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Institute for Sustainable Futures

IMPLICATIONS OF POPULATION GROWTH IN AUSTRALIAN CITIES: CASE STUDY - PLAYFORD, SA

2012

ABOUT THE AUTHORS

The Institute for Sustainable Futures (ISF) was established by the University of Technology, Sydney in 1996 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change toward sustainable futures that protect and enhance the environment, human well-being and social equity. We seek to adopt an inter-disciplinary approach to our work and engage our partner organisations in a collaborative process that emphasises strategic decision-making.

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Case study summary

The City of Playford is located in Adelaide's outer northern suburbs, about 30 kilometres from the Adelaide central business district (CBD). The City is bounded by the District Council of Mallala, the Light Regional Council area, the Town of Gawler and the Barossa Council area in the north, the Adelaide Hills Council area in the east, the Cities of Salisbury and Tea Tree Gully in the south, and Gulf St Vincent in the west.

Between 2001 and 2011, Playford's population grew at an average of 1.6% per annum, amost twice the rate of either Greater Adelaide or SA in this period. Between 2009 and 2010 Playford had the fastest population growth rate in South Australia (SA), when its population rose by 3% to 79,850. However, a downturn in the housing market in Adelaide over the past 12–18 months has slowed development.

Even more significant population growth is expected in the future, with the population of the Playford LGA forecast to nearly double between 2006 and 2026 to 140,000 persons, and to increase to approximately 200,000 by 2050.

The data analysis conducted for this case study suggests a number of implications of recent and future population growth in Playford.

Stakeholders interviewed for this case study pointed to a number of negative impacts of population growth, suggesting that on the whole population growth was inevitable. Many felt they had little control over the rate and even the placement of development and that it was a matter of making the most of the situation.

Playford is seen as having an industrial profile dominated by manufacturing, with major employers being the car manufacturer Holden and related suppliers. Increased retail and services activity has increased employment in these industries, but it is understood that the region still needs to diversify its local economy so that it does not rely exclusively on car manufacturing. It is also understood that local employment must be increased and diversified if the area is to become self-sustaining and more than a dormitory suburb of Adelaide.

There was also a sense of population growth changing the socio-economic demographics of the area. Playford was also seen as having a large concentration of social and public housing, with high rental stress and high and rising unemployment. Also, some areas of the Playford LGA have very high levels of employment. However, the new estates are larger, attracting young families and retirees to the area, and bringing new shopping centres and recreational facilities to the area.

Playford was ranked as the fourth-most disadvantaged LGA in South Australia in 2006, and there is a strong sense that Playford is a place of 'haves' and 'have-nots'. Stakeholders suggested that this will only be exacerbated with population growth. There is a positive sentiment that population growth will offer a chance to increase the standards of living for all across the local government area, but also a concern that if the planning, infrastructure, and service delivery are not done in a timely and needs-driven way, there is a real chance that social divisions will be exacerbated and pockets of the population will experience increasing isolation and depravation.

Glossary

ABS	Australian Bureau of Statistics
CBD	Central Business District
CD	Collection district
DEET	Federal Department of Employment, Education and Training
DEEWR	Federal Department of Education, Employment and Workplace Relations
DPA	Development plan amendment
DPTI	Department of Planning, Transport and Infrastructure
DSEWPaC	Federal Department of Sustainability, Environment, Water, Population and Communities
EPA	Environmental Protection Agency
EPBC Act	Environmental Protection and Biodiversity Conservation Act
GDP	Gross Domestic Product
GRP	Gross Regional Product
ISF	Institute for Sustainable Futures
LGA	Local government area
pa	Per annum
NIEIR	National Institute of Economic and Industry Research
OSCAR	Office of Crime Statistics and Research
RDA	Regional Development Australia
SA	South Australia
SALMS	Small area labour markets survey
SEIFA	Socio-Economic Indexes for Areas
SoC	State of the City report
SoR	State of the Regions
TAFE	Technical and Further Education

Contents

Background and context

Geography and features

The City of Playford is located in Adelaide's outer northern suburbs, about 30 kilometres from the Adelaide central business district (CBD). The City is bounded by the District Council of Mallala, the Light Regional Council area, the Town of Gawler and the Barossa Council area in the north, the Adelaide Hills Council area in the east, the Cities of Salisbury and Tea Tree Gully in the south, and Gulf St Vincent in the west. The City's boundaries are: the Gawler River, Wingate Road, Dalkeith Road, Smith Road and the South Para River in the north; Bassnet Road in the east; Airstrip Road, Hannaford Hump Road, One Tree Hill Road, Gould Creek, the Little Para River, Prunus Avenue, Jarvis Road, Porter Street, Commercial Road, the Gawler railway line, Bellchambers Road, Penfield Road, Heaslip Road; a line running east to west between Mumford Road and Mill Road; a line running east to west to the south of the Winston Park Equestrian Centre in the south; and Gulf St Vincent in the west.

The City is served by Main North Road, Port Wakefield Road and the Gawler railway line.

Figure 1: Geographical context map of Playford

Major features of the City include the Elizabeth City Centre, Munno Para Shopping Centre, TAFE of SA (Elizabeth Campus), Lyell McEwin Hospital, Adelaide International Raceway, State Shooting Centre, Virginia Greyhound Race Track, Winston Park Equestrian Centre, North Lakes Golf Course, Hamra Homes Oval (home of the Central District Football Club), General Motors Holden Automotive Plant, Little Para Reservoir, Parra Wirra Recreation Park and the Gawler River.

The City of Playford local government area (LGA) includes the suburbs and localities of Andrews Farm, Angle Vale, Bibaringa, Blakeview, Buckland Park, Craigmore, Davoren Park, Edinburgh (part), Elizabeth, Elizabeth Downs, Elizabeth East, Elizabeth Grove, Elizabeth North, Elizabeth Park, Elizabeth South, Elizabeth Vale, Elizabeth West, Evanston Park (part), Gould Creek (part), Hillbank, Humbug Scrub (part), MacDonald Park, Munno Para, Munno Para Downs, Munno Para West, One Tree Hill, Penfield, Penfield Gardens, Sampson Flat, Smithfield, Smithfield Plains, Uleybury, Virginia, Waterloo Corner and Yattalunga.

Population summary

The population of the northern areas of metropolitan Adelaide is growing rapidly. Playford had the fastest population growth rate in South Australia (SA) between 2009 and 2010, when its population rose by 3% to 79,850. This growth is expected to continue at an even higher rate, with the population of the Playford LGA forecast to nearly double between 2006 and 2026 to 140,000 persons, and to increase to approximately 200,000 by 2050[1] (see Figure 2).

Between 2001 and 2011, Playford's population grew at an average of 1.6% per annum, a greater rate than either Greater Adelaide or SA (both of which experienced rates of growth of 0.9% per annum during the same time period) (see Table 1).

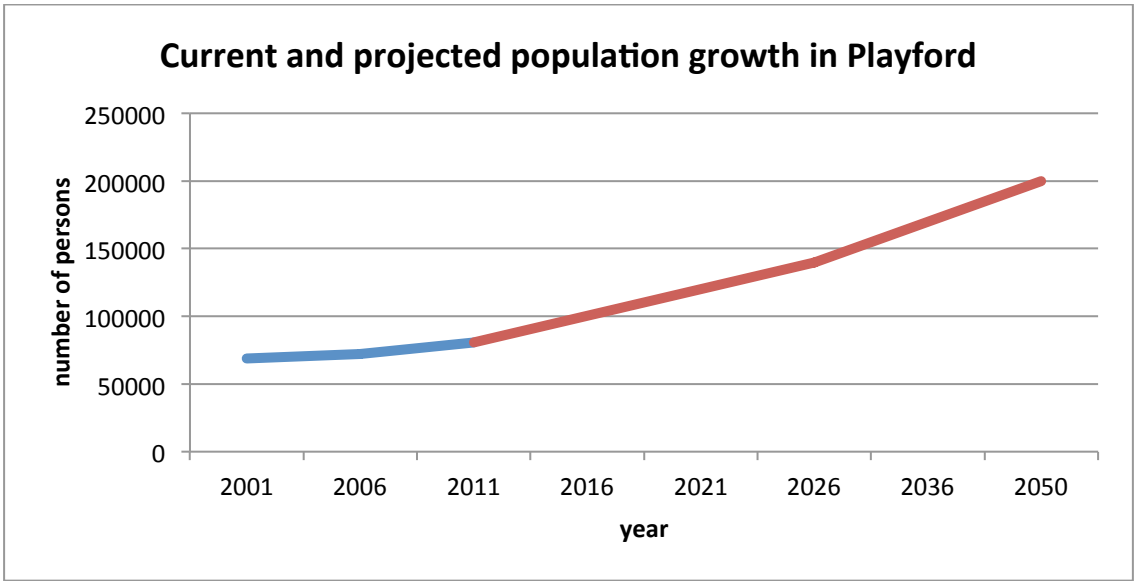


Figure 2: Current and projected population growth in Playford (Source: City of Playford, 2012b; ABS, 2012a) (Note: population projections are shown in red)

[1] Based on DPLG population projections and City of Playford modelling of anticipated growth in zoned land or areas anticipated for urban development, along with expected infill and transit-oriented development.

Table 1: Context indicator – population (Source: ABS, 2012b)

	Playford 2001	Playford 2011	Greater Adelaide 2011	SA 2011
Population (persons)	68,653	80,748	1,107,986	1,511,728
Rate of growth 2011-2001 pa		1.6%	0.9%	0.9%
Population density (people/km^2)	199.05	234.12	606.58	1.54

The City of Playford contains rural areas and growing urban sections, with some industrial and commercial zones. The City encompasses a total land area of 346 square kilometres. Rural land is located mainly in the east, north and west, and is used largely for market gardens, orchards, vineyards, horse studs and hobby farms.

Social characteristics

Playford has a relatively young population in comparison to the South Australian average, with 28% of Playford's population aged under 17 and only 16% aged over 60.

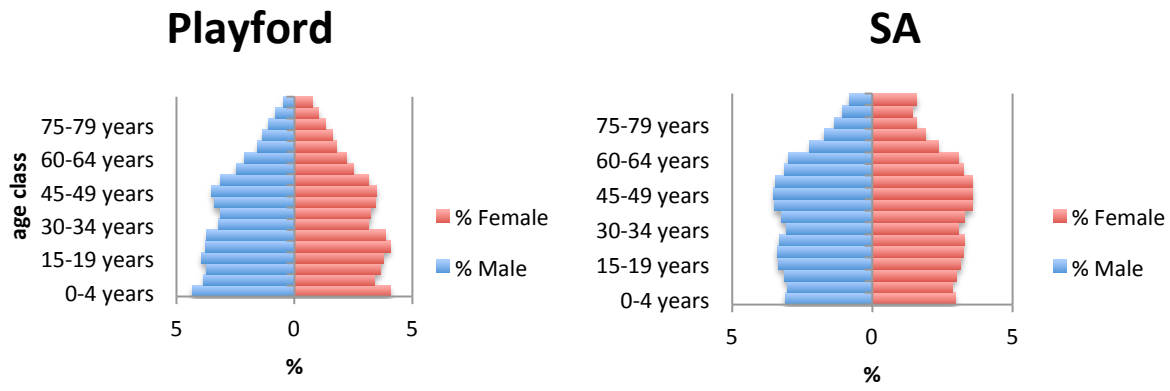


Figure 3: Age profile of Playford and SA (2011) (Source: ABS, 2012a)

While the Playford has seen a fall in the percentage of total overseas born residents, there has been an increase in percentage of residents who do not speak English well. Nearly a quarter (22%) of Playford residents were born overseas, in a total of 83 different countries. Of the 268 overseas immigrants that settled in Playford during 2009–10, the majority (51%) were from Asia, and 29% were from Africa. The area of Playford with the highest concentration of overseas born people from non-English speaking countries is Playford West.

The City has an Indigenous population of 2.6%, with 78% under 35 years old. Over the last decade, the percentage of Indigenous people has increased by 54%. The areas with the highest concentration of Indigenous people are Elizabeth (3.6%) and West Central (4.0%).

Table 2: Contextual indicators – culture and migration (Source: PHIDU, 2010; ABS, 2007)

	Overseas born from predominantly English speaking countries 2006	Overseas born from non-English speaking countries 2006	Indigenous
Playford – East Central	17.8%	4.8%	1.5%
Playford – Elizabeth	16.9%	6.4%	3.6%
Playford – Hills	18.1%	5.9%	0.5%
Playford – West	12.6%	12.2%	1.3%
Playford – West Central	12.7%	5.0%	4.0%
Playford	**15.9%**	**6.4%**	**2.65%**
Greater Adelaide	**10.5%**	**13.2%**	**1.13%**
South Australia	**9.6%**	**10.7%**	**1.70%**

Table 3: Context indicators - culture and migration (Source: PHIDU, 2010; ABS, 2007 & 2012a)

	Playford 2001	Playford 2011	Greater Adelaide 2011	South Australia 2011
% Born overseas	25.4%	21.7%	25.4%	22.2%
Percentage change 2006-2011		0.6%	19.4%	18.3%
% Do not speak English well	1.4%	2.2%	3.1%	2.5%
Percentage change 2001-2011		85%	31%	29%
Indigenous	2.3%	3.0%	1.3%	1.9%
Percentage change 2001-2011		54%	40%	30%

Economic characteristics

According to the Playford State of the City report (City of Playford, 2011), in 2009 there were a total of 3,249 businesses registered in Playford across 15 industries. Of these businesses, the majority fell within these industries: construction (21%), agriculture, forestry and fishing (14%), transport, postal and warehousing (12%) and retail trade (7%).

