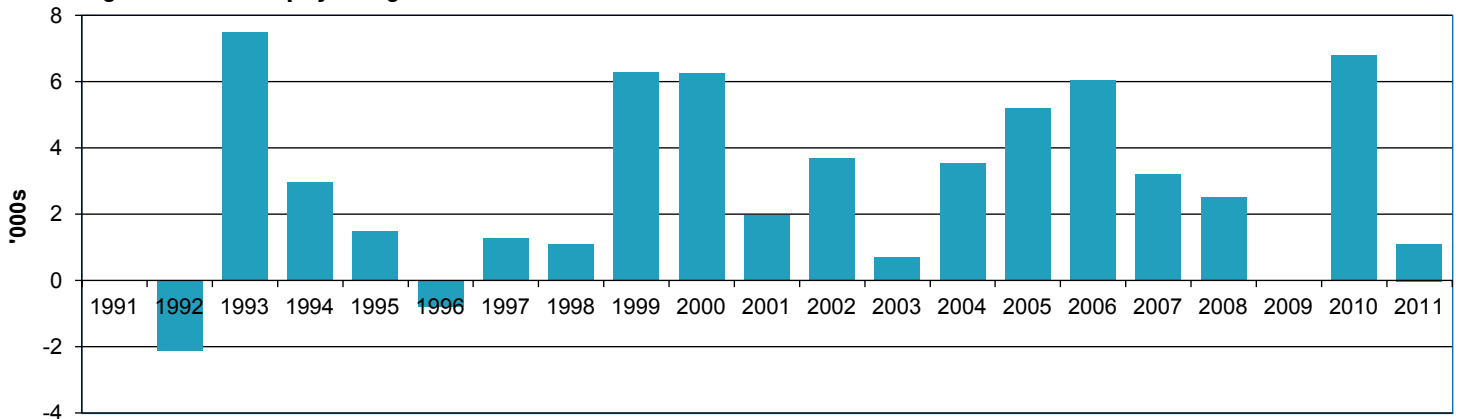
What issues does the ACT Planning Strategy need to consider?

The ACT Planning Strategy has to be aware of — and respond to — trends in employment growth or decline, labour force participation, work types (structure) and locations as outlined below.

Employment trends

In the last decade, there has been considerable variation in annual employment growth and the level of unemployment as indicated in Figures 1 and 2. The unemployment rate fell from 8% in June 1996 to 4.0% in June 2011.

Figure 1: Annual employment growth ACT 1991-2011

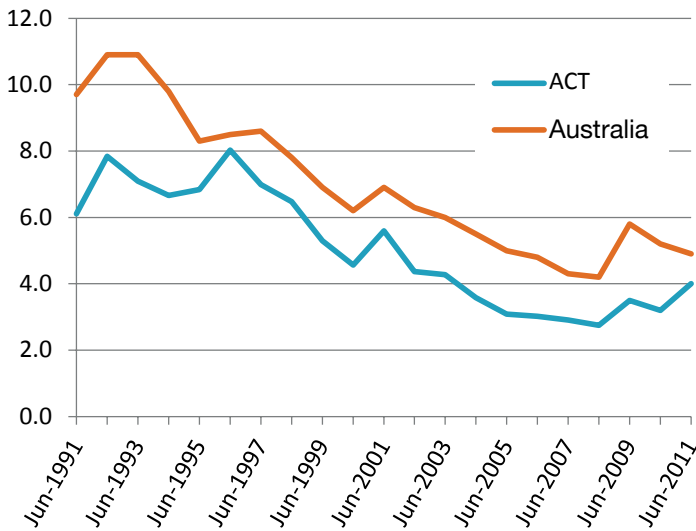


Source: Employment Location in Canberra, April 2009.





Figure 2: ACT and Australian unemployment rate 1991-2011



Source: ABS 6202.0 Labour Force Australia

Employment structure

The ACT has a strong tertiary, services-based economy. Since the 1960s there has been a shift to employment in the service sector - public administration and safety (29.9%) with declines in the agriculture and manufacturing sectors, refer Table 1.

