

Western Sydney Job Deficit Analysis

Final Report

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prepared by **.id**

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1. Introduction

.id has been engaged by WSROC to undertake an assessment of access to employment and public transport in the Western Sydney Region. To do this we have analysed:

- ▣ Difference between employed residents and local jobs available to determine job deficits by subregion and LGA.
- ▣ Job deficits by industry at a subregional and LGA level.
- ▣ Journey to work destinations of residents in Western Sydney with a focus on selected industries and locations
- ▣ The distribution of population with direct access to a train station today and in 2036.

1.1 Disclaimer

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2. Are there enough jobs?

The Western Sydney region does not currently generate enough jobs to support its level of resident workers. This is what can be described as a job deficit. In 2015, there were 844,653 jobs in the region compared to 997,062 resident workers, creating a job deficit of 152,409. Table 1 provides details of the relevant job deficits for individual LGAs and sub-regions in Western Sydney.

Table 1: Difference between local jobs and employed residents – 2015

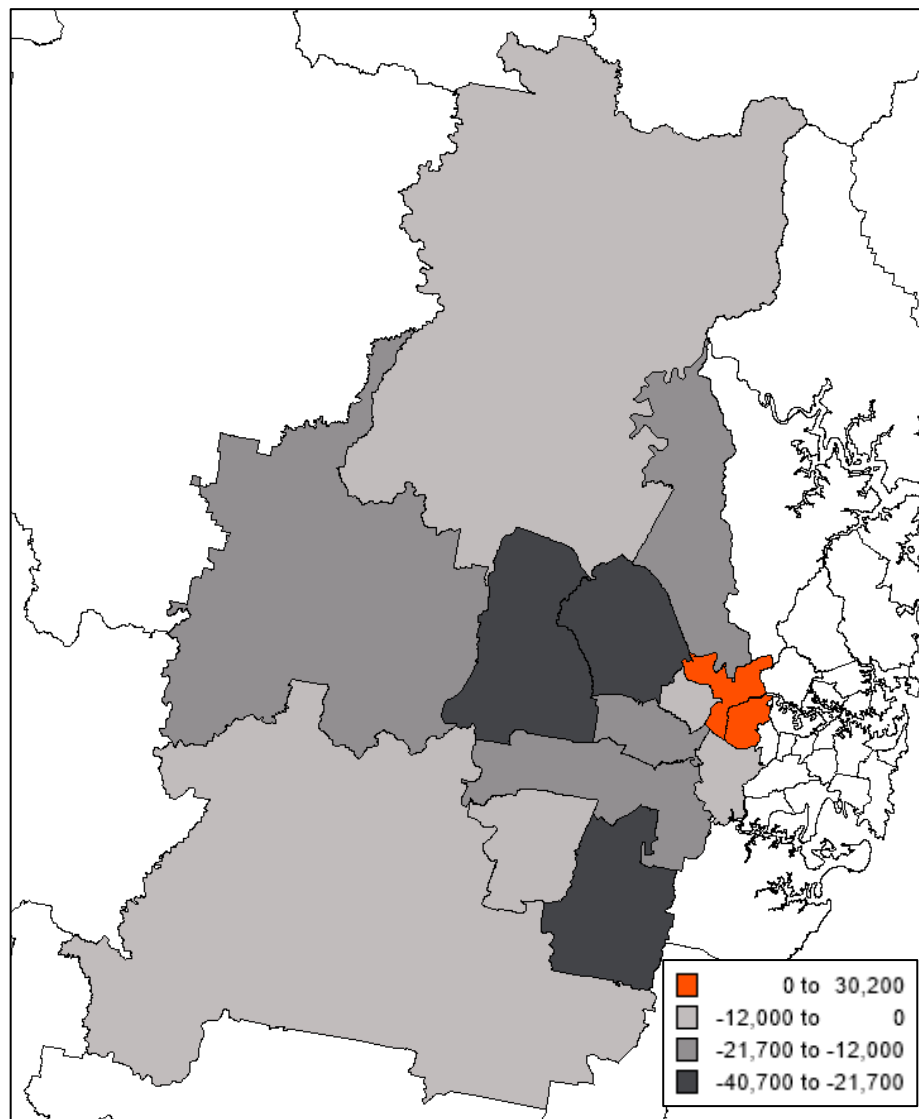
LGA Name	Region	Employed Residents	Local Jobs	Jobs Deficit/ Surplus	Jobs Per Employed Resident
Camden (A)	South West	36,326	25,500	-10,826	0.70
Campbelltown (C)	South West	74,278	47,121	-27,156	0.63
Fairfield (C)	South West	77,684	63,945	-13,739	0.82
Liverpool (C)	South West	89,284	74,227	-15,057	0.83
Wollondilly (A)	South West	24,613	12,618	-11,995	0.51
South West Total		302,184	223,412	-78,772	0.74
Blue Mountains (C)	West	39,074	20,785	-18,289	0.53
Hawkesbury (C)	West	34,645	27,723	-6,923	0.80
Penrith (C)	West	100,543	71,933	-28,610	0.72
West Total		174,263	120,440	-53,822	0.69
Auburn (C)	West Central	36,941	65,109	28,167	1.76
Bankstown (C)	West Central	82,941	77,835	-5,106	0.94
Blacktown (C)	West Central	157,229	116,588	-40,641	0.74
Holroyd (C)	West Central	51,202	40,510	-10,692	0.79
Parramatta (C)	West Central	91,353	121,479	30,126	1.33
The Hills Shire (A)	West Central	100,949	79,281	-21,668	0.79
West Central Total		520,615	500,801	-19,814	0.96
Western Sydney Total		997,062	844,653	-152,409	0.85

Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

Only the LGAs of Auburn and Parramatta currently have job surpluses reflecting the concentration of jobs in the Parramatta CBD and the Sydney Olympic Park

area. The rest of the region's LGAs have substantial job deficits with Blacktown in particular generating over 40,000 less jobs than what would be required to support its resident workforce.

Figure 1: Map of Western Sydney LGAs by job deficit/surplus



Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

The average job to employed resident ratio in Western Sydney (0.85) is much lower than for Sydney as a whole where there is an actual job surplus (1.03). This is largely due to the Sydney Central subregion which generates 36,355 more jobs than residents. All Western Sydney subregions have larger job deficits and lower job-to-resident ratios than both the Sydney Central and Sydney North subregions. The Western Sydney West and South West subregions even have lower job-to-resident ratios than the Central Coast. Blacktown actually has the second largest

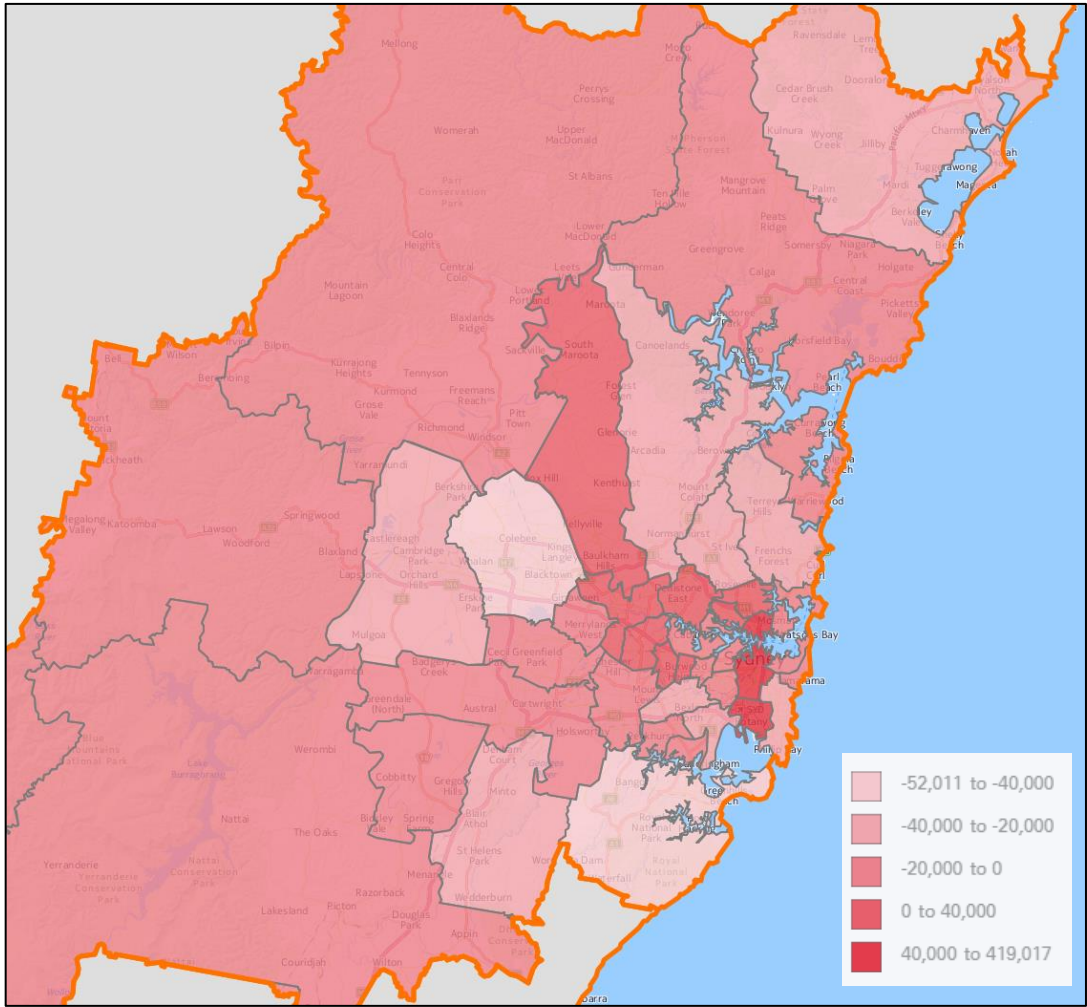
deficit out of all LGAs in Greater Sydney. The only Western Sydney subregion that has a relatively low job deficit is West Central which reflects the importance of the City of Parramatta that has the third largest job surplus out of all Greater Sydney LGAs.

Table 2: Difference between local jobs and employed residents by planning subregions in Greater Sydney– 2015

Region	Employed Residents	Local Jobs	Jobs Deficit/ Surplus	Average Jobs Deficit/ Surplus per LGA	Jobs Per Employed Resident
Greater Sydney	2,513,367	2,448,631	64,736	1,505	1.03
Central Subregion	906,267	506,361	399,906	36,355	1.79
North Subregion	470,192	479,776	-9,583	-871	0.98
South Subregion	179,501	313,911	-134,410	-26,882	0.57
Central Coast	112,753	151,521	-38,768	-19,384	0.74*
South West Subregion	223,412	302,184	-78,772	-15,754	0.74*
West Central Subregion	500,801	520,615	-19,814	-3,302	0.96
West Subregion	120,440	174,263	-53,822	-17,941	0.69

Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts. * South West subregion ratio is 0.739, Central Coast is 0.744.

Figure 2: Map of Greater Sydney LGAs by job deficit/surplus



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3. Where are the deficits by industry?

Job deficits will not be consistent across industries. Analysis of specific industry surpluses/deficits within LGAs and regions can highlight employment specialisations. However, it can also identify industries where the local jobs market does not generate sufficient employment to support all residents working in that industry. The table below summarises this analysis.

Table 3: Industries with largest job deficits in each LGA - 2015

LGA Name	Total Job Deficit / Surplus	Top 3 Industries with Largest Job Deficits		
Blacktown (C)	-40,641	Financial and Insurance Services	Professional, Scientific and Technical Services	Health Care and Social Assistance
Penrith (C)	-28,610	Financial and Insurance Services	Wholesale Trade	Manufacturing
Campbelltown (C)	-27,156	Transport, Postal and Warehousing	Public Administration and Safety	Financial and Insurance Services
The Hills Shire (A)	-21,668	Public Administration and Safety	Financial and Insurance Services	Construction
Blue Mountains (C)	-18,289	Education and Training	Health Care and Social Assistance	Public Administration and Safety
Liverpool (C)	-15,057	Financial and Insurance Services	Construction	Professional, Scientific and Technical Services
Fairfield (C)	-13,739	Financial and Insurance Services	Professional, Scientific and Technical Services	Retail Trade
Wollondilly (A)	-11,995	Health Care and Social Assistance	Manufacturing	Retail Trade
Camden (A)	-10,826	Public Administration and Safety	Manufacturing	Construction
Holroyd (C)	-10,692	Financial and Insurance Services	Public Administration and Safety	Health Care and Social Assistance
Hawkesbury (C)	-6,923	Wholesale Trade	Retail Trade	Construction
Bankstown (C)	-5,106	Financial and Insurance Services	Public Administration and Safety	Retail Trade
Auburn (C)	28,167	Accommodation and Food Services	Health Care and Social Assistance	Agriculture, Forestry and Fishing

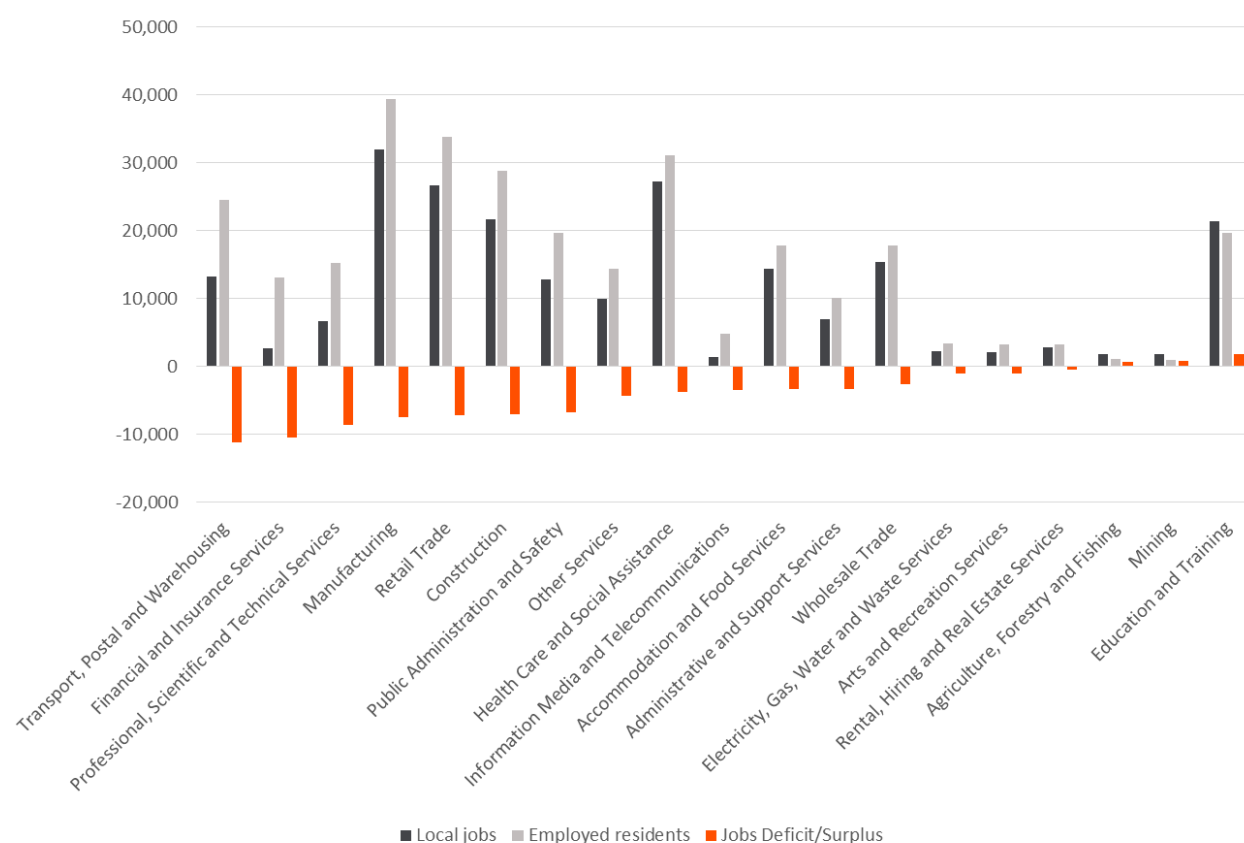
Parramatta (C)	30,126	Information Media and Telecommunications	Accommodation and Food Services	Professional, Scientific and Technical Services
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3.1 WS – South West

The South West sub-region has the largest job deficit out of all sub-regions with a 78,772 shortfall between employed residents and local jobs. The largest deficit is in the Transport, Postal and Warehousing industry which generates 11,214 less jobs than employed residents. The industry with the lowest job to residents' ratio is Financial and Insurance Services where there are only 21 local jobs for every 100 residents working in the industry. Education and Training is the only industry with a significant job surplus (+1,816). The majority of industries experience job deficits are the largest deficits are:

- ↓ Transport, Postal and Warehousing (-11,214)
- ↓ Financial and Insurance Services (-10,402)
- ↓ Professional, Scientific and Technical Services (-8,541)

