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# LIVERPOOL EMPLOYMENT STRATEGY

LIVERPOOL CITY COUNCIL  
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# EXECUTIVE SUMMARY

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## BACKGROUND

Located in the heart of the South Western Sydney Region, the City of Liverpool (Liverpool) is at the epicentre of one of the fastest future growth areas in Australia and is soon to be home to Sydney's second airport. Strategically, Liverpool contains the core attributes to develop into a significant commercial centre and a destination for employment and job creation.

Consistent with the experience of most metropolitan local government areas outside the CBD, a high proportion of local resident workers of Liverpool local government area leave the area for work every day. The local economy is on the cusp of significant change, with a number of high-profile developments underway in the region. This presents a significant opportunity for Council to promote 'Local Jobs for Local People' and improve local employment self-containment. The aim of the 'Local Jobs for Local People' Strategy (the Strategy) is to identify opportunities for and strategies to harness this goal.

The future challenge is in ensuring that the realisation of 'Local Jobs for Local People' is maximised through identification of opportunity, attraction of desired business and industry, as well as local policy alignment and a proactive workforce development program.

## APPROACH

In developing the Strategy, background analysis was undertaken on Liverpool's current employment environment and a literature review conducted regarding potential opportunities in key employment precincts. Workshop discussions were designed and facilitated, and individual consultations conducted to develop a shared vision and establish stakeholder buy-in for the employment outcomes. The Strategy was developed with clear, positive actions and projects that also address identified challenges and are measurable against desired employment outcomes.

## KEY FINDINGS

### Existing Environment

Liverpool is a culturally and economically diverse and relatively young population base which has experienced significant growth in recent years. Strong growth is anticipated to continue into the future, suggesting the size of the labour force has the potential to grow considerably over the coming years. Harnessing the potential of this population to meet the future needs of employers in the region is a core function of this strategy.

Whilst Liverpool has relatively low levels of unemployment, less than a third of local residents who are employed also work in Liverpool. Key destinations of local workers are Sydney, Fairfield and Canterbury-Bankstown. Residents who worked outside the Liverpool boundary were most likely to be employed in manufacturing, construction, and healthcare and social assistance.

Approximately 38% of local jobs are filled by local residents. Other workers are imported from Campbelltown, Fairfield and Camden. Workers imported into the region were most likely to be employed in healthcare and social assistance, manufacturing and retail trade.

### Employment Outlook

Over the 15 years from 2016, employment in Liverpool is estimated to increase by approximately 30,372 jobs at an average annual growth rate of 2.4%. Growth is anticipated to be stimulated by major projects in the region, and occur most prominently in the industries of:

- Healthcare and Social Assistance
- Education and Training
- Transport, Postal and Warehousing
- Construction.

This significant infrastructure investment will also underpin construction employment growth. Supporting this growth, key skills which are likely to be in demand will include:

- Management/ Leadership skills
- Physical/ Technical skills
- Health and Community Care skills
- Customer Serving/ Sales
- Education and Training skills
- Analytical skills
- Administration and Support.

### Benefits of Local Jobs for Local People

There are many benefits of improving local jobs for local people outlined in the table below.

**Table ES. 1. Benefits of Local Jobs for Local People**

Benefits for Residents	Benefits for Businesses
Reduced travel time, congestion and associated pollution	Greater staff retention
Improved health outcomes	Greater capture of wages paid to staff
Better work/life balance	Increase staff diversity
Increased community pride	Increased engagement and inclusiveness
Lower unemployment.	Increased understanding of the local market and networking opportunities.

### Strategic Vision and Themes

The following vision is presented for the Liverpool Employment Strategy:

*“Providing opportunities to live, work and play in Liverpool, reducing commute times and increasing confidence, aspiration, pride, leadership and opportunity for the local community”.*

The Liverpool Employment Strategy is delivered through the following strategic focus areas:

- **Increase Communication & Engagement:** Improving local resident knowledge of employment opportunities in Liverpool and also improving business knowledge of local resident skills
- **Build Skills & Development:** Identifying and keeping track of local skills
- **Leverage Surrounding Infrastructure:** Ensuring local skills are able to benefit from the significant projects planned for the region
- **Review Internal Human Resources Processes:** Encouraging local applicants to apply for jobs within Council
- **Investigate Demand for Co-Working Space:** Understanding the potential for development of co-working space in Liverpool
- **Encourage Labour Force Participation:** Supporting other teams within Council to address long-term intergenerational underemployment in Liverpool.

Figure ES. 1. Liverpool Employment Strategy – Strategic Themes



Source: AEC

Due to the changing nature of skills demand over time and the likely changing perception of Liverpool as an employment/ investment destination, it is recommended the strategy take a tiered approach to its focus and delivery. These tiers include:

- The here and now (12-24 months): with a focus on matching skills attraction to immediate existing gaps in labour market
- Medium term: (3-4 years): with a focus of building the program now to attract and support the alignment of new business in key areas of opportunity in 3-4 years.

These actions are focussed through an implementation plan for Council to facilitate the delivery and extension of the program.

The following measures should be tracked to understand the efficacy of Council's work in terms of local jobs for local people. Most of these indicators are not directly influenced by Council, however, the implementation of the strategy should assist them in improving these outcomes.

Table ES. 2. Tools for Measuring Success

Indicator	Description	Source	Frequency
Employment Self-Containment	Proportion of local resident workers who work locally.	ABS Census of Population and Housing	5 yearly
Employment Self-Sufficiency	Proportion of local jobs filled by local residents.	ABS Census of Population and Housing	5 yearly
Distance Travelled to Work	Average kilometres travelled to work by local residents and workers.	ABS Census of Population and Housing	5 yearly
Transport Use Statistics	Average Road Traffic Volumes	NSW Department of Transport (Roads and Maritime)	Annually
Council Workforce	Number/Proportion of Local Resident Council Workers	Council HR	Ad Hoc

Source: AEC.

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# 1. INTRODUCTION

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## 1.1 BACKGROUND & PURPOSE

Located in the heart of the South Western Sydney Region, the City of Liverpool is at the epicentre of one of the fastest future growth areas in Australia and importantly, soon to be home to Sydney's second airport. Strategically, Liverpool contains the core attributes to develop into a significant commercial centre and a destination for employment and job creation.

Consistent with the experience of most metropolitan local government areas outside the CBD, a high proportion of local resident workers of Liverpool local government area leave the area for work every day. The local economy is on the cusp of significant change, with a number of high-profile developments underway in the region. This presents a significant opportunity for Council to promote 'Local Jobs for Local People' and improve local employment self-containment. The aim of the 'Local Jobs for Local People' Strategy (the Strategy) is to identify opportunities for and strategies to harness this goal.

The future challenge is in ensuring that the realisation of 'Local Jobs for Local People' is maximised through identification of opportunity, attraction of desired business and industry, as well as local policy alignment and a proactive workforce development program.

## 1.2 APPROACH

An overview of the approach taken in the development of the Strategy is outlined below:

- **Existing Environment (Chapter 2):** Provides an overview of the existing environment in Liverpool, in relation to population, demographics, labour force, journey to work flows, and the supply chain. The future employment outlook is also explored in this section to inform identification of vision and strategic themes
- **Benefits of 'Local Jobs for Local People' (Chapter 3):** Provides clarification and explanation of the benefits of 'Local Jobs for Local People' that is clear to both residents and businesses
- **Challenges and Opportunities (Chapter 4):** Provides an overview of the challenges and opportunities for local employment that have been identified
- **Strategy (Chapter 5):** Provides a rationale, agreed vision and desired goals for local jobs development. Provides a summary of strategic themes to support the vision and address challenges/ opportunities. Provides two implementation plans (immediate term and medium-long term) outlining the strategic themes, the actions associated, Council's role, and measurement tools/ success tracking for each.

**Note:** The data and analysis conducted in this report were undertaken pre-COVID19 and as such do not reflect the implications of the global COVID-19 pandemic in 2020. At the time of writing, economic data relating to the economic fallout resulting from the pandemic are limited, particularly at a small-area level. Due to this limitation, the currently available published datasets and projections have been reported and provide an indication of the business as usual scenario for Liverpool.

