

City of Onkaparinga

Population and Employment Trends Analysis

February 2020

FINAL

Important Notice

© MacroPlan Holdings Pty Ltd All Rights Reserved. No part of this document may be reproduced, transmitted, stored in a retrieval system, or translated into any language in any form by any means without the written permission of MacroPlan Holdings Pty Ltd. All Rights Reserved. All methods, processes, commercial proposals and other contents described in this document are the confidential intellectual property of MacroPlan Holdings Pty Ltd and may not be used or disclosed to any party without the written permission of MacroPlan Holdings Pty Ltd.

macroplan staff responsible for this report:

Dr Nigel Stapledon, Chief Advisor

Lainey Haratsis, Consultant – Economics

Medeea Brenda, Analyst - Economics

Version	Version No.
Draft report	1.0
Final report	2.0

Contact

Level 10

580 George Street

Sydney NSW 2000

(02) 9221 5211

info@macroplan.com.au

Table of contents

Executive Summary	4
Section 1: Socio-demographic Analysis	7
1.1 Population Overview	7
1.2 Socio-demographic Profile	10
Section 2: Economic Overview	13
2.1 Historic Employment – Greater Adelaide	13
2.2 Historic Resident Employment – Onkaparinga LGA	16
2.3 Onkaparinga LGA Place of Work - Historic Industry and Employment	20
2.4 Businesses Counts	27
Section 3: Employment Projections	29
3.1 Adelaide - South SA4 Employment Projections	29
3.2 Onkaparinga LGA Employment Projections	30
Section 4: Employment Lands	32
4.1 Onkaparinga LGA Employment Land	32
4.2 Future Employment Land Requirements	33
Section 5: Conclusion	34
Appendix A – Methodology on Population and Employment Projections	36
Appendix B – Jones Lang La Salle (JLL) (2015) Land Use Analysis	40

Executive Summary

The Onkaparinga LGA's population and workforce have both tended to grow marginally slower than has been the case for Greater Adelaide. In the period 2001-18, its population grew at an average 0.8% per annum (vs 0.9% for GA) to 171,500 in 2018 while its working population grew at 0.7% pa to 81,000 in 2018.

In the period 2018-36, based on SA Department of Planning, Transport and Infrastructure (DPTI) projections, Onkaparinga LGA's population is projected to grow by 0.6% pa to about 191,000 (0.8% pa for GA). Over this period, the .id forecasting group is projecting higher population growth for Onkaparinga in 2018-36 (1.1% pa). macroplan's assessment is that the DPTI projections are a more probable scenario.

The fastest growth is projected for the older age cohorts which have lower workforce participation rates, so that the working population living in Onkaparinga is expected to grow at a lower rate of 0.5% per annum to 89,000 in 2036.

In 2016, whereas the working population was 79,800, the number of jobs located within Onkaparinga was about 37,700, giving a jobs ratio of 47%. Of the 37,700 jobs, about 9,900 were held by people commuting into Onkaparinga – mostly from adjacent LGAs – while over 50,000 people living in Onkaparinga commuted out of the LGA for work. Interestingly, the earnings of residents working outside Onkaparinga were 25-30% higher than those of residents working inside Onkaparinga. Those working outside are generating export income for Onkaparinga which in turn drives spending in Onkaparinga. Within Onkaparinga locations close to its beaches (Aldinga, Seaforth) and places such as McLaren Vale are desirable locations for living.

In the period 2001-16, total jobs in the Onkaparinga LGA grew faster than growth in Onkaparinga's working population, so that the jobs ratio rose from 43% to 47%. Looking forward, while the working population is expected to grow by 0.5% per annum, it is expected that jobs in Onkaparinga will grow faster (at 0.9% per annum) in the period 2016-36.

The key drivers of jobs in 2001-16 were education, construction, accommodation and food services, with the largest gains in health. Education and health are primarily servicing demand within Onkaparinga. Construction is a mobile sector and services demand across the broader southern Adelaide economy. Rising spending on accommodation and food services reflects broader consumer trends and tourism, which is linked to McLaren Vale wine industry.

Against these gains there was a significant relative decline in employment in agriculture – from 1,300 to 800 in 2001-16. The Department of Jobs and Small Business (DJSB) projections suggest this decline will moderate in the near future although the pressure from urban growth is not likely to relent.

The largest decline has been in industrial (manufacturing, wholesale and transport) jobs which declined from 9,300 to 5,900 jobs in the period 2001-16. This was led by a structural decline in manufacturing which corresponded with a structural decline in manufacturing across Australia and which was accentuated in South Australia due to historic role of car manufacturing in the State's economy. This period saw the closure of Port Stanvac Oil Refinery at Lonsdale (2003), the Chrysler/Mitsubishi Lonsdale Engine Plant (2004), the impact on auto parts suppliers of the closure of the Tonsley Park Car Assembly Plant (2007) and later (2016-2017) the closure of GMH, Ford and Toyota car-making operations in Australia, as well as the closure of the Accolade Wines (BRL Hardy) wine-bottling

operation (2012) at Old Reynella. While the wine industry remains competitive, the latter reflects a long-term trend towards consolidation into larger-scale operations.

Preliminary estimates are that that sharp pace of decline in industrial jobs, led by manufacturing, appears to have slowed. The balance of manufacturing jobs remaining are mostly in smaller scale operations, including mostly small-scale and some medium-size wine-making operations which account for about 800 manufacturing jobs and reflect the strength of wine production in the region. Looking forward, while the remaining manufacturing presence – much of which is characterised as ‘advanced’ manufacturing - looks more resilient, the Department of Jobs and Small Business (DJSB) projections for Adelaide South (which includes Onkaparinga) is still projecting further decline in manufacturing 2019-24, but with some growth in manufacturing jobs in Adelaide North highlighting its comparative locational advantage. Other industrial jobs (wholesale and transport) and are expected to show some growth. Over the period to 2036, these trends are expected to see industrial jobs decline by about 300 jobs.

Looking forward, with no growth in the school-age population and a limited presence of tertiary institutions, education is expected to lose its high growth status. Growth in employment will occur on existing sites and planned new school sites already. On the other hand, the high growth in the retiree population is expected to see further growth in the health sector, with the DJSB projections highlighting this sector as the prime growth sector. The other sector highlighted by the DJSB projections is professional, scientific and technical services. Retail is projected to decline while the fast growth in accommodation and food services – linked to tourism - is expected to moderate but still continue to grow.

In terms of employment land, the significant decline in industrial jobs has led to a significant amount of vacant and under-utilised industrial land in the Onkaparinga LGA. While 20% of employment land is vacant, including under-utilised land, the effective vacancy rate is significantly higher. That excess supply is focussed on the Lonsdale precinct which comprises 608 hectares (excluding Port Stanvac’s 234 hectares), of which about 480 hectares are occupied. Plant closures has seen employment decline to about 5,700 in 2016 and on the occupied land that represents a density of about 12 persons per hectare which represents a light use of this land. Our expectation is that demand is likely to shift to a density of 12-24 persons per hectare. In that context, the projections for a further marginal decline in industrial jobs will do nothing to alleviate the current surplus on any foreseeable horizon. This contraction will be partly offset by growth in non-industrial jobs, e.g. professional, scientific and technical services (PST) jobs. In aggregate, however, we expect a marginal net contraction in demand for industrial land. Given this outlook for demand, there would be a significant opportunity cost if this land were to remain zoned for industrial jobs based on a possibility that the trend decline in manufacturing jobs might be reversed.

In that regard, a positive step forward is the decision in 2018 to broaden the potential uses although the policy is still highly prescriptive and it is unclear whether these changes will make serious inroads into the surplus. It is early days to judge the impact of these changes. However, the Council does have a proposal before it for an operation in the Lonsdale precinct which is a mix of industrial and non-industrial activities but arguably requires a flexible interpretation of the new 2018 policy for aspects of its operation. If the 2018 policy in practice has this flexibility that would be a very good result and would open the way for growth of jobs in these employment lands. It would also highlight the benefits of a more flexible policy on land uses.

At some point, in our view, that 2018 policy will need to be revisited to further broaden the scope for non-industrial uses in the industrial zones and/or to re-zone for a mix of commercial and potentially in some cases residential uses.

Projected growth in health jobs will likely boost jobs in the Noarlunga Centre, although health jobs are distributed across the LGA and aged care facilities are typically located within residential areas. For the aged care providers, it will be competition for space with dwelling uses which will present a potential constraint on growth. In aged care, with the focus on at home care, a reasonable proportion of those new jobs will also be mobile.

There will be relatively fast growth in professional, scientific and technical services (PST) jobs. A proportion of these jobs are home-based (for single operators). In addition, a proportion are also located on industrial land, in some cases as part of firms which are involved in manufacturing. It will also generate demand for office space in commercial centres. Growth in jobs in accommodation will mostly be in existing urban centres but, for example a large number of winery operations include accommodation and food service activities on-site.

In aggregate, looking at all commercial/centre land, we would expect demand for land to increase by about 20% (but by less to the extent that more intensive land use increases employment density). That is based on an assessment that there is scope to absorb growth of more like 30-40% with the current stock of this land. The longer-term issue is that by 2036, this growth would mean the supply will be tightening and this would see upward pressure on rents/prices. Given the likelihood of there still being a surplus of industrial land, that enhances the case for a flexible interpretation of land use (as per the 2018 policy change) to allow a larger range of commercial activities to be accommodated on industrial land.

The structural changes in the 2000s and 2010s in the Onkaparinga economy have been very significant. The structure of the Onkaparinga economy is expected to continue to adapt and change in the next two decades.

Section 1: Socio-demographic Analysis

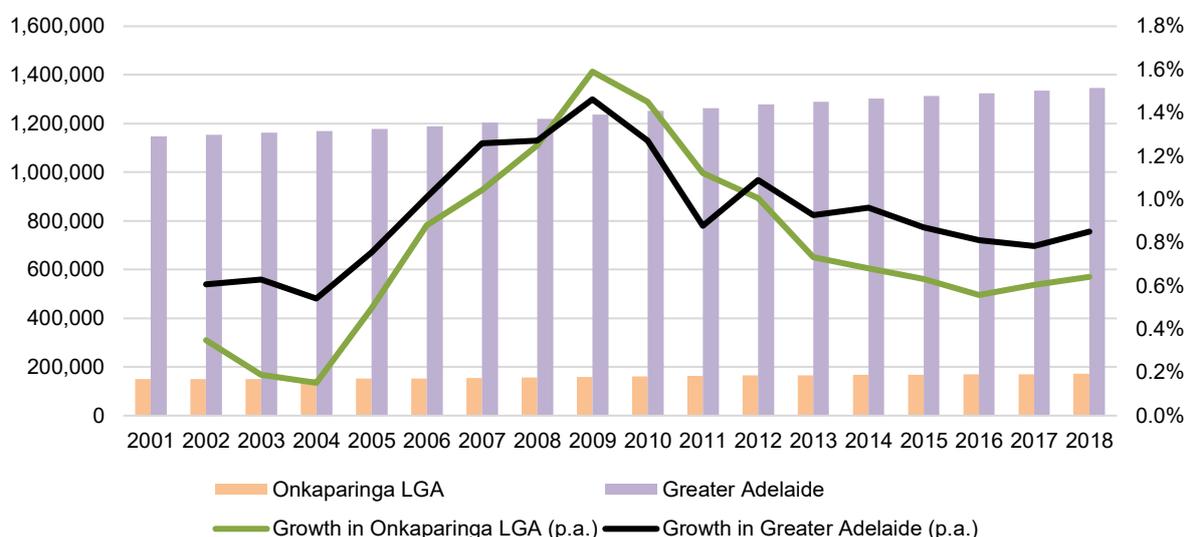
1.1 Population Overview

From 2001 to 2018, the total population in Onkaparinga LGA grew by 0.8% per annum to reach 171,489 people in 2018. Greater Adelaide grew at a slightly higher pace of 0.9% per annum, reaching 1,345,777 people in 2018. The annual growth rate in Onkaparinga LGA has followed a similar trend to that of Greater Adelaide but mostly lagging.

Looking forward, in the period 2018-36, based on DPTI projections (see Appendix), Onkaparinga LGA's population is projected to grow by 0.6% pa to 191,000. Consistent with recent trends (Figure 1), this will lag Greater Adelaide which is projected to grow at about a 0.8% rate to 2036.

We note that .id have published a new set of projections for the Onkaparinga LGA which have its population growing at a much higher 1.1% average rate 2016-36 to a population of 209,000 in 2036.¹ Our assessment is that, given these higher growth projections would require significantly faster growth for South Australia and Greater Adelaide and Onkaparinga LGA capturing a larger share of that higher growth, the DPTI projections are a more probable scenario.

Figure 1. Historical Population Growth in Onkaparinga LGA and Greater Adelaide, 2001-2018



Source: ABS Stat, 2020; macroplan, 2020

Table 1. Historic and Projected Population, Onkaparinga LGA, (2001-2036)

	2001	2006	2011	2016	2018	2021	2026	2031	2036	2001-18	2018-36
										Period Growth Rate (% pa)	
Onkaparinga LGA											
No.'000	150.1	153.2	163.4	169.4	171.5	174.8	180.9	186.0	190.8	0.8	0.6
Growth Rate (% pa)		0.4	1.3	0.7	0.6	0.6	0.7	0.6	0.5		

Source: ABS Stat., 2020; macroplan, 2020; DPTI, 2019

¹ .id draft projections for Onkaparinga Council, presented January 2020.