Figure 3: South West local jobs and employed residents by industry - 2015



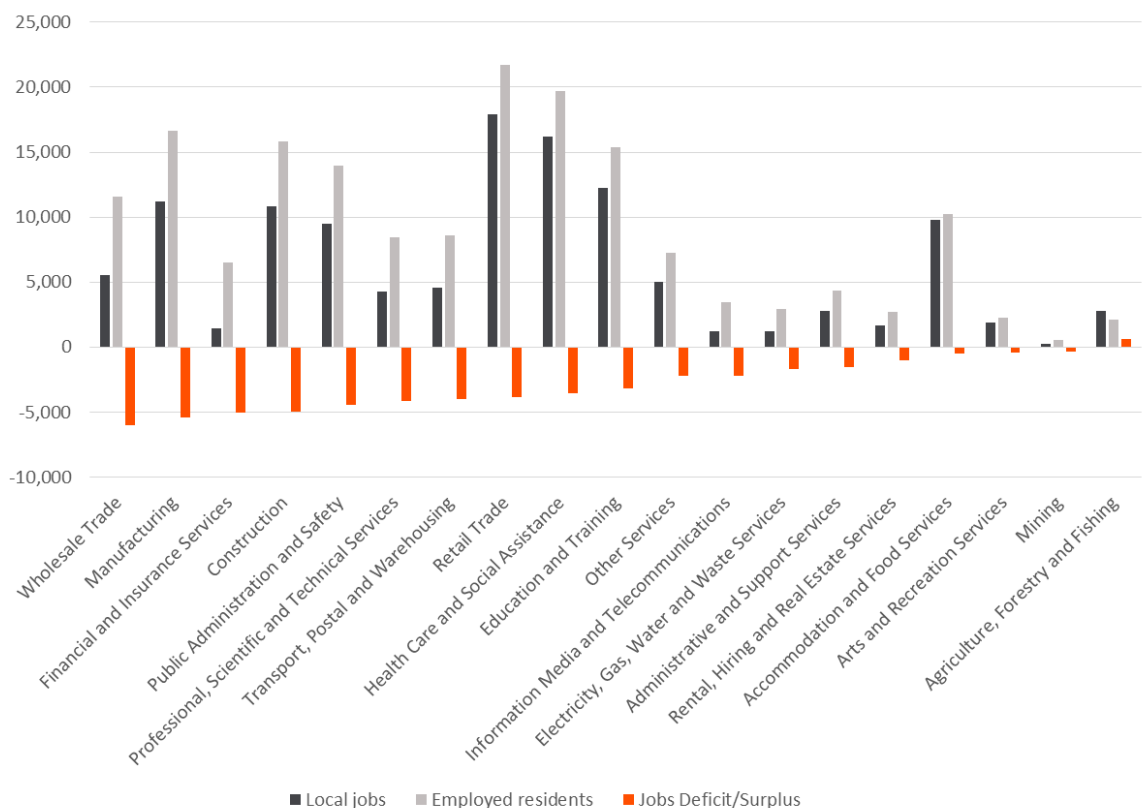
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3.2 WS – West

The West sub-region has the second largest job deficit out of all sub-regions with a 53,822 shortfall between employed residents and local jobs. The largest deficit is in the Wholesale Trade industry which generates 6,038 less jobs than employed residents. The industry with the lowest job to residents' ratio is Financial and Insurance Services where there are only 22 local jobs for every 100 residents working in the industry. Agriculture, Forestry and Fishing is the only industry with a job surplus (+637). The majority of industries experience job deficits and the largest deficits are:

- ▣ Wholesale Trade (-6,038)
- ▣ Manufacturing (-5,405)
- ▣ Financial and Insurance Services (-5,066)

Figure 4: West local jobs and employed residents by industry - 2015



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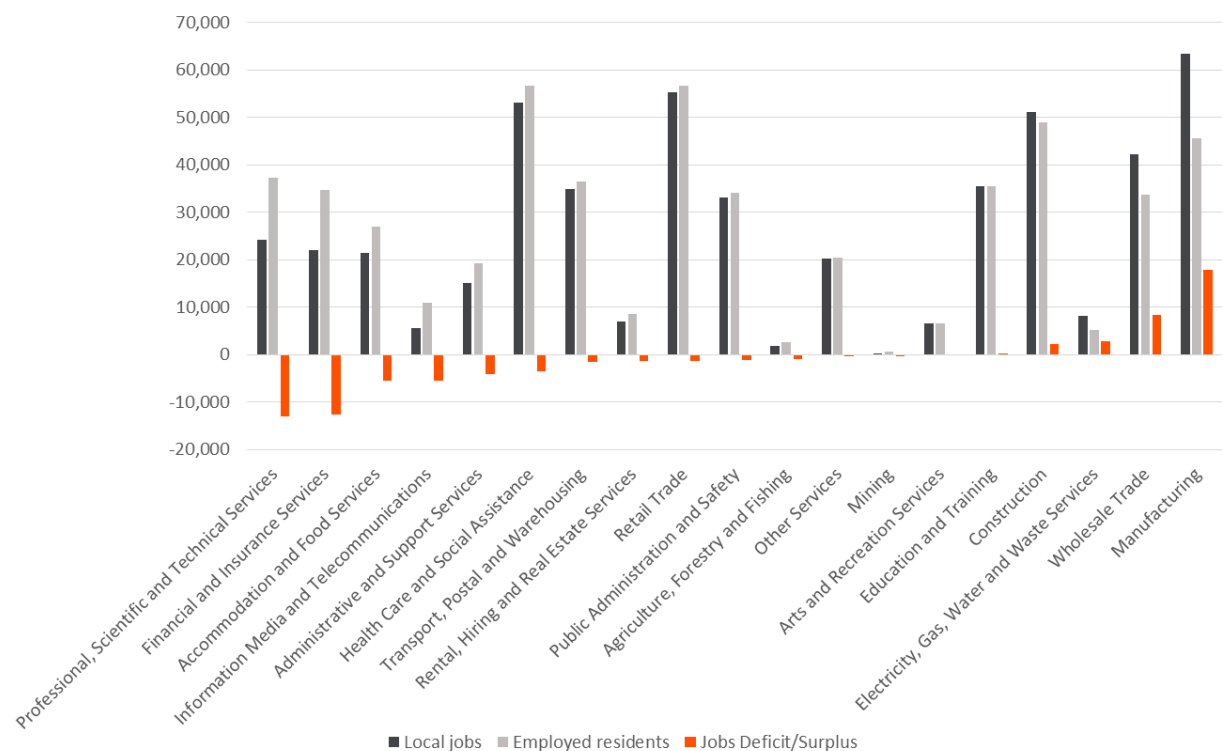
3.3 WS – West Central

The West Central sub-region has the smallest job deficit out of all sub-regions with only a 19,814 shortfall between employed residents and local jobs. The largest deficit is in the Professional, Scientific and Technical Services industry which generates 13,050 less jobs than employed residents. The industry with the lowest job to residents' ratio is Mining where there are only 49 local jobs for every 100 residents working in the industry. Manufacturing is the industry with the largest job surplus (+17,775). The industries with the largest deficits are:

- Professional, Scientific and Technical Services (-13,050)
- Financial and Insurance Services (-12,590)
- Accommodation and Food Services (-5,571)

The West Central sub-region has less industries experiencing job deficits than the other two sub-regions.

Figure 5: West Central local jobs and employed residents by industry - 2015



Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

3.4 LGA analysis

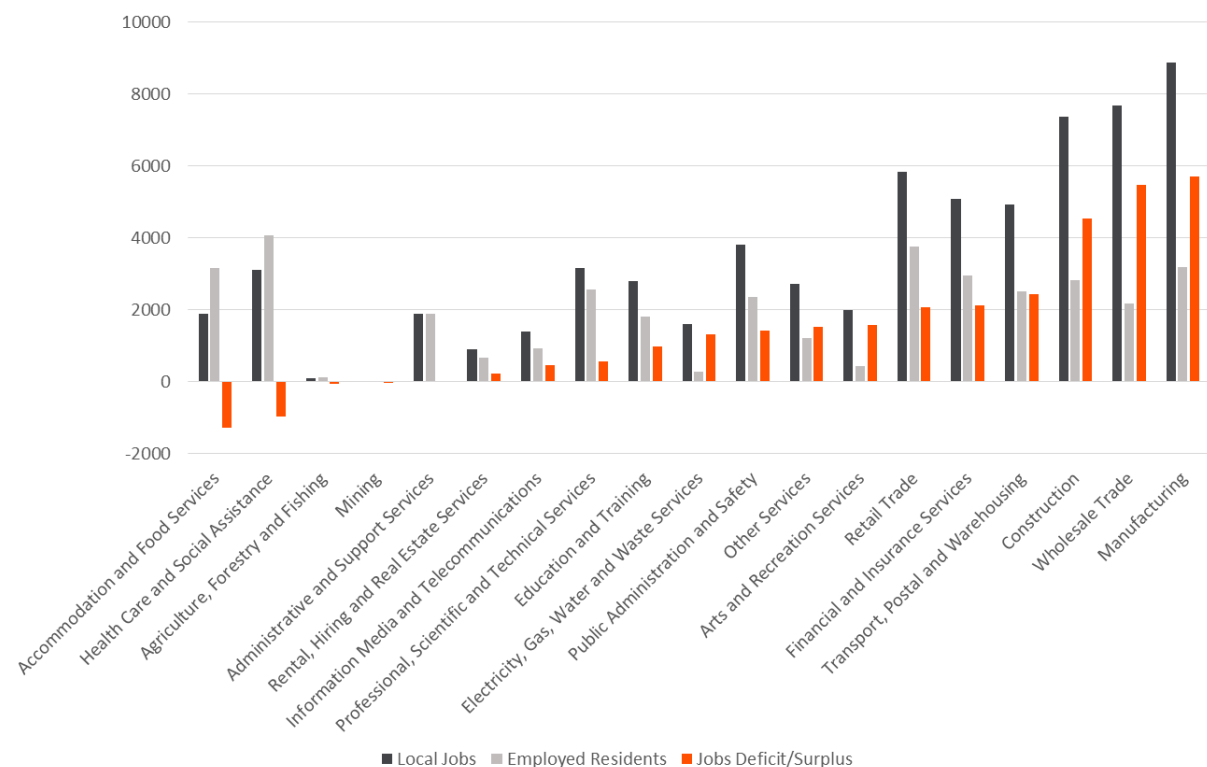
3.4.1 Auburn

Auburn is one of only two LGAs to have a job surplus with 28,167 more local jobs than employed residents. The largest surplus is in the Manufacturing industry which generates 5,693 more jobs than employed residents. The industry with the highest job to residents' ratio is Electricity, Gas, Water and Waste Services where there are 586 local jobs for every 100 residents working in the industry.

Accommodation and Food Services is the largest of only four industries with job deficits (-1,270). Most industries in Auburn experience job surpluses and those with the largest surpluses are:

- ▣ Manufacturing (+5,693)
- ▣ Wholesale Trade (+5,477)
- ▣ Construction (+4,537)

Figure 6: Auburn local jobs and employed residents by industry - 2015



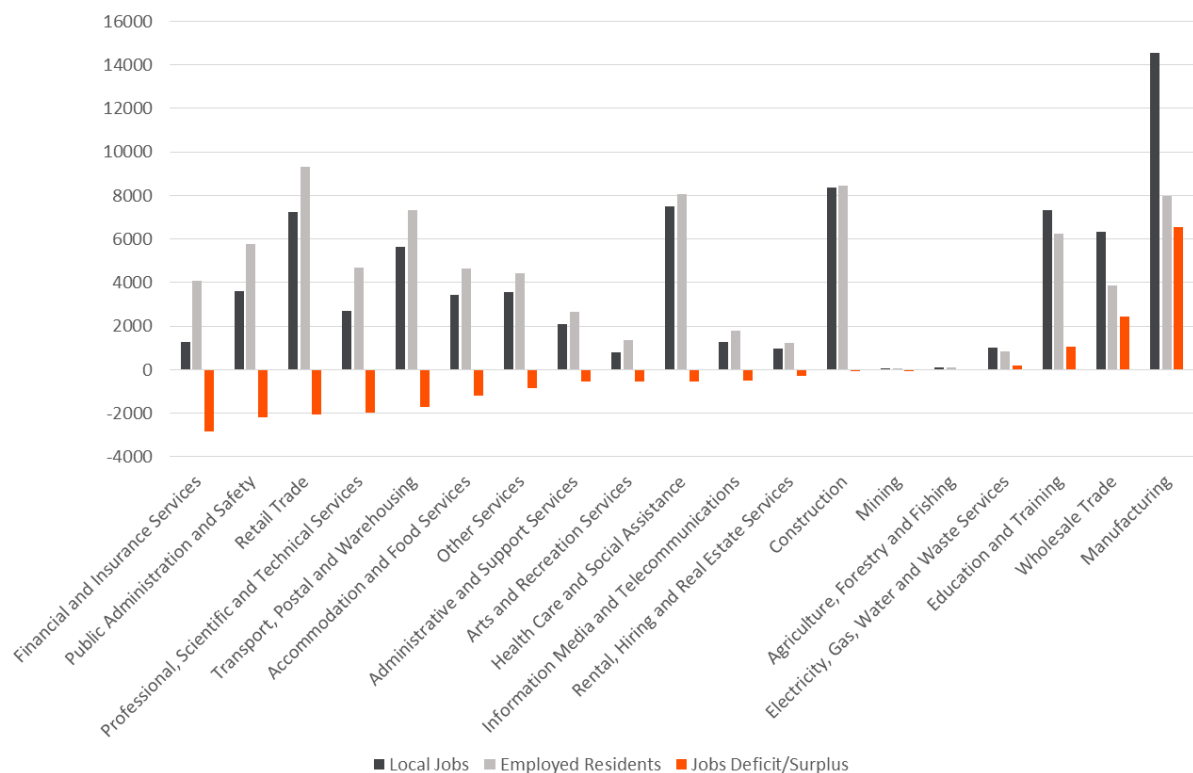
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3.4.2 Bankstown

Bankstown has a relatively small jobs deficit with only 5,106 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 2,835 less jobs than employed residents. It also has one of the lowest job to residents' ratio with only 31 local jobs for every 100 residents working in the industry. Manufacturing is the industry with the largest job surplus (+6,568). Two-thirds of industries in Bankstown experience job deficits and those with the largest deficits are:

- Financial and Insurance Services (-2,835)
- Public Administration and Safety (-2,166)
- Retail Trade (-2,058)

Figure 7: Bankstown local jobs and employed residents by industry - 2015



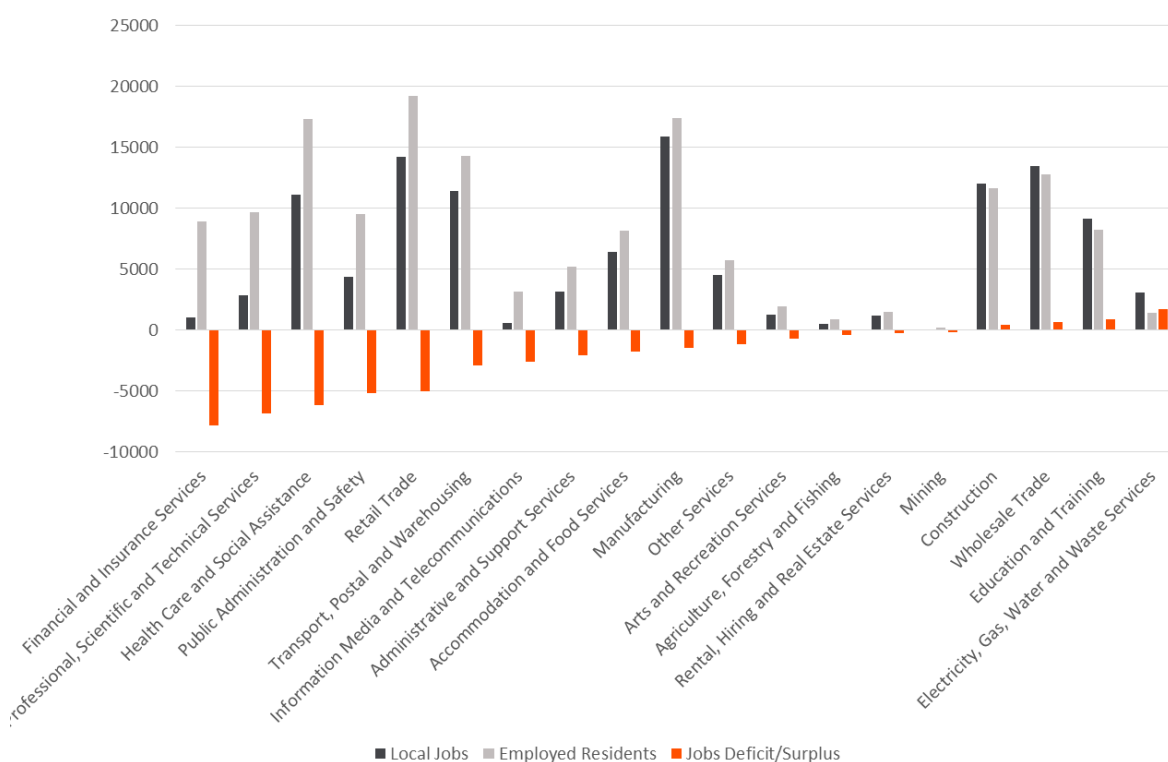
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3.4.3 Blacktown

Blacktown has the largest jobs deficit out of all LGAs generating 40,641 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 7,840 less jobs than employed residents. It also has the lowest job to residents' ratio with only 12 local jobs for every 100 residents working in the industry. Electricity, Gas, Water and Waste Services is the industry with the largest job surplus (+1,707). Most industries in Blacktown experience job deficits and those with the largest deficits are:

- Financial and Insurance Services (-7,840)
- Professional, Scientific and Technical Services (-6,811)
- Health Care and Social Assistance (-6,169)