Table 1: Employment share by industry sector

Industry	Employment share 2006	Share growth 1996-2006
Agriculture, forestry and fishing/mining	0.4	-0.1
Manufacturing	2.7	1.8
Electricity, gas, water and waste services	0.7	2.5
Construction	5.5	11.1
Wholesale trade	1.4	-3.0
Retail trade	8.7	9.6
Accommodation and food services	5.9	2.9
Transport, postal and warehousing	2.4	-2.4
Information media and telecommunications	2.2	-1.8
Financial and insurance services	2.0	-1.1
Rental, hiring and real estate services	1.3	1.9
Professional, scientific and technical services	9.6	21.2
Administrative and support services	2.5	3.9
Public administration and safety	29.9	45.2
Education and training	9.0	7.6
Health care and social assistance	8.8	13.9
Arts and recreation services	1.8	1.9
Other services/not stated	5.2	-15.0

Source 2006 Community Census Profile, Australian Capital Territory

Table 2 shows the relative growth in employment by industry between 1996 and 2006.

Table 2: ACT employment structure 1996-2006

Industry	1996	2001	2006	Change 1996-2006
Agriculture, forestry and fishing/mining	675	725	643	-32
Manufacturing	4,303	5,470	4,800	497
Electricity, gas, water and waste services	555	1,109	1,234	679
Construction	6,731	7,472	9,772	3,041
Wholesale trade	3,378	2,929	2,547	-831
Retail trade	12,729	15,003	15,365	2,636
Accommodation and food services	9,563	10,255	10,367	804
Transport, postal and warehousing	4,947	4,623	4,283	-664
Information media and telecommunications	4,350	4,945	3,851	-499
Financial and insurance services	3,835	3,840	3,522	-313
Rental, hiring and real estate services	1,865	2,503	2,377	512
Professional, scientific and technical services	11,133	15,709	16,956	5,823
Administrative and support services	3,352	5,029	4,437	1,085
Public administration and safety	40,388	41,354	52,823	12,435
Education and training	13,825	15,217	15,913	2,088
Health care and social assistance	11,729	13,164	15,553	3,824
Arts and recreation services	2,670	3,022	3,204	534
Other services/ Not stated	13,387	8,497	9,254	-4,133
Total	149,415	160,866	176,901	27,486

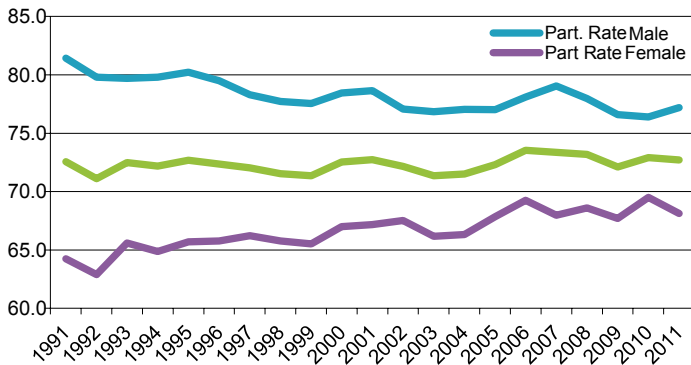
Source: 2006 Community Census Profile, Australian Capital Territory



Labour force

As at June 2011 the number of people employed in the ACT was estimated to be 204,1002 and as at June 2010, public sector employment represented 48.3% of employment in the ACT — 76.9% Commonwealth and 23.1% Territory. Figure 3 shows the trend in labour force participation since 1991.