Between 2001 and 2018, in line with trends across Australia, the population profile of Onkaparinga LGA reflected a trend towards an ageing population, which is broadly expected to continue in the period 2018-36. The fastest growing age cohorts between 2001-18 were the 50-64 (+1.6%), 65-79 (+3.3%) and the 80+ cohort (4.0%). Outside of growth in the 50+ age cohorts, the biggest gains were seen in young adults (18-34 years). The greatest falls were seen in those aged 5-11 and 12-17 years.

Table 2. Historic and Projected Population by Age, Onkaparinga LGA, (2001-2036)

	2001	2006	2011	2016	2018	2021	2026	2031	2036	2001-18	2018-36
No.'000										Period Growth Rate (% pa)	
Onkaparinga LGA											
0-4	9.9	9.3	10.5	10.9	10.3	9.8	10.0	10.0	10.0	0.2	-0.1
5-11	15.8	14.7	14.4	15.2	15.5	15.7	15.0	14.9	15.0	-0.1	-0.2
12-17	13.9	13.4	13.1	12.6	12.9	13.0	13.7	13.4	13.3	-0.5	0.2
18-24	14.2	14.9	15.2	14.9	14.6	14.2	14.3	15.2	15.1	0.2	0.2
25-34	20.2	19.4	21.3	21.8	21.9	21.9	22.0	21.3	21.9	0.5	0.0
35-49	35.2	33.8	33.9	33.2	33.3	33.8	34.9	36.3	36.5	-0.3	0.5
50-64	25.0	29.6	32.6	32.4	32.5	33.1	33.2	33.1	34.0	1.6	0.2
65-79	13.5	16.5	21.7	21.7	23.5	25.5	28.2	29.1	30.1	3.3	1.4
80+	3.5	4.7	5.9	6.6	6.9	7.6	9.6	12.7	14.9	4.0	4.3

Source: ABS Stat., 2020; macroplan, 2020; DPTI, 2019

Education

The population aged 5-11 (the primary school cohort) declined marginally in the period 2001-18 by about 0.1%, meaning there was a minor contraction in the primary school population. Over the same period, persons aged 12-17 years (secondary school cohort) also fell by 0.5% meaning the secondary school population also declined.

Over the period 2018-36, the primary school age population is projected to continue to contract marginally leading to a 2.2% decrease in demand for primary school education. This means going forward there will be a limited opportunity for expansion in primary education employment, however, it also means employment in the sector is unlikely to contract significantly.

Over the same period, the secondary school age population is projected to increase from 12,900 to 13,300. This small increase will result in a 3.3% increase in demand for secondary education. This means going forward there will be some opportunities for expansion in secondary education employment but for the most part current employment levels are likely to remain relatively stable.

Table 3. Demand for Education 2006-18 and Projected to 2036

	2016	2018	2021	2026	2031	2036	2018-36
							Period Growth Rate (% pa)
Pre-School							
No.'000	2.6	2.5	2.4	2.4	2.4	2.4	-2.7%
Growth Rate (% pa)		-2.0	-1.2	0.1	0.0	0.1	
Primary School							
No.'000	15.2	15.5	15.7	15.3	15.1	15.2	-2.2%
Growth Rate (% pa)		1.0	0.4	-0.5	-0.2	0.1	
Secondary School							
No.'000	10.5	10.7	10.7	11.3	11.1	11.0	3.3%
Growth Rate (% pa)		0.8	0.2	1.1	-0.4	-0.2	

Source: ABS Stat., 2020; ABS Census 2016; macroplan, 2020; DPTI, 2019

The numbers attending pre-school is comparatively smaller, being a function of 4-5 year olds. Based on population change, demand for pre-school education is expected to decrease by 2.7%. However, possible additional government funding could see the proportion of children attending pre-school rise, which could boost demand.

The number of people attending tertiary education institutions is expected to grow mostly driven by the projected increase in the 18-24 year population from 14,600 to 15,100 in 2036 while the 25-34 year population is expected to remain at around 21,900. Demand for a TAFE education is projected to grow by 2.0% to 2,300 students in 2036, while demand for a university education is expected to grow by 2.4% to 5,100 students in 2036.

Table 4. Demand for Tertiary Education 2016-18 and Projected to 2036

	2016	2018	2021	2026	2031	2036	2018-36
							Period Growth Rate (% pa)
TAFE							
No.'000	2.2	2.2	2.2	2.2	2.3	2.3	2.0%
Growth Rate (% pa)		-0.4	-0.5	0.1	0.4	0.2	
University							
No.'000	5.0	4.9	4.8	4.9	5.0	5.1	2.4%
Growth Rate (% pa)		-0.6	-0.7	0.1	0.7	0.1	

Source: ABS Stat., 2020; ABS Census 2016; macroplan, 2020; DPTI, 2019

Aged Care

Demand for aged care in the Onkaparinga LGA has been growing, with this trend expected to continue. The projections for 2018-36 are for the 65-79 age cohort to grow by almost 30%, while 80+ age cohort is expected to increase by 115% with the combination potentially boosting demand for aged care places at nursing homes by just under 100%. Government policies to encourage more persons to stay at home longer may moderate this projected growth but such a program will itself require provision of services which in turn means trained personnel.

Table 5. Demand for Aged Care 2016-18 and Projected to 2036

	2016	2018	2021	2026	2031	2036	2018-36	
							No.	%
65-79	275	298	324	359	370	382	84	28.1%
<i>Growth Rate (% pa)</i>		4.0	2.8	2.0	0.6	0.7		
Par Rate	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%		
80 and over	1,017	1,073	1,171	1,486	1,961	2,309	1,236	115.2%
<i>Growth Rate (% pa)</i>		2.7	2.9	4.9	5.7	3.3		
Par Rate	15.5%	15.5%	15.5%	15.5%	15.5%	15.5%		
Total 65+	1,293	1,371	1,495	1,844	2,331	2,691	1,320	96.3%
<i>Growth Rate (% pa)</i>		3.0	2.9	4.3	4.8	2.9		
Par Rate	4.6%	4.5%	4.5%	4.9%	5.6%	6.0%		

Source: ABS Stat., 2020; ABS Census 2016; macroplan, 2020; DPTI, 2019

1.2 Socio-demographic Profile

1.2.1 Medians and Averages

Table 5 below provides a summary of various medians and averages, comparing Onkaparinga LGA to Greater Adelaide in the period 2011 and 2016.

- Average household size remained steady at 2.5 in Onkaparinga LGA, whilst Greater Adelaide increased from 2.4 in 2011 to 2.5 in 2016.
- In 2016, the median age in Onkaparinga LGA was slightly higher at 40 years compared to 39 years in Greater Adelaide.
- Median household income in Onkaparinga LGA grew by 2.0% between 2011 and 2016 to reach \$1,194 per week in 2016. Median household income in Greater Adelaide grew slightly faster at 2.7% to reach \$1,265 per week in 2016.
- In 2016, the median household income in Onkaparinga LGA was 6.0% lower than that of Greater Adelaide. This up from the 2.4% income gap in 2011.
- In 2016, median weekly rent was slightly higher in Onkaparinga LGA. Nonetheless, median rent increased in both Onkaparinga LGA and in Greater Adelaide by 3.0% and 2.7% respectively between 2011 and 2016.
- Median mortgage repayments declined by 0.4% in both Onkaparinga LGA and Greater Adelaide between 2011 and 2016.

Table 6. Medians and Averages in Onkaparinga LGA and Greater Adelaide, 2011 and 2016

Medians and Averages	Onkaparinga LGA		Greater Adelaide	
	2011	2016	2011	2016
Average household size	2.5	2.5	2.4	2.5
Median age	38	40	39	39
Median household income (weekly)	\$1,080	\$1,194	\$1,106	\$1,265
Median rent (weekly)	\$250	\$290	\$250	\$285
Median mortgage repayments (monthly)	\$1,473	\$1,447	\$1,545	\$1,517

Source: ABS Census, 2011 & 2016; macroplan, 2020

1.2.2 Family Composition

In 2016, households in Onkaparinga LGA consisted mainly of couple with children (29.7%), followed by couple without children (27.3%) and lone person (23.9%). Between 2011 and 2016, other family and lone person family compositions have exhibited the highest growth at 2.0% and 1.8% per annum, respectively.

In 2016, households in Greater Adelaide consisted mainly of couple with children (28.4%), followed by lone person (25.8%) and couple without children (25.0%). Between 2011 and 2016, group households and couple with children family compositions exhibited the highest growth of 1.4% and 1.1% per annum respectively.

Table 7. Family Composition in Onkaparinga LGA and Greater Adelaide, 2011 and 2016

Family Composition (% of households)	Onkaparinga LGA			Greater Adelaide		
	2011	2016	Growth p.a.	2011	2016	Growth p.a.
Couple without children	27.7%	27.3%	0.5%	25.4%	25.0%	0.5%
Couple with children	30.8%	29.7%	0.1%	28.0%	28.4%	1.1%
One parent family	12.7%	13.1%	1.5%	11.1%	11.2%	1.0%
Other family/ Household	0.9%	0.9%	2.0%	1.2%	1.2%	0.6%
Lone person	22.8%	23.9%	1.8%	26.1%	25.8%	0.6%
Group Household	5.2%	5.1%	0.5%	8.3%	8.5%	1.4%

Source: ABS Census, 2011 & 2016; macroplan, 2020

1.2.3 Dwelling Structure and Tenure

In 2016, separate house was the main dwelling structure in Onkaparinga LGA, forming 81.5% of total dwellings. Semi-detached, row or terrace house, townhouse formed just 7.4% of dwellings while there was minimal apartment stock. Despite limited stock in 2016, semi-detached, row or terrace house, townhouses have been on the rise with growth of 8.5% per annum between 2011 and 2016.

In 2016, dwelling structures in Greater Adelaide consisted mainly of separate houses (68.4%) and semi-detached, row or terrace house, townhouse (15.4%). Greater Adelaide showed a similar trend to Onkaparinga LGA in terms of growth in semi-detached, row or terrace house, townhouse with growth of 7.5% per annum between 2011 and 2016.

Table 8. Dwelling Structure in Onkaparinga LGA and Greater Adelaide, 2011 and 2016

Dwelling Structure (% of dwellings)	Onkaparinga LGA			Greater Adelaide		
	2011	2016	Growth p.a.	2011	2016	Growth p.a.
Separate house	82.5%	81.5%	0.5%	71.0%	68.4%	0.1%
Semi-detached, row or terrace house, townhouse	5.1%	7.4%	8.5%	11.2%	15.4%	7.5%
Flat, unit or apartment	3.3%	2.1%	-8.5%	9.6%	7.1%	-5.0%
Other	0.5%	0.5%	-1.8%	0.2%	0.3%	2.4%
Unoccupied	8.5%	8.6%	0.8%	8.1%	8.8%	2.5%

Source: ABS Census, 2011 & 2016; macroplan, 2020

In 2016, the majority of households in Onkaparinga LGA owned dwellings with a mortgage (44.0%) followed by owning their dwellings outright (29.6%). Similarly, in Greater Adelaide, 37.4% of households owned dwellings with a mortgage and 31.4% owned dwellings outright.

Table 9. Dwelling Tenure in Onkaparinga LGA and Greater Adelaide, 2011 and 2016

Dwelling Tenure (% of households)	Onkaparinga LGA			Greater Adelaide		
	2011	2016	Growth p.a.	2011	2016	Growth p.a.
Owner (outright)	29.6%	29.7%	0.9%	32.3%	31.4%	0.2%
Owner (with mortgage)	45.3%	44.0%	0.2%	37.4%	37.4%	0.7%
Renter	23.4%	24.5%	1.7%	28.8%	29.6%	1.3%
Other	1.7%	1.8%	1.8%	1.5%	1.6%	2.5%

Source: ABS Census, 2011 & 2016; macroplan, 2020

Section 2: Economic Overview

2.1 Historic Employment – Greater Adelaide

Over the period 2006-16, total employment in Greater Adelaide expanded by 9.8% to 587,060 people in 2016. While employment growth was positive, this decade saw a significant structural change with an acceleration in the already apparent decline in manufacturing and a shift towards a service-based economy.

In 2006, manufacturing was the second highest employing industry sector in Greater Adelaide, employing 68,794 people or 13.1% of the total workforce. Through most of its history the manufacturing sector had been of great importance to the South Australian economy – particularly the manufacture of automobiles, however, increasing inputs and labour costs and competition from global markets (among other things) meant onshore production was no longer economical. As a result of this shift in economic conditions, major employers such as Mitsubishi and Holden closed their Adelaide operations resulting in the significant contraction in the industry. However, while the total number of jobs in manufacturing fell by 35.2% (-24,201 jobs) in the 2006-2016 period, its 2016 share of total employment still remained significant with 7.6% of people employed in manufacturing, on par with the public administration and safety, making these industries the fourth highest employing industries in the metro area. Key sub-industries offsetting the impacts of the decline in automobile manufacturing (and the like), were 'Wine and Other Alcoholic Beverage Manufacturing' (2,365 jobs) supported by region's globally renowned wineries and 'Shipbuilding and Repair Services' (2,221 jobs) with the Australian defence force's Osborne Naval Shipyard located in Osbourne.

The impacts of the mass contraction of employment in manufacturing was offset by the significant growth of five key industries - health (+20,860 jobs), education (+10,599 jobs), construction (+9,482 jobs), accommodation and food services (+8,539 jobs) and public administration and safety (+7,317 jobs).