Figure 8: Blacktown local jobs and employed residents by industry - 2015



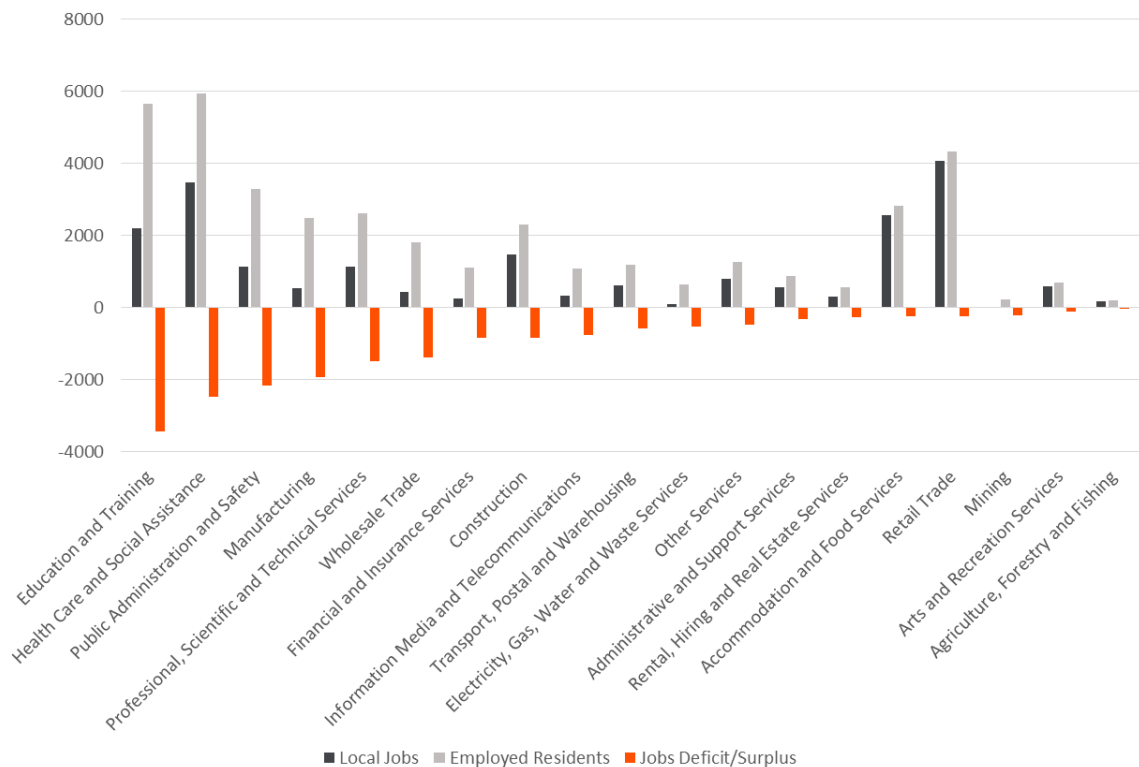
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3.4.4 Blue Mountains

Blue Mountains has a substantial jobs deficit, generating 18,289 less local jobs than employed residents. The largest deficit is in the Education and Training industry which generates 3,441 less jobs than employed residents. Electricity, Gas, Water and Waste Services has the lowest job to residents' ratio of note with only 16 local jobs for every 100 residents working in the industry. No industry in the Blue Mountains has job surplus and those with the largest deficits are:

- ▣ Education and Training (-3,441)
- ▣ Health Care and Social Assistance (-2,467)
- ▣ Public Administration and Safety (-2,156)

Figure 9: Blue Mountains local jobs and employed residents by industry - 2015



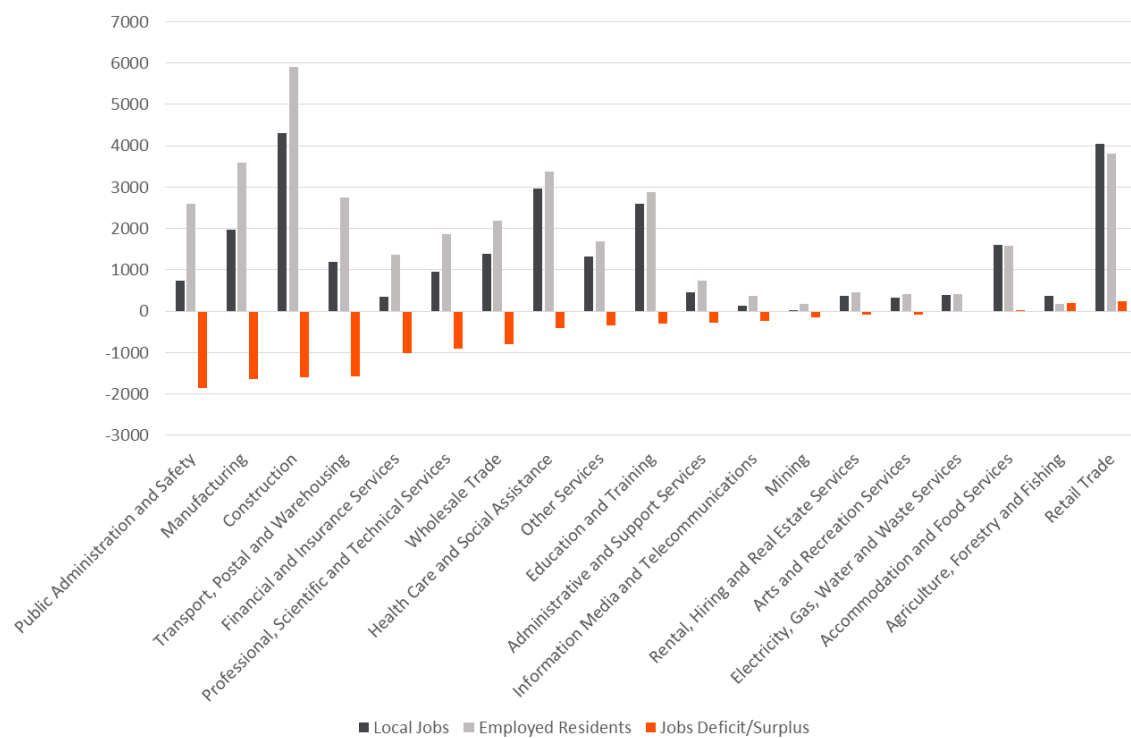
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3.4.5 Camden

Camden has a substantial jobs deficit, generating 10,826 less local jobs than employed residents. The largest deficit is in the Public Administration and Safety industry which generates 1,860 less jobs than employed residents. Financial and Insurance Services has the lowest job to residents' ratio of note with only 25 local jobs for every 100 residents working in the industry. Retail Trade is the industry with the largest job surplus (+238). Most industries in Camden experience job deficits and those with the largest deficits are:

- ↓ Public Administration and Safety (-1,860)
- ↓ Manufacturing (-1,636)
- ↓ Construction (-1,588)

Figure 10: Camden local jobs and employed residents by industry - 2015



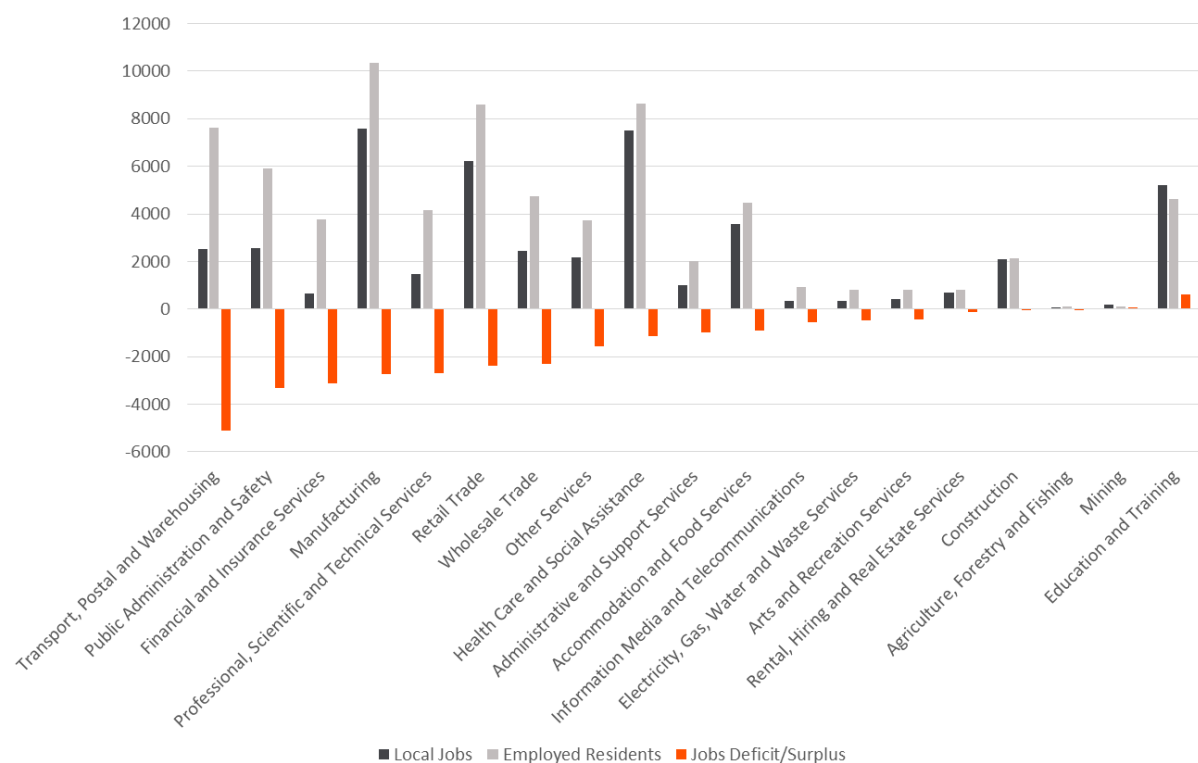
Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

3.4.6 Campbelltown

Campbelltown has a substantial jobs deficit, generating 27,156 less local jobs than employed residents. The largest deficit is in the Transport, Postal and Warehousing industry which generates 5,097 less jobs than employed residents. Financial and Insurance Services has the lowest job to residents' ratio of note with only 18 local jobs for every 100 residents working in the industry. Education and Training is the industry with the largest job surplus (+601). Most industries in Campbelltown experience job deficits and those with the largest deficits are:

- ▮ Transport, Postal and Warehousing (-5,097)
- ▮ Public Administration and Safety (-3,328)
- ▮ Financial and Insurance Services (-3,109)

Figure 11: Campbelltown local jobs and employed residents by industry - 2015



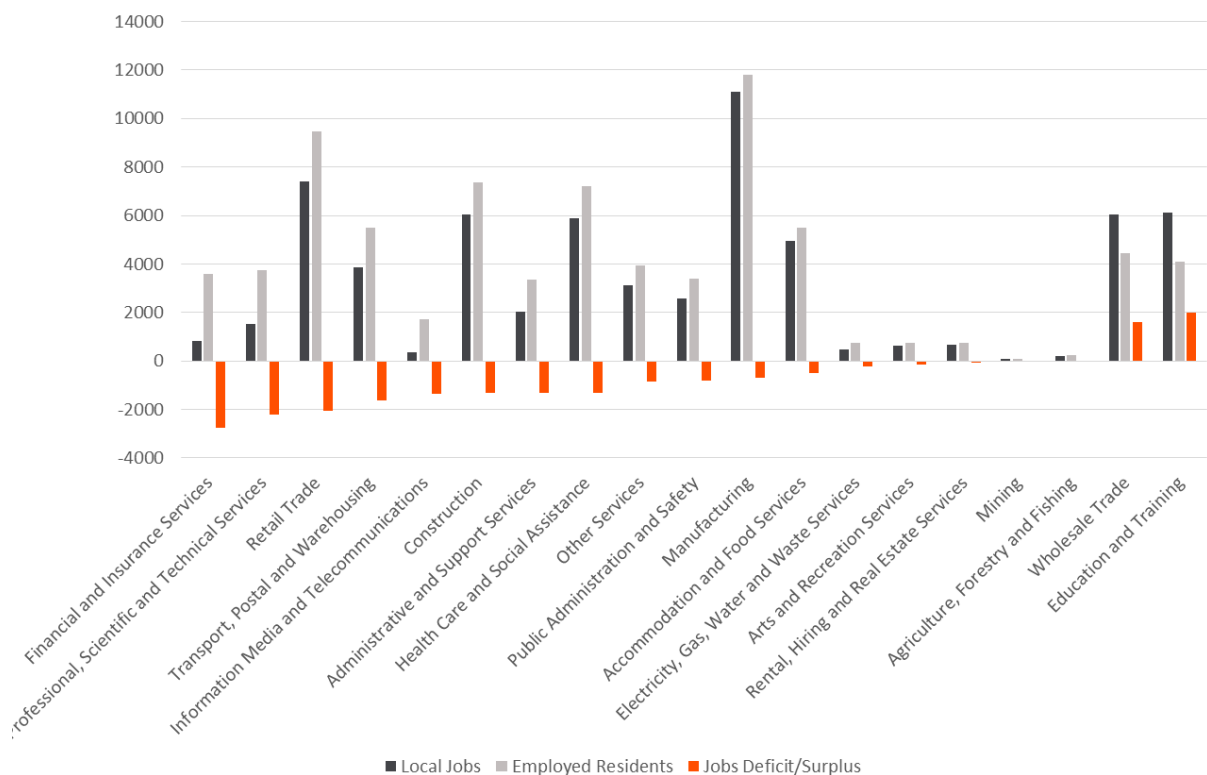
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3.4.7 Fairfield

Fairfield has a substantial jobs deficit, generating 13,739 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 2,757 less jobs than employed residents. Information Media and Telecommunications has the lowest job to residents' ratio with only 20 local jobs for every 100 residents working in the industry. Education and Training is the industry with the largest job surplus (+2,001). Most industries in Fairfield experience job deficits and those with the largest deficits are:

- Financial and Insurance Services (-2,757)
- Professional, Scientific and Technical Services (-2,205)
- Retail Trade (-2,048)

Figure 12: Fairfield local jobs and employed residents by industry - 2015



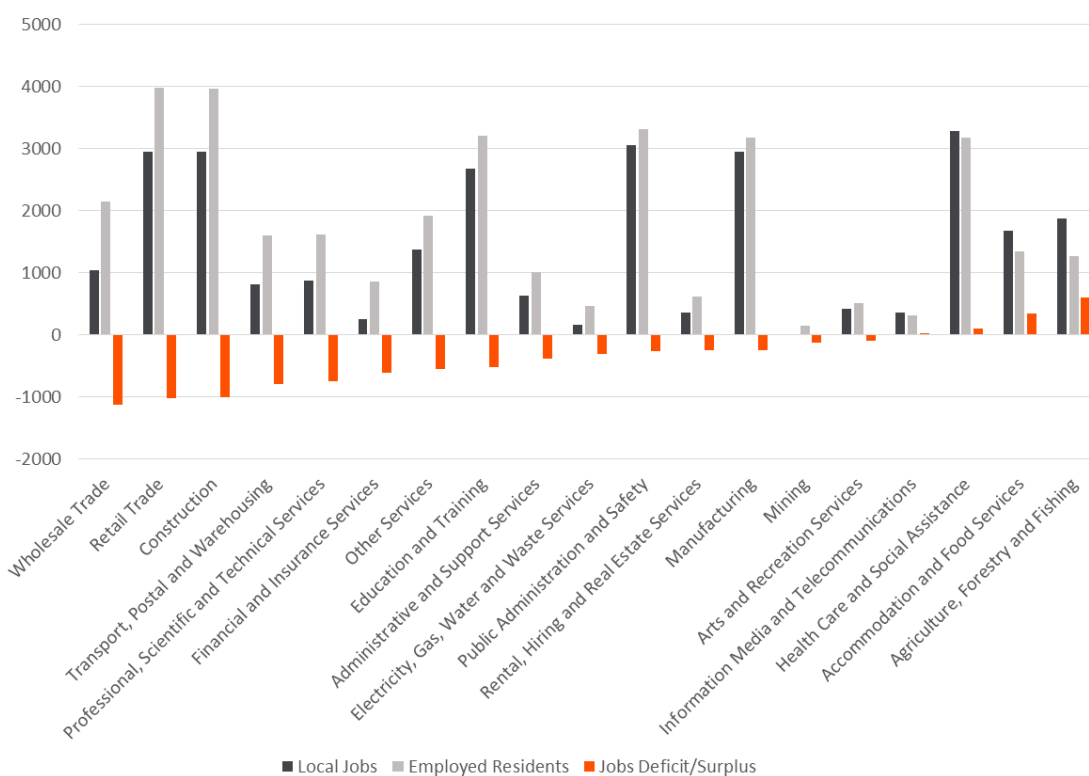
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3.4.8 Hawkesbury

Hawkesbury has a small jobs deficit, generating 6,923 less local jobs than employed residents. The largest deficit is in the Wholesale Trade industry which generates 1,116 less jobs than employed residents. Financial and Insurance Services has the lowest job to residents' ratio of note with only 30 local jobs for every 100 residents working in the industry. Agriculture, Forestry and Fishing is the industry with the largest job surplus (+599). Most industries in Hawkesbury experience job deficits and those with the largest deficits are:

- ↓ Wholesale Trade (-1,116)
- ↓ Retail Trade (-1,024)
- ↓ Construction (-1,005)