The industrial profile of Playford was once dominated by manufacturing, particularly vehicle and associated manufacturing. The largest employer in the LGA is still GM Holden, which has an assembly plant at Elizabeth and other facilities in the area. The employment in manufacturing has declined significantly in the area, following the general trend of a decline in manufacturing across Australia. Agricultural industries are still a prominent part of the economy but are diminishing as many of the area's market gardens are taken over for residential development.

The industrial profile of Playford is clearly in transition.

Planning and governance

South Australia's planning and development system includes three distinct yet interrelated parts: legislation and regulations (predominantly the *Development Act of 1993* (SA) and the Development Regulations 2008); the state's planning strategy; and local government development plans.

Influence of the SA State Government

In 2004, the South Australia Government developed its Strategic Plan to 'secure the wellbeing of all South Australians'. The Department of Premier and Cabinet drove the implementation of the Strategic Plan throughout state government. The plan is the main instrument for determining strategic priorities within agencies and is important in the performance assessment of state government chief executives. Local governments are not required to take the Plan's targets on board, but cabinet recognises that achievement of the plan's targets requires concerted effort from organisations external to state government. Therefore, the plan's Community Engagement Board encourages businesses, community and social interest groups and local governments to align their efforts with the Strategic Plan (which, as discussed below, the City of Playford has done).

South Australia's planning system requires the development of a statutory Planning Strategy for South Australia (*Development Act 1993* (SA), Section 22).

Figure 4 depicts the key policies that contribute to the current Planning Strategy. The Planning Strategy is a 'spatial expression' of South Australia's Strategic Plan, meaning that it outlines the specific planning and development activity required to help achieve the Strategic Plan targets.

Figure 4: Contribution of South Australian Government policies to the Planning Strategy (Source: South Australia Government, 2011: 11)

The Planning Strategy for South Australia contains nine volumes specific to regions within the state. To ensure the state's broad directions are translated into local plans that guide development outcomes, every South Australian council must align their development plans with the applicable Planning Strategy volume, meaning Playford's development plans must align with the Greater Adelaide volume, entitled *The 30-Year Plan for Greater Adelaide*.

The Department of Planning, Transport and Infrastructure (DPTI) predominantly oversees South Australia's Planning Strategy. This oversight includes major developments, in public transport, key infrastructure, roads and rail. Significantly, it also includes the local government development plan amendments. Renewal SA (previously the Urban Renewal Authority) also supports the state in planning for residential and industrial communities. The Minister for Planning is required to provide parliament with an annual report on the implementation of the Planning Strategy. Therefore, yearly report cards are created for each volume, including *The 30-Year Plan for Greater Adelaide*.

The *30-Year Plan for Greater Adelaide* sets out the state's broad directions, and urban infill is one of the key strategies. For the plan's 30-year time period, a key target is for 70 per cent of all new housing to be built in established areas. Other relevant targets are for 50 per cent of the Greater Adelaide region's new housing to be located within 800 metres of transit corridors, and gross densities to increase on average from 15 to 25–35 dwellings per hectare. The Northern Adelaide region, in which Playford is located, has targets for 67,000 additional dwellings and 79,000 net additional jobs by 2040 to accommodate 169,000 net additional residents.

In preparation for the population increase, Playford is specifically listed in the 30-Year Plan as an area for planned strategic growth. This growth includes the development of a net land supply of 10,650 hectares[2], construction of a new 'super school', a new electrical substation, and continued funding for innovative water security projects (see

[2] This net land supply development will be based on the principles of mixed-use development, higher densities and a greater mixture of housing.

Figure 5).

The City of Playford or the Minister may initiate amendments to the local government development plan under the DPTI's development plan amendment (DPA) process. The South Australia Environmental Protection Agency (EPA) is responsible for environmental planning, and has contributed to the development of the Planning Strategy. In terms of DPA approval, the EPA is involved only if the Minister believes the EPA has a direct interest in ministerially initiated DPAs, or if the EPA is specified in council-initiated DPAs.

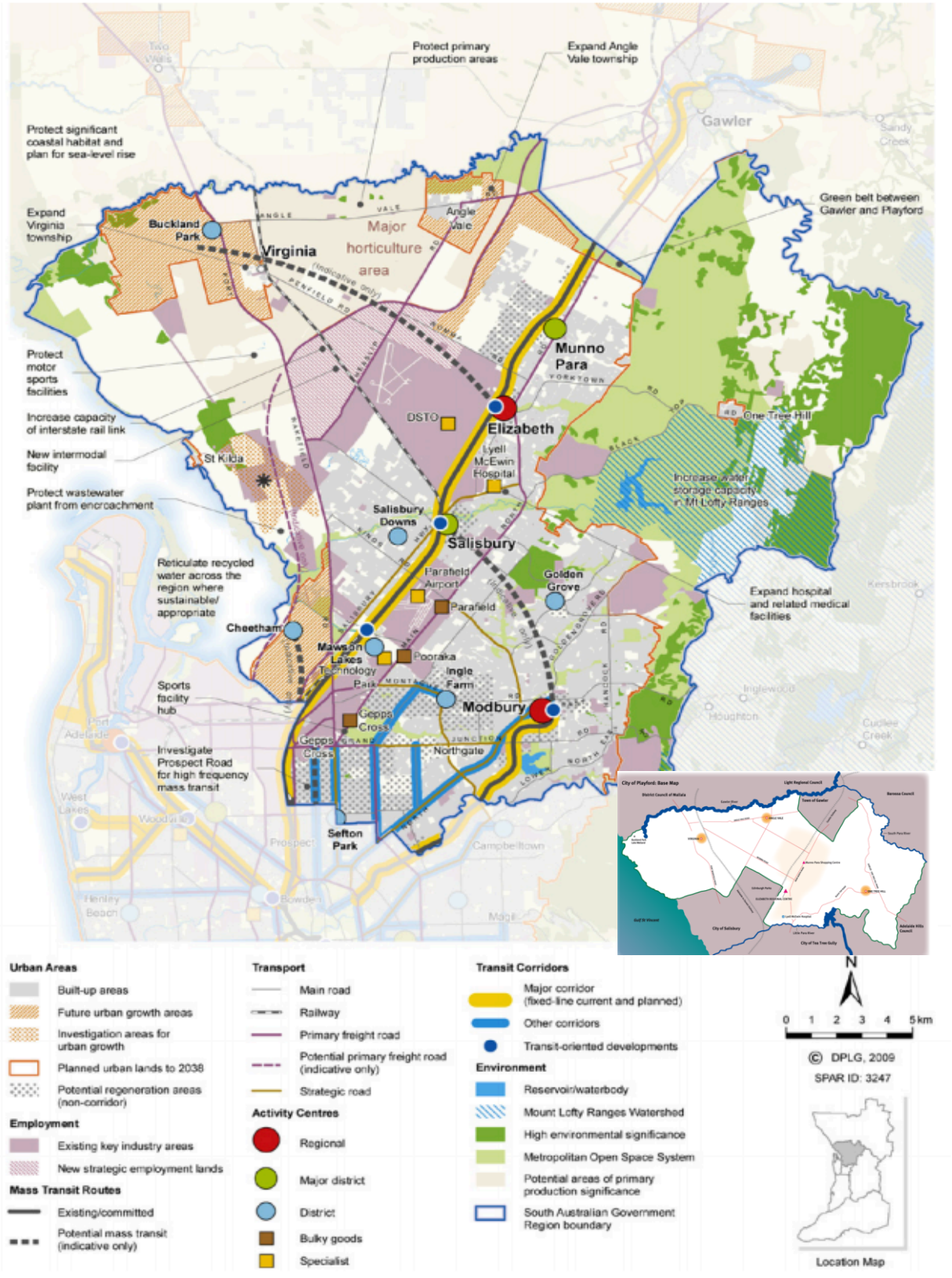
Local governments assess all development applications unless they are deemed 'major developments,' in which case the state's Development Assessment Commission assesses the application. The approval of Buckland Park in the west of Playford is a recent example of a state government-approved major development.

Influence of local government

Under the *Development Act 1993* (SA), each one of the state's 68 local council areas is required to create a development plan, in line with the state's Planning Strategy. Generally the development plans are independent of other legislation. Playford's development plan was consolidated in September 2012. The plan includes zones, maps and policies that oversee the development of activity centres, retail, community facilities, industrial businesses, waste management facilities and other infrastructure. Since 2009, Playford Council's development plan has been the subject of 13 amendments, six of which were ministerial. Specific growth amendments have been made for Blakeview Commercial and Mixed Use, Buckland Park Urban Growth, and Playford North. The council and state government both approved the Playford Alive project, for which the City of Playford has committed up to $23 million over the next 10 years. The project will regenerate Peachey Belt and build more than 4,000 new homes.

To complement the development plan, the City of Playford sought to establish a collective direction for the council area by developing the Playford Community Plan. The Community Plan builds on the work and outcomes of Playford's Revitalising Our City 2002–2012 Plan and aligns with the South Australia Strategic Plan. The goals of the ten-year plan are to improve community wellbeing and economic prosperity while securing a sustainable future for Playford's community. The Plan contains objectives and strategies, measures and targets for achieving the goals.

Figure 5: Planned future growth for urban development, employment and transit for Northern Adelaide (Source: South Australia Government, 2010: 161)



Environmental, social and economic indicators

The first component of the case study research involved investigating data relating to the themes and indicators presented in the indicator framework. Results across the three sustainability domains (environmental, social and economic) are discussed here, using the indicators in the framework as headings. The availability of data at the local level varies greatly across the indicators, and this report therefore draws on the most appropriate data that could be identified to characterise local activity. Where comparative data (for example at the Adelaide and South Australia level) was available and meaningful, this has been included.

The analysis presented shows that population growth is impacting on all three domains. However, data limitations mean there are some gaps in the analysis of how population growth is impacting on environmental quality, particularly regarding air and water pollution and the protection of vulnerable and endangered species. Nevertheless it is clear that population growth has brought with it changes in land use and increased motor vehicle use, both of which have environmental implications.

The social indicators show that Playford is a relatively disadvantaged area, with some areas of very high socio-economic disadvantage. Educational attainment data is consistent with the relatively disadvantaged nature of the area, with a significantly lower proportions of the adult population in Playford having a bachelor's degrees or higher compared to Greater Adelaide and South Australia as a whole. Similarly, in line with expectations that socio-economic status is correlated with health status, many of the health indicators suggest that people in Playford have worse health outcomes than those of Greater Adelaide as a whole. Unemployment is significantly higher than the Greater Adelaide and South Australian averages, and is increasing.

Playford relies heavily on the manufacturing industry for its employment and local economy, and it is generally agreed that Playford must move away from this heavy reliance in order to become more self-sustaining. Overall household wealth has increased in recent years, although average dwelling prices in different areas show that there is a range of household income and wealth levels within the LGA. Data suggests that Playford mortgagees suffer higher rates of mortgage stress than those in Greater Adelaide and South Australia as a whole. Rates of rental stress are also significantly higher than in Greater Adelaide and South Australia. While the proportion of residents with broadband internet connections has increased in Playford since 2006, the proportion is still slightly lower than the regional or state average.

Environmental indicators

Climate and atmosphere

According to the latest available reported statistics there were no exceedences of the National Environment Protection (Ambient Air Quality) Measure (Air NEPM) standards in 2008 at any of the EPA (Environmental Protection Authority) monitoring sites in Adelaide for the following pollutants: ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. A monitoring station in Elizabeth is one of the six monitoring stations for Adelaide.

Smoke from wood combustion heaters is an issue of concern to the community because of the resultant particulate pollution that results from the combustion process. It is also a problem that has the potential to worsen as population growth means additional dwellings and potentially additional burning activity. South Australia's Environmental Protection (Burning) Policy 1994 aims to avoid or minimise environmental harm and nuisance resulting from wood smoke and burning. The City of Playford prohibits burning on domestic premises (except in designated areas) but permits it on non-domestic premises with a permit. In July 2012 the Elizabeth monitoring station recorded two days on which exceedences of atmospheric particulant limits occurred (EPA 2012).

Table 4: Natural capital – climate and atmosphere (Source: EPA 2012; Hamilton et al., 2008)

	Playford	Adelaide
No. of days exceeding air quality standards	No exceedences (2008) (Elizabeth monitoring station)	No exceedences (2008)
Energy consumption industrial basis	3.85 and 5.25 PJ/yr of energy with an average of 4.59 PJ/yr (Hamilton et al, 2008).	

Ecosystems and biodiversity

The City of Playford stretches from the northern Adelaide coastline across the plains to the northern foothills of the Mount Lofty Ranges. The key natural assets of Playford include two significant biodiversity areas: the Buckland Park Wetland, which is home to thousands of migratory birds and is subject to international migratory bird agreements; and the South Para Biodiversity Complex (including the Para Wirra Recreation Park) which is a region of relatively dense native vegetation and is home to a number of threatened species. In addition to these two biodiverse areas, there are 96 protected roadside vegetation sites and 16 Bush for Life sites (under volunteer management) (City of Playford, 2007).

Playford is home to 502 locally indigenous flora species and 165 fauna species (City of Playford, 2007). There are few areas of remnant native vegetation in Playford – just 3% of the Hills area and 0.5% of the Plains area.