Health contributed the largest to total jobs growth and as result increased its total overall share of industry employment with 16% of Greater Adelaide's workforce employed in the health industry in 2016. The largest employers in the health industry were hospitals (26,198 jobs) and aged care residential services (18,272). The trend toward an ageing population will continue to support growth in the health industry.

Jobs growth in education was driven by all three tiers, with growth in education employment, particularly primary and secondary schools, growing alongside population. Similarly, population growth resulted in increased demand for housing thus the robust growth in the construction industry.

Map 1 shows Adelaide's key employment nodes. These include:

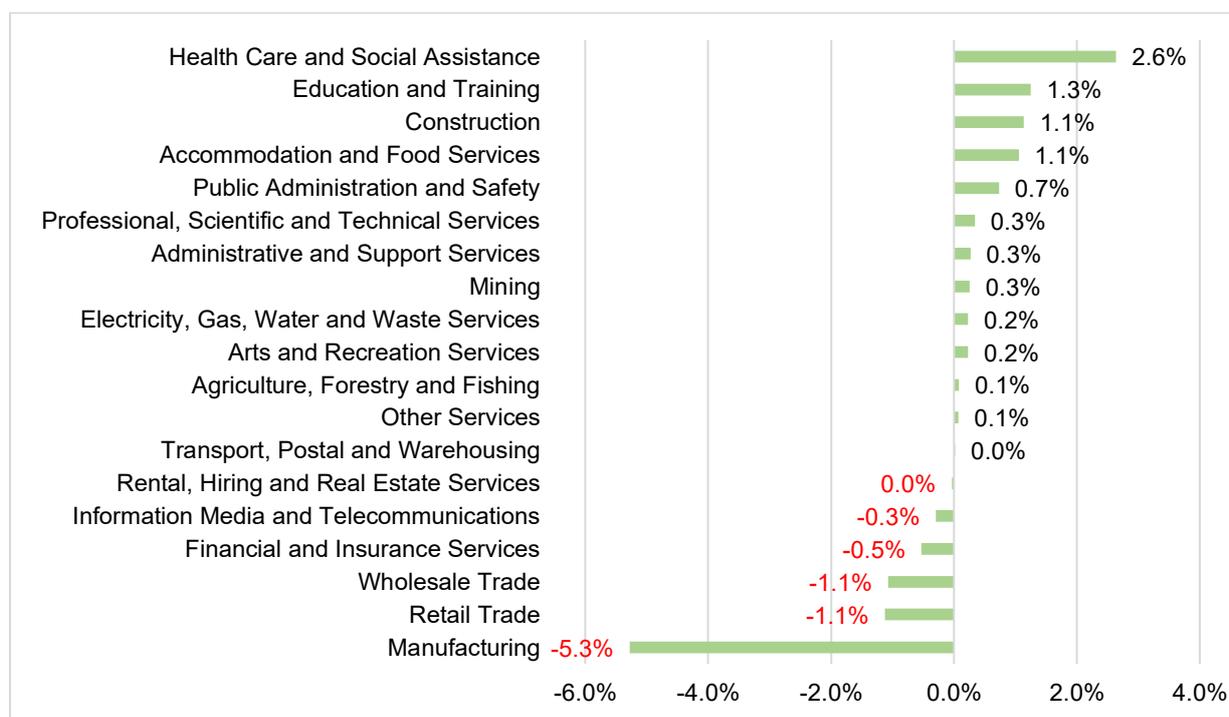
- Adelaide CBD (Adelaide)
- Adelaide Airport (Adelaide Airport)
- Lonsdale Industrial Precinct (Lonsdale) within Onkaparinga LGA
- Flinders University / Hospital Precinct (Bedford Park) and Tonsley Park in Adelaide's south and adjacent to Onkaparinga LGA; and
- A number of employment areas in the northern areas of Adelaide, including Elizabeth.

Table 10. Change in Industry of Employment - Greater Adelaide, 2006-2016*

	Greater Adelaide		
	2006	2016	Change %
Agriculture, Forestry and Fishing	5,900	6,871	16.5%
Mining	3,043	4,754	56.2%
Manufacturing	68,794	44,593	-35.2%
Electricity, Gas, Water and Waste Services	5,667	7,462	31.7%
Construction	36,021	45,503	26.3%
Wholesale Trade	21,296	16,988	-20.2%
Retail Trade	64,198	63,195	-1.6%
Accommodation and Food Services	30,528	39,067	28.0%
Transport, Postal and Warehousing	22,376	24,359	8.9%
Information Media and Telecommunications	9,539	8,679	-9.0%
Financial and Insurance Services	19,640	18,287	-6.9%
Rental, Hiring and Real Estate Services	7,926	8,408	6.1%
Professional, Scientific and Technical Services	32,670	37,334	14.3%
Administrative and Support Services	18,460	21,528	16.6%
Public Administration and Safety	37,696	45,013	19.4%
Education and Training	41,824	52,423	25.3%
Health Care and Social Assistance	70,439	91,299	29.6%
Arts and Recreation Services	6,922	8,809	27.3%
Other Services	21,161	23,353	10.4%

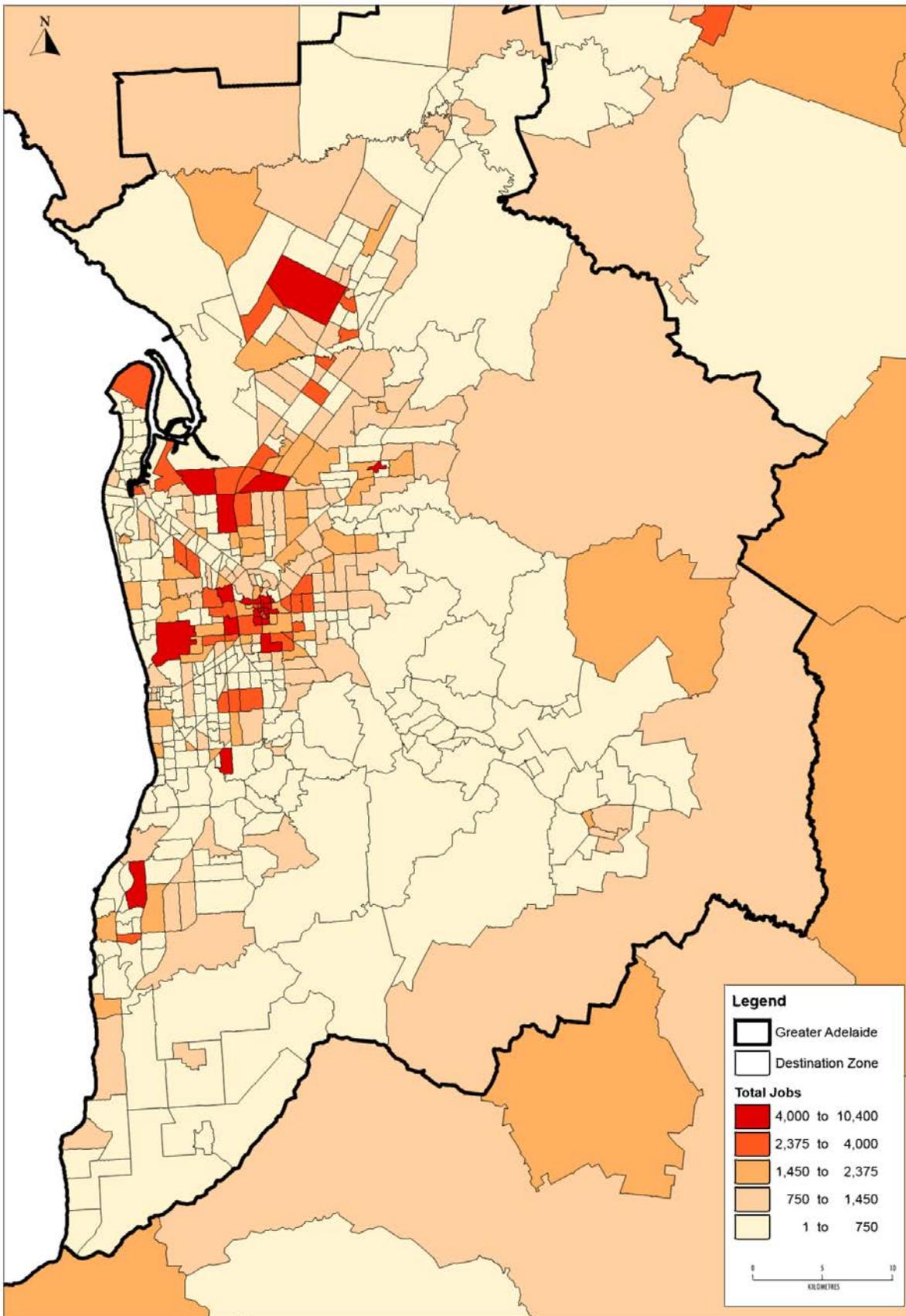
*Excludes jobs that were not stated/inadequately described.
Source: ABS Census, 2006 & 2016

Figure 2. Change in Industry Share of Employment- Greater Adelaide, 2006-2016



Source: ABS Census, 2006 & 2016

Map 1. Greater Adelaide Employment Density by DZN*, 2016



*Destination Zones (DZN) are a spatial unit used to by the ABS to code Place of Work

Source: macroplan, 2020; ABS Census, 2016

2.2 Historic Resident Employment – Onkaparinga LGA

In 2016, Onkaparinga's labour force totalled 81,222 people, 8.6% higher than in 2006. This increase was driven by population growth with the regions participation rate having fallen by 2.7% over the 10-year period to reach 59.8%. This significant fall correlates with the large increase in the LGA's population aged 65+, which formed around 15.0% of people aged over 15 in 2006, increasing to around 21.0% in 2016.

Over the period 2006-16, total employment of people living in Onkaparinga LGA expanded by 6.2% to reach 74,900. While growth was substantial it was still 3.7% below growth in the labour force, which was driven by the contraction in manufacturing. In 2006, manufacturing was the most common industry of employment, with 15.2% of employed Onkaparinga residents working in the industry (10,714 residents). By 2016, manufacturing's share of employment had fallen to 8.0% (or 6,058). Whilst the automobile industry was the largest contributor to the contraction, other industries, most notably the 'Wine and Other Alcoholic Beverage Manufacturing' experienced job losses too. In 2006, 1,065 people worked 'Wine and Other Alcoholic Beverage Manufacturing' compared to 693 in 2016. However, unlike the automotive industry, the key input – grapes, are grown in McLaren Vale hence the biggest threat to the wine making industry is not jobs moving offshore but automation and technology. In the medium to long term it is hard to predict just how much further disruption technology could cause the manufacturing industry.

A key issue faced in regions that once relied on manufacturing is that unlike serviced based industries where many tertiary studies undertaken and skills learnt in sub-industries are easily transferable to other service sector sub-industries (e.g. computer skills) – many of the skills attained in manufacturing aren't directly transferable to the services sector. This poses a problem with the services sector driving the increase in jobs.

The LGA is in a period of transition with baby boomers who lost their jobs shifting closer to retirement, while some in the early to mid-stage of their careers are in the process of upskilling to become qualified in growing industries and the younger generation are pursuing foreseeable opportunities. With the services sector largely driven by population growth, following this transition, the outlook for employment opportunities is positive.

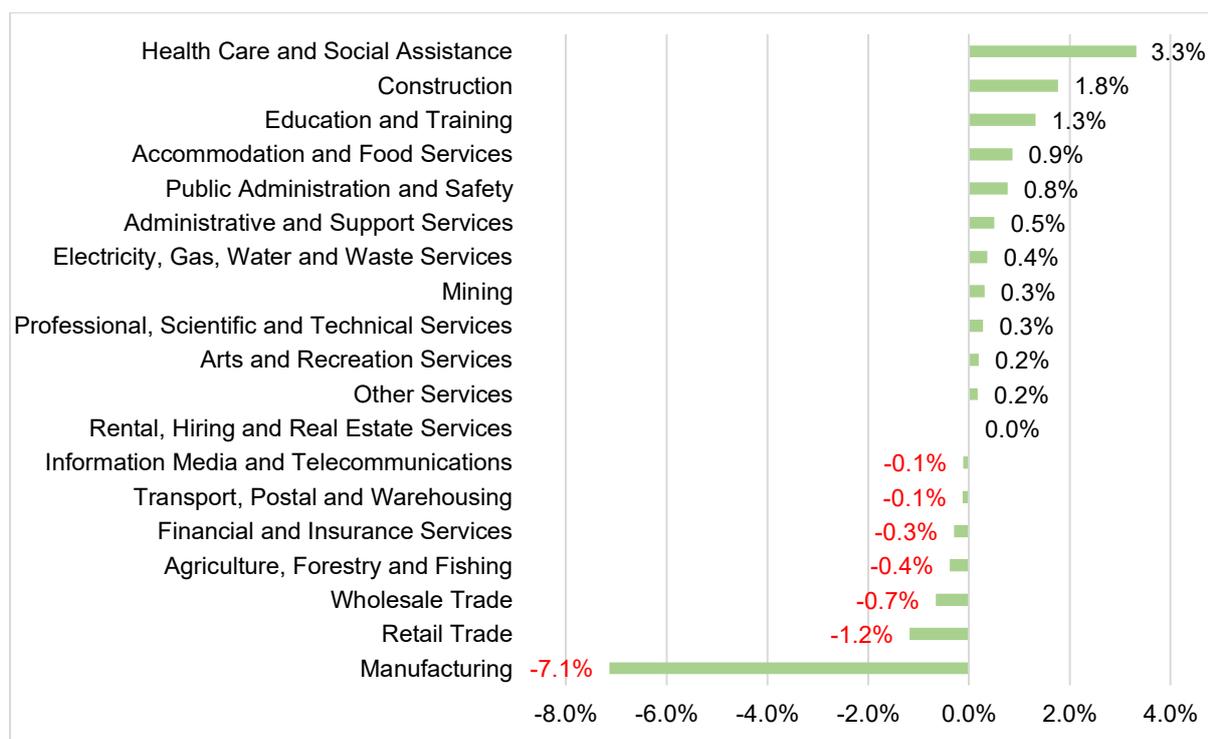
The key services industries driving growth between 2006 and 2016 were health (+2,884 jobs), construction (+1,571 jobs) and education and training (+1,183 jobs). While total jobs in the retail sector declined (-391 jobs) it was the region's second highest employing industry responsible for 12.2% employment (9,112 jobs).