Figure 13: Hawkesbury local jobs and employed residents by industry - 2015



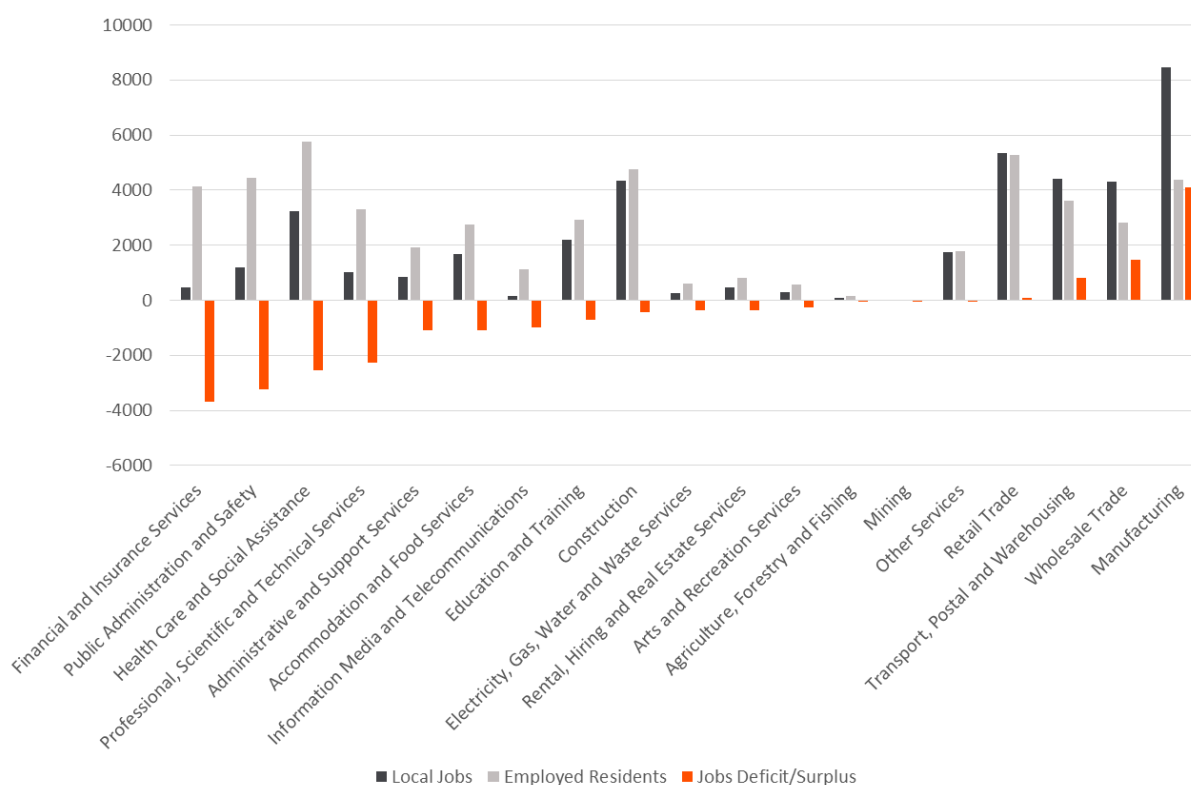
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3.4.9 Holroyd

Holroyd has a large jobs deficit, generating 10,692 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 3,693 less jobs than employed residents. It also has the lowest job to residents' ratio of note with only 11 local jobs for every 100 residents working in the industry. Manufacturing is the industry with the largest job surplus (+4,085). Most industries in Holroyd experience job deficits and those with the largest deficits are:

- ↓ Financial and Insurance Services (-3,693)
- ↓ Public Administration and Safety (-3,242)
- ↓ Health Care and Social Assistance (-2,543)

Figure 14: Holroyd local jobs and employed residents by industry - 2015



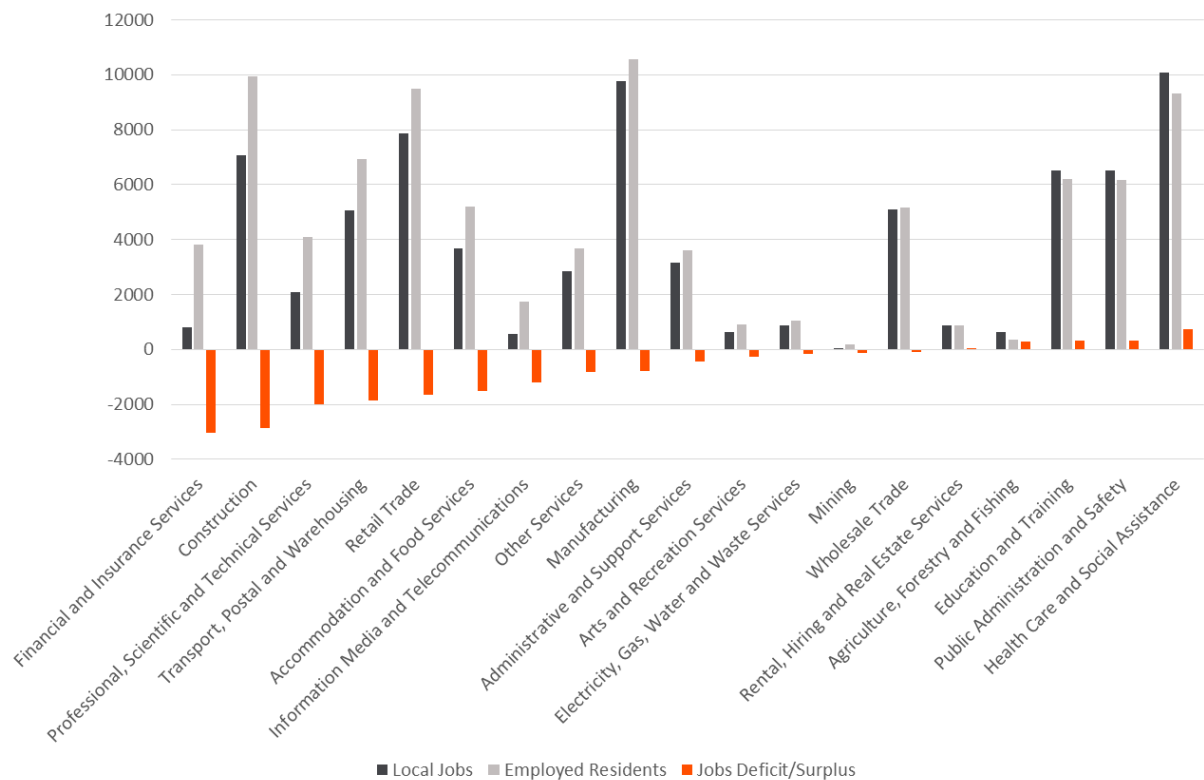
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3.4.10 Liverpool

Liverpool has a substantial jobs deficit, generating 15,057 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 3,024 less jobs than employed residents. It also has the lowest job to residents' ratio of note with only 21 local jobs for every 100 residents working in the industry. Health Care and Social Assistance is the industry with the largest job surplus (+748). Most industries in Liverpool experience job deficits and those with the largest deficits are:

- Financial and Insurance Services (-3,024)
- Construction (-2,863)
- Professional, Scientific and Technical Services (-2,863)

Figure 15: Liverpool local jobs and employed residents by industry - 2015



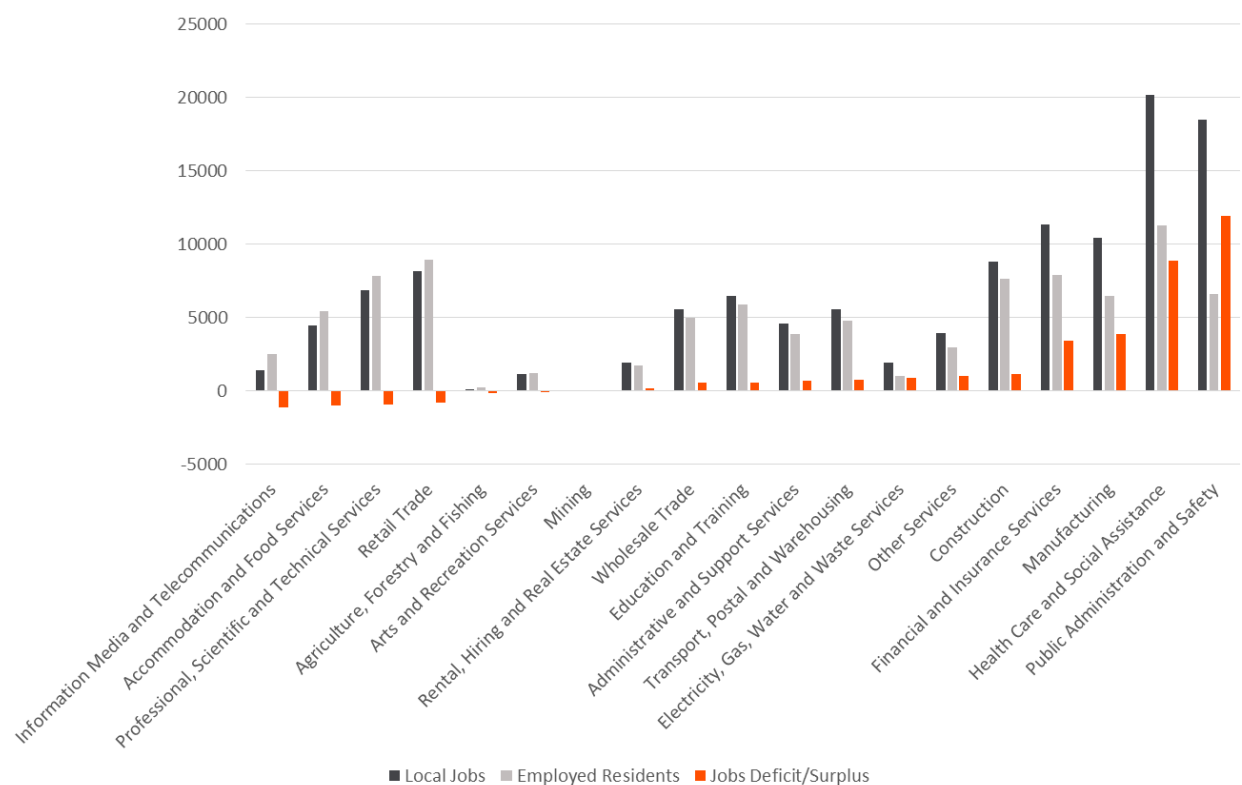
Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

3.4.11 Parramatta

Parramatta actually has a substantial jobs surplus, generating 30,126 more local jobs than employed residents. The largest surplus is in the Public Administration and Safety industry which generates 11,910 more jobs than employed residents. It also has the highest job to residents' ratio of note with 281 local jobs for every 100 residents working in the industry. Information Media and Telecommunications is the industry with the largest job deficit (-1,133). Two-thirds of all industries in Parramatta experience job surpluses and those with the largest surpluses are:

- ▣ Public Administration and Safety (+11,910)
- ▣ Health Care and Social Assistance (+8,881)
- ▣ Manufacturing (+3,910)

Figure 16: Parramatta local jobs and employed residents by industry - 2015



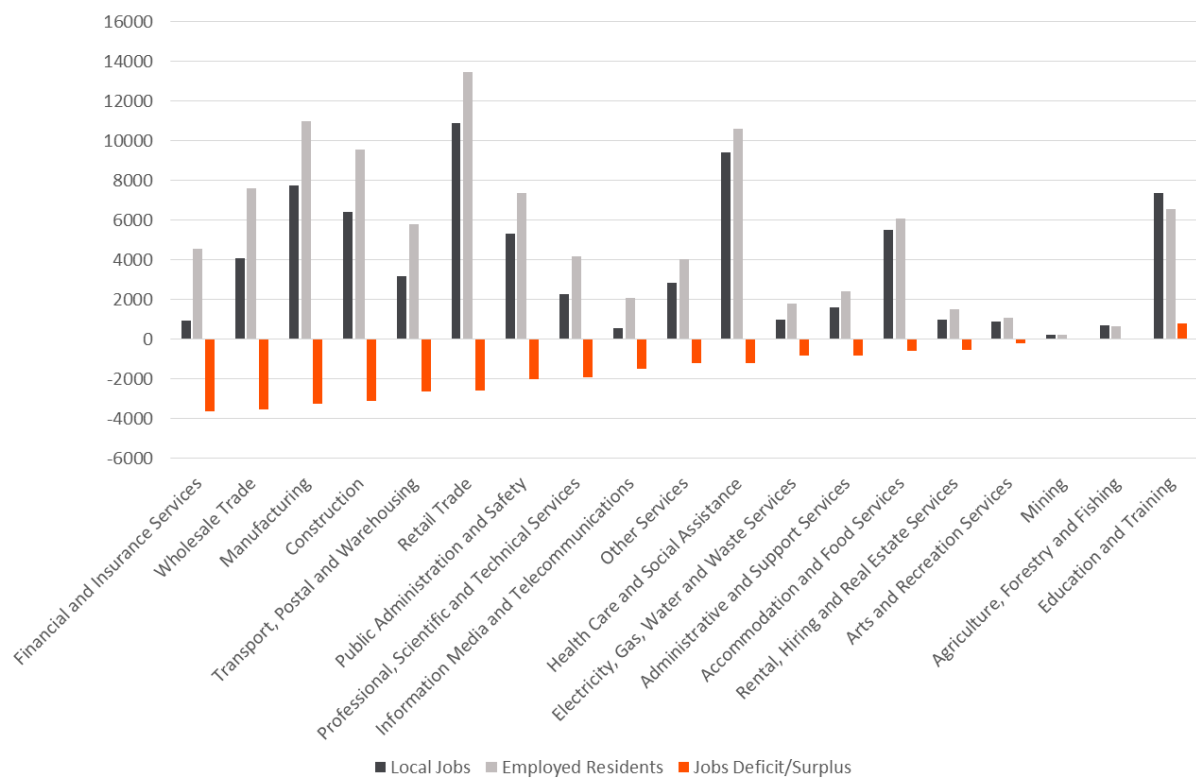
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3.4.12 Penrith

Penrith has the second largest jobs deficit out of all LGAs, generating 28,610 less local jobs than employed residents. The largest deficit is in the Financial and Insurance Services industry which generates 3,610 less jobs than employed residents. It also has the lowest job to residents' ratio of note with 21 local jobs for every 100 residents working in the industry. Education and Training is the industry with the largest job surplus (+796). Most industries in Penrith experience job deficits and those with the largest deficits are:

- ↓ Financial and Insurance Services (-3,610)
- ↓ Wholesale Trade (-3,550)
- ↓ Manufacturing (-3,227)

Figure 17: Penrith local jobs and employed residents by industry - 2015



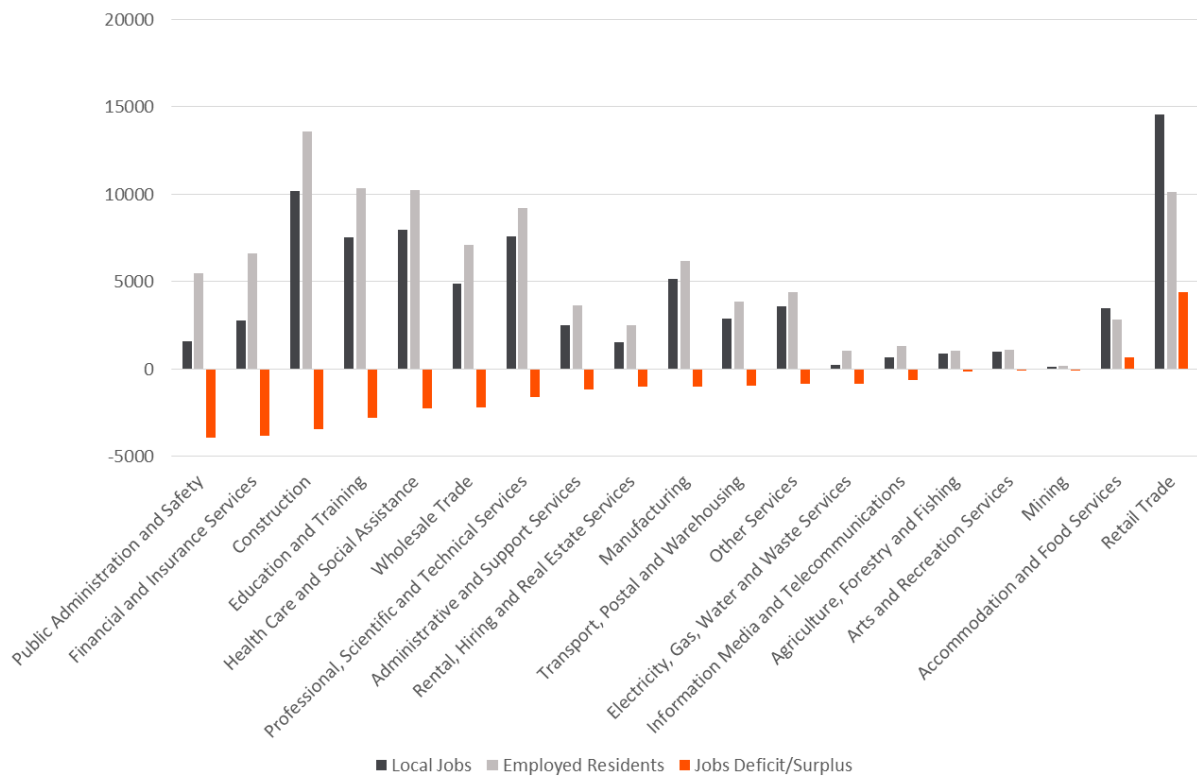
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3.4.13 The Hills Shire

The Hills Shire has a substantial jobs deficit, generating 21,668 less local jobs than employed residents. The largest deficit is in the Public Administration and Safety industry which generates 3,928 less jobs than employed residents. Electricity, Gas, Water and Waste Services has the lowest job to residents' ratio of note with 22 local jobs for every 100 residents working in the industry. Retail Trade is the industry with the largest job surplus (+4,382). Most industries in The Hills Shire experience job deficits and those with the largest deficits are:

- ▣ Public Administration and Safety (-3,928)
- ▣ Financial and Insurance Services (-3,800)
- ▣ Construction (-3,423)