Table 5: Natural capital – ecosystems and biodiversity (Source: City of Playford, 2007)

	Playford
Biodiversity	
Locally indigenous species of flora recorded[#]	502 species
Fauna species recorded	165 species
Feral fauna species recorded	19 species
Weeds of environmental or agricultural significance controlled by the Animal and Plant Control Board	34 species
Remnant vegetation (% of area)	Hills – 3% Plains – 0.5%
Species of threatened status in the Playford Hills	20+
Protected areas	
Bushland reserves	190 hectares (0.6% of Playford)
Roadside marker scheme – protected roadside vegetation	96 sites
Bush for Life sites, under volunteer management	16 sites

In order to increase land biodiversity in the area, council actively plants indigenous species in reserves and also distributes these plants to Playford landowners for planting on their properties. In 2010/11, 17,404 indigenous plants were planted by Council staff, volunteers, contractors and landowners. According to the State of the City (SoC) report (City of Playford, 2011), council has a target of planting 15,000 indigenous plants per annum, and has met this target since 2008, though there was a significant decline in numbers from 2009 to 2010 (see Figure 6). This local measure links to the *State Strategic Plan* (T3.2 Land biodiversity).

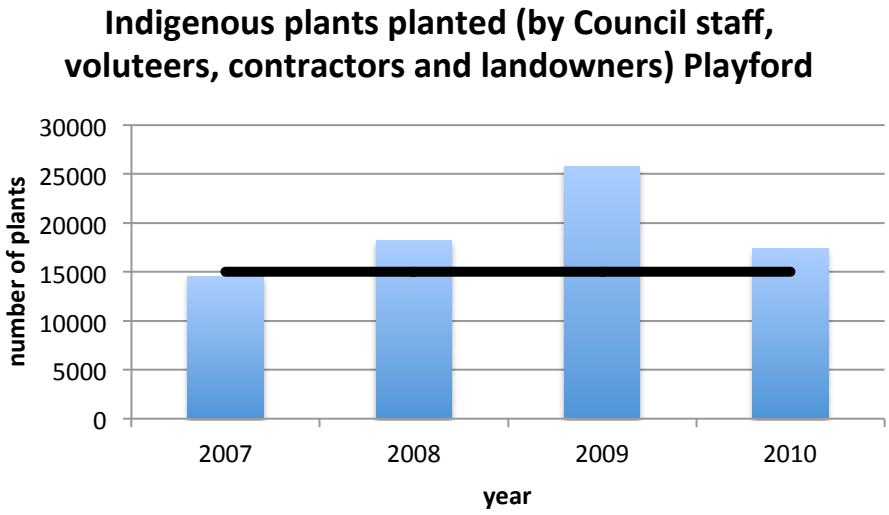


Figure 6: Natural capital - ecosystems and biodiversity (Source: City of Playford, 2011) (Note: Council target is 15,000 plants per annum, which is represented by the black horizontal line)

The City of Playford has committed to increasing the number of species of indigenous plants that it has demonstrated the ability to grow by 20% by 2015 (baseline year 2006/07). Data indicates that Council has been steadily increasing the number of species each year and has nearly met its target five years early (an 18.8% increase since 2006) (see Figure 7 and Table 6).

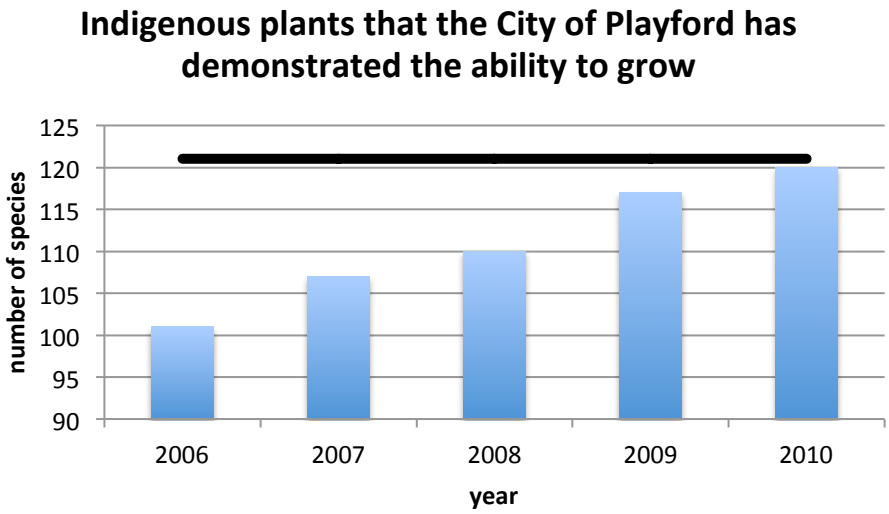


Figure 7: Natural capital - ecosystems and biodiversity (Source: City of Playford, 2011) (Note: Council target is 121 species, which is represented by the black horizontal line)

Table 6: Natural capital – ecosystems and biodiversity (Source: City of Playford, 2011)

	Playford 2006	Playford 2010	Percentage change 2006–10
Number of indigenous plants planted (by Council staff, volunteers, contractors and landowners	14,507	17,404	+20.0%
Number of species of indigenous plants that the City of Playford has demonstrated the ability to grow	101	120	+18.8%

Water

Specific data on water use in Playford could not be found. However according to the Australian Conservation Foundation (2010), Adelaide as a whole performed poorly in the 'water' category of its *Sustainable Cities Index*, with residential water consumption relative to mean annual rainfall the second highest of the twenty Australian cities examined in the Index.

Waste

The 2011 SoC report sets a target of reducing waste to landfill by 25% from the baseline year 2006. While there was a slight decrease in the percentage of waste diverted from landfill between 2007 and 2008, there has been a general upward trend from the baseline year. During 2011/11, 36% of waste was diverted from landfill, compared to 34.8% during 2009/10 (see Figure 8).

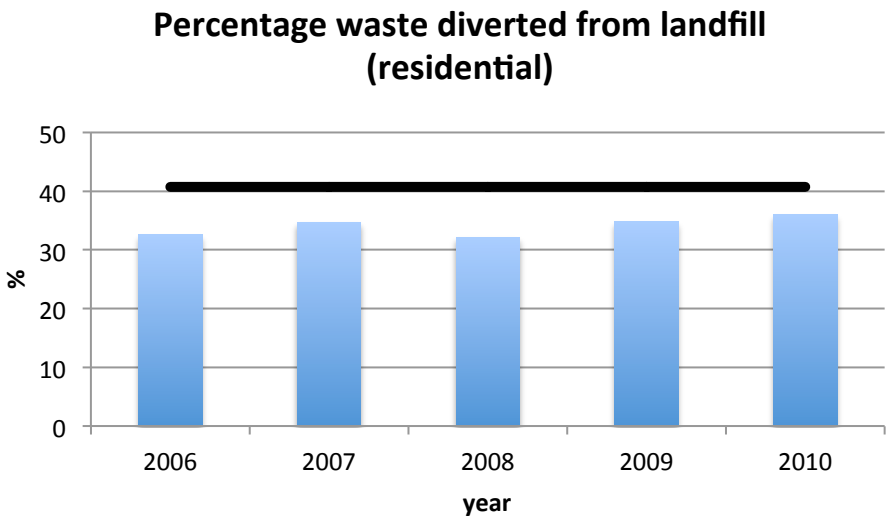


Figure 8: Natural capital – waste (Source: City of Playford, 2011) (Note: Council target is to have 40.7% waste diverted from landfill. This is represented by the black horizontal line)

In 2010/11, an average of 10.2 kilograms of waste was collected weekly per household, compared to 10.1 kilograms in 2009/10. Overall the trend has been fairly static, with only a 0.3kg increase over 5 years (see Figure 9). While the SoC does have a target of 'match or better the state average', it is not currently possible to source state data for this measure.

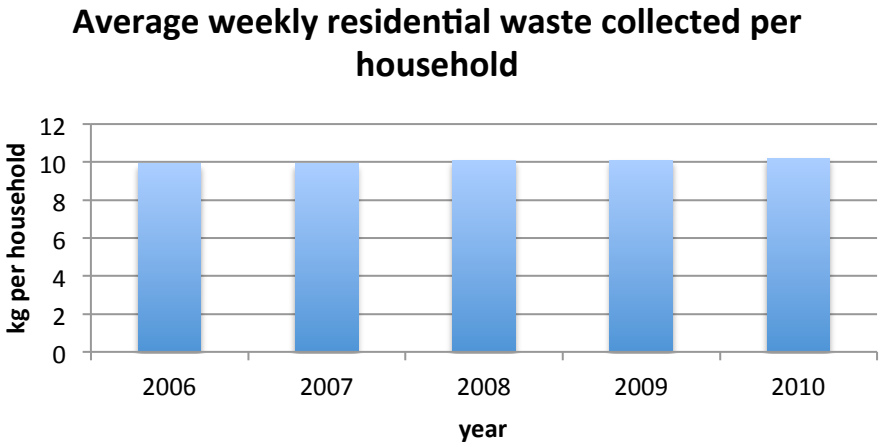


Figure 9: Natural capital – waste (Source: City of Playford, 2011)

Table 7: Natural capital – waste (Source: City of Playford, 2011)

	Playford
Total residential waste per household (kg)	10.2kg/ household (2010) 3.0% increase from 2006
Percentage waste diverted from landfill (residential)	36kg (2010) 10.4% increase from 2006

Social indicators

Skills and education

There are a number of ways to assess educational attainment in populations. Common measures are the proportion of the adult population that has a bachelor's degree or higher, and the proportion that has a certificate or diploma qualification. On both of these measures Playford has a lower level of educational attainment than Greater Adelaide or SA as a whole, with the proportion of the population with degree qualifications being substantially lower. These results are shown in **Error! Reference source not found.** and **Error! Reference source not found.**.

Levels of educational attainment are also increasing more slowly in Playford than in Adelaide or South Australia as a whole. The number of adults with university qualifications in Playford increased by 18.3%, and the proportion of adults with university qualifications increased by 0.1 percentage points from 1.4% in 2001 to 1.5% in 2006.[3] This compares to a higher increase in the wider population, with university attainment increasing across Greater Adelaide by 1.0% from 5.6% in 2001 to 6.6% in 2006, and across SA from 5.0% in 2001 to 5.9% in 2006.

The proportion of the population with certificate and diploma qualifications is only slightly below that in Greater Adelaide or SA however, and attainment levels for these qualifications increased at a slightly faster rate in Playford than in the wider population, from 12.5% of the adult population in 2002 to 13.1% in 2006. This an increase of 0.6 percentage points in Playford in comparison to an increase of only 0.3 percentage points for Greater Adelaide. The proportion of the population with these qualifications is 13.6% in Greater Adelaide and 14.4% across SA.

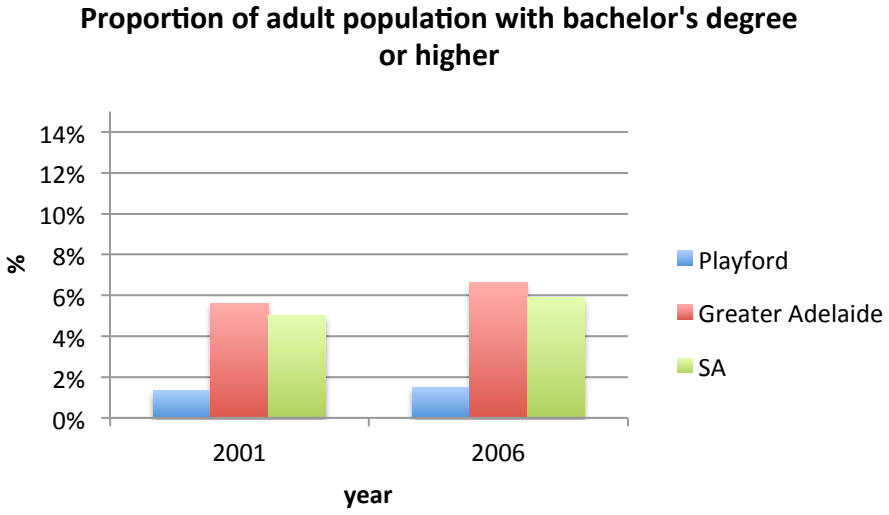


Figure 10: Comparison of adult population with bachelor's degree or higher qualifications (Source: ABS, 2012b)

[3] 2011 census figures will show if this is a continuing trend.

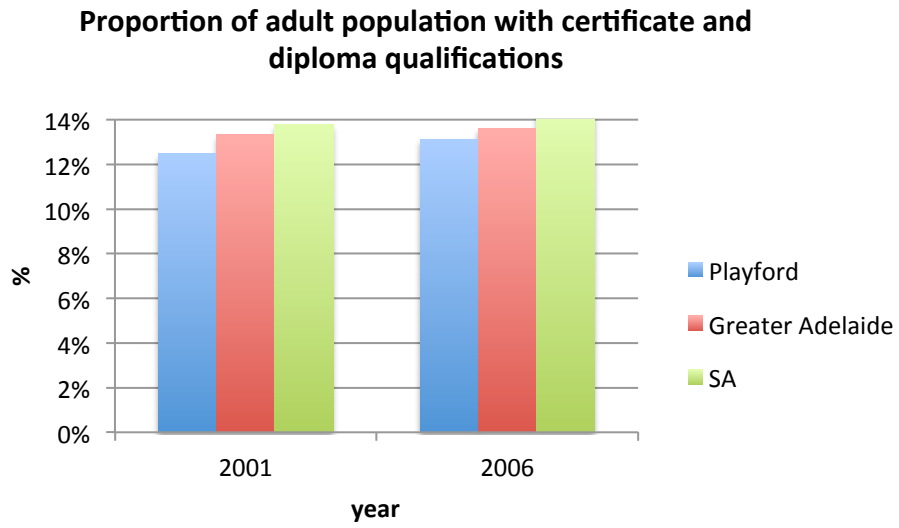


Figure 11: Comparison of adult population with certificate and diploma qualifications (Source: ABS, 2012b)

Health and socio-economic disadvantage

As research on the social determinants of health has shown, health outcomes are closely related to socio-economic status (World Health Organisation, 2012). SEIFA scores suggest that Playford has areas of significant socio-economic disadvantage. They also show that there is some variability within the LGA, with a minimum census collection district (CD) score of 567, a maximum of 1122, and a total score on the SEIFA index of disadvantage of 886. This indicates that Playford is more disadvantaged than the national average. Playford was ranked as the fourth-most disadvantaged LGA in South Australia in 2006.