## 2. EXISTING ENVIRONMENT

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### 2.1 REGIONAL SNAPSHOT

The below section presents an analysis of the socio-economic environment of Liverpool, informed by data collected from Council's Profile.ID webpage where possible. Where data was unavailable on Council's Profile.ID webpage, it has been collected from AEC's inhouse Data Processing System. The findings and analysis in this section are supported by more detailed information located in Appendix A.

Liverpool is a bustling population centre in South Western Sydney, recording strong population growth of approximately 2.3% per annum over the past 14 years (compared to growth of 1.4% for NSW over the same period), to reach approximately 227,600 residents in 2019. Liverpool's population is highly culturally diverse, with high proportions of the population born in the Middle East (9.4%), Mainland South-Eastern Asia (5.5%), and Southern Asia (4.4%). The cultural diversity of the region is an important asset, providing a high level of diversity in skills to the local labour force.

Liverpool's population is significantly younger than NSW with an average age of 33.9 years (compared to 38.9 for NSW). Driving this younger age distribution is the relatively high proportion of youths (persons aged 0-14 years) in the region, suggesting the local labour force has significant room to increase over the coming decades. Harnessing the potential of this population to meet the future needs of employers in the region is a core function of this strategy.

Local residents, overall, recorded lower income levels than the State in 2016, as well as above average socio-economic disadvantage. There are pockets of significant socio-economic disadvantage in the central areas of the LGA (such as Ashcroft – Busby – Miller). These pockets experience low levels of labour force participation and, in some cases, intergenerational unemployment. Engaging with youths in these areas as early as possible in their education journey, to encourage aspiration development, has the potential to drive long-term change for these areas whilst also building the skills to meet future business demands.

Strong population growth is anticipated to continue in Liverpool to 2041, with growth of approximately 2.4% per annum currently estimated for the region as per Profile.ID projections, and 2.1% per annum as per TPA projections (Profile.ID 2019a; TPA, 2016a). Both sets of projections reveal stronger growth for Liverpool than the 1.4% per annum expectation for the State, as indicated by TPA projections (TPA, 2016a). Projections suggest a total population of approximately 382,400 residents in 2041 based on Profile.ID projections and 356,900 residents based on TPA projections.

The working age population is anticipated to record strong growth through to 2041, with TPA employment projections expecting growth of 2.8% per annum on average for those between 15 and 64 years, equivalent to approximately 135,800 people. As the labour force grows, employers will be provided with a deeper labour pool from which to select skilled residents from within the local region.

Whilst high school educational attainment is consistent with the levels recorded at a New South Wales level, non-school qualification attainment in Liverpool was significantly lower than the State average (by almost 10%). Despite the presence of the Western Sydney University (Liverpool City Campus), University of Wollongong (South Western Sydney Campus) and TAFE NSW Liverpool; there is an opportunity for aspiration building and connecting local youths with education pathways to encourage higher education and development of key skills within the region. This will enable the local population to better meet the needs of the local business sector.

Approximately 83,900 Liverpool residents were employed in 2016, primarily in healthcare and social assistance, retail trade, construction, and construction. Liverpool residents were predominantly professional and clerical and administrative workers; however, Liverpool also recorded a high proportion of technicians and trades workers and machinery operators and drivers (consistent with the high proportion of construction and manufacturing workers). Over the past few years, unemployment in Liverpool has trended close in line with NSW (though slightly above), with an average unemployment rate of 4.9% compared to 4.6% for NSW.

Liverpool is experiencing rapid transformation and growth, particularly towards more knowledge and intensive industries, supported by the Innovation Precinct (including all relevant anchors), Western Sydney International



Airport, Moorebank Intermodal Terminal and other key players to the sector. Projections based on Transport, Performance and Analytics (TPA) data reveals that employment is anticipated to experience stronger growth than New South Wales, at 2.1% per annum on average (compared to 1.3% for New South Wales) to more than double by 2056.

## 2.2 JOURNEY TO WORK ANALYSIS

This section presents an analysis of journey to work information for Liverpool residents and Liverpool workers. The analysis in this section is informed by data collected from the 2016 Census of Population and Housing, and therefore estimates may differ to those provided in earlier sections. The findings and analysis in this section is supported by more detailed information located in Appendix A.

### 2.2.1 Overview

Journey to work analysis reveals the employment destinations of local residents (i.e. where do Liverpool residents work) and the resident sources for local employees (i.e. where do Liverpool workers live). This analysis provides insight to local labour markets and highlights potential opportunities to increase employment self-sufficiency<sup>2</sup> and employment self-containment<sup>1</sup>.

Approximately 84,076 employed persons resided in Liverpool in 2016, of which 56,938 persons worked outside of the local government area (exported labour force). Of the 84,076 employed residents, approximately 32.3% also worked in Liverpool (Liverpool self-containment rate<sup>1</sup>), whilst 10.5% worked in Sydney, 9.5% worked in Fairfield and 8.4% worked in Canterbury-Bankstown.

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<sup>1</sup> Self-containment refers to the proportion of people that work and live in Liverpool compared to the total that live in Liverpool. A higher self-containment rate is preferable.

Figure 2.1. Top 10 Liverpool Labour Destinations (Where Liverpool Residents Work)



Source: ABS (2017a).

Approximately 70,979 persons worked in Liverpool in 2016, which can be further broken down into 27,138 persons who live and work local, and 43,840 persons that are classified as imported labour. Of the 70,979 workers in Liverpool, approximately 38.2% also resided in Liverpool (Liverpool self-sufficiency rate<sup>2</sup>), whilst 11.0% lived in Campbelltown, 9.9% in Fairfield and 6.5% in Camden.

<sup>2</sup> Self-sufficiency refers to the proportion of people that live and work in Liverpool compared to the total that work in Liverpool. A higher self-sufficiency rate is preferable.

Figure 2.2. Top 10 Liverpool Labour Sources (Where Liverpool Workers Reside)