Figure 18: The Hills Shire local jobs and employed residents by industry - 2015



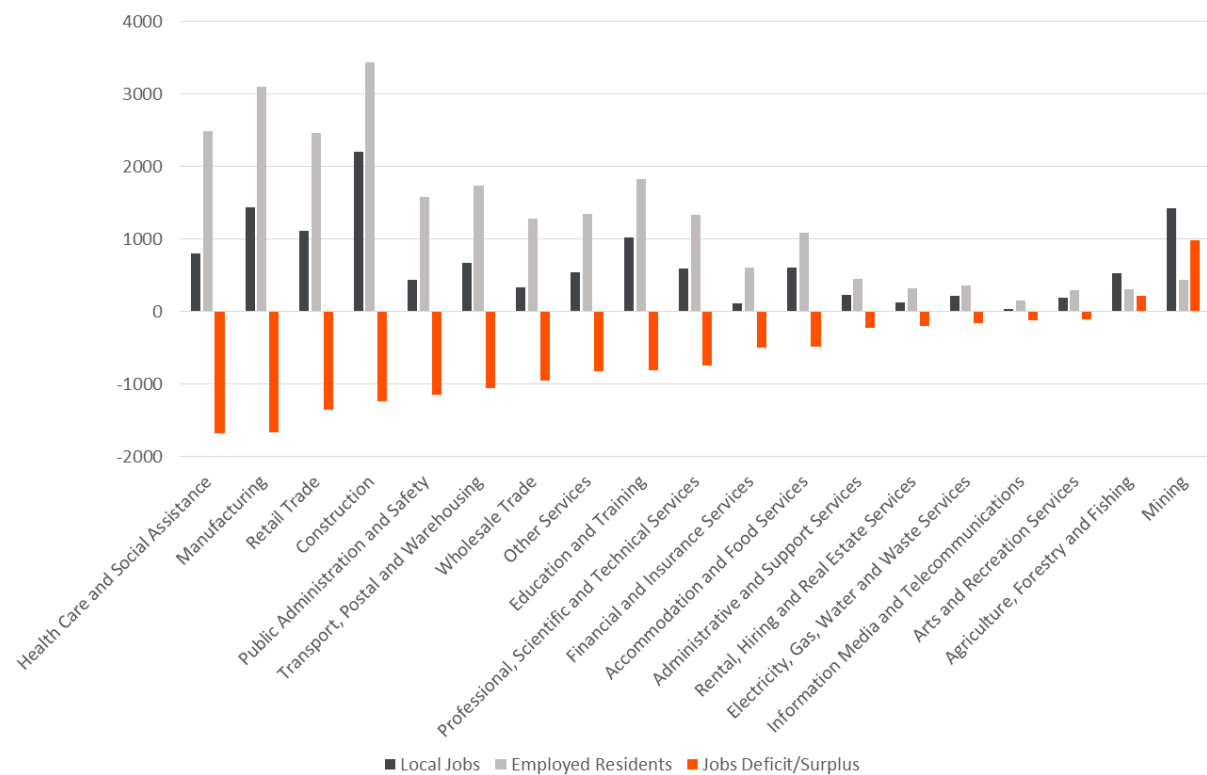
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3.4.14 Wollondilly

Wollondilly has a substantial jobs deficit, generating 11,995 less local jobs than employed residents. The largest deficit is in the Health Care and Social Assistance industry which generates 1,681 less jobs than employed residents. Financial and Insurance Services has the lowest job to residents' ratio of note with 19 local jobs for every 100 residents working in the industry. Mining is the industry with the largest job surplus (+984). Most industries in Wollondilly experience job deficits and those with the largest deficits are:

- ▮ Health Care and Social Assistance (-1,681)
- ▮ Manufacturing (-1,669)
- ▮ Retail Trade (-1,346)

Figure 19: Wollondilly local jobs and employed residents by industry - 2015



Source: National Institute of Economic and Industry Research (NIEIR) ©2016. Compiled and presented by .id, the population experts

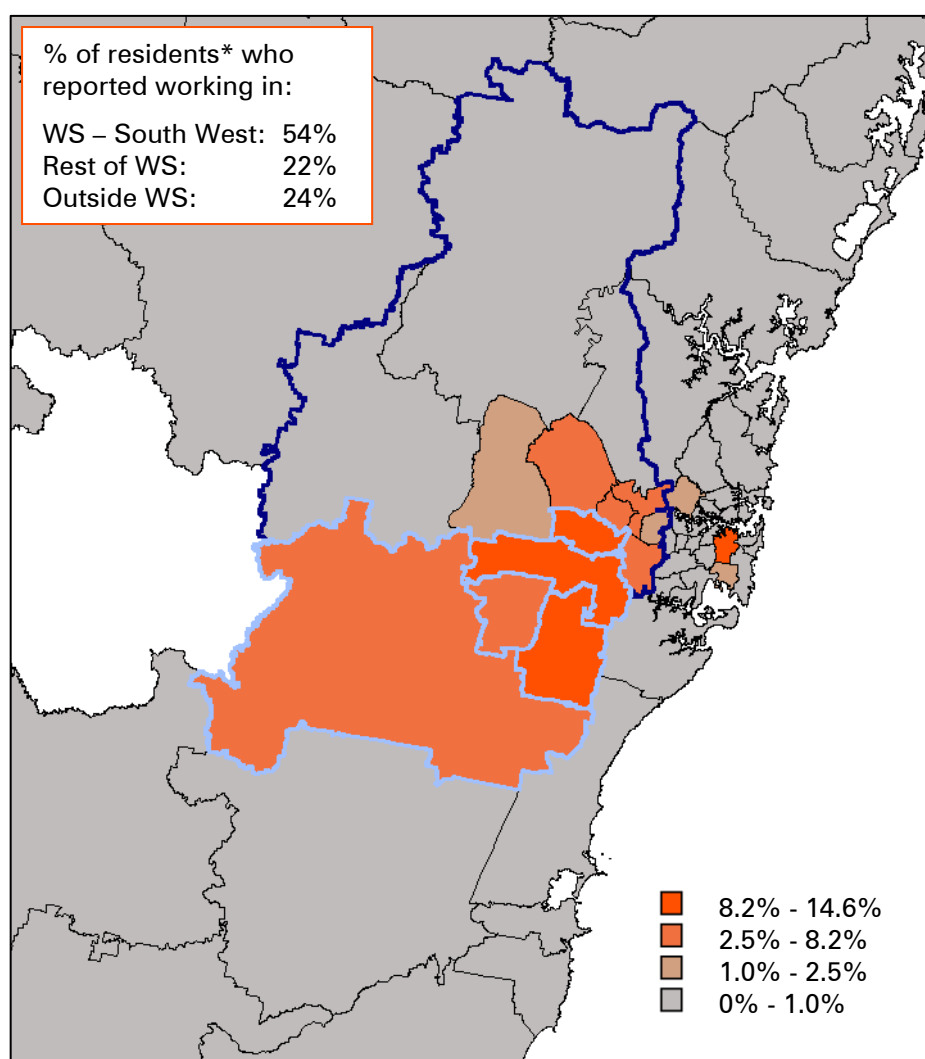
4. Where do they work?

An analysis of job deficits or surpluses within industries gives an indication of the weight of numbers of residents commuting every day but it does not provide an indication of where they are going. To do this we need to look at journey to work figures which are generated by the ABS Census. These figures generally include an under representation of actual movements as many employed residents do not report their place of work or work in multiple locations. However, they still provide a good indication of whether workers are commuting to a number of key locations or are dispersed across broad locations in the Greater Sydney area.

4.1 WS – South West

Inter-regional commuting

At a whole of industry level, most WS – South West resident workers work within the Western Sydney region (76.4% of residents who stated a place of work in 2011). While 8.2% of residents commuted to the Sydney LGA every day, 4 out of the top 5 non WS – South West commuting destinations were in the neighbouring WS – West Central sub-region.

Figure 20: Employment location of WS – South West residents - 2011

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts.

*Percentages relate to proportion of employed residents who reported a fixed employment location

Table 4: Top 10 reported destinations for WS - South West residents - 2011

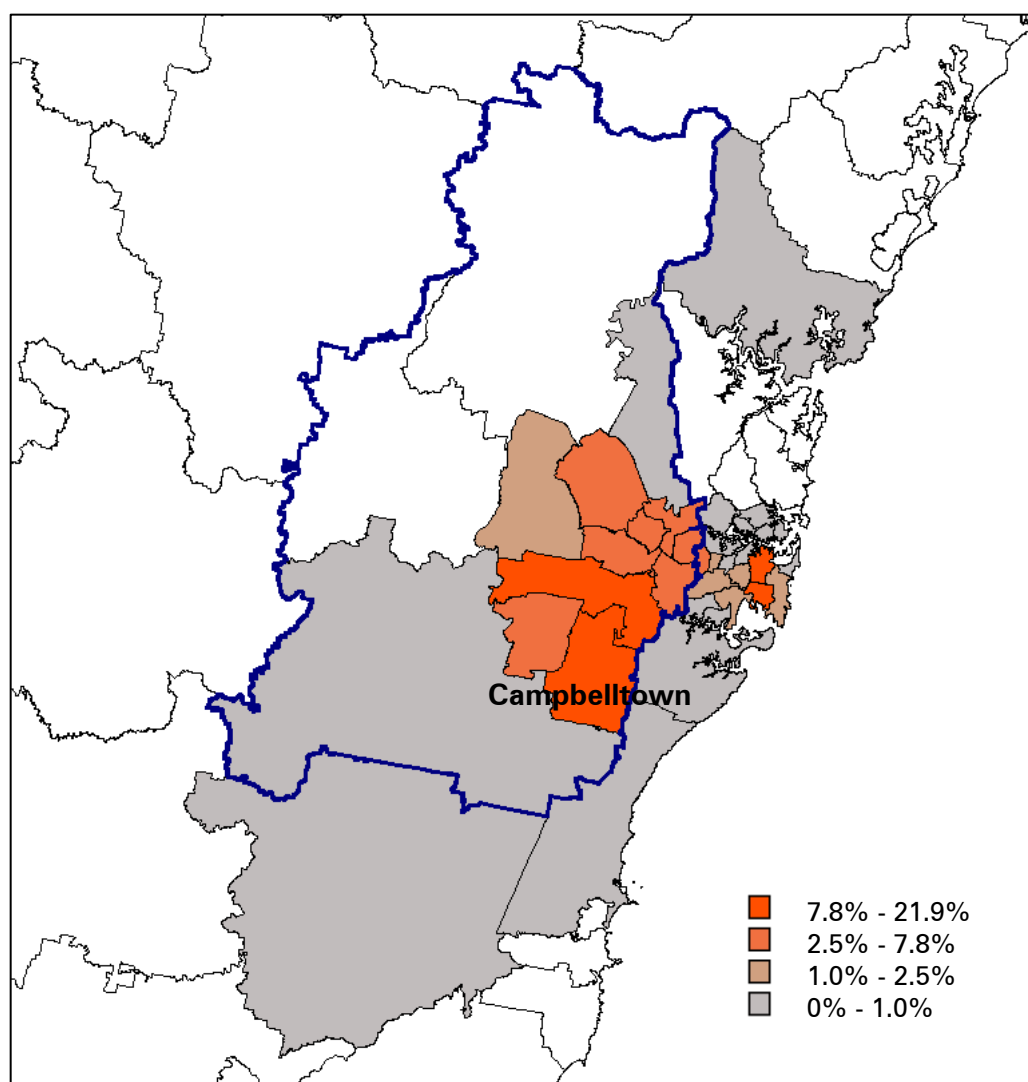
LGA Name	% of resident workers
Liverpool (C)	14.6%
Campbelltown (C)	13.2%
Fairfield (C)	11.2%
Sydney (C)	8.2%
Camden (A)	5.9%
Bankstown (C)	5.0%
Parramatta (C)	4.1%
Blacktown (C)	3.0%
Wollondilly (A)	2.9%
Holroyd (C)	2.6%

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts.

Geographic spread

For some industries in the sub-region, commuters travel to various locations across greater Sydney working in multiple industry hubs. For example, if we look at the industry of Transport, Postal and Warehousing in Campbelltown, which has the highest job deficit in the region, Sydney and Botany Bay are the largest two destinations for workers outside the LGA. However, WS LGAs make up 7 of the top 10 destinations outside the Campbelltown LGA, and the total proportion of workers in the industry commuting out of the LGA is relatively equally split between WS region LGAs (destination for 52% of workers) and non WS LGAs (48%).

Figure 21: Employment location of Campbelltown residents working in the Transport, Postal and Warehousing industry - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Table 5: Top 10 reported destinations for Campbelltown residents working in the Transport, Postal and Warehousing industry - 2011

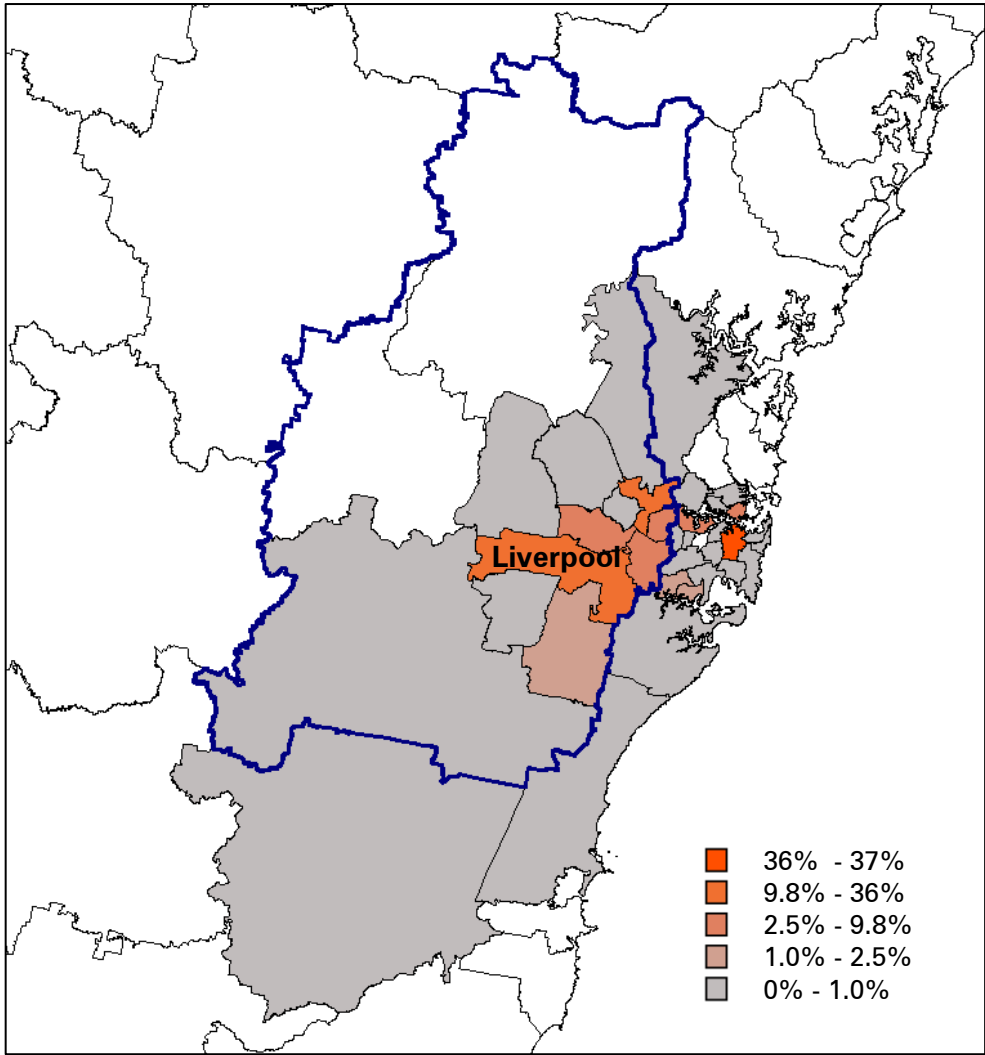
LGA Name	% of resident workers
Campbelltown (C)	21.9%
Sydney (C)	9.5%
Botany Bay (C)	8.8%
Liverpool (C)	7.8%
Bankstown (C)	4.7%
Blacktown (C)	4.5%
Holroyd (C)	3.1%
Fairfield (C)	3.1%
Auburn (C)	3.0%
Camden (A)	2.8%

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Sydney CBD Commute

For some industries the direction of commute is largely targeted towards the CBD and inner Sydney. For example, almost 37% of Liverpool residents working in the Financial and Insurance Services industry work in the LGA of Sydney reflecting the clustering of high value finance jobs in the CBD. Parramatta is also a centre of employment for workers in this industry and will likely increase in importance with the forecast growth of development in the Parramatta CBD.