Table 8: Social and human capital – disadvantage (Source: ABS, 2008)

	Playford 2006	Greater Adelaide 2006	South Australia 2006
SEIFA Index score	886	987	979
Minimum score of CDs	567	556	400
Maximum score of CDs	1122	1160	1160
Rank in South Australia	4 (of 70 LGAs)		
Rank in Australia	89 (of 667 LGAs)		

While available data sources report health information at the whole-of-LGA level only, it is likely that the health status of the population in Playford also contains similar levels of variability. At the LGA level, significant findings include the fact that Playford has a higher proportion of the population whose self-reported health status is only 'fair' or 'poor' (15.2% in Playford in comparison with 13.3% for SA as a whole). Playford also has a higher proportion of the population who are daily smokers (18.5% in Playford in comparison with 14.6% for Greater Adelaide). Other key measures, such as psychological distress[4] and the proportion of overweight or obese persons, are similar to the Greater Adelaide and SA levels (see **Error! Reference source not found.**). It is likely that aggregation to the LGA level is concealing igher concentrations of poor health status in specific areas of Playford.

Table 9: Social and human capital – health (Source: PHIDU, 2010)

	Playford 2007	Greater Adelaide 2007	South Australia 2007
Proportion reporting fair to poor health	15.2%	13.1%	13.3%
Proportion of population that are daily smokers	18.5%	14.6%	15.0%
Proportion of population that are overweight or obese	34.8%	36.6%	36.7%
Proportion of population rated as psychological distressed	11.4%	9.7%	9.4%

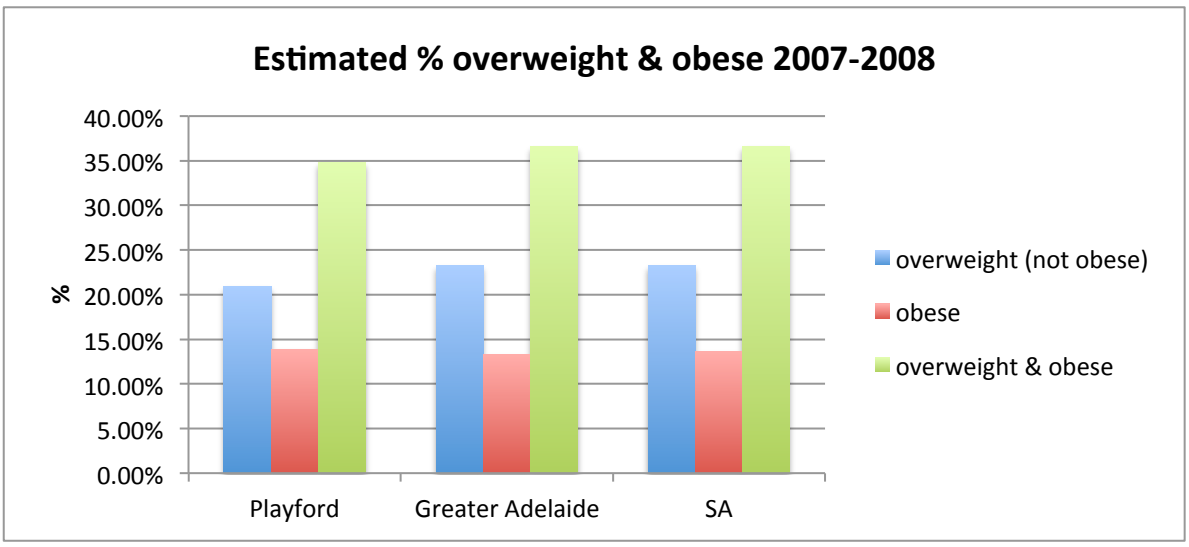


Figure 12: Comparison of estimated % overweight and obese (2007-08) (Source: PHIDU, 2010; ABS, 2009)

[4] As measured by the Kessler 10 scale

Institutions and governance

The SoC reports on levels of voter participation in local government elections, which could be considered an alternative measure for the indicator 'Fair and functioning institutions and governance'. In South Australia voting in local elections is not compulsory. Since 2000, voter participation has decreased significantly, from 37% in 2000 to 24% in 2010. Playford's target is to increase local voter participation to 50% by 2014.

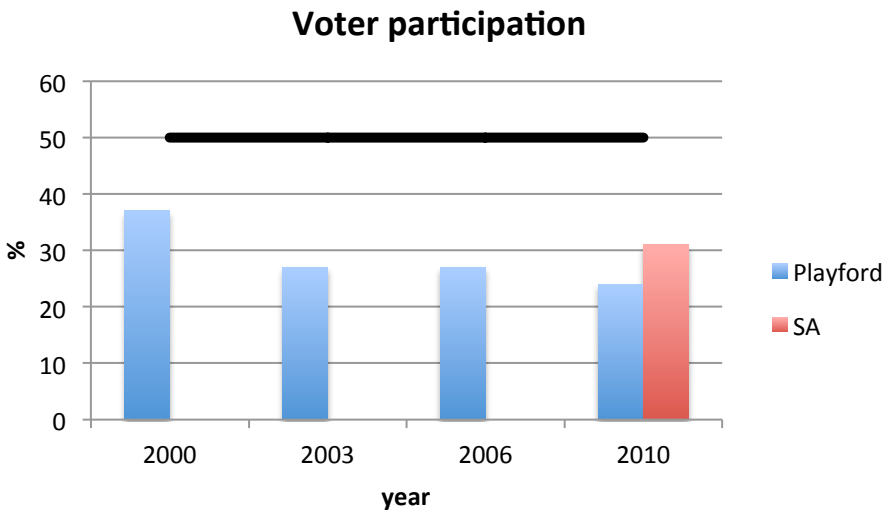


Figure 13: Social capital – institutions and governance (Source: City of Playford, 2011) (Note: Council target is 50%, which is represented by the black horizontal line)

Employment and unemployment

According to DEEWR, Playford's unemployment rate in March 2011 was 13.6%. As shown in the table below, unemployment in Playford is significantly higher than in Greater Adelaide or SA. The data also suggests (see Table 10) that the participation rate increased across Greater Adelaide and SA between 2009 and 2011, whereas in Playford it has been the unemployment rate which has increased in the same time period.

Table 10: Social and human capital – employment and unemployment (Source: City of Playford, 2011)

	Unemployment rate			Percentage point change
	June 2009	March 2010	March 2011	2009-11
Playford	13.2%	13.3%	13.6%	+0.4%
Greater Adelaide	5.6%	5.3%	5.5%	-0.1%
South Australia	6.1%	5.6%	5.6%	-0.5%

Table 11: Social and human capital – employment (Source: DEEWR, 2012a & 2012b) (Note: * data is from the National Institute of Economic and Industry Research (NIEIR) State of the Regions report for Adelaide North, which includes the major centres of Port Adelaide, Salisbury and Elizabeth).

	Northern Adelaide	Greater Adelaide	South Australia
Participation rate	60.9% (August 2012)	62.4% (August 2012)	62.2% (August 2012)
Hours worked per week*[5]	32.5 hours (2011) 0.0% change from 2007		
Social security take-up*	17.3% (2011) 0.1% change from 2007		

There is high variability in the unemployment rate across the Playford LGA, as shown in Table 12. The established centre of Playford is located in Elizabeth, an area that also has a high concentration of social housing. In this area the unemployment rate is much higher than in some of the other areas of Playford. However, the areas of new development such the West and East of the LGA still have high rates of unemployment relative to Adelaide, and these rates have increased significantly since the Global Financial Crisis (GFC). This could be a result of the wider decline in manufacturing and other trade-exposed industries, because manufacturing is a dominant industry within Playford and the North Adelaide region.

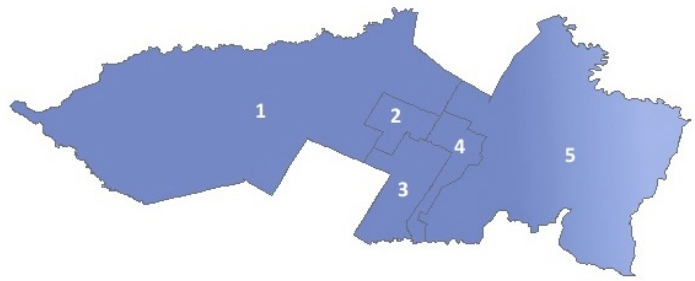


Figure 14: Map of Playford wards (Note: 1 –West; 2 –West Central; 3 – Elizabeth; 4 – East Central; 5 – Hills)

Table 12: Social and human capital – employment details (Source: DEEWR, 2012)

	Unemployment rate 2008	Unemployment rate 2011	Percentage change 2008–2011
Playford – East Central	8.5%	11.6%	40.5%
Playford – Elizabeth	16.9%	21.3%	25.4%
Playford – Hills	5.6%	8.0%	50.0%
Playford – West	5.3%	8.2%	59.8%
Playford – West Central	12.2%	15.2%	27.1%

[5] Place of residence average weekly hours per employee

Security and crime

It is difficult to identify local level data on feelings of safety or security. Crime statistics provide some indication of the security or safety of an area, although it is well-documented that caution should be exercised when interpreting crime statistics, not least because they include only *reported* incidents.

In 2009, Playford had a significantly higher rate of offences against the person with 19.71 offences per 1,000 population, compared with 13.38 per 1,000 for Greater Adelaide. However, Playford's rate had decreased by 2%, from 21.7 in 2006 (OSCAR, 2009). For offences involving property, Playford once again had a significantly higher rate of offences than Greater Adelaide (19.9 per 1,000 dwellings for Playford and 12.73 per 1,000 dwellings for Greater Adelaide). For all offences combined, Playford experienced 220 offences per 1,000 population, in comparison to Greater Adelaide's 154 offences per 1,000 population. However, Playford did experience a major decline in the total number offences (268 per 1,000 population in 2006 to 220 per 1,000 population) in 2009.

The City of Playford undertakes an annual customer satisfaction survey that aims to measure perceptions of safety and lighting. Between 2009 and 2011 residents' perceptions of street lighting and safety have both improved (see Table 13).

Table 13: Social and human capital – security and crime (Source: City of Playford, 2011) (Note: score out of 10, where 10 indicates completely satisfied and 0 indicates very poor)

	Playford 2009	Playford 2010	Playford 2011	Percentage change 2009–2011
Perception of safety	6.0	6.2	6.4	6.7%
Perception of lighting	6.3	6.4	6.4	1.6%

Economic indicators

Wealth and housing affordability

Standard of living is usually measured by disposable household income, adjusted for household size and controlling for housing costs. In the period between 2001 and 2007 household disposable income across Australia grew on average by 3.1% a year, accelerated to 6.5% per year during the global financial crisis (2008–2009) and in the years since has dropped back to 1.6% (NIEIR, 2012). In the North Adelaide region (which includes the Playford LGA and the major centres of Port Adelaide, Salisbury and Elizabeth) disposable income grew by a total of 15.5% in the period from 2006 to 2011 or an average of 2.8% annually (NIEIR, 2012).

The NIEIR report calculates household wealth as the value of dwellings owned by residents of an LGA plus holdings in financial assets less the stock of household liabilities. As Table 15 below shows, household wealth has increased over the last decade, with most of this increase attributable to increased property values. Household debt service ratios and the ratio of debt to income have increased. The average dwelling price in Playford in 2011 was $341,000, an increase of more than 90% from the average price in 2001 ($177,600) (NIEIR, 2012). Although there is only anecdotal data, it is likely that there is large variability in average house prices when disaggregated to the suburb level rather than the regional level.

Mortgage or rental stress is another useful measure of housing affordability. It is based on the proportion of households in the bottom two percentiles of household income that spend 30% or more of their income on housing costs. In Playford, data indicates 10.6% of mortgaged owner-occupiers and 32.0% of private renters can be classified as being in mortgage or rental stress. These rates were above the Greater Adelaide and SA levels.