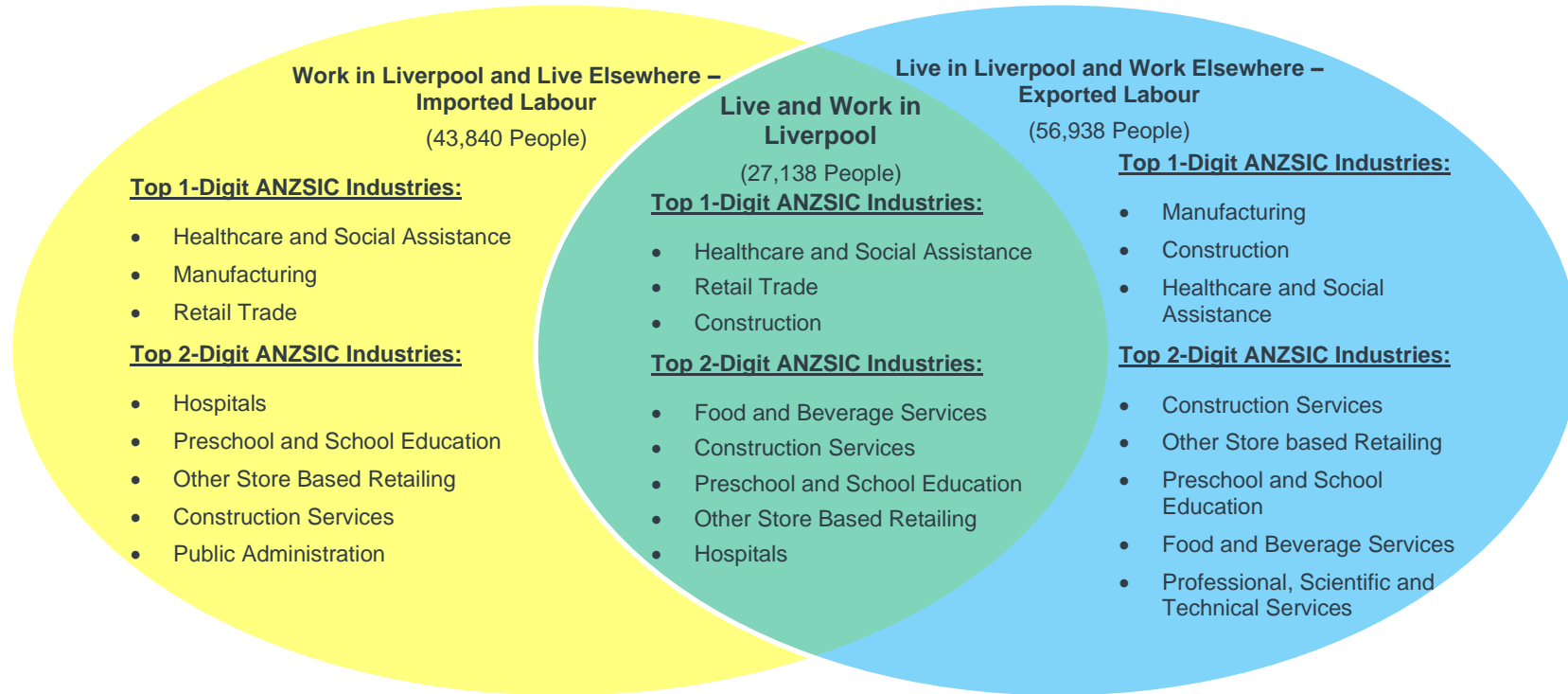


Source: ABS (2017a).

### 2.2.2 Industry and Occupation Trends

The figures below and overleaf provide an overview of the industries and occupations which contribute the highest number of workers to Liverpool's local, imported and exported labour force. The 1-digit industries/ occupations are the broad categories that were identified to employ the highest number of each of the three categories (imported labour, exported labour, live and work local), whilst the 2-digit industries/ occupations provide a more detailed breakdown.

**Figure 2.3. Industry Trends, Liverpool**



Source: ABS (2017a).

The industries which import the highest proportion of their workforce into the region include:

- Electricity, Gas, Water and Waste Services (76.4% of the local workforce is imported)
- Wholesale Trade (74.9% of the local workforce is imported)
- Manufacturing (72.8% of the local workforce is imported)
- Public Administration and Safety (67.7% of the local workforce is imported).

Figure 2.4. Occupational Trends, Liverpool



Source: ABS (2017a).

The occupations which import the highest proportion of their workforce into the region include:

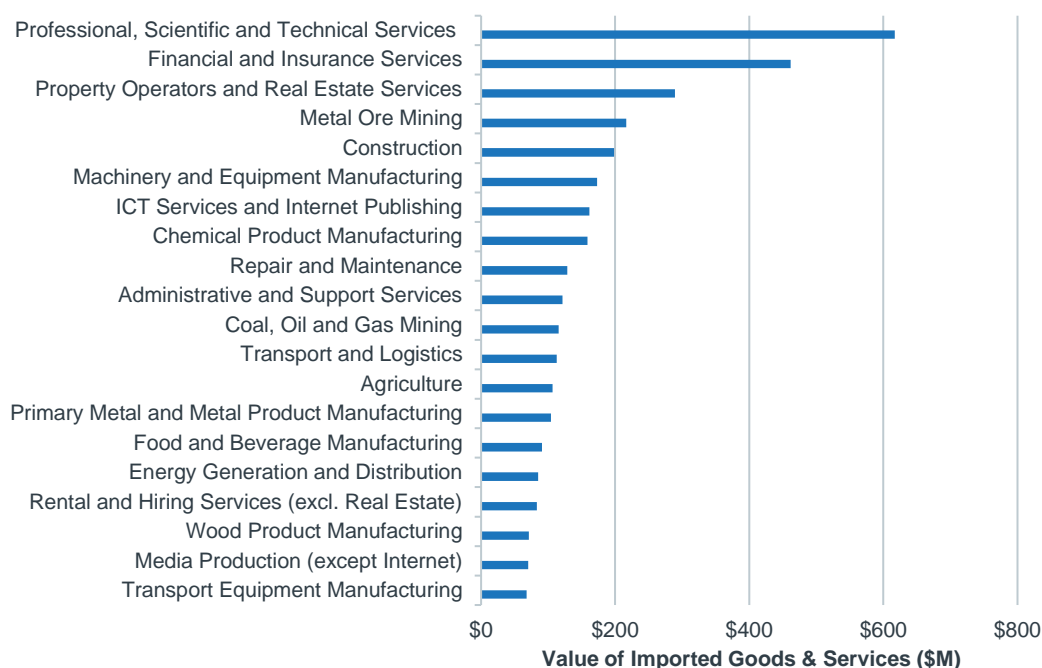
- Clerical and Administrative Workers (68.8% of the local workforce is imported)
- Professionals (67.6% of the local workforce is imported)
- Machinery Operators and Drivers (65.3% of the local workforce is imported)
- Managers (65.3% of the local workforce is imported).

## 2.3 SUPPLY CHAIN ANALYSIS

This section carries out a supply chain analysis to determine the imports and exports of the region. The findings and analysis in this section are supported by more detailed information located in Appendix A.

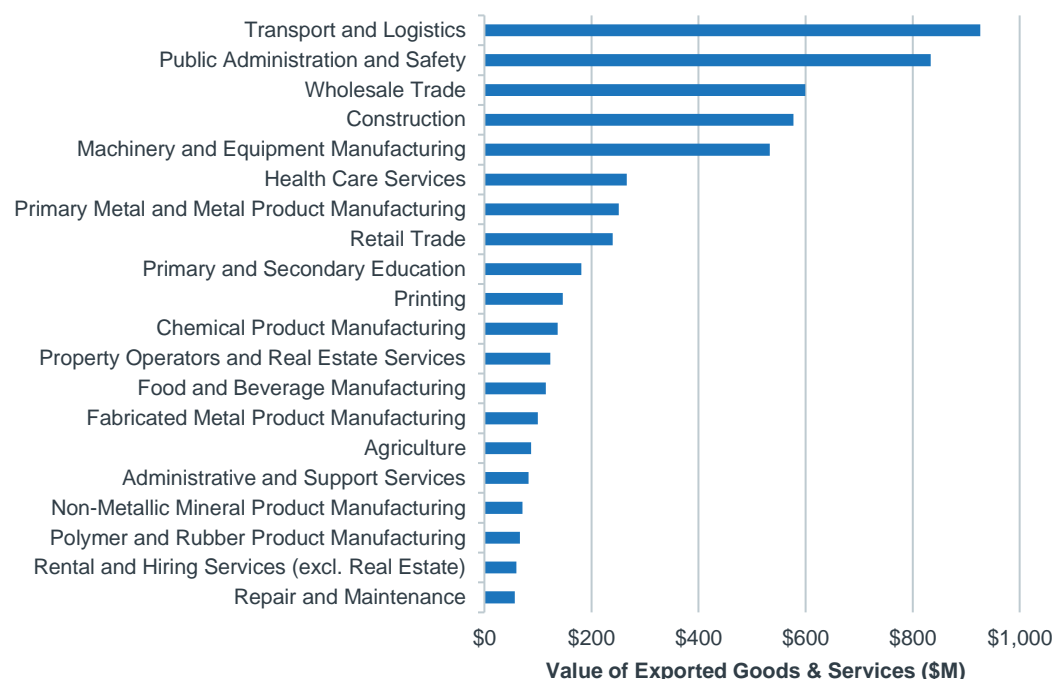
In 2016-17, an estimated \$3.9 billion worth of goods and services were imported into Liverpool from outside the local economy. The most prominent import was Professional, Scientific and Technical Services, at approximately \$617.1 million. Financial and Insurance Services was the second most prominent import from outside the local economy (\$461.6 million), followed by Property Operator and Real Estate Services (\$289.4 million).

**Figure 2.5. Imported Goods and Services, Liverpool, 2016-17**



Source: ABS (2012), ABS (2017b).