Table 11. Change in Industry Employment – Onkaparinga LGA Residents (2006-2016)*

Onkaparinga LGA			
	2006	2016	Change %
Agriculture, Forestry and Fishing	1,108	885	-20.1%
Mining	416	662	59.1%
Manufacturing	10,714	6,058	-43.5%
Electricity, Gas, Water and Waste Services	733	1,037	41.5%
Construction	5,854	7,425	26.8%
Wholesale Trade	2,263	1,896	-16.2%
Retail Trade	9,503	9,112	-4.1%
Accommodation and Food Services	3,692	4,498	21.8%
Transport, Postal and Warehousing	2,822	2,868	1.6%
Information Media and Telecommunications	1,015	980	-3.4%
Financial and Insurance Services	2,339	2,241	-4.2%
Rental, Hiring and Real Estate Services	903	934	3.4%
Professional, Scientific and Technical Services	2,865	3,208	12.0%
Administrative and Support Services	2,519	3,011	19.5%
Public Administration and Safety	4,233	4,995	18.0%
Education and Training	4,630	5,813	25.6%
Health Care and Social Assistance	9,712	12,596	29.7%
Arts and Recreation Services	805	986	22.5%
Other Services	3,077	3,356	9.1%

*Excludes jobs that were not stated/inadequately described.
Source: ABS Census, 2006 & 2016

Figure 3. Change in Industry Share of Employment – Onkaparinga LGA, 2006-2016



*Excludes jobs that were inadequately described.
Source: ABS Census, 2006 & 2016

2.2.1 Location of Employment

In 2016, approximately 37.5% of employed persons (27,773 people) living in Onkaparinga LGA also worked in Onkaparinga LGA particularly those employed in retail trade, health care and social assistance, manufacturing, education and training, accommodation and food services and construction.

Around 11.7% of employed persons (8,694 people) residents commuted to the CBD (Adelaide LGA), mostly employed in public administration and safety (primarily Federal and State government jobs), health, financial and insurance services and professional, scientific and technical services.

Other key employing areas were Mitcham LGA (8.8%) with jobs in health, education and retail trade, Marion LGA (7.6%) with employment in retail, health and manufacturing and West Torrens LGA (7.4%) with employment in manufacturing, transport, health and retail.

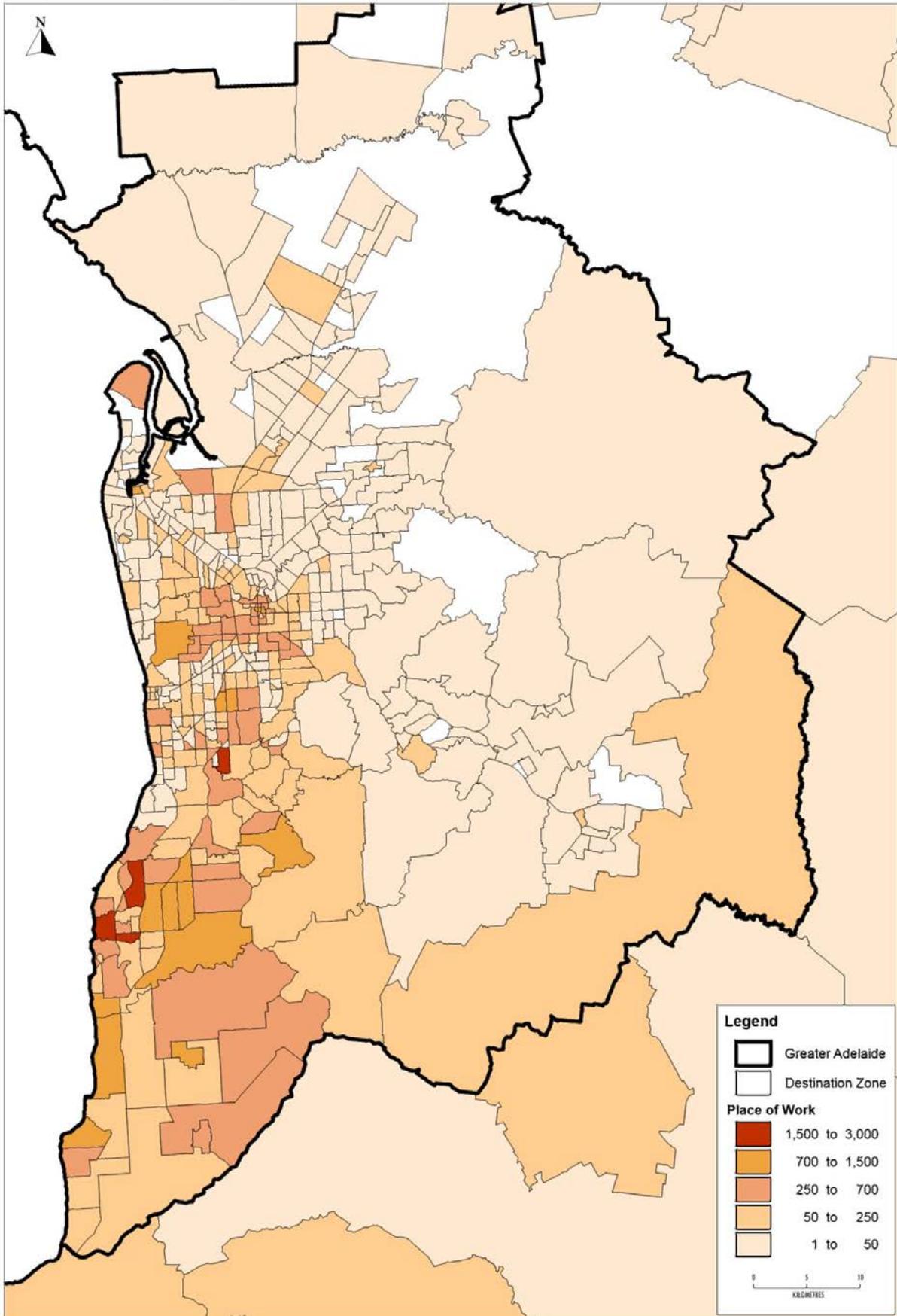
For full-time workers employed within Onkaparinga LGA, the median annual income was \$53,500 (in 2016). By contrast, workers living in Onkaparinga and commuting to jobs in the Adelaide CBD earned \$69,600 per annum, about 30% higher, while those commuting to jobs in the Flinders University/Medical Centre precinct (in Mitcham LGA) earned \$66,900 or about 25% more. The other point to note is that a higher share of the jobs in the Adelaide CBD are full-time (about 70% or close to 6,000) whereas only 53% of jobs in the Onkaparinga are full-time (35 hours or more). These incomes of these commuters are an import driver of spending and employment in the Onkaparinga LGA.

Map 2 provides a detailed job density map using data recorded at a destination zone level. The map indicates where largest concentration of Onkaparinga residents work. As seen in map 2 the largest employment nodes in 2016 included:

1. **Noarlunga Centre:** including 1,002 retail workers (Colonnades Shopping Centre), 644 health workers (Noarlunga Hospital), 404 public administrators (State and Local Government, Centrelink), 267 accommodation and food services workers (Colonnades Shopping Centre) and 102 education workers (TAFE SA).
2. **Lonsdale Industrial Precinct:** including 1,115 manufacturing workers (this may have since declined), 426 construction workers (noting this figure will differ at different points in time), 239 in transport postal and warehousing workers and 186 in wholesale trade workers.
3. **Christies Beach:** including 383 retail workers (Beach Road), 376 health workers (aged care, other social assistance services and allied health), 176 accommodation and food services workers.
4. **Flinders University and Hospital Precinct:** including 1,898 health workers (Flinders Hospital) and 482 education and training workers (Flinders University).

While most residents have to travel to a workplace which is located at a fixed address, for some people their place of work has no fixed address. In 2016, 4,592 Onkaparinga residents reported working at no fixed address most of which worked in construction trades, cleaning, gardening and aged care residential services.

Map 2. Onkaparinga Residents Place of Work by DZN, 2016



Source: ABS Census, 2016; macroplan, 2020

2.2.2 Method of travel

In 2016, approximately 91% of Onkaparinga residents travelled by car to work, either as a driver or passenger. Only a minor proportion of workers travelled by bus or train (3.1% and 1.9% respectively).

By contrast, approximately 85% of workers travelled by car in Greater Adelaide, either as a driver or passenger. A slightly higher proportion of workers travelled by bus and train (5.9% and 1.8% respectively).

Table 12. Top 5 Methods of Travelling to Work - Onkaparinga LGA and Greater Adelaide, 2016

	Onkaparinga LGA	Greater Adelaide
Method of Travelling to Work*	2016	2016
Car, as driver	85.6%	79.9%
Car, as passenger	5.2%	5.5%
Bus	3.1%	5.9%
Train	1.9%	1.8%
Walked only	1.5%	2.7%

*Top 5 in order of Onkaparinga LGA preference.
Source: ABS Census, 2016; macroplan, 2020

While most residents have to travel to a workplace, some people work from home. In 2016, 2,469 Onkaparinga residents worked from home most of which worked in agriculture and services such as hairdressing, accounting, general/allied medical and childcare.

2.3 Onkaparinga LGA Place of Work - Historic Industry and Employment

Up until the 1950's, Onkaparinga LGA's economy and employment relied on the agricultural industry and to a lesser degree the tourism industry. In the 1950's, the South Australian Housing Trust acquired large amounts of land to convert agricultural uses to industrial uses. This land would soon be developed with the most notable developments; the Mobil Oil Refinery at Port Stanvac and Chrysler's Lonsdale engine plant. Following these major developments, a core industrial precinct ensued.

The Port Stanvac Refinery and the Mitsubishi (formerly Chrysler) engine plant closed in 2003 and 2004. The Refinery has been vacant since its closure with demolition work on the Refinery only completed in 2019² and its future use uncertain. The engine assembly and foundry buildings in the former engine plant are being used by a number of companies but the larger site is still under-utilised. The Adelaide Desalination Plant which is located north of the refinery and was built in 2012, is the only major development in the vicinity.³ The surrounding industrial precinct (Lonsdale Industrial Precinct) remains active. As outlined in Section 3.2, other key employment nodes include Noarlunga Centre and Christies Beach. While these are key nodes, as seen in Map 3, there is still a significant number of jobs located at McLaren Vale, Seaford and Morphett Vale.

² Exxon-Mobil contracted Liberty to undertake the work which took two years. See: <https://libertyindustrial.com.au/portfolio-item/port-stanvac-refinery/>

³ The Desalination Plant was built on land purchased from Exxon-Mobil but separate to the Refinery site. It is operated by Acciona. See: <https://www.acciona.com.au/projects/water/desalination-plants/adelaide-desalination-plant/>

In 2016, 32,974 people were working in Onkaparinga LGA, 14.4% more than in 2006. With 37.5% of Onkaparinga residents also working in Onkaparinga, much of the 2006-2016 trends in resident employment outlined in section 3.2 are mirrored in Onkaparinga as a workplace.

- The decline of manufacturing with Port Stanvac and the engine plant both closing and a contraction in wine manufacturing (Closure of BRL Hardy bottling plant in Old Reynella)⁴. Another major shutdown which led to jobs losses in Onkaparinga LGA which was the closure of Carl Zeiss Vision (CZV) – over two decades the Sola/CZV manufacturing operations had been steadily contracted and the remaining non-manufacturing functions (laboratory, research and sales) were moved to a new facility in the Tonsley Park precinct in 2016.⁵ Reflecting this, employment in ‘Photographic, Optical and Ophthalmic Equipment Manufacturing’ industry decreasing by 540 jobs over the 10 year period. In total manufacturing jobs contracted by 2,217 to reach 3,964 jobs in 2016.
- Increasing jobs in services were led by health (+1,846 jobs), construction (+933), accommodation and food services (+923) and education and training (+821).

In 2016, the location of new health jobs in Onkaparinga LGA were focussed in:

- **Noarlunga Centre** - with a large proportion of workers based at the Noarlunga Hospital, followed by dental services and aged care residential services.
- **Morphett Vale** – with many jobs in aged care and other social assistances services, as well as childcare, GP’s and allied health.
- **Christies Beach** - with many jobs in aged care and other social assistances services, as well as GP’s and allied health.

Accommodation and food services jobs are dispersed with a large proportion of these jobs made up of café, restaurant, food catering and takeaway services, however, key locations included Noarlunga/Christies Beach, Morphett Vale, McLaren Vale and Seaford. Similarly, education is dispersed with most jobs pertaining to education in local pre, primary and high schools.