Figure 3: ACT labour force participation rate 1991-2011



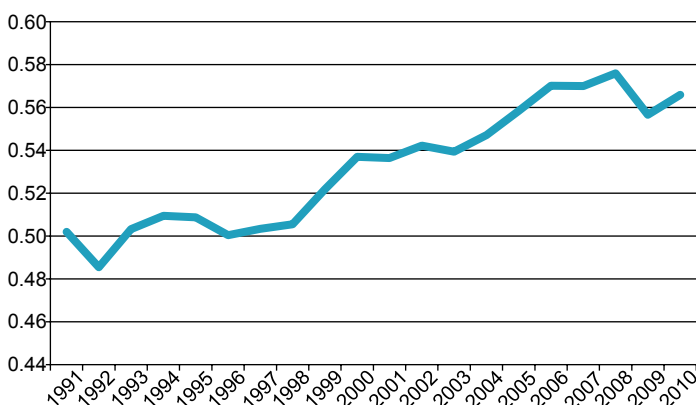
Source: ABS 6202.0 Labour Force Australia

The ACT has traditionally had a high labour force participation rate (the proportion of the civilian population 15 and over who are either employed or unemployed but actively seeking work in a given reference week). At June 2011 the participation rate was 72.7% compared to the national rate of 65.6%. This reflects the high participation rate for men, 77.2% (compared to the 72.2% national rate) and women, 68.1% (compared to the 59.1% national rate). Since June 1991 men's labour force participation rate in the ACT has fallen from 81.4% while women's has increased from 64.3%.

The high workforce participation reflects the job availability and high skill levels in the ACT. Between 2009 and 2030 the working age population (15-64 years) is projected to decline from 71.4% of the population to 65.3%. Possible responses include encouraging older workers to stay in the workforce longer and trying to reduce the number of secondary and tertiary graduates leaving the ACT.

Figure 4 shows the employment to population ratio since 1991. The ratio has been increasing in response to job availability in the ACT and the consequential high labourforce participation.

Figure 4: Employment to population ratio



Source ABS 6202.0 Labour Force Australia, ABS Cat 3101 Australian Demographic Statistics

The variability in employment growth and the high levels of employment in public administration reflect the susceptibility of the ACT economy to changes in Commonwealth Government. Growth in overall employment was generated by Commonwealth expansion and the provision of goods and services, including housing, retailing and community services to service this 'basic' activity. This dependence has been long recognised and has led to attempts to diversify the city's economy.

Employment trends – market advantages

To maintain ongoing prosperity, the challenge for Canberra is how to market its comparative lifestyle and business advantages, such as:

- a highly educated workforce
- access to domestic and international markets through the improvement of transport infrastructure, with upgrading of Canberra Airport, roads and the possible high speed train further improving access to Sydney – Australia's financial and cultural centre, major international entry point and larger consumer market – and Melbourne, Australia's other major centre of population, industry, finance and culture
- its role as the national capital, giving access to government policy makers and legislators
- access to national institutions, including the High Court, National Gallery, Film and Sound Archive, Australian War Memorial and National Museum
- its higher education and research facilities – three major universities (Australian National University, Australian Defence Forces Academy and the University of Canberra), the CSIRO and its 10 co-operative research centres
- its high standard of urban amenity in terms of built environment, ease of movement, short journeys to work, low pollution, safety, high quality health, education, recreation, cultural and entertainment facilities
- its outstanding setting and landscape quality, with easy access to beaches, mountains and snow
- its image as an internationally renowned well-planned city
- a political and commercial ability to quickly respond to major opportunities by having efficient administrative and legislative structures and a supply of high quality, accessible land that can be made available at short notice.
- its geographical location, importance as a regional economic centre and gateway to the region's attractions including wineries, historic towns, coastal and mountain activities.



Given the social, physical and economic attributes of the ACT, information technology, services, education and tourism have the greatest potential for expansion.

The move to a 'clean economy' will provide the opportunity for the ACT to use the expertise in renewable energy technologies found in its education and research institutes. Canberra could position itself as an exporter of knowledge and know-how. The ACT Regional Strategic Plan identified Canberra's push to become the solar power capital as emblematic of this approach.