In 2016-17, an estimated \$5.9 billion of goods and services were exported out of Liverpool. The most prominent export was Transport and Logistics, valued at \$926.2 million. Public Administration and Safety, and Wholesale Trade followed, valued at \$833.4 million and \$599.1 million, respectively.

**Figure 2.6. Exported Goods and Services, Liverpool, 2016-17**


Source: ABS (2012), ABS (2017b).

## 2.4 EMPLOYMENT OUTLOOK

Employment projections were developed using Transport for NSW's Travel Zone Projection 2016 (TPA, 2019) model to understand the future level of employment for each industry in Liverpool. Growth rates from this model were applied to 2016 base employment (provided by the Census) to project forward employment. The employment by occupation projections were developed by applying the 2016 Census occupational breakdown (for each industry) to the final 2031 employment by industry totals. These projections were developed at the 4-digit ANZSCO level.

Whilst TPA employment projections are an important baseline gauge for future employment growth, these projections do not incorporate current population or employment growth expectations and/ or commitments to major infrastructure projects (e.g. Western Sydney International Airport and Western Sydney Aerotropolis). The major infrastructure projects that have been accounted for include the Defence Land Moorebank – Intermodal Terminal, former Hoxton Park Airport, Liverpool CBD and South West Growth Area. Due to this limitation, these projections are indicative-only and should be used and interpreted with caution.

The findings and analysis in this section are supported by more detailed information located in Appendix A and B.

Over the 15 years from 2016, employment in Liverpool is estimated to increase by approximately 30,372 jobs at an average annual growth rate of 2.4%. With an additional 66,787 people anticipated for the working age cohort (15 to 64 years) over the same period, this indicates labour force participation is anticipated to remain low without action. This growth is anticipated to be stimulated by major projects in the region, such as:

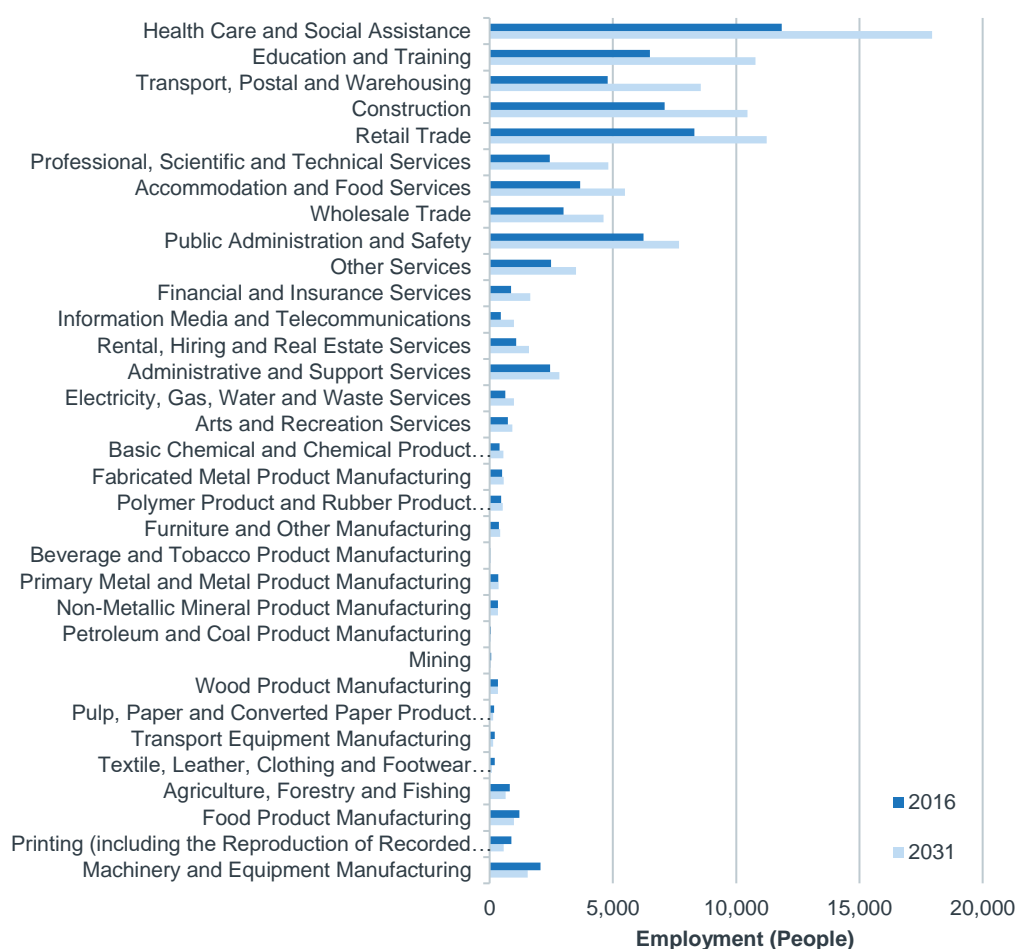
- **Liverpool City Centre:** The City Centre has recently undergone rezoning, of approximately 25 hectares of land, to allow mixed-use development in its former commercial core (under amendment 52). The revitalised City Centre is anticipated to accommodate an additional 7,000 units and has plans in place for numerous multi-purpose buildings such as the Liverpool Civic Centre. This is anticipated to stimulate up to 22,000 construction and ongoing jobs in the area, as a result of the rezoning (Urban Task Force, 2018)
- **Liverpool Innovation Precinct:** The Precinct is anticipated to assist in boosting health and education employment to approximately 30,000 by 2036 (Liverpool Innovation, 2019)

- Moorebank Intermodal Terminal:** The Intermodal Terminal is anticipated to provide approximately 6,800 full time equivalent employment opportunities at full operation, including 5,985 in warehousing (including office space), 584 in transport (i.e. truck driving), 150 in ancillary services, 81 in terminal operations and 22 in site management (Deloitte, 2017).

Though not considered in the above projections, the Western Sydney International Airport and Aerotropolis, wholly located within Liverpool LGA, will further stimulate employment growth. The Airport and Aerotropolis is anticipated to create approximately 13,169 direct jobs and 8,292 supply chain jobs by 2031, predominantly in the fields of engineering, food, hospitality, personal services, information technology, management, and commerce (EY, 2017).

This significant infrastructure investment will also underpin construction employment growth.

**Figure 2.7. Employment by Industry, Liverpool, 2016 and 2031**



Note: (a) The industries in Figure 2.3 have been ranked based on their contribution to new jobs between 2016 and 2031. (b) These projections were developed at the 1-digit ANZSIC level for all industries, except for manufacturing which was developed at the 2-digit ANZSIC level. Source: TPA (2016b). ABS (2017a).