As seen in the table below, while retail and manufacturing jobs in Onkaparinga LGA contracted between 2006 and 2016, both industries remain some of the highest employing industries in the LGA. Retail is located throughout the LGA in both shopping centres as well as strip retail while the focus for industry is still in the Lonsdale Industrial Precinct as well as McLaren Vale.

Table 13. Change in Industry Employment – Onkaparinga LGA Place of Work (2006-2016)*

	Onkaparinga LGA		
	2006	2016	Change %
Agriculture, Forestry and Fishing	1,031	762	-26.1%
Mining	92	159	72.8%
Manufacturing	6,181	3,964	-35.9%
Electricity, Gas, Water and Waste Services	301	370	22.9%
Construction	2,077	3,070	47.8%
Wholesale Trade	887	806	-9.1%
Retail Trade	5,413	5,778	6.7%
Accommodation and Food Services	2,341	3,264	39.4%

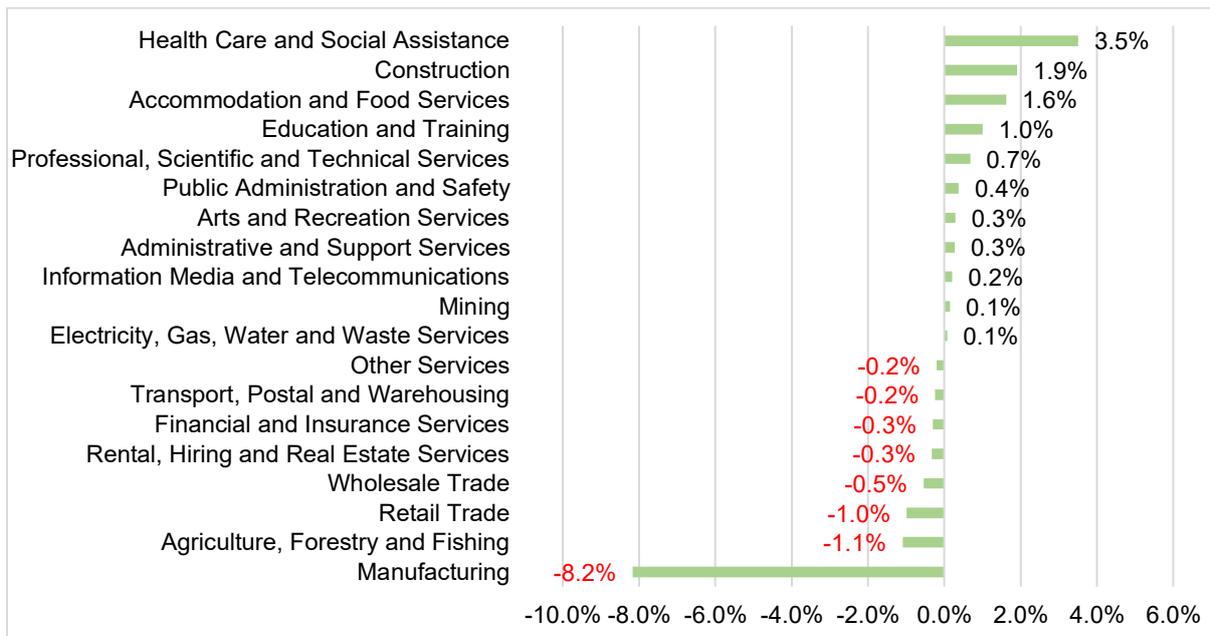
⁴ The BRL site is now occupied by non-industrial activities - retail (Bunnings) and

⁵ See: History of Sola/CZV <http://www.solahistory.com/chapter-4-03.html#early-sola-manufacturing-at-lonsdale>

Transport, Postal and Warehousing	895	928	3.7%
Information Media and Telecommunications	153	251	64.1%
Financial and Insurance Services	518	477	-7.9%
Rental, Hiring and Real Estate Services	514	463	-9.9%
Professional, Scientific and Technical Services	922	1,301	41.1%
Administrative and Support Services	952	1,184	24.4%
Public Administration and Safety	1,335	1,658	24.2%
Education and Training	3,297	4,118	24.9%
Health Care and Social Assistance	3,941	5,787	46.8%
Arts and Recreation Services	328	483	47.3%
Other Services	1,498	1,628	8.7%

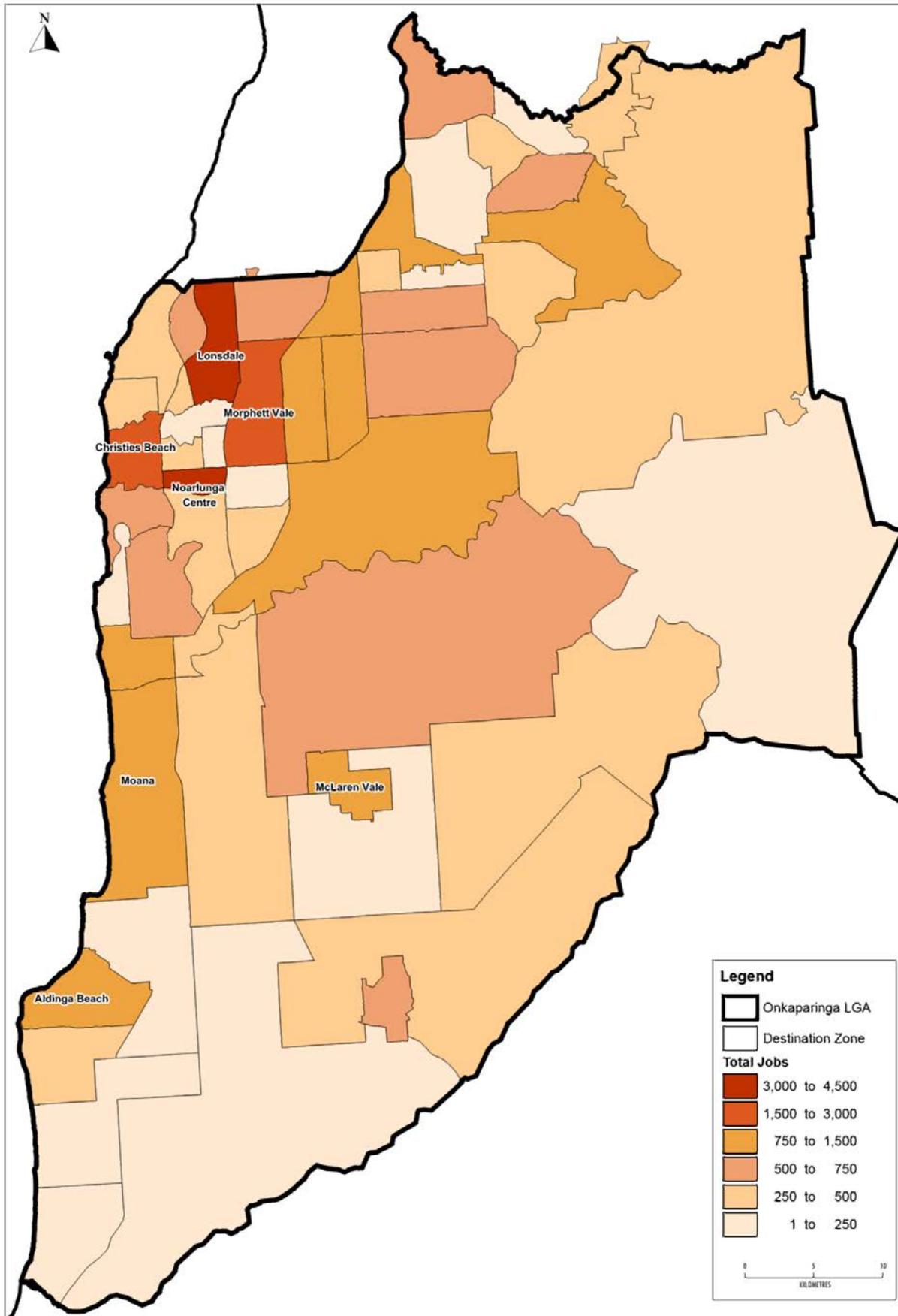
**Excludes jobs that were inadequately described.
Source: ABS Census, 2006 & 2016*

Figure 4. Change in Industry Share of Employment – Onkaparinga LGA Place of Work, 2006-2016



**excludes jobs that were inadequately described.
Source: ABS Census, 2006 & 2016*

Map 3. Total Jobs by Destination Zone, 2016



Source: ABS, 2016; macroplan 2020

2.3.1 Onkaparinga LGA Place of Work Employment Hubs

The existing employment hubs in Onkaparinga LGA (based on 2016 Census) include:

1. **Noarlunga Centre**⁶: including 1,213 retail workers (Colonnades Shopping Centre), 984 health workers (Noarlunga Hospital), 645 public administrators (State and Local Government, Centrelink), 341 accommodation and food services workers (Colonnades Shopping Centre) and 189 education workers (TAFE SA).
2. **Lonsdale Industrial Precinct**⁷: including 2,096 manufacturing workers (this may have since declined), 988 construction workers (noting this figure will differ at different points in time), 403 in transport postal and warehousing workers and 388 in wholesale trade workers.
3. **Christies Beach**⁸: including 489 retail workers (Beach Road), 557 health workers (aged care, other social assistance services and allied health), 205 accommodation and food services workers.
4. **Morphett Vale**⁹: including 676 health workers (GPs & allied health mostly along Main South Road, aged care & retirement), 634 retail workers (Main South Road), 406 education workers (primary and high schools) and 360 workers in accommodation and food services (café and take away food services, mostly along Main South Road).
5. **Seaford Retail & Industrial Precinct**¹⁰: including 237 education workers (Moana Primary School, All Saints Catholic Primary School & Seaford Secondary College), 328 retail workers and 110 accommodation and food services workers (Commercial Road, Seaford Central), 225 health workers (The Sands Life Style Village, GPs & various allied health). Approximately 122 people were working in industry including 28 wholesale trade workers, 51 transport, postal and warehousing workers and 43 manufacturing workers.
6. **McLaren Vale**¹¹: Local wineries are significant generator of jobs in the McLaren Vale township and in the region around the township. Wineries are multi-industry activities with combinations of agriculture, manufacturing, wholesale, logistics, retail, accommodation and food services and professional, scientific and technical jobs. Key employing industries in 2016 included manufacturing (714 workers – a significant number in wine manufacture), retail (337 workers), accommodation and food service (308 workers), agricultural (332 workers), wholesale trade workers (53 workers) and transport, postal and warehousing (48 workers).
7. **Aldinga Township**¹²: the most common employing industries were health care and social assistance with 267 workers (retirement & aged Care, GPs & allied health), education with 229 workers (Aldinga Beach School, Galilee Catholic School & Southern Vale Christian College), retail with 212 workers (Aldinga Central Shopping Centre) and accommodation and food services with 160 workers (mostly café & takeaway services).

2.3.2 Onkaparinga LGA Employees - Place of Usual Residence

As seen in Map 3, and detailed earlier, most people working in Onkaparinga LGA in 2016 were also living the LGA. The largest pool of employees were living in Morphett Vale (3,575 people) in Onkaparinga's north followed by Aldinga Beach (2,098 people) in Onkaparinga's South.

⁶ DZN 410731270

⁷ Lonsdale SA2

⁸ DZN 410741268

⁹ DZN 410851443 & DZN 410841264

¹⁰ DZN 410871278

¹¹ McLaren Vale SA2

¹² DZN 410721281 & DZN410721545

People living in Morphett Vale mostly worked in retail (664 people), health (545), manufacturing (386) and accommodation and food services (366). Aldinga Beach residents were mostly working in health (323), retail (321), manufacturing (221) and accommodation and food services (212).

While most of employees are living in Onkaparinga LGA (73.8%) there is still a significant number of suburbs outside of Onkaparinga in which many employees live. These suburbs are mostly in the neighbouring Marion LGA (11.7% of employees) with suburbs such as Hallett Cove housing 994 employees and Sheidow Park, 628 employees.