Promotion of the high quality lifestyle offered by Canberra, with its wide range of cultural, entertainment and leisure activities, would counteract the perception that the city is dull. The development of a lively city centre would be assisted by additional residential and tourist accommodation and improvement of the design quality of its public spaces.

Employment locations – town centres

Location of employment has been a major consideration for Canberra's planners, with employment dispersal, particularly to town centres, a fundamental objective. Canberra's structure of town, group and local centres, supplemented by the bulky and construction goods retailing at industrial estates, is a useful framework when considering where retail facilities and services should be located. The employment dispersal to concentrated nodes provides major transport benefits including shorter journeys to work, higher use of public transport, reduced traffic congestion, opportunities for multi-purpose trips, and lower fuel consumption, parking and transport infrastructure requirements. Employment at the town centres reinforces the trading position of centres' businesses. Employees can easily walk to shops, financial services, libraries, etc.

The location of office employment was particularly important when town centres in Woden, Belconnen and Tuggeranong were established. Office complexes in Woden and Belconnen were facilitated by Commonwealth construction but after the mid seventies, when the Commonwealth withdrew from office construction, office location has been the result of private sector investment decisions. In Tuggeranong the location of the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) was facilitated by an instalment purchase agreement between the Commonwealth Government and the private sector.

Retailing and community facilities followed the dispersal of population to the new towns. Employment dispersal was also associated with the growth of the industrial areas of Fyshwick, Hume and Mitchell, mixed use areas in Deakin and Bruce, at group and local centres and at education and other community facilities in the towns.

Employment locations – group and local centres

Retail outlets are generally part of diverse mixed use group and local centres. Local centres provide many benefits for example, people walking means lower car usage plus community interaction and health benefits provide social benefits.

However, local centres have been under pressure from demographic and social changes including changing shopping patterns brought about by longer trading hours at larger centres, cheaper and wider range of goods and services at the larger centres, increased car usage and increasing participation of women in the workforce. Several local centres have closed and if present trends continue, there is likely to be further reductions in trade at local centres, which could result in the closure of more centres.

Employment locations – industrial estates

In response to retailing changes, the role of Fyshwick, originally intended as an industrial estate, has expanded. The area has extensive, low rent floor space to accommodate uses such as bulky goods and big box retailing. But movement to and through industrial estates is predominantly car based and the peripheral location of these estates makes providing efficient public transport difficult.

Retail developments such as discount department stores and supermarkets have been restricted in Fyshwick but encouraged in multi-use centres, where they are well served by public transport and highly accessible to the surrounding population.

Table 3 shows the distribution of employment in different employment zones³. At the 2006 Census the ACT had 195,500 people in jobs, including a net inflow each working day from the region of 19,200⁴ people, and Queanbeyan had 9,500 people in jobs.

The growth of employment in City/Braddon by 40% between 2001 and 2006 is largely due to the Commonwealth employment. The growth in employment at the airport from 900 to 5300 (included under other in Table 3) is also noteworthy. Central Canberra had over 52% of Canberra-Queanbeyan employment in 2006 (see Table 4). Woden-Weston Creek had 13% of Canberra-Queanbeyan employment, Belconnen 12.5%, Tuggeranong 8.5%, Gungahlin 3.4% and Queanbeyan 4.7%.

Relationship of employment and residence

Planning for accessibility includes going to work, shops, schools and recreation facilities. Travel to work is a significant component of travel demand on weekdays and shorter trips to work means lower energy use, less air pollution, less congestion and more leisure time. It is therefore important to shorten or reduce the number of work trips, particularly by car, by having work locations close to home.

Table 5 shows that job opportunities per employed resident vary appreciably, between 3.7 jobs in South Canberra and 0.3 in Tuggeranong. Table 5 and Figure 6 indicate the share of jobs available in each district taken by resident workers in that district. The share in Tuggeranong is almost 73%, Belconnen 61% and Queanbeyan 58%. The lower share in North and South Canberra reflects the high overall employment in those districts.