Figure 22: Employment location of Liverpool residents working in the Financial and Insurance Services industry - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Table 6: Top 10 reported destinations for Liverpool residents working in the Financial and Insurance Services industry - 2011

LGA Name	% of resident workers
Sydney (C)	36.62%
Parramatta (C)	14.05%
Liverpool (C)	9.80%
Auburn (C)	4.86%
Canada Bay (A)	4.60%
Bankstown (C)	3.53%
Fairfield (C)	3.01%
Hurstville (C)	1.71%
Kogarah (C)	1.71%
Campbelltown (C)	1.16%

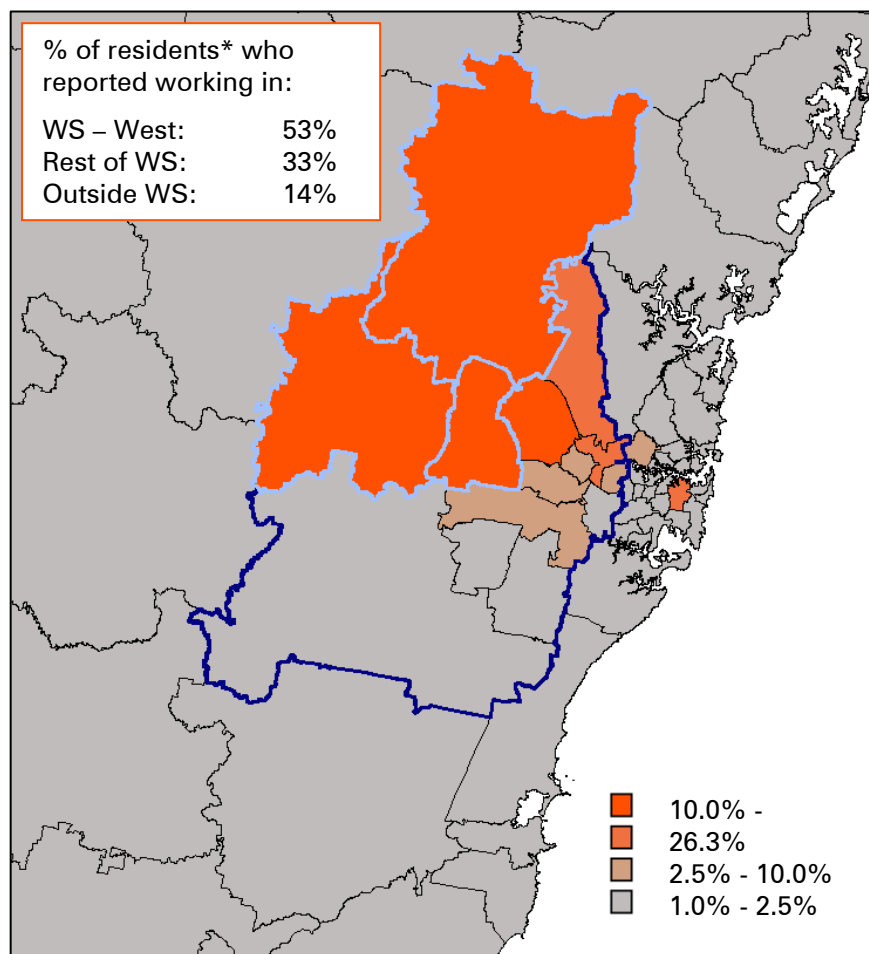
Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

4.2 WS – West

Self-contained in the north-west

At a whole of industry level, the WS – West sub-region is relatively self-contained when compared to other sub-regions with 86% of resident workers (who stated a place of work in 2011) commuting within the Western Sydney region, predominately in WS - West Central LGAs. The Sydney LGA was the highest reported non-WS location of work, but only 5.4% of residents reported commuting there every day.

Figure 23: Employment location of WS – West residents - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts.

*Percentages relate to proportion of employed residents who reported a fixed employment location.

Table 7: Top 10 reported destinations for WS - West residents - 2011

LGA Name	% of resident workers
Penrith (C)	26.30%
Blacktown (C)	11.18%

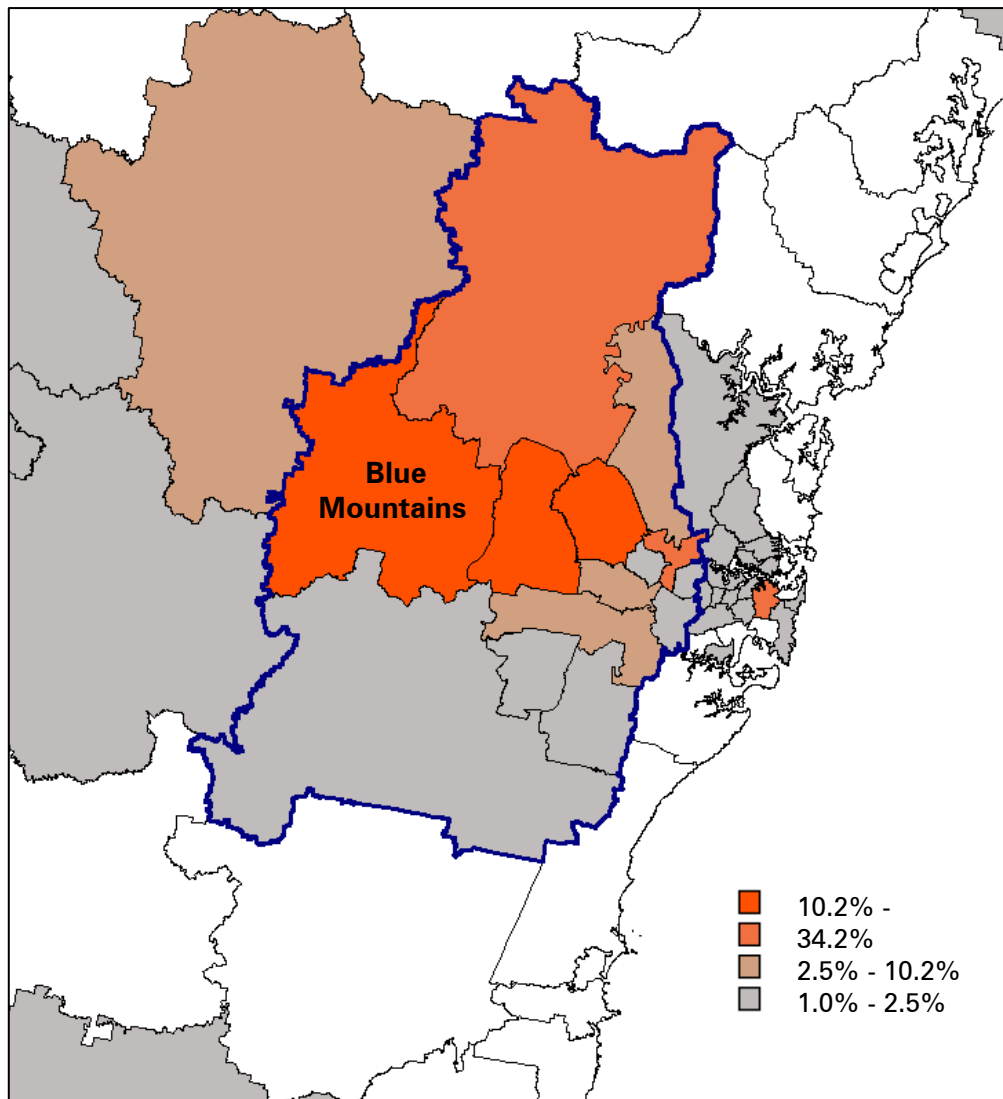
Hawkesbury (C)	11.00%
Blue Mountains (C)	10.27%
Parramatta (C)	5.82%
Sydney (C)	5.14%
The Hills Shire (A)	2.89%
Fairfield (C)	2.23%
Auburn (C)	2.10%
Holroyd (C)	1.88%

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Central corridor commute

The Education and Training industry in Blue Mountains was one of the industries with the highest job deficit in the WS – West sub-region. The journey to work movements for this industry displays a pattern of workers commuting along the central road and rail transport corridors into neighbouring LGAs of Penrith and Blacktown. Almost 5% of residents also reported travelling over an hour each day into central Sydney to work.

Figure 24: Employment location of Blue Mountain residents working in the Education and Training industry - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Table 8: Top 10 reported destinations for Blue Mountain residents working in the Education and Training industry - 2011

LGA Name	% of resident workers
Blue Mountains (C)	34.15%
Penrith (C)	26.99%
Blacktown (C)	10.18%
Sydney (C)	4.85%
Hawkesbury (C)	3.37%
Parramatta (C)	2.71%
Lithgow (C)	1.77%
Liverpool (C)	1.29%
Fairfield (C)	1.16%
The Hills Shire (A)	1.06%

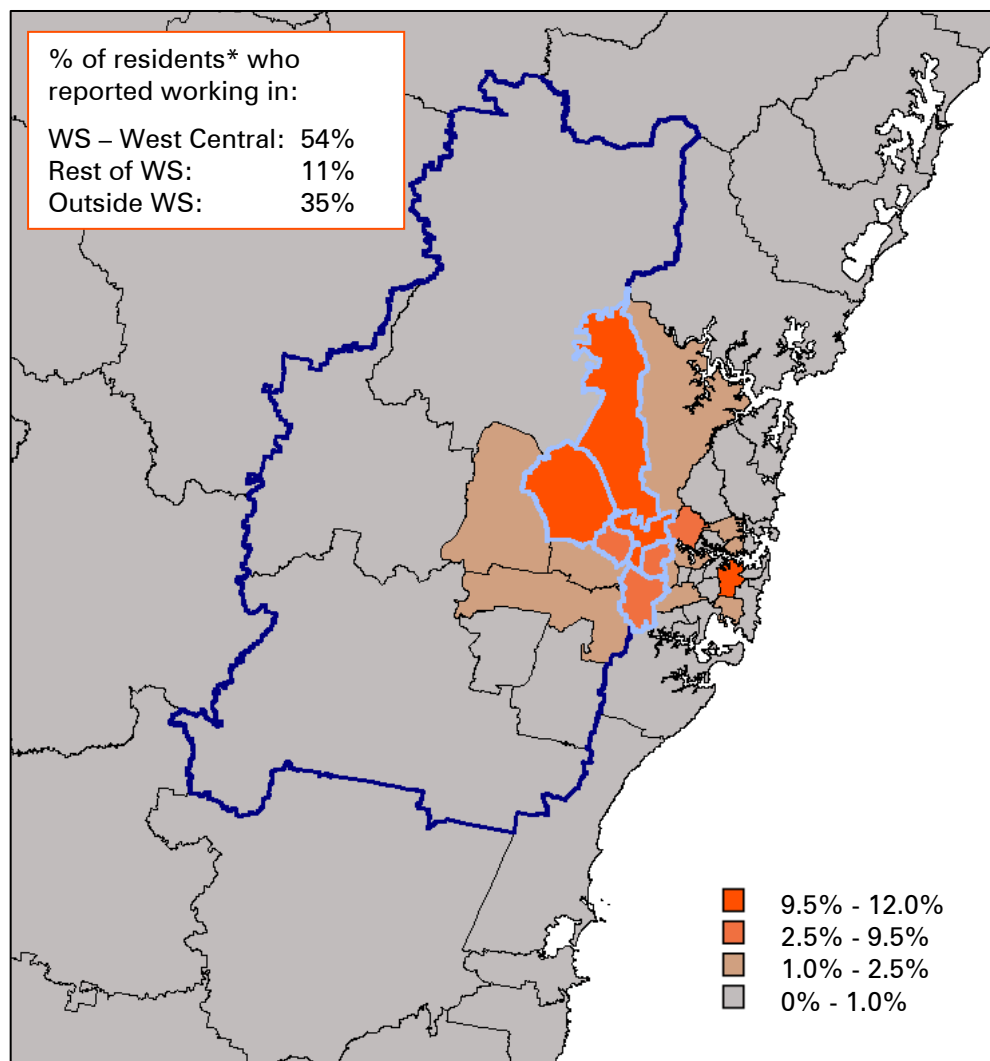
Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

4.3 WS – West Central

Central corridor commute

At a whole of industry level, WS – West Central is the least self-contained sub-region with only 64.6% of resident workers (who stated a place of work in 2011) commuting within the Western Sydney region. More than 1 in 10 resident workers reported commuting to the Sydney LGA every day.

Figure 25: Employment location of WS – West Central residents - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts.

*Percentages relate to proportion of employed residents who reported a fixed employment location.

Table 9: Top 10 reported destinations for WS – West Central residents - 2011

LGA Name	% of resident workers
Blacktown (C)	11.96%
Parramatta (C)	11.81%
Sydney (C)	11.68%
The Hills Shire (A)	9.55%
Bankstown (C)	5.88%
Auburn (C)	4.87%
Ryde (C)	4.19%
Holroyd (C)	3.70%
Fairfield (C)	2.48%
Penrith (C)	2.13%

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

Dispersed across hubs

The Professional, Scientific and Technical Services industry in Blacktown was one of the industries with the highest job deficit in the WS – West Central sub-region. The largest proportion of workers commute into central Sydney each day, reflecting the density of high value professional employment opportunities in the CBD. However, there are also high proportions of workers travelling to other key employment locations within the WS region (The Hills Shire, Parramatta) and outside the region (North Sydney, Ryde). Over a third of employed residents in the industry, who reported a place of work in 2011, designated these four areas as their employment location.

Figure 26: Employment location of Blacktown residents working in Professional, Scientific and Technical Services - 2011

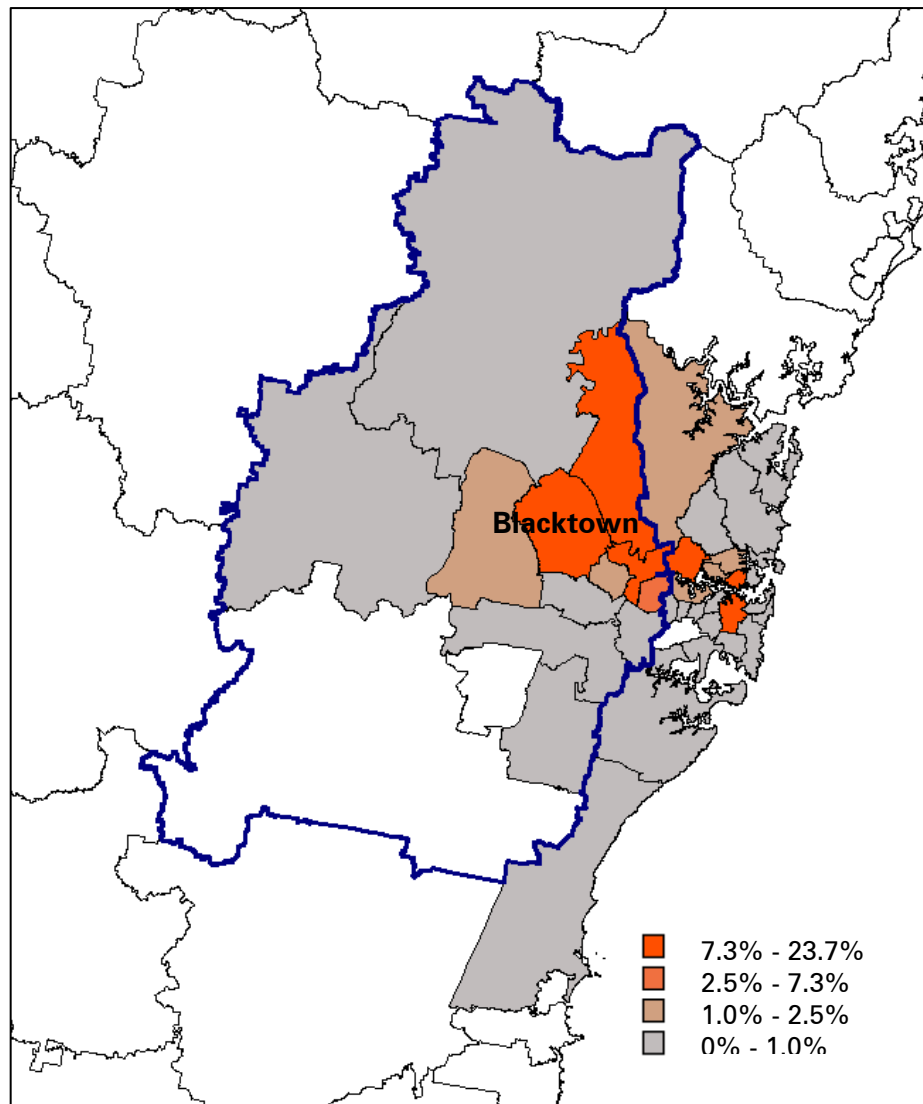


Table 10: Top 10 reported destinations for Blacktown residents working in Professional, Scientific and Technical Services - 2011

LGA Name	% of resident workers
Sydney (C)	23.69%
Blacktown (C)	18.36%
The Hills Shire (A)	9.53%
North Sydney (A)	7.73%
Parramatta (C)	7.69%
Ryde (C)	7.37%
Auburn (C)	2.51%
Willoughby (C)	2.12%
Penrith (C)	1.83%
Holroyd (C)	1.20%

Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

5. Proximity to train stations

.id has undertaken an analysis of the level of population in Western Sydney that live within walking distance (800m) to a train station. This analysis has been undertaken over two periods:

- ▣ Today – 2016
- ▣ Future – 2036

5.1 Methodology

The analysis that follows was based on three stages:

- ▣ Identify stations across Western Sydney and their 800m buffers
- ▣ Selection of geographic areas (SAFi areas) located within this buffer
- ▣ Population estimates in 2016 and forecasts to 2036

A summary of each stage is provided below.

5.1.1 Stations included in the analysis

The stations included in the analysis are listed in Appendix B. It is important to note that the 2016 analysis is based on existing stations, while the 2036 analysis includes the existing stations plus Sydney Metro Northwest stations. Parramatta Light rail is not included any calculation (2016 or 2036) due to the uncertainty of the final station locations.

5.1.2 GIS analysis

The GIS analysis was based on the train station layer sourced from PSMA Australia Limited. This layer was updated with locations of recently built stations at Leppington and Edmondson Park. Combined this was the base layer used for the 2016 analysis. Based on this layer, .id created 800m radial buffers for each station. A spatial selection analysis was then undertaken to identify the SAFi geographic areas that were within the 800 metre buffers.

A manual analysis was also conducted to ensure that SAFI area selections were not under or over-inclusive. This consisted of a manual LGA-by-LGA scan which made sure that areas which were only partially within the buffer are not included. It also made sure that large SAFI areas which may not be selected with the GIS spatial analysis BUT do have current or future growth anticipated within the 800m buffer area, are included. The SAFI 'residential development layer' assisted with identifying future growth areas. The 2016 residential addresses assisted with identifying current state/distribution of population within a SAFI area to assist with decision making when selecting/excluding a SAFI area from the results.