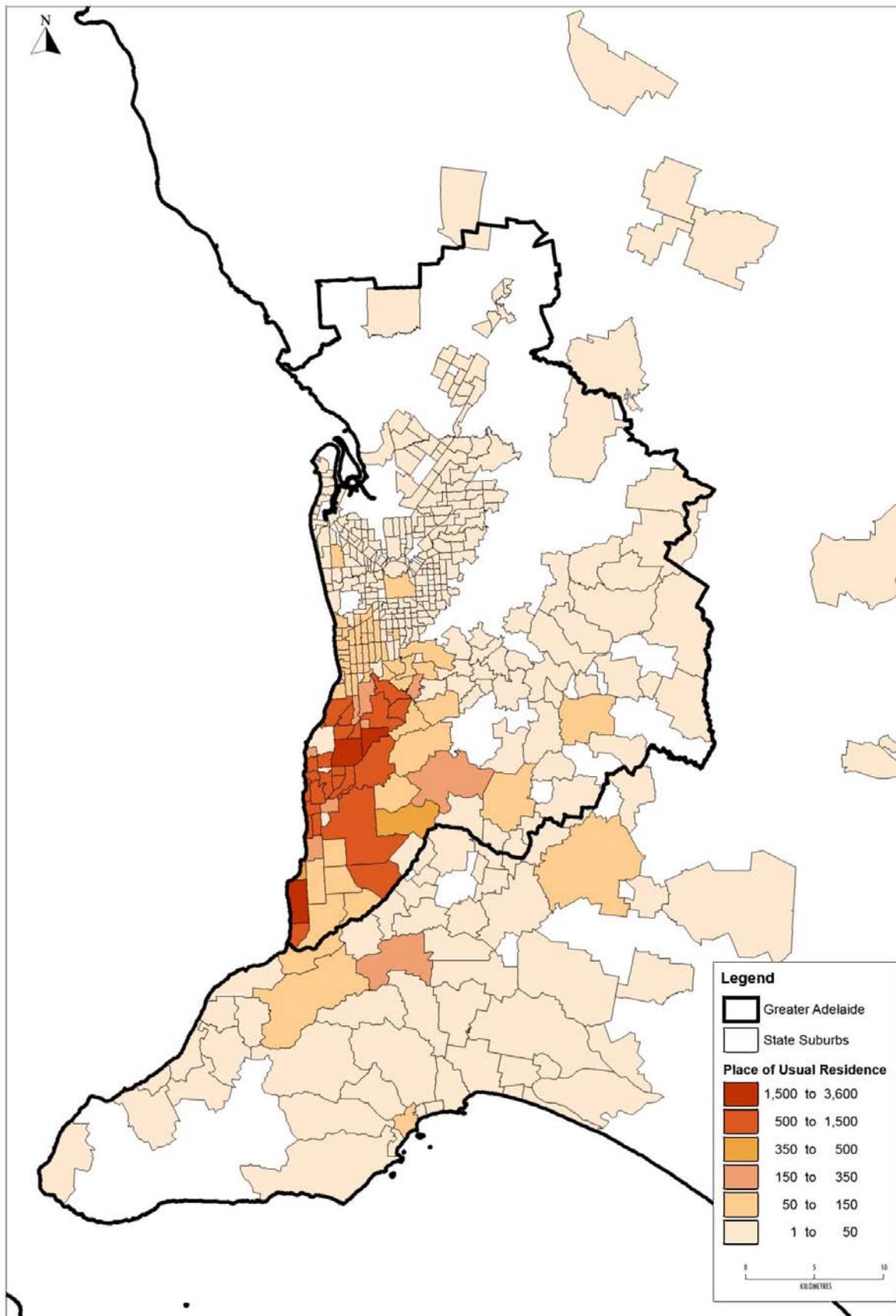
The table below details the suburbs in which over 700 employees are living.

Table 14. Suburbs Housing 700+ Onkaparinga LGA Employees, 2016

Onkaparinga LGA	
	Employees Place of Residence
Morphett Vale	3,575
Aldinga Beach	2,098
Woodcroft	1,920
Happy Valley	1,446
Aberfoyle Park	1,268
Seaford Rise	1,235
Flagstaff Hill	1,095
Hallett Cove	994
McLaren Vale	957
Christies Beach	927
Seaford	771
Reynella	707
Seaford Meadows	701

Source: ABS Census, 2016

Map 4. Onkaparinga Employees Place of Residents by Suburb, 2016



Source: ABS Census, 2016; macroplan, 2020

2.4 Businesses Counts

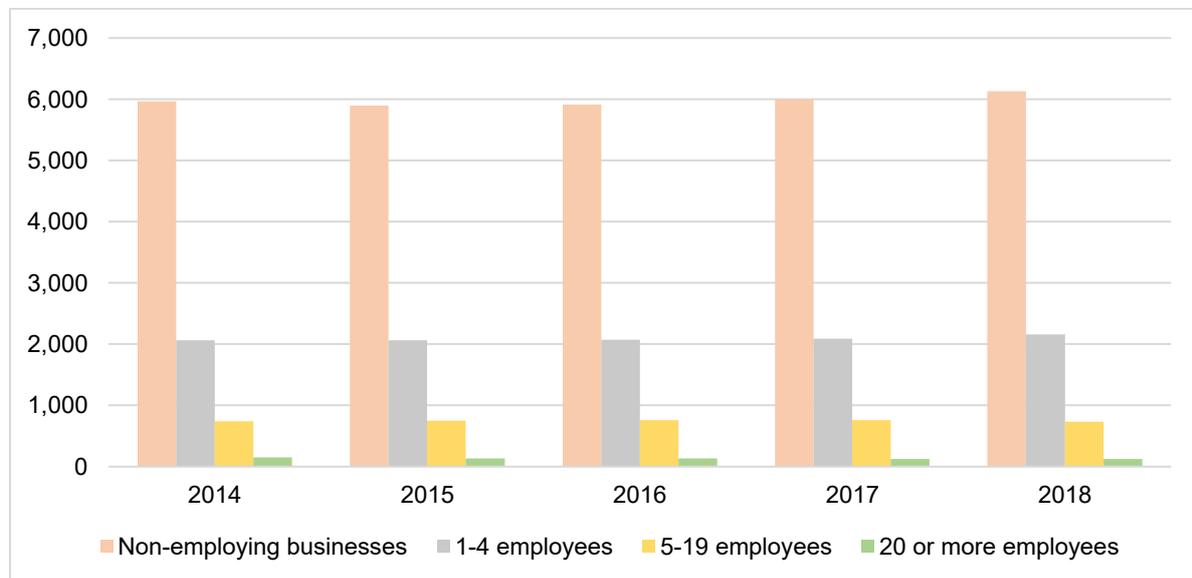
In 2018 there were 9,146 businesses operating in Onkaparinga LGA, 209 more than in 2014. Most growth was seen in non-employing businesses (+166) followed by businesses employing 1-4 employees (+90). While there was growth in the number of small businesses, the number of large businesses decreased with 14 less businesses with 5-19 employees and 22 less businesses with 20 or more employees. The shift towards small business has some implications for demand for industrial as particularly non-employing businesses are more likely to be based at home.

The key industries in which total businesses contracted included retail, (-74), agriculture (-62), and professional scientific and technical services (-58). Key growth industries included construction (+112), finance and insurance services (+74) and transport postal and warehousing (+79).

In 2018, the most common businesses operating in Onkaparinga LGA included:

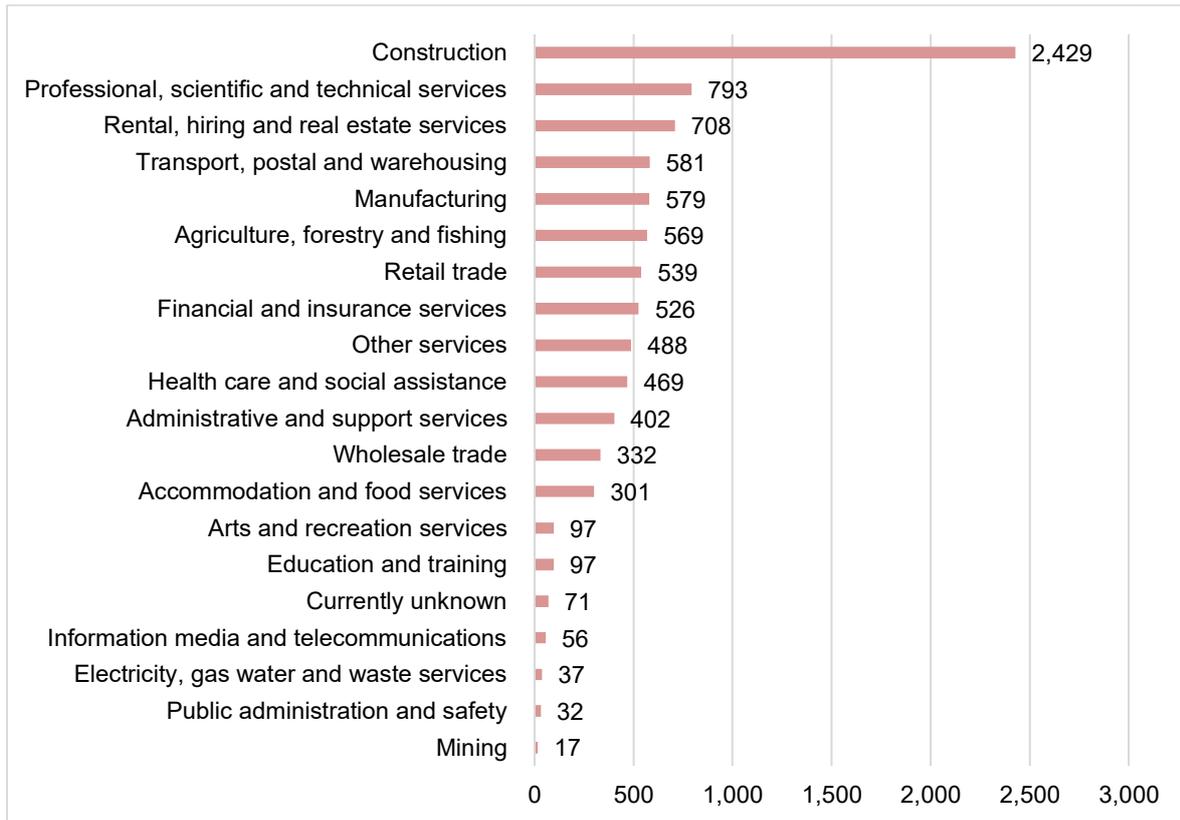
- Construction (2,429 businesses);
- Professional, scientific and technical services (793 businesses); and
- Rental, hiring and real estate services (708 businesses).

Figure 5. Business Counts - Onkaparinga LGA, 2014-2018



Source: ABS, 2019

Figure 6. Business Counts by Industry – Onkaparinga LGA, 2018



Source: ABS, 2019

Section 3: Employment Projections

3.1 Adelaide - South SA4 Employment Projections

Department of Jobs and Small Business (DJSB) publishes 5-year projections for employment by industry by ABS SA4 regional areas. The most up-to-date projections look at changes in employment between 2019-24. Onkaparinga LGA is located in Adelaide - South SA4 region with the remainder of the SA4 formed by Marion, Mitcham and Holdfast Bay LGAs.

DJSB project employment in Adelaide - South SA4 to grow from 181,100 in 2019 to 193,900 in 2024, a 7.3% increase over the 5 year period. This growth is expected to be driven by 4 key industries including:

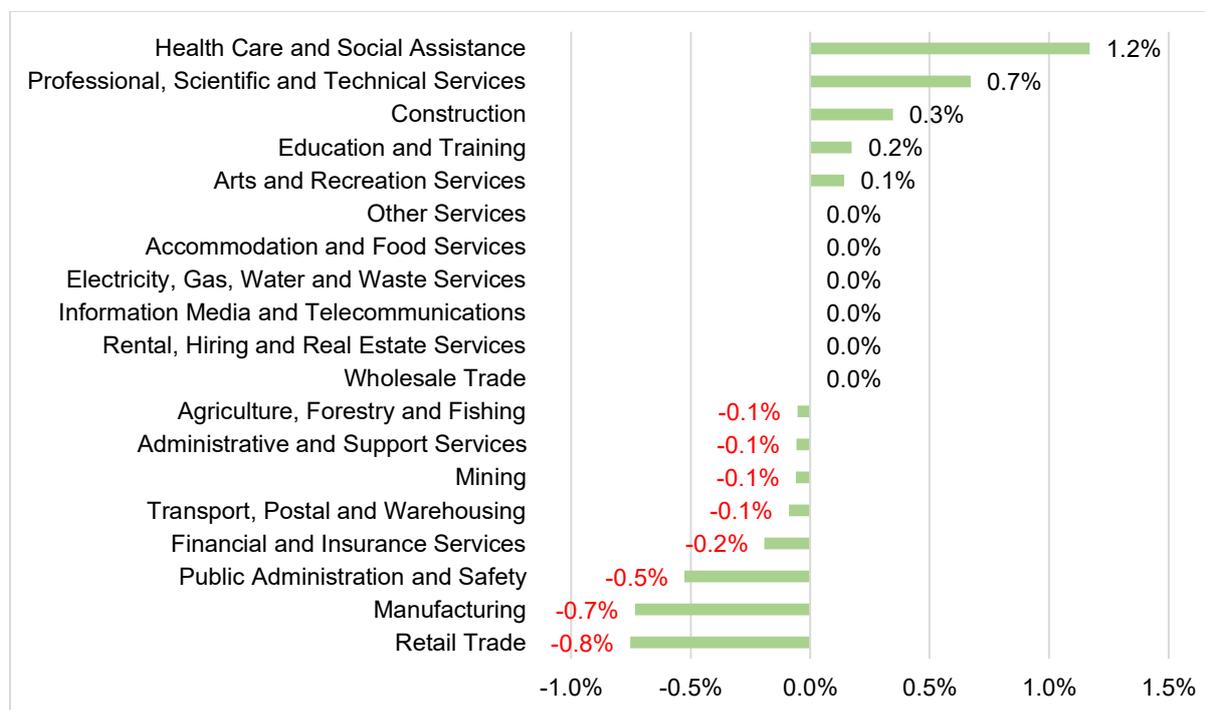
- **Health:** with an additional 4,700 jobs projected (+13.7%).
- **Professional, scientific and technical services:** with an additional 2,200 jobs (+17.1%).
- **Construction:** with an additional 1,800 jobs (+11.1%).
- **Education and training:** with an additional 1,400 jobs (+9.8%).

These sectors are already key employers in the region, however, with declines in other key sectors, each of these industries shares of total employment is also expected to grow. Key sectors expected to contract in 2019-24 period include:

- **Manufacturing:** with over 500 jobs lost.
- **Public administration and safety:** with 300 jobs lost.

While not contracting, the retail sector which is the second highest employing sector in the SA4 is expected to experience no growth over the 5-year period.