Table 3: Employment distribution 1981 – 2006

	1981	1986	1991	1996	2001	2006
Central Canberra						
City/Braddon	17600	21400	29550	25860	23000	32500
Acton	7400	7000	6575	4280	5490	6760
Parkes/Barton	11900	16850	12040	13480	14960	17310
Russell/Campbell Park	7100	8800	5355	5430	7860	8170
Other	19700	24550	25710	27645	27355	30520
Total	63700	78600	79230	76695	78665	95260
Town centres						
Woden TC	10100	13450	12545	12865	13500	14235
Belconnen TC	8700	10800	9475	11580	11960	12900
Tuggeranong TC	0	0	5180	7985	8890	9290
Gungahlin TC	0	0	0	0	770	1650
Total	18800	24250	27200	32430	35120	38075
Secondary Zones						
Bruce	1800	2050	4185	4200	4645	5590
Fyshwick	8800	10250	12150	12980	12245	12230
Hume	250	500	745	1335	1690	2230
Mitchell	800	1350	2450	3415	3265	3180
Total	11650	14150	19530	21930	21845	23230
New town local zones						
Woden/Weston Creek	7300	7850	8535	10540	12000	12425
Belconnen	5800	7250	7400	7695	8775	8100
Tuggeranong	1700	3950	6190	7130	8040	8110
Gungahlin	0	0	520	1275	1830	2115
Other ACT	2500	2650	2395	3305	4725	8125
Total	17300	21700	25040	29945	35370	38875
TOTAL	111450	138700	151000	161000	171000	195440

Source: ABS Population and Housing Census, Journey to Work

Table 4: Distribution of employment by district 2006

2006	Employment	% of total ACT-Queanbeyan Employment
North Canberra	61460	30.0
South Canberra	46030	22.5
Woden-Weston	26660	13.0
Belconnen	26590	12.5
Tuggeranong	17400	8.5
Gungahlin	6940	3.4
Other ACT *	10360	5.1
ACT	195440	95.3
Queanbeyan	9560	4.7
ACT/Queanbeyan	205000	100.0

Source: ABS Population and Housing Survey, Journey to Work *Other ACT includes Majura, Kowen, Hume, Oaks Estate, Harman, Symonston, Pialligo and Jerrabomberra

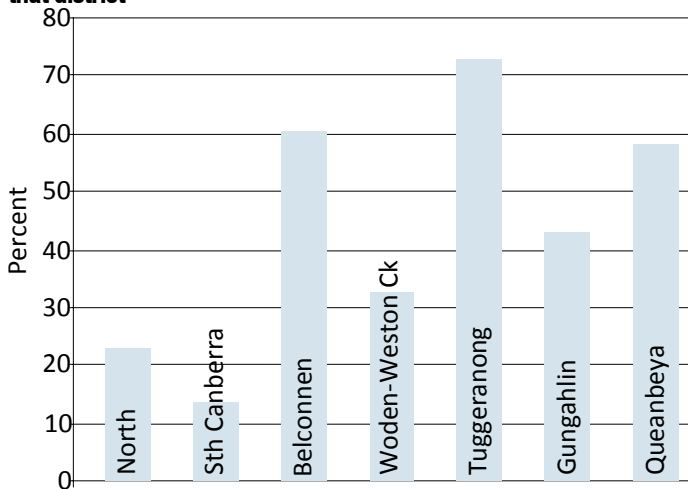
Table 5: Employment opportunities per resident 2006

Location	Ratio of local jobs to resident workers	% of local jobs taken by local residents
North Canberra	2.55	22.9
South Canberra	3.68	13.5
Woden	1.30	23.1
Weston	0.36	41.9
Belconnen	0.55	60.6
Tuggeranong	0.33	72.8
Gungahlin	0.39	43.2
Queanbeyan	0.56	58.1

Source: ABS Population and Housing Survey, Journey to Work



Figure 6: Proportion of jobs in each district taken by residents of that district



Source: ABS Population and Housing Survey, Journey to Work

Employment locations – self-contained districts

The journey to work data was analysed to understand the level of self-containment within each district and establish the portion of the resident workforce employed in the same district. Table 6 shows the change in self-containment levels since 1991. North and South Canberra have the highest level of self containment, reflecting the high job availability relative to the number of residents. Belconnen, Queanbeyan and Woden-Weston Creek have containment levels of around 30%. In Tuggeranong the self containment level in 2006 was 24%, up from 17% in 1991.