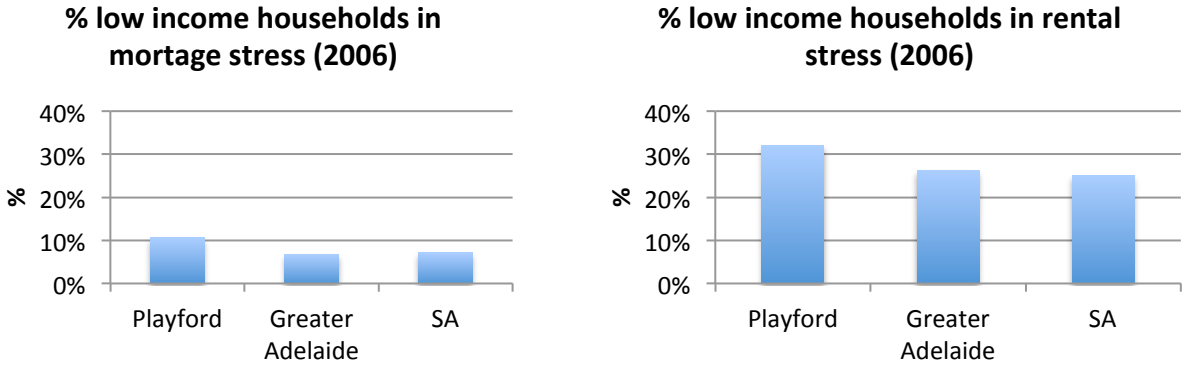


Figure 15: Comparison of % low income households in mortage & rental stress (2006) (Source: PHIDU, 2010; ABS, 2007)

Table 14: Economic capital – wealth and housing affordability (Source: NIEIR, 2012) (Note: Adelaide North comprises the northern suburbs of Adelaide, and includes the major centres of Port Adelaide, Salisbury and Elizabeth; *represents growth in chain volume measures using ABS methodology)

	Adelaide North 2001	Adelaide North 2012
Wealth per household*	$278,000	$406,000
Social security take-up	15.8% (2007)	17.3%
Household debt service ratio	13%	19%
Household debt to gross income ratio	1.06	1.50
Average dwelling price	$177,600	$341,000
Average dwelling price to household disposable income	2.7	4.4

Transport and infrastructure

Transport

The City of Playford has a target of maintaining lower rates of vehicle travel to work than the Greater Adelaide average (City of Playford, 2011: 44), which links with the State Strategic Plan (T3.6 Use of public transport). ABS data from the 2006 Census indicates that car usage of Playford residents is 3% higher than Greater Adelaide. Data also indicates that in Playford the percentages using other travel categories are lower than the equivalent percentages for Greater Adelaide (see Table 15 for details).

Table 15: Economic capital – transport and infrastructure (Source: City of Playford, 2011; ABS, 2007)

	Worked at home	Car	Public transport	Walked or cycled
Playford	2.5%	72.5%	6.5%	2.4%
Greater Adelaide	3.1%	68.9%	8.3%	3.9%
Difference	-0.6%	+3.6%	-1.8%	-1.5%

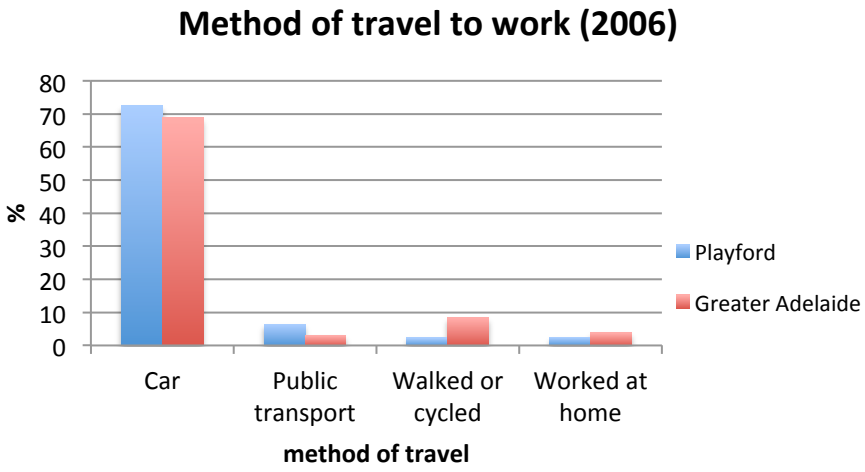


Figure 15: Economic capital – transport and infrastructure (Source: City of Playford, 2011; ABS, 2007)

Access to broadband Internet connections is a common measure of communications infrastructure. In Australia as a whole, the uptake of broadband services increased rapidly between the 2006 and 2011 census periods. In 2006 25% of Playford residents had access to a broadband Internet connection; this increased to 70.1% in 2011, similar to both Greater Adelaide and SA as a whole.

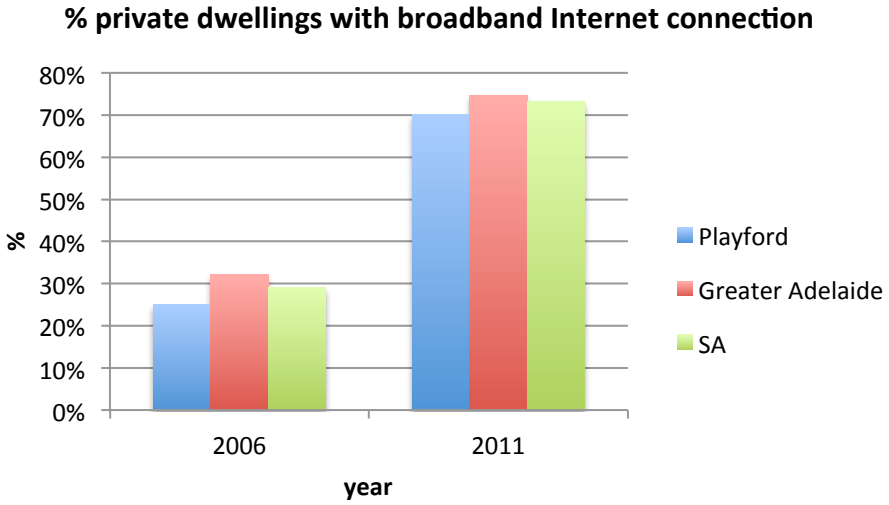


Figure 16: Comparison of broadband Internet connection (2006 & 2011) (Source: ABS, 2007 & 2012a)

Productivity

The Playford State of the City report (2011) states that the gross regional product of the cities of Playford and Salisbury combined has increased at almost double the rate of the rest of South Australia. The actual figures on which this claim is based are not available. Playford will be the site of significant infrastructure investment of over $21 billion in the coming decade, including $9 billion in civil, residential and commercial development and a further $11.7 billion in defence projects, mainly around Edinburgh and the Lefevre Peninsula.

Business innovation

Local-level business innovation data is virtually non-existent, unless it is collected through small, locally based surveys. Patent counts per 100,000 population are often used as proxies for innovation, but these are often unsuitable, as patents are only used in certain types of innovation (technology based and radical innovative activity), meaning this measure excludes other more common forms of innovative activity such as service or organisational innovation.

The NIEIR State of the Regions report does calculate patent applications per 100,000 population for the Adelaide North region. NIEIR calculates 11.2 patent applications 100,000 population (applications between 1994 and 2011). This compares with the Australian average of 21.01.

Stakeholders

Stakeholders were identified from a process of stakeholder mapping. Seventy-four possible stakeholders were identified from this process. This list was refined and selected stakeholders were invited to participate in an interview.

A total of 13 stakeholder interviews were conducted from 8 to 19 October 2012. The list of stakeholders interviewed is shown below.

Table 16: List of stakeholders

Interviewee	Position and Organisation	Role of organisation	Category
Theresa Brown	Manager, Community and Cultural Development	Local Government	Social
Claire Dilliway	CEO, Northern Area Community and Youth Services	Local NGO	Social
Bill Doyle	Revegetation Officer, Playford City Council	Local Government	Environmental
Pauline Frost	Chairwomen, Playford Greening and Landcare Group	Local NGO	Environmental
Gayle Greiger	Senior, Natural Resource Management Policy Officer	State Government	Environmental
Helen Halse	Program Manager, Northern Metro ICAN (Innovative Community Action Networks), SA Dept. of Education and Child Development	State Government	Social
Tammi Hamilton	Social Planner, Playford City Council	Local Government	Social
Luke Harris	Economic Development Officer, Playford City Council	Local Government	Economic
Andrew Nesbitt	Manager, Health and Sustainability, Playford City Council	Local Government	Environmental
Greg Pattinson	Manager, Growth and Regeneration Playford City Council	Local Government	Economic, Planning
Chris Rudd	Manager, Population, Land and Housing Analysis Unit, SA Dept. of Planning and Infrastructure	State Government	Planning
Emanuela Simos	Regional Manager, Greater Northern Adelaide, ICAN (Innovative Community Action Networks), SA Dept. of Education and Child Development	State Government	Social
Ross Womersly	Executive Director, South Australian Council of Social Services	Peak NGO	All

Positive and negative views about population growth

On the whole, stakeholders in Playford expressed a sense of inevitability about population growth. Many felt they had little control over the rate and even the placement of development and it was a matter of making the most of the situation.

> *'No control over the population growth but the impact and the sheer number of people that are coming in, the fast pace of the suburbs development has been very noticeable.'*

For Playford the vast majority of population growth and development will be in the future rather than in the present, or recent past. A downturn in the housing market in Adelaide over the past 12–18 months has also slowed development.

There was also a sense of population growth changing the socio-economic demographics of the area. In the past Playford was seen as a satellite suburb to Adelaide.

> *'Thirty years ago you would have thought Playford was the edge of suburbia and not even connected to Adelaide but now that greenfield space is not even there.'*

Playford was also seen as having a large concentration of social and public housing. However, the new estates are larger, attracting young families and retirees and bringing new shopping centres and recreational facilities to the area.

The industrial profile of the area is dominated by manufacturing and major employers are the car manufacturer Holden and its related suppliers. Increased retail and services activity has increased employment in these industries. There is an understanding among stakeholders in the region that local employment must be increased but also diversified if the area is to become self-sustaining, and if it is to be more than a dormitory suburb of Adelaide.

Playford is an area dominated by the car, and there were mixed views on the adequacy of public transport in the area and the integration of public transport across modes. The vast majority of journeys to work in Playford are by car. High levels of car dependence reflect the way in which the area was historically planned for car use, with wide roads and large roundabouts. The recent completion of the freeway to Adelaide has also provided a relatively quick option for commuting to central Adelaide. Access to public transport is seen as a major issue for those who do not have cars, and it appears this issue will increase in importance as traffic congestion increases with future growth.

There is a strong sense that Playford is a place of 'haves' and 'have-nots', and that this will only be exacerbated by population growth. There is a positive sentiment that population growth will offer a chance to increase the standards of living for all across the local government area, but also a concern that if planning, infrastructure and service delivery are not done in a timely and needs-driven way, there is a real chance that social divisions will be exacerbated and pockets of the population will experience increasing isolation and depravation.

> *'Population growth gives you the critical mass to get the bigger things done.'*

Environmental issues

Diversity of land types

Playford has a range of land types: broad acre agricultural land, rural living areas, suburbs, coastal areas and bush up towards the Adelaide Hills. Despite this there is a perception within the population that there is very little natural vegetation and few areas of biodiversity value left within the Playford area. The area has been extensively cleared and farmed using European-style farming practices for most the past century. For stakeholders working in environmental areas this created the challenge of raising awareness of the importance of protecting the remaining vegetation. One stakeholder stated:

> *'People know that it is already bad, so they don't see it as a calamity if things gets worse. It means you have to work hard to protect what genetic material you have left'.*

The diversity of land types also means a diversity of landowners, each with different attitudes about their roles and responsibilities regarding land management. In some areas new landowners and their land management practices were seen negatively and were viewed as a potential risk to biodiversity.

> *'People moving into the area are new to rural living so we have issues to do with weeds and feral animals, as these people don't have a lot of experience with the land.'*

However, engaging with landowners who have little rural living experience and educating them in new land management techniques was also seen as a way to promote revegetation of some areas and increase biodiversity.

> *'These people* [new residents] *are really interested in what to do with their land, and they usually want to do the right thing and improve their land.'*

Another environmental problem discussed by stakeholders related directly to population growth in the region was that an increasing number of people are accessing coastal areas, mainly for recreational purposes. Coastal environments are notoriously fragile ecosystems and motorised recreational activities are highly damaging due to the sandy soil being easily disturbed and extremely slow to recover. One stakeholder said:

> '*While our organisation is trying to educate and raise awareness, and do a little bit of fencing to protect what is there … from a policy perspective it is very hard to stop people accessing these areas because they are reasonably isolated and so policing is hard'.*

Housing design leading to inefficient resource usage

There were number of comments on the design and quality of new housing and housing estates in the Playford area. Stakeholders felt poor design was leading to inefficient resource use, resulting in higher expenditure on electricity for heating and cooling due to the positioning of houses and the types of building materials used, and higher water consumption due to unsuitable gardens, parks and plantings.

Electricity use and the recent electricity price rises were topical issues with stakeholders, with a number pointing out that while building standards might require water tanks and solar panels, this would not offset the energy wastage due to the inefficient design of houses and estates. One stakeholder spoke of the heat waves that Playford experiences throughout the year and the direct effect this has on electricity usage.

> *'Because of the poor design of houses to make them affordable for sale, everyone needs to have an air-conditioner. We'll usually have two or three heat waves a year, everyone will come home and switch on their air-conditioners, this means massive demand for electricity and ultimately all our electricity bills go up.'*

Other concerns of increased electricity prices were more related to social inequality.

> *'People in social housing have pretty static electricity use; they often won't air-condition or heat their homes because they are worried about paying the bills – but they still have to pay the major price increases.'*

Climate change

The impact of climate change is an issue that is on the radar for Playford, but in a very distant way. Among the stakeholders interviewed there was a view that Playford would be subjected to impacts of climate change (for example sea level rises, lower levels of rainfall, heat wave events) and there was also some understanding of the risks these events pose to communities and infrastructure.