Figure 7. Change in Industry Share of Employment – Onkaparinga LGA Place of Work, 2019-2024



Source: Department of Jobs and Small Business, 2019

3.2 Onkaparinga LGA Employment Projections

Based on the population projections for the Onkaparinga LGA, macroplan has projected growth in the workforce for the LGA (see Appendix for methodology). In the period 2001-18, the working age population (15+) expanded by 1.0% per annum but with a decline in the participation (PAR) rate, the labour force grew marginally slower at a rate of 0.8% per annum, while a rise in the unemployment rate saw the actual number of working people living in Onkaparinga grow at a lesser again rate of 0.7% per annum.

Looking forward, the decline in the PAR rate is expected to continue to 2036. This will reflect growth in older age cohorts for which PAR rates are lower, offsetting rises in PAR rates for individual age cohorts. So, whereas the working age population is projected to grow at 0.7% per annum, the labour force is projected to grow at only 0.4% per annum rate. On the premise that the unemployment rate declines to a lower level, the actual number of working people living in Onkaparinga is expected to grow at a 0.5% average rate, which will take it from 81,000 in 2018 to 89,000 in 2036.

Table 15. The Onkaparinga Labour Force 2001-18 and Projected 2018-36

	2001	2006	2011	2016	2018	2021	2026	2031	2036	2001-18	2018-36
No.'000										Period Growth Rate (% pa)	
Total Onkaparinga LGA											
Working Age Pop	117.5	122.7	132.0	137.1	139.5	142.5	149.0	154.6	159.1	1.0	0.7
<i>Growth Rate (% pa)</i>		0.9	1.5	0.8	0.9	0.7	0.9	0.7	0.6		
Participation Rate (%)		65.0	65.3	63.0	62.7	62.2	60.8	59.9	59.4		
Labour Force	76.4	79.7	86.2	86.4	87.4	88.6	90.7	92.5	94.5	0.8	0.4
<i>Growth Rate (% pa)</i>		0.9	1.6	0.1	0.5	0.5	0.5	0.4	0.4		
Unemployment Rate (%)		5.6	5.9	7.7	7.3	5.8	5.8	5.8	5.8		
Employment	72.1	75.2	81.1	79.8	81.0	83.5	85.4	87.2	89.0	0.7	0.5
<i>Growth Rate (% pa)</i>		0.9	1.5	-0.3	0.8	1.0	0.4	0.4	0.4		

Source: ABS Stat. 2019; macroplan, 2020

The number of jobs in the Onkaparinga LGA in 2001 was 31,000 which was 43% of the number of workers living in the LGA, giving a jobs ratio of 43%. As discussed elsewhere, the majority of workers living in Onkaparinga commute outside the LGA for work. In the period 2001-18, despite the contraction in industrial jobs in the LGA, the jobs ratio actually rose to 48%. Jobs in Onkaparinga grew at an average 1.3% per annum, well ahead of the 0.7% growth in numbers of workers in the LGA. Looking forward, this trend is expected to continue with the jobs ratio rising to 51% and jobs growing at an average 0.9% per annum. These projections would have the number of jobs within the LGA rising by 6,500 in the period 2018-36.

Table 16. Growth in Jobs in Onkaparinga 2001-18 and Projected Growth 2018-36

	2001	2006	2011	2016	2018	2021	2026	2031	2036	2001-18	2018-36
No.'000										Period Growth Rate (% pa)	
Jobs in Onkaparinga											
Employment in Onkaparinga	31.0	33.0	35.9	37.7	38.7	40.3	41.9	43.5	45.2	1.3	0.9
Growth Rate (% pa)		1.21	1.71	1.01	1.22	1.38	0.80	0.76	0.76		
Jobs to Workforce Ratio (%)	43.1%	43.8%	44.3%	47.3%	47.7%	48.3%	49.1%	49.9%	50.8%		

Source: ABS Stat. 2019; ABS Census, 2016; macroplan, 2020

Using the DJSB projections as a guide, macroplan has projected the sectoral growth of jobs within the Onkaparinga LGA. The key trends are:

- Agricultural employment is projected to show a slight decline.
- Industrial employment is projected to decline marginally, with a further decline in manufacturing partially offset by a rise in wholesale and transport.
- Services are projected to grow, with retail, accommodation and food services, and education all growing but with the fastest growth projected for professional services and health services.

Table 17. Growth in Jobs in Onkaparinga 2001-16 and Projected Growth 2106-36

	2001	2006	2011	2016	2036
No.'000					
Industry					
Agriculture	1.3	1.0	0.7	0.8	0.7
Industrial Jobs	9.3	8.0	7.2	5.9	5.6
<i>Manufacturing</i>	7.2	6.2	5.2	4.1	3.6
<i>Wholesale</i>	1.2	0.9	1.1	0.8	0.9
<i>Transport</i>	0.9	0.9	0.9	1.0	1.1
Retail	5.9	5.5	5.7	6.0	6.9
Accommodation and Food Services	2.0	2.4	2.8	3.4	4.5
Professional, Scientific and Technical Services	0.8	0.9	1.2	1.3	1.9
Education	3.0	3.3	3.7	4.3	5.0
Health	3.2	4.0	5.1	6.0	8.5
Other	5.5	7.8	9.6	10.1	12.2
Total	31.1	33.0	35.9	37.7	45.2

Source: ABS Census 2016; macroplan, 2020

Section 4: Employment Lands

4.1 Onkaparinga LGA Employment Land

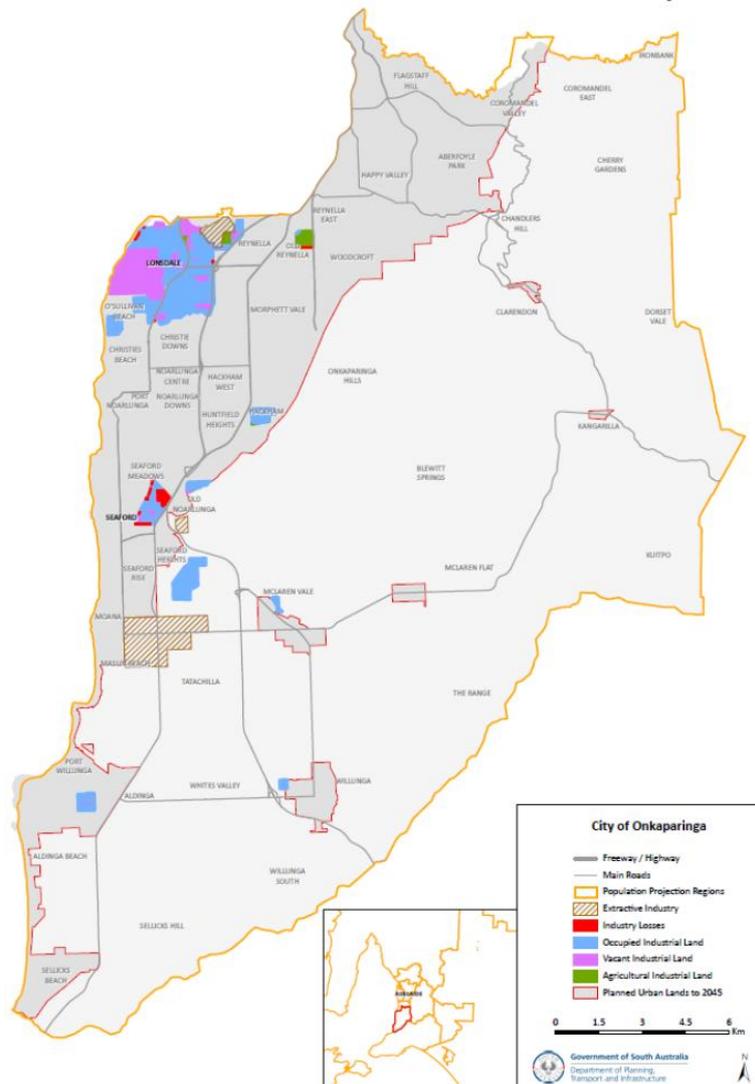
In 2019, data provided to macroplan by the Department of Planning, Transport and Infrastructure (DPTI) indicated that Onkaparinga LGA had 4,021 hectares of employment land including:

- 3,301 hectares of occupied employment land; and
- 719 hectares of vacant employment land.

Approximately 500 hectares of employment land is located in a centre or commercial zone - around 40% of this located in Noarlunga Regional Centre. Most 'Centre' zones endorse medium and/or high-density developments hence while not necessarily vacant, have the potential to increase their employment density.

As seen in the figure below, most vacant industrial and agricultural land is located north in the Lonsdale Industrial Precinct while there is some vacancy in Seaford and Willunga/Aldinga.

Figure 8. Onkaparinga LGA Industrial and Agricultural Employment Land



Source: DPTI, 2020

4.2 Future Employment Land Requirements

Focussing on industrial land, there is an estimated 1,280 hectares of industrial land in the Onkaparinga area, of which about 840 hectares are in the Lonsdale industrial precinct (this includes 234 hectares at Port Stanvac). Excluding Port Stanvac, the JLL (2015) Land Use Analysis identified 177 hectares of vacant land – or a 19% vacancy rate in the Lonsdale precinct in 2014. The JLL analysis also identified significant under-utilisation of land. Since then there has been further decline in manufacturing. Macroplan's estimate is that the vacancy rate remains at about 20% but that another 10% is occupied but not fully utilised.

In terms of currently occupied and used land, the evidence points to this industrial land being lightly used. In Lonsdale, about 5,700 persons are employed on the occupied lands, which equates to 12 persons per hectare. This includes industrial jobs (manufacturing, wholesale and transport (MWT)) but also supporting jobs (admin, technical, etc) which account for about 40 per 100 industrial jobs located on industrial land. It also includes close to 1,000 construction jobs of which a component is likely to have been transient, so that the actual number per hectare is likely to be closer to 11.

A low density use of industrial land would employ about 12 persons per hectare when fully used, while a medium density scenario would employ about 24 persons per hectare. In more inner urban areas in Australian capital cities – where there is pressure for density – employment would be upwards of 36 persons per hectare.

With a shift away from heavy manufacturing industry towards light manufacturing - partly offset by more automated freight and logistics sector employing fewer – long-term demand is likely to shift towards a usage rate of 12-24 persons per hectare.

When the JLL (2015) Land Use Analysis identified 177 hectares of surplus land, it assumed 144 hectares could be developed and estimated that at a rate of 4-6 hectares per annum, this represented 24-36 years of supply (see Extract in Appendix C). Given the projections to 2036 for industrial jobs and the potential for more intensive use of existing land, macroplan's assessment is that this demand projection is highly optimistic. In short, bearing in mind that MWT jobs are not projected to grow there is a surplus of industrial land in the Onkaparinga area on any foreseeable time horizon.

We would note that in 2018 the State Minister for Planning approved the Employment Lands Development Plan Amendment (DPA) for Onkaparinga. The DPA converted Industry and Light Industry Zones to the Urban Employment Zone which the stated objective of allowing more flexible use of land, including some non-industrial uses. These zoning changes were initiated by the Onkaparinga Council in response to an Employment Land Study by Intermethod (2016) and the Employment Land Analysis by JLL (2015). The changes are designed to “support the growth of existing industries, changes in existing industries and the emergence of new industries” in the Onkaparinga area¹³. These are positive changes, but the policy is still highly prescriptive and could, if narrowly interpreted, still preclude some new industrial investment opportunities. That is, it is unclear how these changes will make serious in-roads into the surplus.

¹³http://archive.onkaparingacity.com/onka/living_here/planning_development/councils_development_plan/development_plan_amendments/employment_lands_development_plan_amendment.jsp

Section 5: Conclusion

The structural changes in the 2000s and 2010s in the Onkaparinga economy have been very significant, with a very large and permanent decline in its manufacturing sector. Despite this, the population of the Onkaparinga area has grown and jobs in the area have grown faster than growth in working population.

In 2016, whereas the working population was 79,800, the number of jobs located within Onkaparinga was about 37,700, giving a jobs ratio of 47%. Of the 37,700 jobs, about 9,900 were held by people commuting into Onkaparinga – mostly from adjacent LGAs – while over 50,000 people living in Onkaparinga commuted out of the LGA for work. It is important to note that the earnings of residents working outside Onkaparinga were 25-30% higher than those of residents working inside Onkaparinga. Those working outside are generating export income for Onkaparinga which in turn is a major driver of spending and jobs in Onkaparinga.

In the period 2001-16, total jobs in the Onkaparinga LGA grew faster than growth in Onkaparinga's working population, so that the jobs ratio rose from 43% to 47%. Looking forward, while the working population is expected to grow by 0.5% per annum, it is expected that jobs in Onkaparinga will grow faster (at 0.9% per annum) in the period 2016-36.

The key drivers of jobs in 2001-16 were education, construction, accommodation and food services, with the largest gains in health. Education and health are primarily servicing demand within Onkaparinga. Growth in these sectors countered the significant decline has been in industrial (manufacturing, wholesale and transport) jobs which declined from 9,300 to 5,900 jobs in the period 2001-16. Preliminary estimates are that that sharp pace of decline in industrial jobs, led by manufacturing, appears to have slowed. The balance of manufacturing jobs remaining are mostly in smaller scale operations, including mostly small-scale and some medium-size wine-making operations which account for about 800 manufacturing jobs and reflect the strength of wine production in the region. Looking forward, the remaining manufacturing presence – much of which is characterised as 'advanced' manufacturing - looks more resilient. Other industrial jobs (wholesale and transport) and are expected to show some growth. Over the period to 2036, the Department of Jobs and Small Business (DJSB) projections indicate that industrial jobs will decline marginally.