Tables 7 and 8 and Figure 10 show the relationships between home and work. Table 7 indicates the percentage of people employed in each district by where they live. Table 8 indicates the percentage of people living in each district by where they work.

The high flow from each district to North and South Canberra reflects the job concentration in these areas. A fall off with distance is apparent with only 17.5 % of Belconnen residents working in South Canberra compared to 24% of Tuggeranong residents.

Table 6: Change in self-containment levels

Self Containment *	1991	1996	2001	2006
North Canberra	57.1	50.3	54.5	55.9
South Canberra	32.6	44.6	40.3	47.4
Woden/Weston	24.0	28.5	37.8	31.4
Belconnen	29.2	32.6	32.2	31.8
Tuggeranong	17.3	22.2	24.1	23.7
Gungahlin	-	10.9	13.7	15.6
Queanbeyan	32.4	34.5	30.4	29.6

Source: ABS Population and Housing Survey, Journey to Work* Proportion of working people who live and have employment in that district to the total district working people.

Transport to work

The level and location of employment influences people's choice of mode of transport. Figure 7 shows, by suburb, how people choose to get to work, and the dominance of driving cars. It also shows the lower car use by residents living in areas of high employment – North Canberra, Kingston, Barton, the Woden and Belconnen town centres and their adjacent suburbs.

The availability of jobs in the new towns reduces pressure on the external road system and the centre of the city. The achievement of substantial employment in Gungahlin, planned to accommodate some 90-95,000 residents, is an important part of a strategy to reduce overall travel.

While significant, the level of employment dispersal is not as great as anticipated. There are also opportunity costs of employment not occurring at the town centres, where it can help support business and community activity. The implementation of office decentralisation policies has become more difficult since individual Commonwealth departments began making decisions on office location in the early 1990s.

For example the emergence of a major employment node at the airport is producing a pattern of development that increases car dependent travel and requires greater infrastructure expenditure.

The lack of ACT Government involvement in decision making about commercial development, land uses and transport impacts at the airport provides a challenge for integration of metropolitan and regional planning.

Internet implications

The internet is likely to impact on the location of employment as it provides the opportunity for more people to work from home. Electronic networking enables considerably more flexible working arrangements. The pros and cons of tele-working have been extensively studied from the point of view of human resources, organisation psychology and personal wellbeing.⁵ If the rate of tele-working increases, it will reduce the level of travel with consequent flow on effects to fuel consumption, air pollution, carbon emissions and traffic congestion.

Things to think about

The development of a more sustainable city requires the full assessment of economic, social and environmental costs and benefits. Strategies to achieve a sustainable city are likely to include the development of mixed use sub-centres, well served by public transport and supported by travel demand management strategies to reduce car use (including a mixture of improved public transport services, reduced parking supply, car-pooling, higher parking charges). The strategies will have a greater chance of success if they work with decentralisation trends and the gradual increase in demand for medium and higher density housing forms.