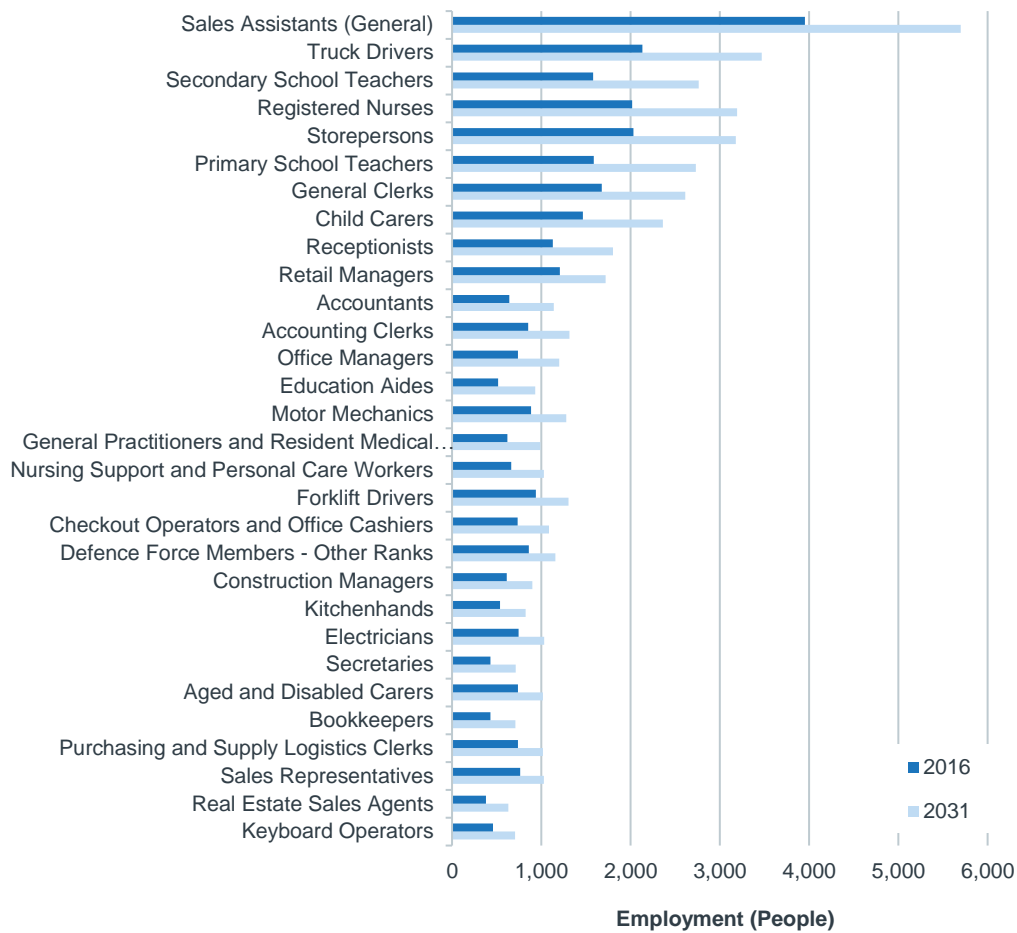
The skillsets which are most likely to experience growth in demand over the coming period, to support this employment growth, are:

- Management/ Leadership:** This skill group encompasses the use of organisational, managerial and leadership skills to achieve organisational goals, typically attained through university and TAFE education/ training. Specific occupations where this skillset is expected to experience high demand in Liverpool by 2031 include retail managers, office managers and construction managers
- Physical/ Technical:** This skill group involves the interaction of physical work with objects such as machines and technological systems, typically attained through TAFE, private/ independent, and on the job education/ training. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include truck drivers, motor mechanics, forklift drivers and electricians



- **Health and Community Care:** This skill group involves the provision of medical and caretaking services for individuals and communities. Health related skillsets are typically attained through university and TAFE education/ training, whilst community care skillsets are typically attained through private/ independent training. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include registered nurses, general practitioners, resident medical officers, child carers and aged and disabled carers
- **Customer Serving/ Sales:** This skill group involves assisting customers find products and ensuring interactions with the business remain positive. Sales related skillsets may be attained through university, TAFE or private/ independent education/ training, whilst customer serving skills are typically attained through on the job learning. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include storepersons, sales assistants, checkout operators and office cashiers, sales representatives, and real estate sales agents
- **Education and Training:** This skill group involves teaching across all levels of schools, as well as university lecturers and tutors. Most of these skills require university or TAFE qualifications, though there are lower skilled occupations which may require only private/ independent training. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include secondary school teachers, primary school teachers and education aides
- **Analytical:** This skill group encompasses the logical processing of information to produce useable results, typically attained through university and TAFE education/ training. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include accountants, accounting clerks, purchasing and supply logistics clerks, and bookkeepers
- **Administration and Support:** This skill group involves support activities for day-to-day operations of businesses and organisations, typically attained through private/ independent training and on the job learning. Specific occupations where this skill group is expected to experience high demand in Liverpool by 2031 include general clerks, receptionists, secretaries, keyboard operators.

**Figure 2.8. Employment by Occupation, Liverpool, 2016 and 2031 (Top 30 Net Change)**



Notes: (a) The occupations in Future 2.4 have been ranked based on their contribution to new jobs between 2016 and 2031. (b) These projections were developed at the 1-digit ANZSIC level for all industries, except for manufacturing which was developed at the 2-digit ANZSIC level.  
 Source: TPA (2016b), ABS (2017a).

## 3. BENEFITS OF 'LOCAL JOBS FOR LOCAL PEOPLE'

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The employment strategy is focused on delivering local jobs for local people. There are considerable benefits for both employers and employees (residents) to improving the rate of locals working within the region. This section provides an overview of these benefits as identified through a review of existing research and consultations with businesses in the local region.

### 3.1 BENEFITS FOR RESIDENTS

#### 3.1.1 Reduced Travel Time, Congestion, and Associated Pollution

A transition to working locally would lead to reduced travel times for residents. Liverpool residents currently commuting to Sydney CBD can expect an additional 31 minutes of travel time added to the usual 34-minute commute, due to workers traffic related congestion (Grattan Institute, 2017). Reduced travel times would provide residents with additional time each day to spend on leisure, personal relationships, sleep, education, etc. which improves overall wellbeing and reduces stress.

Road congestion is another aspect of peak hour commuting which could be alleviated from residents working locally. Road congestion, and the associated economic, social and environmental costs, is a significant issue among most cities in Australia. With the anticipated population growth over the coming years, this is only set to worsen. The aggregated economic, social and environmental cost of road congestion and public transport crowding for the Sydney, Hunter and Illawarra region is anticipated to increase from approximately \$8.1 billion in 2016 to \$15.9 billion by 2031 (Infrastructure Australia, 2019). Psychological costs are also associated with road congestion, including higher levels of stress, lowered life satisfaction, poorer attitudes, and reduced productivity (The Australian Institute, 2005). A transition towards working locally would help combat these associated economic and psychological costs.

Reduced congestion and travel times will, in turn, lead to reduced pollution levels. The main sources of pollution associated with commuter vehicles include PM2.5 (airborne particulate matter small enough to penetrate deep into the lungs and potentially pose significant health risks), NOx (a mixture of nitric oxide and nitrogen dioxide which causes detrimental effects to the bronchial system), and VOC (volatile organic compounds produced by the combustion of fuels which can be harmless to health). Commuter vehicles are estimated to contribute to approximately 62% of NOx emissions, 24% of VOC emissions and 14% of PM2.5 emissions (EPA, 2013) in Sydney. Health risks associated with these pollutants range from coughing, fatigue and headaches to impaired lung function, increased respiratory disease and increased mortality rates. Reduced air quality also reduced quality of life and wellbeing for residents.

#### 3.1.2 Improved Health Outcomes

Lengthy commutes are directly correlated with various negative health outcomes, including physical health concerns related to prolonged sitting as well as mental health concerns. Prolonged sitting has been linked to increased blood pressure, high blood sugar, excess body fat and abnormal cholesterol levels (Government of South Australia, 2019). Mental health issues include sleep disturbances, fatigue, concentration problems and stress (Scientific American, 2005).

Working locally encourages residents to use active modes of transport (e.g. walking and cycling), where there is infrastructure in place to support this activity, as the proximity to the location of work reduced the need for motorised vehicles (Kelobonye.K, Mao.F, Xia.J, Swapan.M, McCarney. G, 2019). This results in improved health and wellbeing outcomes for these residents due to increased physical exercise and reduction in congestion induced stress.

### 3.1.3 Better Work/ Life Balance

Those that undergo lengthy commutes have less time to spend with family, friends and to pursue own interests, impacting overall wellbeing and happiness (The Australian Institute, 2005). Residents that work locally will have more time before and after work for other commitments, providing more of a balance between work and other aspects of life.

### 3.1.4 Increased Community Pride

Lengthy commutes to other regions away from place of residence removes people from their community, impacting involvement in community affairs and social interactions. Increased employment self-containment has positive repercussions for the relationships that individuals build with other community members, leading to community engagement, heightened satisfaction levels and consequently increased community pride (The Australian Institute, 2005).

### 3.1.5 Reduced Local Unemployment

'Local jobs for local people' may be a suitable approach for tackling local unemployment, where residents have the right skills mix and are motivated, capable and ready to work. In this case, Liverpool could potentially reduce its unemployment rate from the current 5.0% level (Economy.ID 2019). Though as it is unlikely the majority of residents who currently work outside of Liverpool will have the right skills mix to work locally, the transition may need to be motivated by providing residents with opportunities for further education and training in Liverpool's key industries.