> *'We've done lots of risk assessment research (into climate change impacts) but we haven't made any decisions about it yet; for example how do we account for a footpath that we thought would last 20 years now only last 15? That will have huge financial impacts, but there is a sense that we will just deal with it when it comes along.'*

It appears that no local planning has been undertaken to respond to the predicted effects that climate change will have on infrastructure planning and expenditure, or on community planning and health. There was also a concern that addressing some of the impacts of climate change (for example increased bushfires) would lead to other negative environmental impacts, such as increased pressure for fire breaks and frequent back-burning in fire-prone areas.

> *'If we are going to have the drought/ la Nina rainfall patterns, bushfires will be a big concern, people don't want their houses burnt down so they will start to push for protections including breaks and back-burning, this can have a devastating impact on the remaining vegetation.'*

Social issues

Entrenched disadvantage and unemployment

While Playford is an area that has a high concentration of socio-economic disadvantage, stakeholders emphasised that this is not a new issue associated with recent population growth. Rather this is a longstanding issue, with stakeholders pointing out that there are many families for whom this is the second or third generation that is reliant on welfare payments.

There is a large concentration of public housing in Playford, '*which was done to create affordable safe housing for everyone'* in the past. However, while there is a large amount of public housing, there are still shortfalls in the amount of public housing available compared to the demand, meaning that people who actually become social housing tenants usually have a high degree of need.

> *'If you are a current tenant of a housing trust house you need to have many complex life issues to even be considered for a tenancy.'*

This also means that other aspects of social disadvantage such as high unemployment rates, high long-term unemployment, lower levels of high school completion and other forms of educational attainment, are also concentrated in these areas.

One of the most frequently mentioned advantages of population growth in Playford is that the new residents would 'dilute' the concentration of social disadvantage currently within Playford and lead to a more diverse community. One stakeholder believed that population growth would '*[water] down the inter-generational unemployment issues'*. However, stakeholders acknowledge that tensions between the 'haves' and 'have-nots' may lead to widespread tensions within the community, though stakeholders did have mixed views on the longevity and seriousness of these tensions. Stakeholders described Playford as having '*a history'* of demographic transition, especially since the area is '*an amalgamation between the working class, industrial community of Elizabeth and the rural community of Manna Para'.*

First stop for refugee and new migrant communities

The Playford area is home to populations of recently arrived migrants and refugees with what one stakeholder described as '*hope and expectation and a preparedness to do anything to get ahead*'. New migrants were drawn to the area as it has inexpensive rental housing stock. Stakeholders commented that the area is usually a *'first stop'* for these populations because they can access housing and health and community services relatively easily. Over time, many then move to other areas. However, in recent years the members of a number of migrant African communities have chosen to remain in the area on a long-term basis. These populations have typically come from conflict situations and in some cases now find themselves living in close proximity to ethnic groups that they were previously in conflict with in Africa. One stakeholder voiced major concern regarding this issue and the area's ability to cope, stating:

> *'We see people escaping countries where there were significant tribal hatreds and now they are living as neighbours. How do we handle that? I don't know that any of us have worked through that issue.'*

Site for large urban renewal

A large section of the social housing in Playford is currently being redeveloped. The '*Playford Alive'* urban renewal project will see the redevelopment of 1000-hectare site, with higher densities, and mixed use buildings including residential, commercial and health and community services. The residential portion includes a mixture of social and private housing ownership, and of renters and owner-occupiers. The site is currently home to 13,000 people but its population is expected to increase to 40,000 by the completion of the project in 10 to 15 years' time.

Stakeholders questioned whether the integration of social and private housing could really work.

> *'Social housing people feel isolated in these areas – other residents don't like them, feel they are depreciating their house, don't let children play together, so they feel very isolated, at least here they are all in it together.'*

Other issues regarding integration come from anecdotal reports of tensions between social housing and private housing residents over expectations of upkeep and tidiness of properties.

> *'We have a lot of issues with people's inability to deal with their own waste products – the poorer areas struggle a lot with people hoarding … people are coming into new homes which are in the older suburbs and seeing the hoarding or squalor over the fence and complaining about it.'*

A few stakeholders also highlighted that the Playford Alive project was shifting the ownership of social housing from public to private and that the same mechanisms for communications about maintenance and problem neighbours were not available with private landlords.

> *'When they were with the Housing Trust there was a process for complaints. Now these are private landlords, most of them are not even in SA, so it is very hard to get them, and because it is low cost housing they are not very interested – so it is very hard to get problem neighbours removed. We have lost our only form of process in some places.'*

Playford is seen as an area for affordable housing. However, with new housing development and the urban renewal programs, demand and prices have increased. This has forced some households, particularly low income households on the private rental market, to move to areas adjoining Playford to secure affordable housing. This shifting of population has implications for service delivery, with most services still located in Playford but not adjoining areas. One stakeholder stated:

> *'Eventually the welfare-dependent people will be displaced as urban sprawl increases. I have started to hear that we are getting Northern kids moving up to the Riverland … this area has a lot of services, they may be stretched but they are all available, whereas in Riverland we only have one service provider, by the time the services catch up with the population shift there will be a gap.'*

Building design and density

The majority of existing housing in Playford is low density. This includes the social housing estates. In the new development and renewal areas, housing is at a much higher density. However, stakeholders commented that the existing population has little experience of living at higher densities and lack an understanding of high density living 'social norms' such as tolerance for noise, and they feared that the activities of others would be a potential source of conflict in the future.

One stakeholder discussed the health issues of higher densities around transportation hubs in terms of noise and air pollution, and predicted that while net reductions in pollution would result from higher densities and more use of public transport, for the people who live around these hubs the benefits may not outweigh the costs. Higher quality design and construction could ameliorate these issues but some stakeholders felt that keeping housing affordable meant sacrificing quality.

> *'*[High density] *looks great in a drawing but then you start to think about it in reality, and the health and noise issues of so many people living along busy transport corridors … we are not used to it, this multi-unit dwelling.'*

A number of stakeholders also said that the design of new housing estates, particularly in respect of the placement of open spaces, discouraged social interaction between new and established residents.

> *'Many of the new development in Playford are like 'gated estates' with limited points of entry. We would expect that many people living in those estates will blame the people living next door* [in the housing trust house] *for anything that happens in the estate (e.g. theft) … on the other hand you will also see those communities* [housing trust houses] *looking to the gated community and wondering, why don't I have all that stuff?'*

There was also the expectation among stakeholders that the newer estates would have higher ongoing maintenance costs than the established areas because developers spent money on higher standard finishings such as plantings, footpaths and curbing and guttering as part of the marketing of the new estates. Existing residents had the perception that more money would be spent on maintaining these new areas, even if this was not the case, and conversely, new residents would be unhappy with the level of upkeep that council provided, compared with that of the developers in the early stages of a new estate.

'Developers put a lot of infrastructure into new areas (plantings, footpaths, playground equipment)., It looks glossy and new when it goes in but can we maintain this infrastructure to the same level that people expect?'

Schools as community hubs

This view of the importance of inclusive design extended to other buildings in the community, particularly schools. Many stakeholders identified the important role of schools as community hubs and as mechanisms for community education (as opposed to just student education).

Playford is the site of a recent SA Government education innovation: 'super schools'. This is where a number of school populations are combined into the one large site (1000+ students). The super school in Playford was established using a public–private partnership model, with school facilities available after-hours to community members on a cost recovery basis. Many stakeholders interviewed had been involved in some way in the planning or operation of the local super school. Some questioned the competence of the advanced planning when the school was at capacity shortly after opening:

'The super-school was at capacity the day it opened – the Education Department has not been very forthcoming about where the future population will be schooled.'

Stakeholders also expressed concerns about the design of the school. They felt that the inward-facing buildings, with minimal street frontage, had a limited ability to serve as community hubs in which people could meet and interact. They felt that these bulidings were not properly designed to provide co-location opportunities for health and community services and retail outlets. Stakeholders felt that the designs do not have the kind of features that would '*help create a sense of community'.*

Concerns were also raised about the cost-recovery model for the school's facilities for after-hours use, and stakeholders wondered how many in the community could afford to access these facilities. One stakeholder stated:

'Since these super-schools are run as public–private partnerships, it means the facilities aren't available after 3:30, or if they are they have to be hired at a fee for service cost and this just doesn't work with the financial situation of the families here.'

Education and educational facilities were recognised as key components of the social and economic development strategies of the area. This includes schools but also other vocational and tertiary learning institutions.

'What we do know is that the presence of an educational institution however is a very useful component in building social cohesion in an area.'

All stakeholders were aware of the need to engage and up-skill a large proportion of the existing residents if the community was going to take advantage of the jobs growth that population growth and the associated development would bring to the area. However, one stakeholder believed that past educational retention rates and the region's track record could hinder future engagement.

'In reality the educational institutions, our schools, don't do very well at keeping that group of people connected with schooling, let alone after they've left school.'

Economic issues

Changing industrial landscape

From all of the stakeholder interviews there was a sense that Playford is at a transition point in terms of its industrial composition, just as much as it is in the composition of its population. Playford's industrial structure was dominated by agricultural (particularly market gardening for vegetables) and manufacturing for much of the recent past.

> *'Historically Playford was the food basin of Adelaide, but in essence the population growth is decimating the market gardens or shifting them away.'*

The Holden car manufacturing plant is the largest employer in the area, employing more than 3,000 people directly and an estimated 20,000 indirectly in the associated supply chain (this is only counting the immediate tier 1 and tier 2 supplier industries in the supply chain).

Employment and economic activity in the agricultural industry is diminishing as the number of market gardens reduces as agricultural land is developed for housing. Stakeholders acknowledged the underlying tension between the need for agricultural production close to the city for food security purposes, and the direct financial rewards of selling land when it is rezoned from agricultural to residential. A common statement was that while productive food land should be valued for its intrinsic worth, for some of the area's market gardeners the rezoning of their agricultural land to residential was seen as a form of personal retirement income:

> *'These market gardeners have worked the land all their lives and they may not have superannuation. They look to urban development as a way to retire, but this land is also valuable to food production but this is not value that can be reaped by the landowner.'*

Stakeholders highlighted Playford's economic vulnerability due to the concentration of employment in trade-exposed manufacturing industries, such as car manufacturing, and acknowledged that the area has already been very reliant on outside governmental help to sustain employment temporarily.

> *'Holden received grants from the state and federal government that will push out production until 2022, but the last car to be designed there will in 2016. There is a big role to look at transitioning those workers and the suppliers too, we are trying to get them ready for when Holden leave.'*

As recently as 2 November 2012, Holden announced the loss of 170 workers from its Elizabeth assembly plant (The Australian, 2012), and there was strong sentiment amongst stakeholders that layoffs will continue to happen into the future, just as have in the past.

> *'When Holden laid off staff last year … the effects were felt immediately in the community. Do we have to wait until Holden closes its doors before we come up with a re-training and rescue package? I am sure it will happen* [the assistance package] *but not quickly enough for people not to lose their houses.'*

Playford Council, both on its own and in partnership with neighbouring councils, has a strong focus on diversifying the industrial base of the region, but it is acknowledged this is an outcome that councils have limited ability to influence. One stakeholder stated:

> *'With Edinburgh Park* [new Industrial estate], *the high cost of infrastructure to start it up has meant that population growth has not resulted in equivalent commercial growth. The land is all flat, and there is no regional stormwater management, the drainage costs are huge ($80-$100m) and the land is all owned by different landowners'.*

The location of the defence base in Playford (one of only two combined Army and Navy bases in Australia) has also brought some diversity to the economy. Twelve thousand defence personnel and their families have moved to Playford. There is also a submarine development facility in the area, which allows some focus on industrial diversification through advanced manufacturing. However, these activities are also at the mercy of government defence policies.

Increased retail activity

While population growth has increased retail employment and activity in the area, new retail activity has been concentrated in shopping centre developments rather than existing strip shopping. This has had knock-on effects on older businesses and older shopping areas, such as high vacancy rates. As one stakeholder stated:

> *'Dilapidated shops are going out of business because of the new developments. They can't compete with new retail centres who are offering honeymoon rents'.*

While employment in retail and associated food and beverage service industries has increased the amount of employment in the region, the jobs are often casual/ part-time employment with low skills requirements.