The same process was applied to the Sydney Metro Northwest stations to build the 2036 analysis layer.

5.1.3 Population forecasts

.id SAFi population forecasts are a key input into the accessibility analysis that follows. SAFi has been developed to provide unprecedented insight into the future of Australia's population – at both the macro and the micro level. These forecasts provide an expert and independent view of how the population will change between 2011 and 2036 at a very small geographic level (SA1 derived). They offer valuable insight into how the demand for products and services, which are targeted at specific age groups, will change. This level of detail is required in order to understand population change around stations to 2036.

Our approach to developing SAFi forecasts has been to combine both tops-down and bottoms-up modelling techniques. The tops-down model limits the total amount of population within the context of natural demographic limits. This means that all areas add up to Regional, State and National totals. The bottoms-up model takes into account changes occurring to housing supply at the local level, as well as relevant typologies of migration and area-specific birth, death and migration rates. A detailed methodology paper can also be provided upon request.

5.2 Summary of analysis

The analysis by LGA that follows is based on the recent amalgamation of a number of councils across NSW.

There is a large variance between LGAs in Western Sydney in terms of the proportion of residents who have reasonable access to train stations (includes train stations and some major bus interchanges that are located within the 800m of an existing/under construction station (e.g. Rouse Hill Town Centre).

Reflecting their role as economic and employment hubs, Canterbury-Bankstown and Cumberland 2016 have the highest proportion of residents living within 800m of train stations (both over 40%). However, some LGAs have less than 10% of residents who live in close proximity to train stations, including Camden where there are no existing facilities near population. For the region as a whole, 1 in 5 residents typically live within 800m of train stations.

In the next twenty years, there is estimated to be a small increase (+3 percentage points) in the proportion of Western Sydney residents living close to train stations. This is largely influenced by:

- ▣ 23 percentage point increase in The Hills Shire LGA due to the development of the Sydney Metro Northwest stations
- ▣ 7 percentage point increase in the LGA of Parramatta that likely reflects proposed higher density transit orientated development.

Four LGAs are forecast to experience falls in the percentage of serviced populations due to proposed residential development in areas not within 800m of existing or future train stations.

While the proportion of population being serviced by train stations will likely increase for most LGAs, the actual amount of people unserved will increase due to forecast population growth. This means over 560,000 extra people in the Western Sydney region will be unserved by train stations by 2036. Essentially, proposed train stations development and major PT orientated residential development is not forecast to keep pace with population growth.

Access to train stations has substantial ramifications for the level of commuting travel time and road congestion in urban areas. LGAs in Western Sydney have a higher proportion of car ownership than most inner Sydney LGAs (see Figure 29).

Table 11: LGA population proximity to train stations

LGA	2016	2036	Percentage point change (2016-36)	Change in number of unserved population 2016-2036
Canterbury-Bankstown	44%	46%	2%	29,591
Blacktown (C)	14%	17%	3%	89,346
Blue Mountains (C)	39%	39%	1%	2,227
Camden (A)	0%	1%	1%	125,896
Campbelltown (C)	15%	15%	0%	33,575
Fairfield (C)	22%	25%	3%	10,882
Hawkesbury (C)	11%	10%	0%	9,168
Liverpool (C)	9%	8%	-1%	87,078
Parramatta (C)	36%	43%	8%	63,677
Penrith (C)	8%	11%	4%	34,837
The Hills Shire (A)	0%	23%	23%	23,065
Wollondilly (A)	25%	18%	-7%	29,438
Cumberland	41%	46%	4%	21,758
WSROC TOTAL	23%	26%	3%	560,538

Source: SAFi Compiled and presented by .id, the population experts. Note estimates have been rounded.

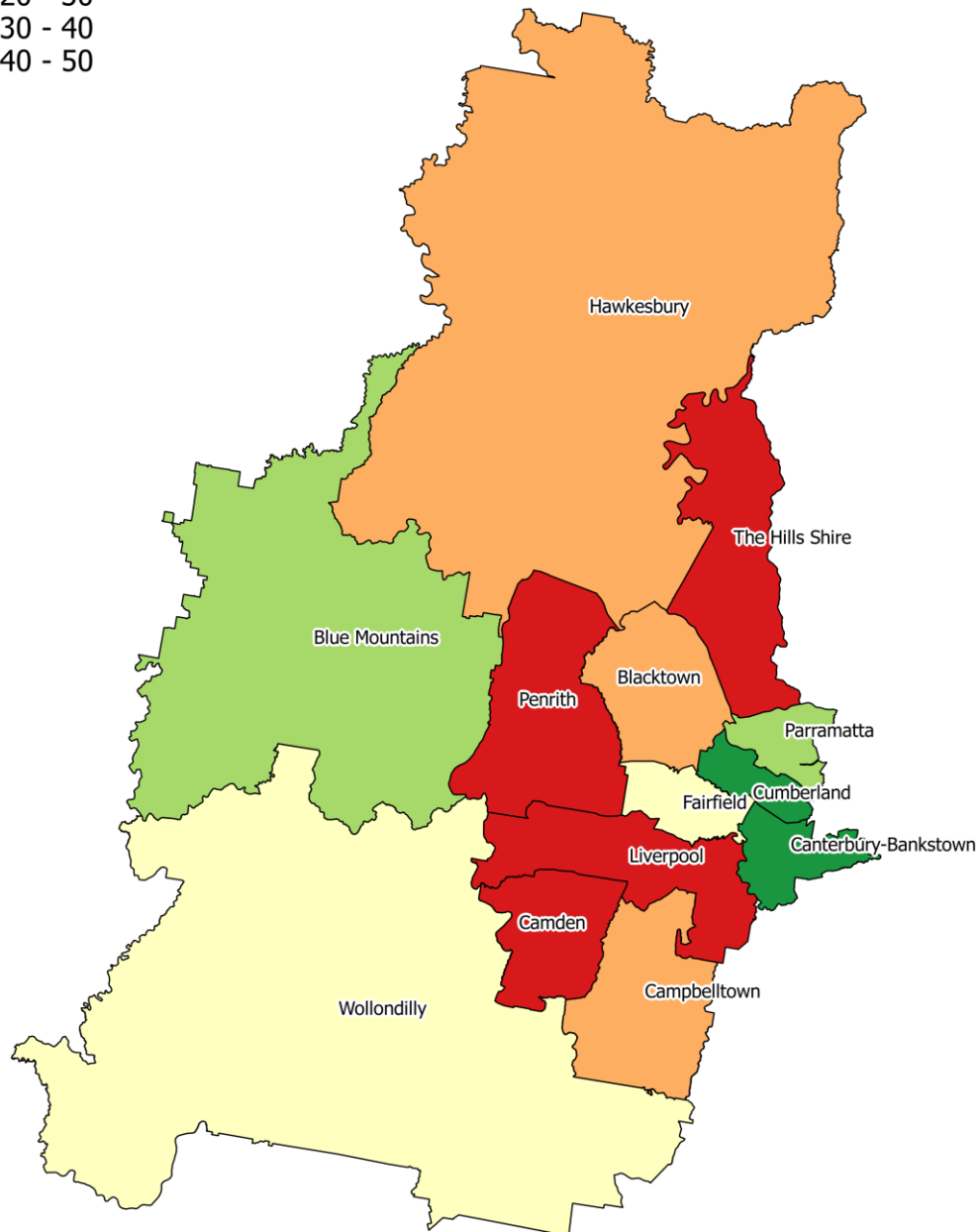
2016 analysis is based on existing stations. 2036 analysis include existing stations plus Sydney Metro Northwest stations currently under construction. The Parramatta Light Rail project is excluded from this analysis.

Figure 27: % of LGA population within 800m of train stations- 2016

Legend

% of LGA population within 800m of a train station

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50



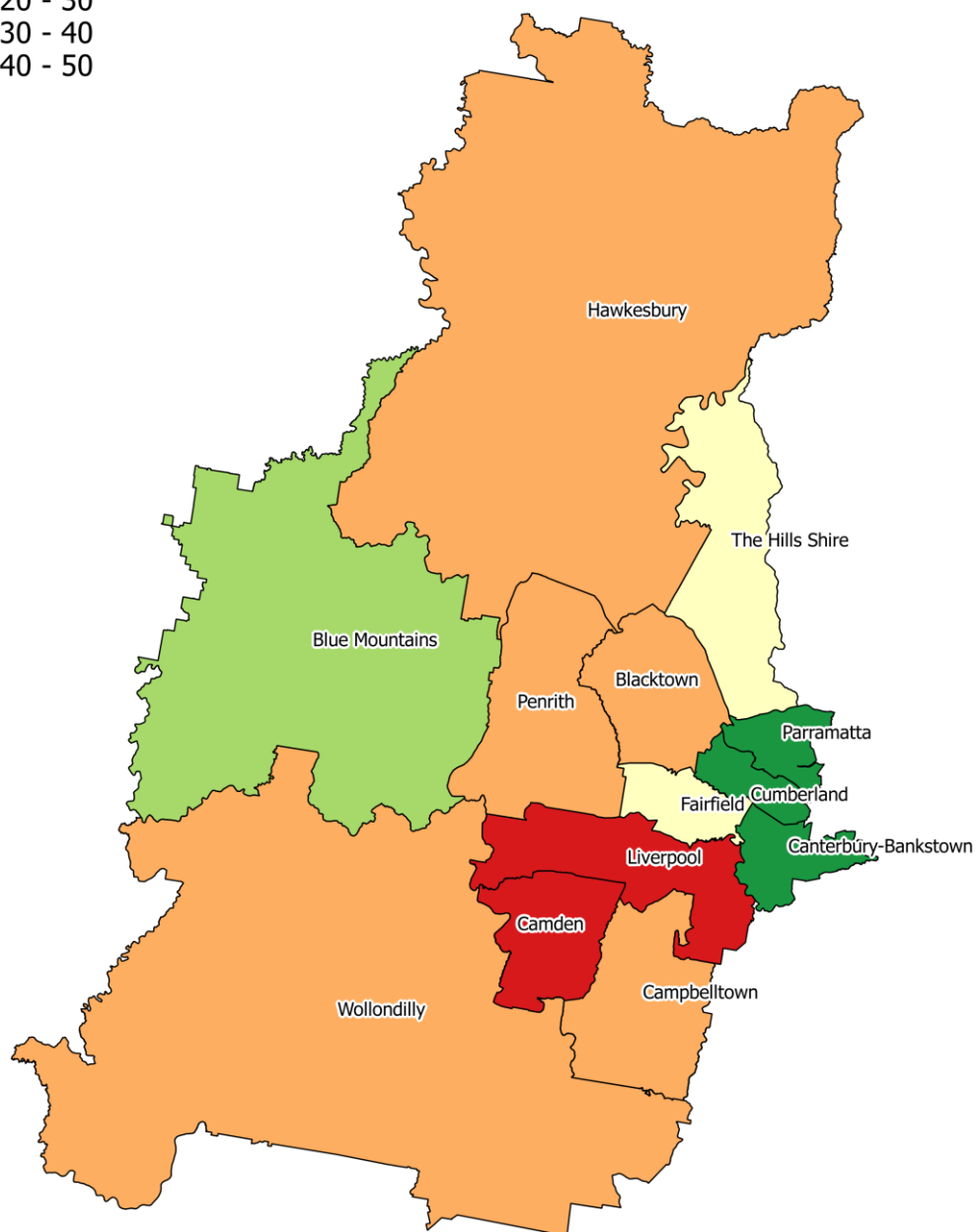
Source: SAFi Compiled and presented by .id, the population experts.

Figure 28: % of LGA population within 800m of train stations- 2036

Legend

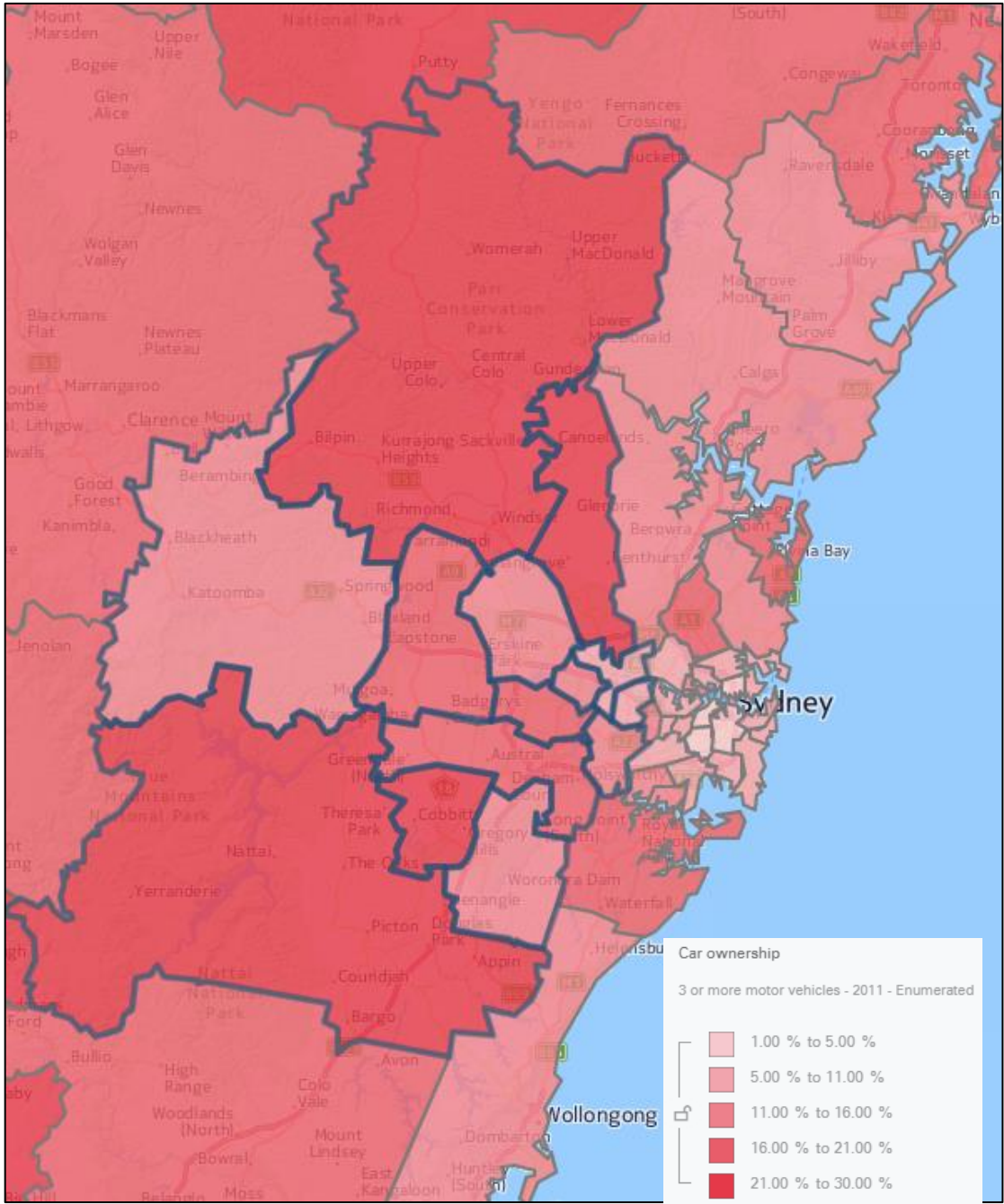
% of LGA population within 800m of a train station

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50



Source: SAFi Compiled and presented by .id, the population experts.

Figure 29: % of population owning 3 or more cars - 2011



Source: Australian Bureau of Statistics Census 2011. Compiled and presented by .id, the population experts

6. Appendix A – LGA Industry Job Deficits/Surpluses

This section presents the individual LGA tables showing job deficit or surplus by industry.