## 3.2 BENEFITS FOR BUSINESSES

### 3.2.1 Greater Staff Retention

Greater staff retention is a flow-on benefit of better outcomes for residents. Residents reap numerous benefits from working locally, including a better work life balance, social atmosphere, and organisational prestige (Shakeel, N., 2015). For businesses, employing workers with an improved work-life balance will increase employee commitment and positively influence retention rates. Additionally, employing workers with good relationships and social atmosphere with co-workers, provided by the increased social opportunities of living in the same region, will improve retention rates.

### 3.2.2 Greater Capture of Wages Paid to Local Staff

Increased participation of residents in the local workforce generates substantial economic benefits. More of the income earned locally will be retained and multiplied within the region, through spending at local businesses. Throughout the working week, people typically spend around their place of work, including through visiting cafes, purchasing lunch, and shopping/ leisure activities after work. A transition to working locally would retain this spending in the locally economy and create a multiplier effect, through increased recirculation of money, further job creation and greater investment in the community.

### 3.2.3 Increased Staff Diversity

Diversity is one of Liverpool's strengths, with approximately 40.7% of Liverpool residents born overseas, compared to just 27.6% in New South Wales (Profile.ID, 2016). Increasing employment self-containment will result in increased staff diversity, due to this diverse range of cultures present within the Liverpool region. Benefits of a culturally diverse workplace include increased creativity and innovation due to unique perspectives, ability to target unique markets due to cultural sensitivity, ability for the organisation to offer a broader and more adaptable range of products and services, increased productivity and growth (Hult International Business School, 2019).

### 3.2.4 Increased Engagement and Inclusiveness

When workers of a business/ organisation reside in the same area, there are increased opportunities to engage with colleagues outside of the workplace. Fostering closer connections with colleagues helps workers to feel more

emotionally invested in their jobs and feel more important in the workplace, resulting in increased engagement and feelings of inclusiveness (SHRM, 2016).

### 3.2.5 Increased Understanding of Local Market/ Networking Opportunities

Participation of residents in the local workforce provides businesses/ organisations with an enhanced understanding of the local market, as their employees are part of the local market (Shakeel, N., 2015). In addition, local resident workers may have connections and networks which they can draw from.

## 4. CHALLENGES & OPPORTUNITIES

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Stakeholder consultations with local businesses and business groups provided guidance on the challenges and opportunities for local jobs for local people in Liverpool. These findings are outlined below and are addressed by the Strategy in Chapter 5.

### 4.1 OPPORTUNITIES

Liverpool is on the cusp of significant change with several catalytic projects in delivery and planning for the region. The range of opportunities for Liverpool are numerous and diverse. Harnessing these opportunities is essential to ensuring local residents are able to benefit as much as possible from the increased economic activity.

Key opportunities identified for Liverpool include:

- Major Projects (refer to Section 2.4) and key industries, including:
  - Significant infrastructure development and resulting demand for ancillary services
  - The presence of existing institutions which bring together the needs of universities and business
  - Strong growth outlook of key sectors including health care and research, hospitality, warehousing, trade, administration and community services.
- Growing desire from residents to work locally:
  - “Return to the west” movement of residents with families who are experienced and bring their skills back to the area
  - Residents looking for local work to avoid long commutes to the city.
- Increasing support for remote working: Almost all external stakeholders consulted with suggested there were opportunities relating to increased working from home/ remote working. Co-working spaces might be an opportunity to support the work local strategy.

### 4.2 CHALLENGES

Though Liverpool is experiencing significant economic activity, the pass-through of this activity to local residents is not as strong as it could be. The following challenges in terms of local jobs for local people were uncovered in consultations:

- Challenges faced by Business:
  - Local residents, generally, have a relatively low understanding of the opportunities and jobs available in the region. Further, general public perceptions for an industry may not be aligned with the specific nature of the industry in the local region
  - Attracting niche skills from the local population is difficult. Highly specialised firms within the region did indicate considerably lower rates of local workers than other businesses consulted with
  - Some concerns that focus on local employment will detract from employing the “best person for the role”, however, local businesses who have met local employment targets specifically noted that meeting local employment targets had not had this impact
  - Attraction of businesses to Western Sydney in general is difficult as businesses (of a certain calibre) prefer to be in the CBD.
- Challenges faced by Residents and Workers:
  - Businesses can have high expectations of entry level staff. Employers need to be “youth” ready, the youth entering the workforce now are a different generation with different needs. Similarly, some education is needed for youths in terms of realistic expectations of income levels

- Careers advice at school is minimal and students have limited understanding of the broad range of jobs which are present not just locally, but broadly. As a result, Parents are key drivers of student's study choices, and there is a strong focus on university qualifications above TAFE qualifications
- Local wages are generally lower than other areas of Sydney, which attracts locals to work elsewhere
- Whilst local companies are international players in their fields, they are sometimes not perceived as prestigious
- Local public transportation limitations impact considerably on local resident workers. This is particularly an issue for youths and those of low socio-economic status where access to transport (particularly a car) is dependent on having a job, but access to jobs is constrained by not having access to transport
- New migrant and other communities can struggle to find employment (as is the case more broadly than Liverpool). Low skilled, highly casualised jobs are filled easily, however, leveraging the existing skills of migrant workers can be improved – and leveraged within local businesses
- Pockets of low socio-economic status within the region record low levels of employment and education participation. Supporting these residents to re-engage in the labour force (or education) may assist in improving local self-containment, but they will need support to do so.
- Challenges for those furthest from the labour force: Pockets of Liverpool experience high levels of socio-economic disadvantage and inter-generational unemployment. There is a challenge for the region in taking a long-term view to support these communities in re-entering the labour force, including use of existing early learning and primary schools to engage/incite youth aspirations
- Other Challenges: There are negative perceptions of Liverpool as a location to live or socialise. The region is not seen as a “safe” place to socialise. To change this view the Liverpool City Activation Strategy, which focuses on fostering an 18-hour walkable city with a lively and well-integrated mix of activities, and rich culturally infused food-outlets will be critical to attract those who work locally to live locally. Other areas for enhancement include quality of housing stock, green space and improved general service provision.

## 5. STRATEGY

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### 5.1 VISION

The following is the vision for the Liverpool Employment Strategy:

*“Providing opportunities to live, work and play in Liverpool, reducing commute times and increasing confidence, aspiration, pride, and leadership for the local community”.*

### 5.2 STRATEGIC THEMES

The Liverpool Employment Strategy is delivered through the following strategic focus areas:

- Increase Communication & Engagement
- Build Skills & Development
- Leverage Surrounding Infrastructure
- Review Internal Human Resources Processes
- Investigate Demand for Co-Working Space
- Encourage Labour Force Participation.

**Figure 5.1. Liverpool Employment Strategy – Strategic Themes**



Source: AEC



### 5.2.1 Increase Communication & Engagement

**Description:** This strategic focus area is aimed at improving local resident knowledge of employment opportunities in Liverpool and also improving business knowledge of local resident skills.

**Rationale:**

Liverpool's business community is enthused and engaged in the movement towards local jobs for local people. Continuing to publicly share Council's intent to lift the attainment of local jobs by local residents has the potential to further lift the profile of this objective for businesses of all sizes and encourage businesses to consider local labour in their recruitment processes. Communicating Council's objectives are anticipated to take the form of a flexible and responsive marketing campaign across social media, direct marketing and engagement with local businesses.

Liverpool is a diverse economy incorporating businesses of varying sizes engaged in a broad range of industries. As a result, there exists a significant variety of employment opportunities in the region. There is a role for Council in sharing the breadth of local job opportunities with local residents, and potential future residents in the region. In addition, local youths may be encouraged to enter into key areas of study which will be required in the future – particularly those of a STEM nature – by profiling local businesses and occupations in an easily accessible format.