Increasing the skills profile of the local population

As noted in the social issues section above, stakeholders highlighted the long-standing unemployment and educational deficits that exist with a large proportion of the Playford population. For the local population to benefit from the increased industrial activity arising from population growth, the skill levels and employability of the local residents from lower socio-economic backgrounds will need to be addressed. As one stakeholder put it:

> *'In Edinburgh Park* [new industrial estate] *they are predicting 5,000 jobs and we thought if local people get 500 of those we will be lucky'.*

Another stakeholder discussed the fact that the local economy has *'done away with labouring and unskilled jobs'* and this affects job opportunities for '*that group of people who are not highly engaged and are not motivated to study'.*

> *'We don't have jobs for those people. If there are no jobs for those people there is two things we can do about it – try to skill them up to get them the jobs, or give them an activity to help develop skills and behaviour to get them closer to jobs.'*

There is a large number of existing government funded employment programs but stakeholders commented that these programs were by and large not addressing the causes that prevented people from taking up employment. One stakeholder suggested that the federal government approach, which was perceived to focus exclusively on job numbers, was the wrong model for Playford:

> *'We used to have a therapeutic model to get people into employment. We dealt with all the issues that were preventing them from getting into work – drug and alcohol issues, literacy, family issues, but then the Feds stepped in and it became a job generating model, about how many people can you get into a job and not dealing with the other problems at all. It became volume not quality. Even when people get a job, they have so many problems that they will not last the 13 weeks before they get sacked.'*

Housing affordability and accessibility

Although housing availability, particularly the availability of social housing, was identified as an issue for existing residents, housing affordability or more critically, vulnerability to mortgage stress, was also highlighted as an issue. There is a significant difference in socio-economic status between many of the new residents and the established communities, but the new residents also faced vulnerabilities including mortgage stress, cost of living and job security pressures. As one stakeholder put it:

> *'People moving into these new houses have hocked themselves to the eyeballs, have bought furniture, cars, everything on rental agreements. They have such high ratios of debt to income, and they are very vulnerable to inflation, interest rate changes and the cost of electricity – it is often at the point of having children that they find themselves under enormous financial pressure'.*

A number of stakeholders also commented on issues of social isolation for the new residents. Long commuting times and lack of transport infrastructure and other facilities where social interaction can occur (such as community centres and the like) can leave new residents little time for community life and little opportunity for social interaction. These issues can further manifest as health issues, alcohol and drug abuse and domestic violence.

Challenges and issues of population growth in Playford

A need to put 'the basics' in place

Discussions with the stakeholders highlighted the interrelationships between the three issue domains: environmental, social and economic. All of the stakeholders felt these issues need be addressed in a holistic manner if Playford is to cope with the current and forecast population growth and development. Stakeholders said there were a number of essential elements that needed to be in place for new communities, including:

- high quality building design and structures that are informed by the long term needs of the residents who will live in them;
- transport and social interaction options that all member of the community can access
- local and diverse employment and education options
- basic health and community services.

> *'We think there are three things that are essential for any new urban development: good transport systems from the outset, things that connect people out of their homes (library, community centre, childcare) and basic health services'*

> *'Need to provide quality housing, employment opportunities, open space and other facilities such as childcare. If these facilities are not present we run the risk of creating urban centres without soul, without heart and the result is places that are pretty crappy places to live.'*

Population growth forcing a new identity on the region

The identity of Playford is clearly changing with the population growth that is coming and the industrial development that is being planned. The area is changing from semi-rural to suburban, with high-density housing and increased commercial development. For existing residents there is the sense that they are being forced to adapt to a new reality, and particularly in the case for social housing residents, that they have little control over the creation of this new reality.

> *'Often there has not been genuine local level consultation – most consultation is actually just telling; it's actually just informing. Even if local people say something it isn't acted on, so then they think, what is the point?'*

Stakeholders emphasised that the new identity needed to encompass and appeal to both existing and new residents. One stakeholder described addressing reputation issues:

> *'Edinburgh North used to be called Elizabeth West; businesses wanted the suburb name changed* [because of the bad reputation] *so we got behind it and helped'.*

Whilst improving the reputation of the area within the wider Adelaide region and South Australian context was important for encouraging industrial and housing development, stakeholders suggested it was also important to realise that not all current residents necessarily see Playford as a bad place to live.

> *'Elizabeth and Hackham are the two areas in South Australia that get hounded the most in terms of being ghettos, however people in this area don't necessarily see it that way'.*

Roles and responsibilities in funding infrastructure

Stakeholders all highlighted the importance of key pieces of social and physical infrastructure that they knew would help support the development of a new and socially cohesive identity for Playford. They also expressed frustrations about the delay in providing this infrastructure to the community when they needed it. There was an understanding that many social, economic and environmental problems could be avoided by more proactive planning and infrastructure delivery, rather than delaying and exacerbating issues further, which then require more resources to resolve.

The lack of an established and transparent framework for developer contributions meant that several groups of stakeholders felt the costs of growth were being shifted to the local level without any resourcing or measures that would enable councils particularly, but also other local institutions such as community groups, agencies and NGOs, to bear or manage these costs.

> *'Population growth creates enormous demand on government including local government. Most of the human services issues end up getting dropped at the feet of government and especially local government and they* [the issues] *don't always get addressed well.'*

The current system of developer contributions means that the provision of facilities has to be negotiated on a development by development basis. This can lead to unevenness in the patterns of services delivery and has the potential to create tensions between established and new residents.

> *'In lieu of having a compulsory developer contribution scheme we have to negotiate development by development and we haven't kept rates up to meet CPI and fund infrastructure.'*

Changing role of Councils

Population growth is broadening the role that councils play in the local area, and '*local government is having to change how it understands the world, moving from roads and rubbish to broader service provision'.* Playford City Council has established an advocacy role within Adelaide and SA.

> *'As council we need to take a leadership role – we need to advocate for the needs and aspirations of our communities, even if its not our role to deliver it is our role to make sure its here for them* [the community].*'*

While it is acknowledged that council has limited control and influence over the implementation of growth in the Playford LGA, it is understood that council does have some control and influence on the provision of services and opportunities (e.g. local employment, transport, childcare and educational services) to the people who are, and will be, residents in their LGA.

> *'It's about defining council's role in relation to the issues, whether they have direct control or if they have influence. Either way, they* [other levels of government, departments etc.] *need to recognise that council is a player.'*

Coordination of planning and service delivery

Insufficient coordination of and planning for efficient and effective service delivery seems to be a feature both within and between different levels of government. While there are various formal procedures in place to enable coordination, these processes appear not to be evenly applied, are subject to change, and reflect the unequal power dynamics between the different levels of government and different government agencies. One stakeholder stated:

> *'Planning seems to progress from individual departments. It is meant to be an integrated process, where everyone meets up and decides how these things should happen, but that does not always happen'.*

Another stakeholder discussed the difficulty in having conversations between different departments.

> *'We want to have these integration discussions but they are so hard to deal with. Education is very difficult to work with, and the health department always takes such a measured approach i.e. 100 new people = 1 new bed, etc. This is their only response to the growth'.*

The second level where a lack of coordination was visible was in the ability for on-the-ground service providers to be responsive to local need. With many of the services and programs targeting social issues in the area, lack of money was not an issue; it was more the ability to address in a holistic way the range of social issues that exist within the population.

> *'Almost every strategy that* [the federal] *government seems to put into place gets a program here. There is wastage with some many agencies out here; there is lots of money in programs in this region but it's the responsiveness and coordination that is the issue.'*

Stakeholders commented that the way programs were designed meant they have little flexibility for adapting them to local needs and reflected a lack of knowledge about the individuals the services are being provided for.

> *'There is lots of rules about how to use the money, so if someone says 'we need this' and it doesn't meet the rule, we have to say 'we can't help you'. We have had massive amounts of money pumped in to the area but we are still dealing with the same issues.'*

Repetition of this model of service delivery meant that many people who are the targets of these activities are reluctant to engage due to previous bad experiences.

Information gaps and opportunities

In the interviews stakeholders noted the lack of industrial indicators within the framework, particularly indicators that described the composition and skills base of the area at a sectoral level.

Stakeholders also asked questions about how the indicator framework was to be used, and stressed the importance of being able to reflect on some of the positive aspects of the area, even if in comparison to other areas Playford does not generally look particularly favourable. The social disadvantage of the area is well known, but some stakeholders stressed that it did not fully describe the variety of life that exists in Playford.

> *'A challenge for all communities is to try and give voice to all of the good elements that are there, not just the poor results on specific indicators, because they ultimately end up being described as bad places, so that even the people who live there end up believing it. It is a very bad story to keep on telling yourself because it spirals you inward rather than outward.'*

Detailed analysis of data availability, gaps and possible alternative measures is provided in the following Tables 18–21. A summary of theme and indicator data is provided in Tables 22–25.

Table 17: Natural capital - data availability, gaps and alternative measures

Natural Capital				
Theme	**Indicator**	**Measure**	**Data availability at case study level**	**Alternative case study level measure (if applicable)**
Climate and atmosphere	1. Air quality	Number of days in year that key pollutants exceed national air quality standards	Available	n/a
	2. GHG emissions	Net greenhouse gas emissions	Not available	No alternative measure available
		Greenhouse gas emissions per capita	Not available	No alternative measure available
	3. Energy usage	Residential and non-residential electricity use	Not available	Energy consumption industrial basis
Ecosystems and biodiversity	4. Terrestrial ecosystems	Extent of native vegetation	Not available	Remnant vegetation (% of area)
		Extent and distribution of protected areas	Not available	Extent of bushland reserves (% of area)
	5. Vulnerable and endangered species	Number of endangered species, population and communities listed under the *EPBC Act*	Not available	Number of species of threatened status
	6. Reestablishment of local vegetation communities	Number of hectares under restoration by council and volunteers	Not available	Indigenous plants planted; Indigenous plants demonstrated the ability to grow
Water	7. Water consumption and availability	Water consumption (per capita)	Not available	Average water received compared with mean annual rainfall
		Water availability to meet demand	Not available	No alternative measure available
Land	8. Ground cover	Ground cover	Not available	No alternative measure available
Waste	9. Waste disposed to landfill	Waste disposed to landfill	Not available	Total residential waste per household (kg)
	10. Recycling rates	Proportion of waste generated being recycled	Not available	Percentage waste diverted from landfill (residential)

Table 18: Social and human capital - data availability, gaps and alternative measures

Social and Human Capital				
Theme	**Indicator**	**Measure**	**Data availability at case study level**	**Alternative case study level measure (if applicable)**
Skills and education	11. Educational attainment and qualification	Highest level of educational attainment	Available	n/a
	12. Education services	Ratio of childcare places to population of children aged 0–5 years resident in the LGA	Not available	No alternative measure available
		Ratio of primary school places to population of primary aged children resident in the LGA	Not available	No alternative measure available
Health	13. Self-reported health status	% reporting fair to poor health	Available	n/a
	14. Life expectancy	Life expectancy	Not available	No alternative measure available
	15. Persons who smoke daily	% of adults who are daily smokers	Available	n/a
	16. Obese persons	% of adults that are overweight or obese	Available	n/a
	17. Mental health	Proportions of adults rated as psychologically distress	Available	n/a
	18. Access to open space	Open space per capita	Not available	No alternative measure available
Institutions and governance	19. Fair and functioning institutions and governance	Levels of trust in key institutions	Not available	Voter participation; Satisfaction with resident's ability to influence decision
	20. Community engagement	Proportion of people who volunteer	Available	n/a
Employment	21. Under-employment	Underemployment rate	Not available	Hours worked per week
	22. Unemployment	Unemployment rate	Available	n/a
	23. Local employment	% people working and living in the same LGA	Not available	Participation rate
Security	24. Security	Feelings of safety	Not available	Perception of safety/lighting
		Incidence of personal and household crime	Not available	Rate of offences against a person; Rate of offences involving property

Table 19: Economic capital - data availability, gaps and alternative measures

Economic Capital				
Theme	**Indicator**	**Measure**	**Data availability at case study level**	**Alternative case study level measure (if applicable)**
Wealth	25. Household net wealth	Household net worth	Not available	Wealth per household
Housing	26. Housing supply gap	Net dwelling gap	Not available	Average dwelling price
	27. Housing affordability	Low income households in rental stress	Available	n/a
		Low income households in mortgage stress	Available	n/a
Transport and infrastructure	28. Mode of transport to work	Car	Available	n/a
		Public transport	Available	n/a
		Walked or cycled	Available	n/a
		Worked at home	Available	n/a
	29. Transport infrastructure	Kilometres of dedicated cycling paths	Not available	No alternative measure available
	30. Access to broadband internet	% households with broadband connection	Available	n/a
Income	31. Income disparity	Disparity in disposable household weekly income	Not available	Social security take-up; Household debt service ratio; Household debt to gross income ratio
Productivity and innovation	32. Multifactor productivity	Multifactor productivity	Not available	Gross regional product
	33. Innovation	Business with innovative activity	Not available	Patent counts per population
Socio-economic status	34. Relative socio-economic disadvantage	ABS Index of Relative Socioeconomic Disadvantage (IRSD) score	Available	n/a

Table 20: Contextual indicators - data availability, gaps and alternative measures

Contextual Indicators				
Theme	**Indicator**	**Measure**	**Data availability at case study level**	**Alternative case study level measure (if applicable)**
Population	35. Population size	Number of persons	Available	n/a
	36. Rate of growth	Annual rate of population growth	Available	n/a
	37. Population density	Number of persons per square kilometre	Available	n/a
	38. Gender and age profile	Gender and age profile	Available	n/a
Land use	39. Land use change	Rates of greenfield development	Available	n/a
Cultural diversity	40. Proficiency in spoken English	% do not speak English well or not at all	Available	n/a
	41. Indigenous population	% Iindigenous	Available	n/a
	42. Country of birth	Country of birth	Available	n/a
Regional migration	43. Net overseas migration	Net overseas migration	Not available	No alternative measure available
	44. Overseas born	% born overseas	Available	n/a
	45. Domestic or internal migration	Net number of regional internal migrants	Available	n/a