Looking forward, with no growth in the school-age population and a limited presence of tertiary institutions, education is expected to lose its high growth status. On the other hand, the high growth in the retiree population is expected to see further growth in the health sector, with the DJSB projections highlighting this sector as the prime growth sector. The other sector highlighted by the DJSB projections is professional, scientific and technical services. Retail is projected to decline while the fast growth in accommodation and food services – linked to tourism - is expected to moderate but still continue to grow.

In terms of employment land, the significant decline in industrial jobs has led to a significant amount of vacant and under-utilised industrial land in the Onkaparinga LGA. A reasonable expectation is that demand is likely to shift to a higher density use of land and with projections for a further marginal decline in industrial jobs, this will do nothing to alleviate the current surplus on any foreseeable horizon. Given this outlook for demand, there would be a significant opportunity cost if this land were to remain zoned for industrial jobs as narrowly defined.

In that regard, a positive step forward is the decision in 2018 to broaden the potential uses for industrial land although it is unclear whether these changes will make serious inroads into the surplus. It is early days to judge the impact of these changes. However, the Council does have a proposal before it for an operation in the Lonsdale precinct which involves a mix of industrial and non-industrial activities which arguably requires a flexible interpretation of the new 2018 policy for aspects of its operation.

If the 2018 policy in practice has this flexibility that would be a very good result and would open the way for growth of jobs in these employment lands. It would also highlight the benefits of a more flexible policy on land uses.

Appendix A – Methodology on Population and Employment Projections

The Onkaparinga LGA and the ABS SA3 area by the same name, are almost precisely the same geographic areas. As highlighted in the Table below, the population of the SA3 area is only slightly (0.8%) larger. The Onkaparinga SA3 is included in the Adelaide-South SA4 area which also includes the SA3 areas of Holdfast Bay, Marion and Mitcham. Each of these SA3 areas roughly corresponds to the LGAs of the same name. As discussed below, official population and industry/workforce projections are published at the LGA level and also at SA2, SA3 and SA4 level.

Population as at June 2018	SA3	LGA	SA3 vs LGA
Holdfast Bay	35,274	37,032	-4.7%
Marion	93,850	92,308	1.7%
Mitcham	65,920	67,253	-2.0%
Onkaparinga	172,793	171,489	0.8%
Adelaide SA4/Total	367,837	368,082	-0.1%

The Onkaparinga LGA has also been analysed using ABS data, at the SA2 level and, for a detailed look at employment by place of work, at the DZN (destination zone) level. There are 19 SA2 areas within the LGA and there are 53 DZN areas which fit within SA2 areas. The Lonsdale SA2 area, for example, includes four DZN areas. To the extent possible, we have aligned the DZN areas with the DPTI industrial (urban employment) zones but apart from Lonsdale and the DZN areas are larger than the zones.

ABS Statistics

In this report, unless otherwise stated, macroplan has used the latest series of published official data from the Australian Bureau of Statistics (ABS).

The ABS Census provides detailed 5-yearly data (latest being August 2016) on population, age profile, education, workforce, status of employment, occupation of employees by industry sector, employees by industry sector by place of residence and place of work, all of which has been used to provide a detailed economic and socio-demographic profile of the Onkaparinga LGA and the areas within the LGA. In addition, the ABS publish detailed annual population statistics at the LGA and SA2 level which include minor upward adjustments to the Census population estimates. (That is, the population estimate for 2016 is higher than the Census figure.) This provides a consistent series of estimates of total population for the period 2001-2018. The latest estimate for population is June 2018 and this has been used as the starting point for looking back at history and looking forward with projections.

The ABS also publish quarterly employment data at the SA4 level which give estimates of full and part-time employees, and hours work, by industry. The data is from May 1999, with the latest data for August 2019.

List of Key ABS sources

ABS Census – various but primarily 2006, 2011 and 2016

ABS 3235.0 - Regional Population by Age and Sex, Australia, 2018 (published August 2019)

http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ANNUAL_ERP_LGA2018

ABS 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly

Population Growth Projections

The latest official population projections (SADPTI (2019)) available are for SA2, SA3 and SA4 areas, and also by LGA, for SA for the period 2016-36. The primary projections used in this analysis is based on the LGA projections where, as noted, Onkaparinga LGA and SA3 areas are close approximations. The medium scenario population projections are the most probable scenario and these projections are utilised.

Age Profile Projections

In terms of the age profile, the latest ABS estimate for 2018 has estimates of the age profile – by 5-yearly cohorts - at LGA and SA2 level and 2018 is taken as the starting point age profile.

The LGA level projections Onkaparinga (SADPTI (2019)) which are presented in terms of 5-year age cohorts (0-4; 5-9;;80-84; 85+), while the SA2/SA3 projections are presented in terms of primary school (5-11), secondary school (12-17) and tertiary/workforce entry(18-24) cohorts. The prime working age cohorts are aggregated in three groups (25-34; 35-49; and 50-65) while there are two retiree cohorts (65-79 and 80+). We have reconciled these in the historical data and presented projections which utilise these cohorts.

Labour Force Projections

For each of these age cohorts, macroplan has estimated the labour force (LF) participation (PAR) rate and employment (or its inverse the unemployment (u/e)) rates, and educational participation rates, utilising the LF PAR, employment/unemployment and educational PAR rates of the age cohorts from the 2016 Census.

For the projections in aggregate employment of people resident in the area for the period 2018-36, it has been assumed that the LF PAR rates for each of the age brackets rises marginally. If unchanged, the aggregate PAR ratio would decline significantly, due to the relative rise in older age cohorts with low PAR rates. The change in the age composition of the working age population (towards an older population) however means a decline in the overall PAR rate. This analysis is in line with the latest Australian Government Intergenerational Report (IGR, 2015)¹⁴

The unemployment rate in 2016 in SA at the time of the Census was 6.7%, which was 0.8 percentage points lower than the unemployment rate for SA based on the Census data (7.5%). The SA unemployment rate is currently 6.3%. For the forward projections, we assume that full employment is achieved and that this is about 5%. This (5%) is the average rate that was achieved in the period 2005-08 before the GFC caused unemployment to rise. This would translate to about 5.75% in terms of the Census measure. For the Onkaparinga area, the unemployment rate as recorded in the Census in 2016 was 7.6% in 2016 – on a par with the State unemployment rate. For Onkaparinga we assume a long-term unemployment rate of 5.75%.

¹⁴ <https://treasury.gov.au/publication/2015-igr>

Place of Work

Macroplan has constructed estimates for number of employees by place of residence and by place of work for the Onkaparinga area for the June quarter 2018. These are based on the Census estimates for 2016, with adjustments which take accounts of estimated growth in the working age population in the period 2016-18 and also taking account of the ABS estimates for growth in employment in the SA4 area in the period 2016-18.

In terms of employment within the Onkaparinga LGA, we would note that for every 100 employees living within the LGA in 2016 there were 47 jobs in the LGA. This gives a jobs ratio of about 47%. In 2001, the ratio was 43%, which suggests a slightly rising trend in the jobs ratio. In line with this rising trend, the projections assume this ratio rises to about 51% in 2036. We would also note that about 2% of jobs within Onkaparinga are located 'at home' and about 3.5% of jobs are mobile. We would also note that a high proportion of constructions jobs are located at the place of construction happening – industrial land is used for storage of equipment.

Employment Projections by Industry

Historical estimates of industry shares for Onkaparinga are based on Census data. For the period 2016-18, ABS data (ABS 6291.0.55.003) for industry employment at the SA4 level (of which Onkaparinga is about half) have been used as a guide to more recent trends. This, for example, captures further impact of the closures of car-making operations by GMH, Ford and Toyota on parts producers in the Onkaparinga area.

By industry, the Commonwealth Department of Jobs and Small Business (DJSB 2019) projections for the period 2019-24 for the SA4 area for changes in industry share have been used as a guide for the indicative industry employment projections for the period to 2036. The DJSB projections are primarily generated from past trends and macroplan has applied its own judgment in formulating the projections beyond 2024 to 2036.

Employment and Demand for Land

In reconciling demand with employment, we have assumed medium density land use. Light land use – a high component of heavy manufacturing industry and highly automated freight and logistics (transport and wholesale industries) which requires extensive land or (in case of automation) employs few people - would be about 12 persons per hectare, while heavy use – with a larger component of light manufacturing - would be about 36 persons per hectare. The medium density scenario (24 per hectare) allows a mix of the two. With the closing of Port Stanvac oil refinery and Lonsdale Engine Plant, heavy industry has largely exited although account is taken of the desalination plant which uses a large amount of land and employs few people. Most manufacturing remaining in industrial parks will be light industry. In the case of wine manufacturing (medium industry) this is largely located at wineries on agricultural land, often in conjunction with accommodation, hospitality (function) and retail facilities.

Industrial jobs are defined as manufacturing, wholesale and transport (MWT) industries. We would also note that for each industrial job, there are about 0.4 support (administration, technical, etc) and construction jobs located on industrial land. That is, 100 industrial (MWT) jobs equates to a total of 140 jobs.

Education Population Projections

As discussed above, the SA DPTI (2019) projections are categorised in terms of age cohorts of residents living in the Onkaparinga area with high attendance at primary, secondary or tertiary education institutions. Using the Census data for 2016, macroplan has generated educational PAR rates for these age cohorts, to generate the actual numbers in attendance at these institutions. In the case of primary and secondary institutions, it is assumed that (a high proportion of) these students attend facilities within the LGA and, more importantly, that growth in these cohorts will equate to growth in demand for primary and secondary school facilities within the LGA.

In the case of tertiary students, a significant proportion will commute to tertiary institutions outside the LGA, e.g. Flinders University in Mitcham LGA, or the universities in the CBD (Adelaide, UniSA) all of which are accessible via the rail line. There are some TAFE facilities in Noarlunga which provide vocational training. It is assumed demand for Noarlunga TAFE will grow in line with growth in the age cohorts.

Health and Aged Care Demand

As discussed above, the SA DPTI projections are categorised in terms of age cohorts of residents living in the Onkaparinga area in the retirement bracket (65-79), and in the 80+ age bracket where demand for aged care services typically rises.

The Census data for 2016 is used to estimate the proportions of these two age groups in aged care (nursing home) facilities. The relative growth of these age brackets gives an indication of the likely growth in demand for aged care services in the Onkaparinga area.

The Commonwealth Government has policies to encourage more aged people to stay at home which may affect future demand for beds in facilities but will generate demand for services to provide these home care services. These jobs would be located 'at home'.

In terms of hospital employment, the facilities within Onkaparinga are subsidiary facilities to the Flinders Medical Centre which provides higher level services. This is assumed to continue. However, the demands on the facilities within Onkaparinga are nonetheless expected to grow in line with growth in population and in particular growth in the older age cohorts with higher health/medical needs.

Appendix B – Jones Lang La Salle (JLL) (2015) Land Use Analysis

Extract from page 19 of report – Future Demand

The above discussion points to limited demand from traditional industrial uses for industrial zoned land. Recent historical take-up suggests that future industrial land consumption will be modest, with the last 7 years seeing only 4-5 hectares consumed per annum.

Discussions with JLL industrial agents as well as JLL Research highlights limited demand from larger regional users of industrial land in Adelaide's southern metropolitan area. Furthermore, metropolitan industrial land consumption has been relatively weak over the last 6-7 years. Long term consumption patterns across metropolitan Adelaide suggest around 50 hectares per annum of industrial land is consumed for industrial purposes.

With just 4-5 hectares per annum consumed in the Onkaparinga LGA, this equates to no more than 10% of metropolitan demand. Our view is that the northern metropolitan area will continue to attract the majority of businesses that consume industrial zoned land, with the main driver of demand in Onkaparinga being driven by local business needs, or businesses serving the southern metropolitan area. Population growth is a natural driver of demand for industrial land.

Onkaparinga's proportion of metropolitan population growth to 2026 is estimated at 13%. Should the City of Onkaparinga account for 13% of industrial demand (more than it has in recent years), land consumption would be approximately 6.5 hectares per annum. We consider the industrial development will be skewed towards outer suburban regions. While this suggests that Onkaparinga may support industrial demand from a larger southern metropolitan area, this is likely to be offset by major development for large logistics premises gravitating to the northern suburbs. This is clearly the pattern in recent major development projects.

The City of Onkaparinga currently has approximately 180 hectares of vacant land zoned for industrial purposes. Assuming 80% of this land is suitable for industrial development suggests 144 hectares of useable vacant industrial land to serve future growth. With consumption rates projected to be between 4-6 hectares per annum, this equates to approximately 24-36 years of future industrial land supply.

Added to this is the former oil refinery site at Port Stanvac, Lonsdale that could provide up to an additional 234 hectares of land for industrial purposes. The site is currently underutilised but undergoing remediation. The site represents an additional 40 years of future land supply but the timing of its master planning and release needs to be carefully considered against the role of the established and serviced industrial offering with the City of Onkaparinga.

MELBOURNE

Level 16
330 Collins Street
Melbourne VIC 3000
(03) 9600 0500

www.macroplan.com.au

SYDNEY

Level 10
580 George Street
Sydney NSW 2000
(02) 9221 5211

BRISBANE

Level 1
310 Edward Street
Brisbane QLD 4000
(07) 3221 8166

GOLD COAST

Level 2
89-91 Surf Parade
Broadbeach QLD 4218
(07) 3221 8166

PERTH

Level 1
89 St Georges Terrace
Perth WA 6000
(08) 9225 7200

macroplan