Facilitating discussions between local businesses and local employers can also be a key role for Council, connecting the needs of business with the next generation of skills. There is a possibility these discussions can result in greater levels of partnership between business and education in the region – supporting job opportunities for local students, hands-on learning opportunities and innovation in Liverpool.

**Key Activities:**

The following key activities are recommended to implement this component of the strategy:

- Report and promote Council successes and key performance metrics:
  - Run a social media campaign throughout the year informing businesses of Council's aims and objectives in the Employment Strategy and Council's performance against these aims and objectives. This might include a story on a business which has recently employed a number of local residents or a local resident who has recently been employed locally
  - Run a letter drop campaign or include details of Council's desire to increase local jobs for local people with quarterly rates notices
  - Report a tally of number of businesses engaged with each month on Council's website
  - Attend and engage with local businesses at networking events, particularly those with smaller business owners who might not be aware of council's activities.
- Market local job opportunities to current and potential future residents
  - Work with job advertising companies (e.g. SEEK, LinkedIn) to assist in identifying local residents for local job opportunities
  - Develop a 'Work in Liverpool' component to Council's website where local businesses can advertise job opportunities
  - Run a social media campaign targeting youths providing vignettes of local employers in key sectors and the broad range of jobs available. This is anticipated to broaden local residents understanding of the range of opportunities available locally and assist in building aspirations in the local community
  - Continue to run existing programs such as the Making the Connection series across sectors in Liverpool (including STEM).
- Market the benefits of local jobs for local people to businesses
  - Develop marketing collateral to advertise the benefits of 'local jobs for local people' for local businesses
  - Distribute this marketing material to businesses and promote on Council's website

- Facilitate discussions between education providers and local business
  - Meet with key businesses and education providers to discuss current and future skills needs
  - Continue to run regular skills connection webinars and seminars.

### 5.2.2 Build Skills & Development

**Description:** This strategic focus area is aimed at identifying and keeping track of local skills.

**Rationale:**

Understanding the range of skills available in Liverpool is a core component to connecting skills to business needs in the region. Skills prevalent in the region take a number of forms, including those skills (in terms of occupations) of local residents as well as the skills prevalent in local businesses.

Developing a skills register which can be provided to major project proponents may assist in lifting the proportion of contracts associated with these projects which are awarded to local industry. Major projects in the region which have used higher proportions of local labour in recent periods have provided local businesses and locals with greater confidence in their ability to gain employment/ contracts on local major projects.

The skill mix of local residents can, over time, be transformed through increased engagement with local education providers. Ensuring the provision of local education and training courses consider the future employment potential of Liverpool, and the mix of industries in the region, can assist in lifting the employment of local residents in local business. This can include higher education facilities, but also schools in the area.

**Key Activities:**

- Ongoing skills mapping and update program (i.e. what skills will be required in the local area into the future):
  - Assess the skills of local residents on a regular basis: understanding the mix of skills in the local population and what is required by businesses. This will provide guidance on skills development needs
  - Develop and maintain a business and skills register: This register will outline the industry and main activities of all (or as many) businesses in the local community. It is possible that local business chambers already maintain such information or could be consulted with on the best approach of compiling this information. Otherwise, it is recommended that the business register is obtained from the Australian Taxation Office and businesses are invited to complete the information
  - Provide guidance on the skills register with new developments/projects, to assist them in identifying local businesses to engage in their works.
- Ongoing skills planning in conjunction with education providers. Continue to discuss future skills needs, and education requirements to fill those needs with local education providers.

### 5.2.3 Leverage Surrounding Infrastructure

**Description:** This strategic focus area is aimed at ensuring local skills are able to benefit from the significant projects planned for the region by aligning local skills and training now with the skills needed by these major projects into the future.

**Rationale:**

Liverpool is on the cusp of significant change. Several catalytic projects are currently underway and have the potential to spur additional business and investment attraction into Liverpool. Local residents have the ability to benefit directly from these developments if their skills are appropriately leveraged. Planning ahead for the skills requirements of projects not just in the construction phase, but also in the ongoing operations phase is likely to support the delivery of required skills from within the local population.

Council has an opportunity to undertake targeted business attraction activities to support the attraction of businesses which will benefit from newly delivered infrastructure as well as requiring the skills prevalent in the local resident population. This activity would serve to lift local supply chains as well as the engagement of local labour.

### Key Activities:

The following key activities are recommended to implement this component of the strategy:

- Engage with major project proponents as early as possible to plan for skills. Discussions around skills needs will focus on both construction and operational phases as are aimed at increasing the use of local labour as much as possible
- Develop a Major Projects Skills Development Plan, which outlines the current major projects and the operational skills required by them. This document may also be used as a guide for discussions between local major project proponents and local education providers to encourage the development of required skills (where possible) and be refined regularly. Key industry stakeholders, programs and information (e.g. ICN gateway, Skills exchanges, Productivity bootcamp, etc) should be leveraged wherever possible
- Undertake business investment activities to attract local businesses which would benefit from the surrounding infrastructure and have skills requirements similar to those of local residents (leveraging skills mapping). An economic opportunity and skills matching assessment should be conducted to understand the industries most likely to strongly benefit from developing major infrastructure in the region as well as using the current skill set of local residents. This assessment can then be used to undertake business investment attraction activities.

#### 5.2.4 Review Internal HR Processes

**Description:** This strategic focus area is aimed at encouraging local applicants to apply for jobs within Council.

#### Rationale:

Council is a key employer in Liverpool. Council can encourage local applicants to apply for job opportunities, increasing the opportunities for local residents to work within Council.

#### Key Activities:

Continue to implement procurement policy within Council, ensuring any recruitment process considers local residents where requisite and equivalent skills are matched.

#### 5.2.5 Investigate Demand for Co-Working Space

**Description:** This strategic focus area is aimed at understanding the potential for development of co-working space in Liverpool.

#### Rationale:

In April and May 2020, in the midst of the COVID-19 pandemic, approximately 46% of Australians aged over 18 years reported they were working more hours from home than usual (ABS, 2020). Business consulted with in the development of this strategy suggested the positive impacts of changes to work during the pandemic had the potential to lift interest in remote working in Australia after the crisis.

Whilst many residents may continue to work from home it is likely that continued remote working will increase demand for co-working spaces. This will provide local residents the ability to work within the region whilst being employed by a business located outside the Liverpool boundary. The demand for and feasibility of a co-working space, particularly professional services and state government, should be investigated before a decision regarding this opportunity is made.

#### Key Activities:

The key activity recommended to implement this component of the strategy is the development of a business case to understand the:

- Current and anticipated demand for remote working and co-working spaces
- Feasibility of a local co-working space
- Market for investment in co-working spaces.

### 5.2.6 Encourage Labour Force Participation via Internal Engagement

**Description:** This strategic focus area is aimed at supporting other teams within Council to address long-term intergenerational underemployment in Liverpool.

**Rationale:**

Pockets of Liverpool experience inter-generational unemployment. Significantly higher than average levels of unemployment and youth (15 to 24 years) educational disengagement (Profile ID, 2019a) are experienced in locations such as Miller and Busby.

As a long-term strategic activity, engaging with local children all through their educational life (from pre-school years through to high school), to incite aspiration and encourage educational attainment can assist in working towards lifting participation rates.

Whilst this work is not directly within the role of the Business Development team, the team can work with the Community Development team, providing support and business contact information where appropriate.

**Key Activities:**

The key activity recommended to implement this component of the strategy is regular engagement with the Community Development Team to ensure consistent messaging toward and engagement of youths in the local region. Activities which could assist in encouraging local labour force participation could include supporting the Community Development Team to:

- Proactively engaging with youths from as young as possible to incite aspiration and interest in education
- Engaging with local education providers and service providers to identify practical strategies to encourage participation
- Engaging with local business to encourage employment of local low skilled workers.

In terms of the action/ implementation planning the last three work areas have been combined into a Council internal initiatives focus area – however, the intent and rationale are kept separate in this section to ensure clarity of purpose.