Summary of theme and indicator data for Playford

Table 21: Natural capital - data figures

Natural Capital						
Theme	**Indicator**	**Measure**	**Data**	**Frequency**	**Spatial resolution**	**Data source**
Climate and atmosphere	1. Air quality	Number of days in year that key pollutants exceed national air quality standards	No exceedences (2008)	2008	Local – Elizabeth monitoring station	EPA
	2. GHG emissions	Net greenhouse gas emissions	Not available	n/a	n/a	n/a
		Tonnes CO_2-e per person per year	Not available	n/a	n/a	n/a
	3. Energy usage	Energy consumption industrial basis	3.85 and 5.25 PJ/yr of energy with an average of 4.59 PJ/yr	2008	Playford	Hamilton et al.
Ecosystems and biodiversity	4. Terrestrial ecosystems	Remnant vegetation (% of area)	Hills – 3% Plains – 0.5%	One off	LGA	SoC
		Extent of bushland reserves (% of area)	0.6%	One off	LGA	SoC

	5. Vulnerable and endangered species	Number of species of threatened status	20+ (in the Playford Hills)	One off	LGA	SoC
	6. Reestablishment of local of vegetation communities	Number of Indigenous plants planted per annum	14,507 (2006), 17,404 (2010), Increase*	Annual (2006 – 2010)	LGA	SoC
		Number of Indigenous plants demonstrated the ability to grow	101 (2006), 120 (2010), Increase*	Annual (2006 – 2010)	LGA	SoC
Water	7. Water consumption	Average water received compared with mean annual rainfall	194kL annually with a mean annual rainfall of 542.2mm	2010	Adelaide	ACF
Land	8. Ground cover	Ground cover	Not available	n/a	n/a	n/a
Waste	9. Waste disposed to landfill	Total residential waste per household (kg)	10.2kg/ household (2010), 3.0% increase from 2006	Annual (2006 – 2010)	LGA	SoC/NAWMA
	10. Recycling rates	Percentage waste diverted from landfill (residential)	36kg (2010), 10.4% increase from 2006	Annual (2006 – 2010)	LGA	SoC/NAWMA

Table 22: Social and human capital - data figures

Social and Human Capital						
Theme	**Indicator**	**Measure**	**Data**	**Frequency**	**Spatial resolution**	**Data source**
Educational attainment	11. Educational attainment and	% adults with tertiary qualifications	1.4% (2001), 1.5% (2006), Increase*	5 years (Census)	LGA	ABS
		% adults with Certificate/ Adv Diploma	12.5% (2001), 13.1% (2006), Increase*	5 years (Census)	LGA	ABS
	12. Education services	Ratio of childcare places to population of children aged 0-5 years resident in the LGA	Not available	n/a	n/a	n/a
		Ratio of primary school places to population of primary aged children resident in the LGA	Not available	n/a	n/a	n/a
Health	13. Self-reported health status	% reporting fair to poor health	15.2% (2007), SA 13.3% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	14. Life expectancy	Life expectancy	Not available	n/a	n/a	n/a
	15. Persons who smoke daily	% of adults who are daily smokers	18.5% (2007), SA 15.0% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	16. Obese persons	% of adults who are overweight or obese	34.8% (2007), SA 36.7% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	17. Mental health	% of adults rated as psychologically distress	11.4% (2007), SA 9.4% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	18. Access to open space	Open space per capita	Not available	n/a	n/a	n/a

Institutions and Governance engagement	19. Fair and functioning institutions and governance	Voter participation	37% (2000), 24% (2010), Decrease*	Election years	LGA	SoC/Local Government Association
		Satisfaction with resident's ability to influence decision making (score out of 10)	5.10 (2005), 5.70 (2011), Increase*	Annual (2005-2011)	LGA	SoC/City of Playford Customer Satisfaction Survey
	20. Community engagement	% of volunteering	12.5% (2006), 11.8% (2011), Increase*	5 years (Census)	LGA	ABS
Employment	21. Underemployment rate	Hours worked per week	Adelaide North 32.5 hours (2011), 0.0% change from 2007	Annual	NIEIR region	SoR
	22. Unemployment rate	Unemployment rate	13.2% (June 2009), 13.6% (March 2011), Increase*	Monthly	DEEWR labour force region	DEEWR, Labour Force Region
	23. Local employment	Participation rate	Northern Adelaide 60.9% (August 2012), SA 62.2% (August 2012)	Monthly	DEEWR labour force region	DEEWR, Labour Force Region
Security	24. Security	Perception of safety (score out of 10)	6.0 (2009), 6.4 (2011), Increase*	Annual (2009-2011)	LGA	SoC
		Perception of lighting (score out of 10)	6.3 (2009), 6.4 (2011), Increase*	Annual (2009-2011)	LGA	SoC
		Rate of offences against a person (per 1,000 population)	Playford 19.71 (2009), Greater Adelaide 13.38 (2009)	One off (2009)	LGA	SoC/OSCAR/Crime Mapper
		Rate of offences involving property (per 1,000 population)	Playford 19.9 (2009), Greater Adelaide 12.73 (2009)	One off (2009)	LGA	SoC/OSCAR/Crime Mapper

Table 23: Human capital - data figures

Economic Capital						
Theme	**Indicator**	**Measure**	**Data**	**Frequency**	**Spatial resolution**	**Data source**
Wealth	25. Household net wealth	Wealth per household	$278,000 (2001), $406,000 (2012), Increase*	Annual	NIEIR region	SoR
Housing	26. Housing supply gap	Average dwelling price	$177,600 (2001), $341,000 (2012), Increase*	Annual	NIEIR region	SoR
	27. Housing affordability	Households in rental stress	32.0% (2006); SA 25.1% (2006)	5 years (Census)	LGA	PHIDU
		Households in mortgage stress	10.6% (2006); SA 7.1% (2006)	5 years (Census)	LGA	PHIDU
Transport and infrastructure	28. Mode of transport to work	Car	Playford 72.5%, Greater Adelaide 68.9%	5 years (Census)	LGA	SoC/ABS
		Public transport	Playford 6.5%, Greater Adelaide 8.3%	5 years (Census)	LGA	SoC/ABS
		Walked or cycled	Playford 2.4%, Greater Adelaide 3.9%	5 years (Census)	LGA	SoC/ABS
		Worked at home	Playford 2.5%, Greater Adelaide 3.1%	5 years (Census)	LGA	SoC/ABS
	29. Transport infrastructure	Kilometres of dedicated cycling	Not available	n/a	n/a	n/a
	30. Access to broadband internet	% households with broadband connection	25.0% (2001), 70.1% (2006), Increase*	5 years (Census)	LGA	ABS
Income	31. Income disparity	Social security take-up	.	Annual	NIEIR region	SoR
		Household debt service ratio	13% (2001), 19% (2011), Increase*	Annual	NIEIR region	SoR
		Average dwelling price to household disposable income	1.06 (2001), 1.50 (2011), Increase*	Annual	NIEIR region	SoR

Productivity and innovation	32. Multifactor productivity	GRP per capita	Greater Adelaide $31,000 (2011), Australia $40,234 (2011)	n/a	Adelaide	Flinders University
	33. Innovation	Patent counts per population	11.2 per 100,000 (1994-2011), national average 21.01	Annual	NIEIR region	SoR
Socio-economic status	34. Relative socio-economic disadvantage	ABS IRSD score	Playford 886, Greater Adelaide 987, SA 979	5 years (Census)	LGA	ABS

Table 24: Contextual indicators - data figures

Contextual Indicators						
Theme	**Indicator**	**Measure**	**Data**	**Frequency**	**Spatial resolution**	**Data source**
Population	35. Population size	Number of persons	68,653 (2001), 80,748 (2011), Increase*	Annual	LGA	ABS
	36. Rate of growth	Annual rate of population growth	Average 1.6% per annum 2001–2011	Annual	LGA	ABS
	37. Population density	Number of persons per square kilometre	199.05 (2001), 234.12 (2011), Increase*	Annual	LGA	ABS
	38. Gender and age profile	Gender and age profile	See Figure 3	5 years (Census)	LGA	ABS
Land use	39. Land use change	% infill development	Not available	n/a	n/a	n/a
		% greenfield development	Not available	n/a	n/a	n/a
Cultural diversity	40. Proficiency in spoken English	% do not speak English well or not at all	1.4% (2001), 2.2% (2011), Increase*	5 years (Census)	LGA	ABS
	41. Indigenous population	% indigenous	2.3% (2001), 3.0% (2011), Increase*	5 years (Census)	LGA	ABS
	42. Country of birth	Country of birth	See Table 25	5 years (Census)	LGA	ABS
Regional migration	43. Net overseas migration	Net overseas migration	Not available	n/a	n/a	n/a

	44. Overseas born	% born overseas	25.4% (2001), 21.7% (2011), Increase*	5 years (Census)	LGA	ABS
	45. Domestic or internal migration	Net number of regional internal migrants	Data inconclusive[6]	Annual (2006-2010)	SLA	ABS

[6] ABS (cat. no. 3412.0) Migration, Australia, 2010-11 experimental regional internal migration estimates. Data for Playford inconclusive.

References

ABS 2002, 2001 Census of Population and Housing.

ABS 2007, 2006 Census of Population and Housing.

ABS 2008, Census of Population and Housing: Socio-Economic Indexes of Areas (SEIFA), Australia (cat. no. 2033.0.55.001).

ABS 2012a, 2011 Census of Population and Housing.

ABS 2012b, Time Series Profile, Australia (cat. no. 2003.0).

Australian, The 2012, '*Northern suburbs to fight on after jobs* blow', 4 November 2012 http://www.theaustralian.com.au/northern-suburbs-to-fight-on-after-jobs-blow/story-e6frea83-1226509495146

Australian Conservation Foundation 2010, *Sustainable cities index,* http://www.acfonline.org.au/sites/default/files/resources/2010_ACF_sci_index_report.pdf, accessed 10 December 2012.

City of Playford 2007, *Environmental Care Goal Plan 2006-2011*

City of Playford 2011, *State of the City Report 2011*.

City of Playford 2012a, Discussion Paper 1: *The planning process and the role of Council*, available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012b, Discussion Paper 2: *Population growth and change*, available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012c, Discussion Paper 3: *Economic development,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012d, Discussion Paper 4: *Environmental sustainability,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012e, Discussion Paper 5: *Infrastructure, facilities and services,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012f, Discussion Paper 6: *Urban development and regeneration,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012g, Discussion Paper 7: *Rural and primary production lands,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

City of Playford 2012h, Discussion Paper 8: *The role of Playford in health,* available at: http://www.playford.sa.gov.au/page.aspx?u=1723, date accessed 7 December 2012.

Hamilton, C. 2009, Energy Efficiency Potential For Playford LGA, Working Paper for *Carbon Neutral Communities*, RMIT

Hamilton C, Kellett J, and Yuan X 2008, Carbon profiling: An analysis of methods for establishing the local emissions baseline. In *Proceedings of the 3rd International Solar Cities Congress.* 17-21 February 2008, pp331-340, Adelaide.

National Economics (NIEIR) 2012, State of the Regions Report, NIEIR: Canberra.

Oliphant M 2003, *South Australian Residential Sector Baseline Study of Energy Consumption*. Final Report to State Energy Research Advisory Committee. Sustainable Energy Centre University of South Australia. January 2003.

Public Health Information Development Unit (PHIDU) 2010, A Social Health Atlas of Australia, 2010.

South Australian Government 2010, The 30 Year Plan for Greater Adelaide.

South Australian Government 2011, Planning Strategy for South Australia Annual Report Card 2010-11.

World Health Organisation 2012, 'Social determinants of health', http://www.sho.int/social_determinants/en, accessed 7 September 2012.

Appendix A

Table 25: Contextual indicators - country of birth (Source: ABS, 2012b)

Country of birth	2001	2011	Percentage point change 2001-2010
Australia	69.8%	73.0%	3.3%
Bosnia and Herzegovina	0.0%	0.1%	0.0%
Cambodia	0.2%	0.3%	0.1%
Canada	0.1%	0.0%	0.0%
China (excl. SARs and Taiwan)	0.1%	0.1%	0.0%
Croatia	0.1%	0.1%	0.0%
Egypt	0.0%	0.0%	0.0%
Fiji	0.0%	0.1%	0.0%
Former Yugoslav Republic of Macedonia	0.0%	0.0%	0.0%
Germany	0.8%	0.6%	-0.2%
Greece	0.4%	0.2%	-0.1%
Hong Kong (SAR of China)	0.0%	0.0%	0.0%
India	0.1%	0.3%	0.1%
Indonesia	0.1%	0.1%	0.0%
Iraq	0.0%	0.1%	0.1%
Ireland	0.4%	0.3%	-0.1%
Italy	0.9%	0.6%	-0.3%
Japan	0.0%	0.0%	0.0%
Korea, Republic of (South)	0.0%	0.0%	0.0%
Lebanon	0.0%	0.0%	0.0%
Malaysia	0.1%	0.1%	0.0%
Malta	0.1%	0.1%	0.0%
Netherlands	0.7%	0.5%	-0.2%
New Zealand	0.6%	0.8%	0.1%
Philippines	0.4%	0.6%	0.2%
Poland	0.2%	0.2%	0.0%
Singapore	0.0%	0.1%	0.0%
South Africa	0.1%	0.2%	0.1%
South Eastern Europe	0.2%	0.1%	-0.1%
Sri Lanka	0.0%	0.0%	0.0%
Thailand	0.1%	0.1%	0.1%
Turkey	0.1%	0.0%	0.0%
United Kingdom, Channel Islands and Isle of Man	17.2%	11.6%	-5.5%
United States of America	0.1%	0.2%	0.0%
Vietnam	0.7%	0.6%	-0.1%
Born elsewhere	1.5%	3.5%	2.1%
Country of birth not stated	4.9%	5.3%	0.4%