Table 7: Place of residence by work destination 2006

Place of Work	Place of Residence									Total
	North Canberra	Belconnen	Woden Valley	Weston Creek	Tuggeranong	South Canberra	Gungahlin	Other	Queanbeyan	
North Canberra	22.9	24.3	6.9	5.0	16.9	6.3	10.9	0.2	6.4	100
South Canberra	9.8	17.7	9.6	6.3	25.6	13.5	6.6	0.2	10.8	100
Belconnen	7.7	60.6	3.3	3.0	8.4	2.7	11.7	0.1	2.5	100
Woden	5.4	12.3	23.1	9.7	33.7	5.2	3.9	0.2	6.4	100
Weston Creek	4.7	10.7	7.8	41.9	22.2	3.8	3.7	0.3	5.0	100
Tuggeranong	2.2	5.8	5.9	4.3	72.8	2.0	1.6	0.6	4.8	100
Gungahlin	7.6	30.8	2.3	2.1	8.5	1.6	43.2	0.3	3.6	100
Other	8.6	27.9	6.5	6.5	32.4	4.1	10.3	0.9	2.7	100
Majura	11.3	17.5	7.9	5.5	25.5	7.3	12.4	0.6	12.0	100
Queanbeyan	3.1	7.2	3.5	2.7	19.0	3.2	3.1	0.1	58.1	100
Total	11.7	23.6	8.5	6.2	25.1	6.6	9.0	0.3	9.1	100

Source: ABS Population and Housing Survey, Journey to Work

Table 8: Work location by district of residence 2006

Place of Residence	Place of work								
	North Canberra	Belconnen	Woden	Weston Creek	Tuggeranong	South Canberra	Gungahlin	Other	Queanbeyan
North Canberra	56.1	29.4	23.3	23.2	19.3	27.1	34.5	21.9	20.2
South Canberra	19.5	17.5	26.4	23.7	23.8	47.6	17.0	17.5	27.6
Belconnen	8.2	31.9	4.9	6.1	4.2	5.0	16.1	6.8	3.4
Woden Valley	5.0	5.6	29.4	16.9	14.5	8.4	4.7	8.2	7.6
Weston Creek	0.9	1.0	2.0	14.7	1.9	1.2	0.9	2.4	1.2
Tuggeranong	1.5	2.0	5.7	5.7	23.8	2.4	1.5	18.3	4.3
Gungahlin	2.1	4.3	0.9	1.1	1.1	0.8	15.7	3.2	1.3
Other ACT	3.1	5.0	3.2	4.4	5.5	2.6	4.8	14.1	1.3
Majura	2.3	1.8	2.2	2.1	2.4	2.6	3.3	5.2	3.2
Queanbeyan	1.2	1.4	1.9	2.1	3.5	2.2	1.6	2.4	29.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS Population and Housing Survey, Journey to Work



Further reading

- The Canberra Plan - indicators for prosperity
http://www.measuringourprogress.act.gov.au/a_prosperous_act
- Employment location and journey to work in Canberra
http://www.actpla.act.gov.au/tools_resources/research_based_planning_for_a_better_city
- Discussion on gender and the urban environment:
<http://www.gendersite.org/>
- Sustainable tourism
<http://www.crctourism.com.au/Page/Home.aspx>
- Green Building Council of Australia
<http://www.gbca.org.au/>
- Sustainable business
<http://sustainabilitybusiness.com.au/>

Endnotes

- 1 “work” *A Dictionary of Economics*. John Black, Nigar Hashimzade, and Gareth Myles. Oxford University Press, 2009. *Oxford Reference Online*. Oxford University Press. Australian National University. 26 May 2011 www.oxfordreference.com.virtual.anu.edu.au/views/ENTRY.html?subview=Main&entry=t19.e3376
- 2 ABS data Catalogue 6202.0 - Labour Force, Australia, 2011
- 3 The distribution is based on the ABS Population and Housing censuses, Journey to Work data adjusted for undercount, not stated, no usual address and ABS estimated resident employment and employee movements between the region and ACT
- 4 Access Economics, 2007
- 5 For example, Hill, E. Jeffrey; Erickson, Jenet Jacob; Holmes, Erin K.; Ferris, Maria, Workplace flexibility, work hours, and work-life conflict: Finding an extra day or two, *Journal of Family Psychology*, Vol 24(3), Jun 2010, 349-358. Study concluded that ‘workplace flexibility is beneficial both to individuals (in the form of reduced work-life conflict) and to businesses (in the form of capacity for longer work hours). However, work-at-home appears less beneficial in countries with collectivist cultures’