Table 12: Auburn Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Accommodation and Food Services	1893	3163	-1270	0.60
Health Care and Social Assistance	3114	4070	-956	0.77
Agriculture, Forestry and Fishing	91	134	-43	0.68
Mining	0	14	-14	0.00
Administrative and Support Services	1887	1878	9	1.00
Rental, Hiring and Real Estate Services	904	680	224	1.33
Information Media and Telecommunications	1392	924	468	1.51
Professional, Scientific and Technical Services	3152	2574	577	1.22
Education and Training	2791	1819	972	1.53
Electricity, Gas, Water and Waste Services	1600	273	1326	5.86
Public Administration and Safety	3801	2370	1431	1.60
Other Services	2733	1206	1527	2.27
Arts and Recreation Services	2007	437	1569	4.59
Retail Trade	5828	3749	2079	1.55
Financial and Insurance Services	5085	2950	2134	1.72
Transport, Postal and Warehousing	4935	2509	2426	1.97
Construction	7357	2820	4537	2.61
Wholesale Trade	7664	2187	5477	3.50
Manufacturing	8878	3184	5693	2.79
Total	65109	36941	28167	1.76

Table 13: Bankstown Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	1269	4104	-2835	0.31
Public Administration and Safety	3600	5767	-2166	0.62
Retail Trade	7257	9315	-2058	0.78
Professional, Scientific and Technical Services	2711	4699	-1989	0.58
Transport, Postal and Warehousing	5637	7335	-1698	0.77
Accommodation and Food Services	3430	4632	-1202	0.74
Other Services	3549	4411	-862	0.80
Administrative and Support Services	2110	2662	-552	0.79
Arts and Recreation Services	804	1347	-543	0.60
Health Care and Social Assistance	7520	8048	-529	0.93
Information Media and Telecommunications	1289	1799	-510	0.72
Rental, Hiring and Real Estate Services	982	1247	-265	0.79
Construction	8368	8450	-82	0.99
Mining	4	51	-47	0.08
Agriculture, Forestry and Fishing	98	107	-10	0.91
Electricity, Gas, Water and Waste Services	1008	833	174	1.21
Education and Training	7326	6256	1069	1.17
Wholesale Trade	6314	3884	2430	1.63
Manufacturing	14559	7992	6568	1.82
Total	77835	82941	-5106	0.94

Table 14: Blacktown Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	1077	8917	-7840	0.12
Professional, Scientific and Technical Services	2874	9685	-6811	0.30
Health Care and Social Assistance	11129	17298	-6169	0.64
Public Administration and Safety	4406	9530	-5124	0.46
Retail Trade	14245	19223	-4978	0.74
Transport, Postal and Warehousing	11390	14289	-2899	0.80
Information Media and Telecommunications	603	3202	-2599	0.19
Administrative and Support Services	3132	5194	-2063	0.60
Accommodation and Food Services	6414	8131	-1717	0.79
Manufacturing	15916	17398	-1482	0.91
Other Services	4564	5743	-1179	0.79
Arts and Recreation Services	1239	1949	-710	0.64
Agriculture, Forestry and Fishing	509	924	-415	0.55
Rental, Hiring and Real Estate Services	1234	1466	-232	0.84
Mining	54	216	-161	0.25
Construction	12043	11606	437	1.04
Wholesale Trade	13458	12770	688	1.05
Education and Training	9178	8271	907	1.11
Electricity, Gas, Water and Waste Services	3123	1416	1707	2.21
Total	116588	157229	-40641	0.74

Table 15: Blue Mountains Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Education and Training	2198	5639	-3441	0.39
Health Care and Social Assistance	3470	5937	-2467	0.58
Public Administration and Safety	1133	3288	-2156	0.34
Manufacturing	544	2483	-1938	0.22
Professional, Scientific and Technical Services	1137	2627	-1491	0.43
Wholesale Trade	446	1817	-1372	0.25
Financial and Insurance Services	255	1102	-848	0.23
Construction	1481	2311	-830	0.64
Information Media and Telecommunications	323	1078	-755	0.30
Transport, Postal and Warehousing	609	1187	-579	0.51
Electricity, Gas, Water and Waste Services	104	635	-531	0.16
Other Services	797	1268	-471	0.63
Administrative and Support Services	561	881	-320	0.64
Rental, Hiring and Real Estate Services	310	569	-259	0.54
Accommodation and Food Services	2565	2813	-247	0.91
Retail Trade	4076	4318	-242	0.94
Mining	5	215	-211	0.02
Arts and Recreation Services	594	707	-113	0.84
Agriculture, Forestry and Fishing	178	196	-18	0.91
Total	20785	39074	-18289	0.53

Table 16: Camden Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Public Administration and Safety	733	2593	-1860	0.28
Manufacturing	1966	3602	-1636	0.55
Construction	4309	5897	-1588	0.73
Transport, Postal and Warehousing	1183	2759	-1576	0.43
Financial and Insurance Services	344	1363	-1020	0.25
Professional, Scientific and Technical Services	960	1863	-903	0.52
Wholesale Trade	1399	2190	-791	0.64
Health Care and Social Assistance	2963	3379	-416	0.88
Other Services	1332	1681	-349	0.79
Education and Training	2591	2885	-294	0.90
Administrative and Support Services	463	742	-279	0.62
Information Media and Telecommunications	129	363	-233	0.36
Mining	36	173	-137	0.21
Rental, Hiring and Real Estate Services	370	460	-90	0.80
Arts and Recreation Services	322	408	-86	0.79
Electricity, Gas, Water and Waste Services	384	406	-22	0.95
Accommodation and Food Services	1612	1588	24	1.02
Agriculture, Forestry and Fishing	362	171	191	2.12
Retail Trade	4042	3803	238	1.06
Total	25500	36326	-10826	0.70

Table 17: Campbelltown Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Transport, Postal and Warehousing	2520	7618	-5097	0.33
Public Administration and Safety	2574	5902	-3328	0.44
Financial and Insurance Services	672	3781	-3109	0.18
Manufacturing	7592	10330	-2738	0.73
Professional, Scientific and Technical Services	1474	4163	-2689	0.35
Retail Trade	6206	8574	-2368	0.72
Wholesale Trade	2459	4752	-2293	0.52
Other Services	2187	3740	-1553	0.58
Health Care and Social Assistance	7492	8617	-1125	0.87
Administrative and Support Services	1019	2016	-997	0.51
Accommodation and Food Services	3556	4461	-905	0.80
Information Media and Telecommunications	361	911	-550	0.40
Electricity, Gas, Water and Waste Services	338	796	-458	0.42
Arts and Recreation Services	405	824	-419	0.49
Rental, Hiring and Real Estate Services	707	826	-119	0.86
Construction	2095	2146	-52	0.98
Agriculture, Forestry and Fishing	69	103	-35	0.66
Mining	188	109	79	1.72
Education and Training	5208	4607	601	1.13
Total	47121	74278	-27156	0.63

Table 18: Fairfield Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	812	3570	-2757	0.23
Professional, Scientific and Technical Services	1538	3743	-2205	0.41
Retail Trade	7413	9461	-2048	0.78
Transport, Postal and Warehousing	3855	5492	-1636	0.70
Information Media and Telecommunications	343	1710	-1367	0.20
Construction	6046	7371	-1325	0.82
Administrative and Support Services	2028	3349	-1321	0.61
Health Care and Social Assistance	5903	7223	-1320	0.82
Other Services	3120	3952	-833	0.79
Public Administration and Safety	2587	3399	-811	0.76
Manufacturing	11109	11796	-687	0.94
Accommodation and Food Services	4969	5476	-507	0.91
Electricity, Gas, Water and Waste Services	493	736	-243	0.67
Arts and Recreation Services	617	758	-140	0.81
Rental, Hiring and Real Estate Services	674	757	-83	0.89
Mining	75	98	-23	0.76
Agriculture, Forestry and Fishing	215	238	-23	0.90
Wholesale Trade	6046	4457	1589	1.36
Education and Training	6101	4100	2001	1.49
Total	63945	77684	-13739	0.82

Table 19: Hawkesbury Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Wholesale Trade	1036	2151	-1116	0.48
Retail Trade	2954	3979	-1024	0.74
Construction	2953	3958	-1005	0.75
Transport, Postal and Warehousing	819	1605	-786	0.51
Professional, Scientific and Technical Services	872	1615	-743	0.54
Financial and Insurance Services	256	865	-609	0.30
Other Services	1370	1919	-549	0.71
Education and Training	2678	3203	-525	0.84
Administrative and Support Services	631	1018	-386	0.62
Electricity, Gas, Water and Waste Services	168	468	-300	0.36
Public Administration and Safety	3049	3310	-262	0.92
Rental, Hiring and Real Estate Services	362	612	-251	0.59
Manufacturing	2942	3181	-239	0.92
Mining	16	142	-126	0.12
Arts and Recreation Services	426	513	-88	0.83
Information Media and Telecommunications	355	321	33	1.10
Health Care and Social Assistance	3286	3178	108	1.03
Accommodation and Food Services	1682	1338	343	1.26
Agriculture, Forestry and Fishing	1869	1270	599	1.47
Total	27723	34645	-6923	0.80

Table 20: Holroyd Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	456	4150	-3693	0.11
Public Administration and Safety	1206	4448	-3242	0.27
Health Care and Social Assistance	3229	5771	-2543	0.56
Professional, Scientific and Technical Services	1034	3307	-2273	0.31
Administrative and Support Services	845	1928	-1083	0.44
Accommodation and Food Services	1667	2745	-1078	0.61
Information Media and Telecommunications	145	1138	-993	0.13
Education and Training	2200	2925	-726	0.75
Construction	4331	4750	-419	0.91
Electricity, Gas, Water and Waste Services	260	623	-363	0.42
Rental, Hiring and Real Estate Services	473	824	-351	0.57
Arts and Recreation Services	293	567	-274	0.52
Agriculture, Forestry and Fishing	85	144	-60	0.59
Mining	0	30	-30	0.00
Other Services	1755	1784	-28	0.98
Retail Trade	5348	5273	74	1.01
Transport, Postal and Warehousing	4426	3610	815	1.23
Wholesale Trade	4296	2808	1488	1.53
Manufacturing	8460	4375	4085	1.93
Total	40510	51202	-10692	0.79

Table 21: Liverpool Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	805	3829	-3024	0.21
Construction	7075	9939	-2863	0.71
Professional, Scientific and Technical Services	2083	4078	-1995	0.51
Transport, Postal and Warehousing	5073	6923	-1850	0.73
Retail Trade	7859	9494	-1635	0.83
Accommodation and Food Services	3693	5199	-1506	0.71
Information Media and Telecommunications	560	1745	-1185	0.32
Other Services	2854	3663	-809	0.78
Manufacturing	9780	10550	-770	0.93
Administrative and Support Services	3171	3616	-445	0.88
Arts and Recreation Services	636	911	-275	0.70
Electricity, Gas, Water and Waste Services	885	1053	-169	0.84
Mining	58	196	-138	0.30
Wholesale Trade	5081	5175	-94	0.98
Rental, Hiring and Real Estate Services	874	869	5	1.01
Agriculture, Forestry and Fishing	633	340	293	1.86
Education and Training	6515	6199	316	1.05
Public Administration and Safety	6519	6180	340	1.05
Health Care and Social Assistance	10074	9326	748	1.08
Total	74227	89284	-15057	0.83

Table 22: Parramatta Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Information Media and Telecommunications	1401	2533	-1133	0.55
Accommodation and Food Services	4478	5439	-961	0.82
Professional, Scientific and Technical Services	6868	7810	-942	0.88
Retail Trade	8154	8931	-777	0.91
Agriculture, Forestry and Fishing	95	264	-168	0.36
Arts and Recreation Services	1169	1196	-27	0.98
Mining	87	49	38	1.77
Rental, Hiring and Real Estate Services	1920	1739	181	1.10
Wholesale Trade	5545	4982	563	1.11
Education and Training	6485	5884	601	1.10
Administrative and Support Services	4583	3852	731	1.19
Transport, Postal and Warehousing	5575	4789	785	1.16
Electricity, Gas, Water and Waste Services	1916	1036	880	1.85
Other Services	3980	2953	1026	1.35
Construction	8833	7650	1184	1.15
Financial and Insurance Services	11333	7889	3444	1.44
Manufacturing	10407	6497	3910	1.60
Health Care and Social Assistance	20164	11283	8881	1.79
Public Administration and Safety	18486	6576	11910	2.81
Total	121479	91353	30126	1.33

Table 23: Penrith Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Financial and Insurance Services	949	4559	-3610	0.21
Wholesale Trade	4069	7620	-3550	0.53
Manufacturing	7748	10976	-3227	0.71
Construction	6429	9534	-3105	0.67
Transport, Postal and Warehousing	3159	5776	-2617	0.55
Retail Trade	10865	13448	-2583	0.81
Public Administration and Safety	5331	7357	-2026	0.72
Professional, Scientific and Technical Services	2285	4201	-1916	0.54
Information Media and Telecommunications	575	2061	-1487	0.28
Other Services	2849	4046	-1196	0.70
Health Care and Social Assistance	9425	10619	-1194	0.89
Electricity, Gas, Water and Waste Services	973	1805	-832	0.54
Administrative and Support Services	1586	2416	-830	0.66
Accommodation and Food Services	5514	6095	-581	0.90
Rental, Hiring and Real Estate Services	1004	1527	-522	0.66
Arts and Recreation Services	881	1076	-195	0.82
Mining	235	225	9	1.04
Agriculture, Forestry and Fishing	705	648	57	1.09
Education and Training	7350	6554	796	1.12
Total	71933	100543	-28610	0.72

Table 24: The Hills Shire Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Public Administration and Safety	1575	5503	-3928	0.29
Financial and Insurance Services	2798	6598	-3800	0.42
Construction	10190	13613	-3423	0.75
Education and Training	7557	10333	-2776	0.73
Health Care and Social Assistance	7992	10217	-2224	0.78
Wholesale Trade	4894	7102	-2208	0.69
Professional, Scientific and Technical Services	7607	9221	-1613	0.83
Administrative and Support Services	2494	3652	-1158	0.68
Rental, Hiring and Real Estate Services	1518	2521	-1003	0.60
Manufacturing	5166	6165	-999	0.84
Transport, Postal and Warehousing	2909	3846	-937	0.76
Other Services	3585	4414	-829	0.81
Electricity, Gas, Water and Waste Services	229	1053	-823	0.22
Information Media and Telecommunications	690	1335	-645	0.52
Agriculture, Forestry and Fishing	909	1073	-164	0.85
Arts and Recreation Services	996	1106	-111	0.90
Mining	122	187	-65	0.65
Accommodation and Food Services	3508	2852	657	1.23
Retail Trade	14541	10160	4382	1.43
Total	79281	100949	-21668	0.79

Table 25: Wollondilly Jobs Deficit / Surplus by Industry - 2015

Industry	Local Jobs	No of resident workers	Total Job Deficit / Surplus	Jobs per Employed Resident
Health Care and Social Assistance	807	2488	-1681	0.32
Manufacturing	1434	3102	-1669	0.46
Retail Trade	1109	2456	-1346	0.45
Construction	2200	3430	-1230	0.64
Public Administration and Safety	440	1580	-1140	0.28
Transport, Postal and Warehousing	676	1731	-1055	0.39
Wholesale Trade	336	1280	-945	0.26
Other Services	537	1352	-815	0.40
Education and Training	1022	1831	-809	0.56
Professional, Scientific and Technical Services	589	1337	-748	0.44
Financial and Insurance Services	112	604	-491	0.19
Accommodation and Food Services	608	1087	-479	0.56
Administrative and Support Services	227	449	-221	0.51
Rental, Hiring and Real Estate Services	126	327	-201	0.38
Electricity, Gas, Water and Waste Services	212	364	-152	0.58
Information Media and Telecommunications	35	149	-114	0.24
Arts and Recreation Services	196	300	-104	0.65
Agriculture, Forestry and Fishing	526	304	222	1.73
Mining	1427	443	984	3.22
Total	12618	24613	-11995	0.51

7. Appendix B – Stations included

The following stations were included in the 2016 accessibility analysis.

▮ AUBURN	▮ GLENBROOK	▮ PARRAMATTA
▮ BANKSTOWN	▮ GLENFIELD	▮ PENDLE HILL
▮ BARGO	▮ GRANVILLE	▮ PENRITH
▮ BELL	▮ GUILDFORD	▮ PICTON
▮ BERALA	▮ HARRIS PARK	▮ QUAKERS HILL
▮ BIRRONG	▮ HAZELBROOK	▮ REGENTS PARK
▮ BLACKHEATH	▮ HOLSWORTHY	▮ REVESBY
▮ BLACKTOWN	▮ INGLEBURN	▮ RICHMOND
▮ BLACKTOWN	▮ KATOOMBA	▮ RIVERSTONE
▮ BLAXLAND	▮ KINGSWOOD	▮ ROOTY HILL
▮ BULLABURRA	▮ LAPSTONE	▮ ROSEHILL
▮ BUXTON	▮ LAWSON	▮ RYDALMERE
▮ CABRAMATTA	▮ LEIGHTONFIELD	▮ SCHOFIELDS
▮ CAMELLIA	▮ LEPPINGTON	▮ SEFTON
▮ CAMPBELLTOWN	▮ LEUMEAH	▮ SEVEN HILLS
▮ CANLEY VALE	▮ LEURA	▮ SPRINGWOOD
▮ CARLINGFORD	▮ LIDCOMBE	▮ ST MARYS
▮ CARRAMAR	▮ LINDEN	▮ TAHMOOR
▮ CASULA	▮ LIVERPOOL	▮ TELOPEA
▮ CHESTER HILL	▮ MACARTHUR	▮ TOONGABBIE
▮ CLARENDON	▮ MACQUARIE	▮ VALLEY HEIGHTS
▮ CLYDE	▮ FIELDS	▮ VILLAWOOD
▮ COURIDJAH	▮ MARAYONG	▮ VINEYARD
▮ DOONSIDE	▮ MEDLOW BATH	▮ WARRIMOO
▮ DOUGLAS PARK	▮ MENANGLE PARK	▮ WARWICK FARM
▮ DUNDAS	▮ MENANGLE	▮ WENTWORTH
▮ EAST HILLS	▮ MERRYLANDS	▮ FALLS
▮ EAST RICHMOND	▮ MINTO	▮ WENTWORTHVILLE
▮ EDMONDSON	▮ MOUNT DRUITT	▮ WERRINGTON
▮ PARK	▮ MOUNT VICTORIA	▮ WESTMEAD
▮ EMU PLAINS	▮ MULGRAVE	▮ WINDSOR
▮ EPPING	▮ OLYMPIC PARK	▮ WOODFORD
▮ FAIRFIELD	▮ PADSTOW	▮ YAGOONA
▮ FAULCONBRIDGE	▮ PANANIA	▮ YENNORA

The Sydney Metro Northwest stations were included in the 2036 accessibility analysis because these station locations have been finalised and currently under construction. The following stations are included in the 2036 accessibility analysis:

- ▣ Cherrybrook
- ▣ Castle Hill
- ▣ Showgrounds
- ▣ Norwest
- ▣ Bella Vista
- ▣ Kellyville
- ▣ Rouse Hill
- ▣ Cudgegong Road

Parramatta Light Rail Project – not included

The stops along the Parramatta Light Rail project have not been included in the 2016 or 2036 accessibility analysis. This is because the route and station locations are currently out for consultation and the publically available route network is indicative only. The preferred network map includes the main train station interchanges but does not include all the proposed stops (reports indicate 22 stops all up).

Metro South West - included

The Metro South West project does not include any new stations. Instead this project will improve the reliability of services. The accessibility analysis therefore accounts for this project.