## 6. IMPLEMENTATION

### 6.1 IMPLEMENTATION PLAN

The following table outlines the key activities to be undertaken to implement the strategy and how often each of them should be undertaken in each of the coming four years.

Due to the changing nature of skills demand over time and the likely changing perception of Liverpool as an employment/ investment destination, it is recommended the strategy take a tiered approach to its focus and delivery. These tiers include:

- The here and now (12-24 months): with a focus on matching skills attraction to immediate existing gaps in labour market
- Medium term: (3-4 years): with a focus of building the program now to attract and support the alignment of new business in key areas of opportunity in 3-4 years.

These actions are focussed through an implementation plan for Council to facilitate the delivery and extension of the program.

**Table 6.1. Increase Communication & Engagement**

Activity	Year 1	Year 2	Year 3	Year 4
<b>1.1 Report and promote Council successes and key performance metrics</b>				
Run social media campaign	3	3	2	2
Letter drop/inclusion in rates notices	4	4	4	4
Promote number of businesses engaged each month on website	12	12	12	12
Attend and engage with businesses at networking events	4	4	4	4
<b>1.2 Market local job opportunities to current and potential future residents</b>				
Engage with Seek and LinkedIn to understand potential to identify job applicants lining within the region for job opportunities located within the region	2	1	1	1
Inform businesses of how to stratify or identify job applicants by their place of residence	2	2	2	2
Develop "Work in Liverpool" Portal for Council's website	1	0	0	0
Run Making the Connection seminars	4	4	4	4
Run social media campaign specifically targeting youth engagement for local employment	3	3	2	2
<b>1.3 Market the benefits of local jobs for local people to local businesses</b>				
Develop marketing collateral (refresh annually thereafter)	1	1	1	1
Distribute marketing collateral	1	1	1	1
<b>1.4 Facilitate discussions between education providers and local business</b>				
Meet with key businesses and education providers	6	6	6	6
Run Skills Connection webinars/seminars	4	4	4	4

**Table 6.2. Build Skills & Development**

Activity	Year 1	Year 2	Year 3	Year 4
<b>2.1 Assess the skills of local residents each Census period</b>				
Analyse and compare the place of usual residence and place of work employment data by industry and occupation in each Census period	0	1	0	0
Communicate findings of this work to local businesses	0	1	0	0
<b>2.2 Develop and maintain a business and skills register</b>				
Contact local business chambers	1	1	1	1
Request business register from Australian Taxation Office	1	1	1	
Contact all local businesses and obtain information about their skills and capabilities	1	0	0	0
Maintain this register annually	0	1	1	1
Provide details on the local skills and businesses with new developments and projects in the area	1	1	1	1
<b>2.3 Ongoing skills planning with local education providers</b>				
Discuss identified skills gaps and the required skill needs with education providers	4	4	4	4

**Table 6.3. Leverage Surrounding Infrastructure**

Activity	Year 1	Year 2	Year 3	Year 4
<b>3.1 Engage with major project proponents as early as possible to plan for skills</b>				
Meet with major project proponents to discuss the skills requirements of their projects	2	2	2	2
Provide major project proponents with details of local providers for key skills needed to encourage use of local workers	2	2	2	2
Develop and maintain major projects skills development plan	1	1	1	1
Facilitate discussions between major project proponents and education facilities (where appropriate) where appropriate to plan for operational skills needs	0	1	0	1
<b>3.2 Attract new businesses</b>				
Undertake an opportunity assessment and skills matching assessment	0	1	0	0
Identify business types to be attracted to the region	0	1	0	0
Engage with potential new businesses to the region	0	0	2	2

**Table 6.4. Council Internal Initiatives**

Activity	Year 1	Year 2	Year 3	Year 4
<b>4. Investigate Demand for a Co-Working Space</b>				
Scope the Terms of Reference for the development of a Business Case	1	0	0	0
Undertake demand analyses and business case for co-working space.	1	0	0	0
Action outcomes of the business case (i.e. EoI or Council delivery, where feasible).	1	0	0	0
<b>5. Review Internal HR Processes</b>				
Meet with Council's HR team to discuss the benefits of local jobs for local workers.	1	0	1	0
Extend the benefits of the program to the Council Executive and Directors annually	1	1	1	1
<b>6. Encourage Labour Force Participation</b>				
Engage regularly with the Community Engagement Team to ensure consistent messaging and engagement of youths in the local region.	4	4	4	4

## 6.2 MEASURING SUCCESS

The following measures should be tracked to understand the efficacy of Council's work in terms of local jobs for local people. Most of these indicators are not directly influenced by Council, however, the implementation of the strategy should assist them in improving these outcomes.

**Table 6.5. Tools for Measuring Success**

Indicator	Description	Source	Frequency
Employment Self-Containment	Proportion of local resident workers who work locally.	ABS Census of Population and Housing	5 yearly
Employment Self-Sufficiency	Proportion of local jobs filled by local residents.	ABS Census of Population and Housing	5 yearly
Distance Travelled to Work	Average kilometres travelled to work by local residents and workers.	ABS Census of Population and Housing	5 yearly
Transport Use Statistics	Average Road Traffic Volumes	NSW Department of Transport (Roads and Maritime)	Annually
Council Workforce	Number/Proportion of Local Resident Council Workers	Council HR	Ad Hoc

There are also a range of data points, which Council could collect from local businesses on a regular basis (annually) through the use of a survey. These datapoints would include:

- Destination of local students (what do students do the year after they finish their studies and where do they do it)
- Awareness of other key local businesses
- Proportion of local workers in business workforce
- Perceptions of Liverpool as a place to live and work.



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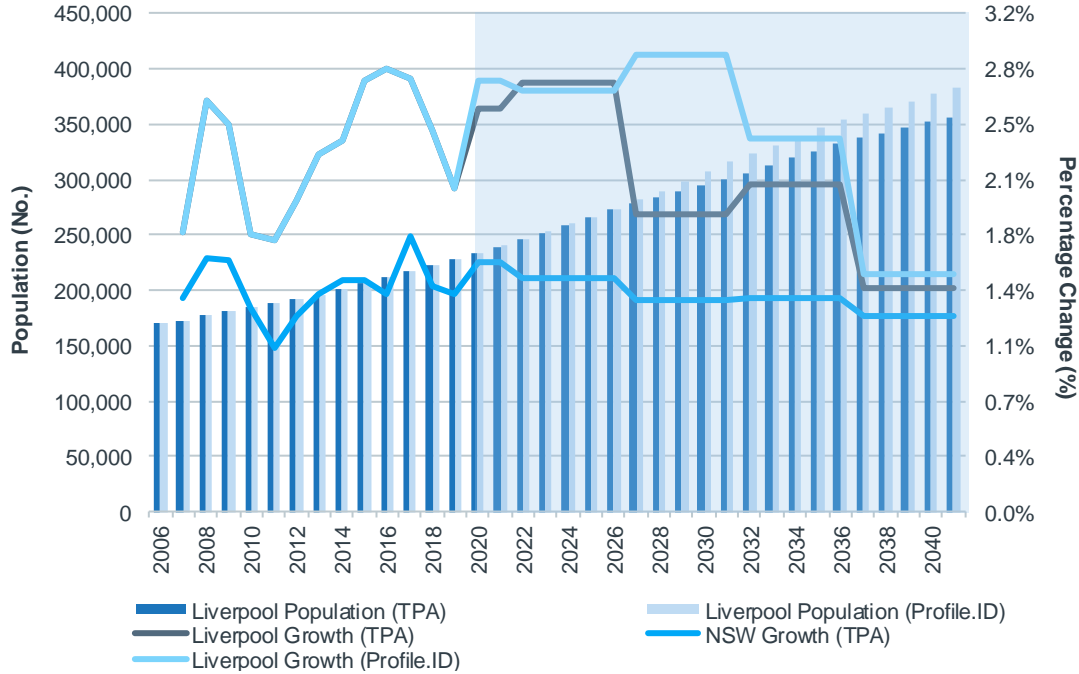
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# APPENDIX A: LIVERPOOL OVERVIEW DETAILS

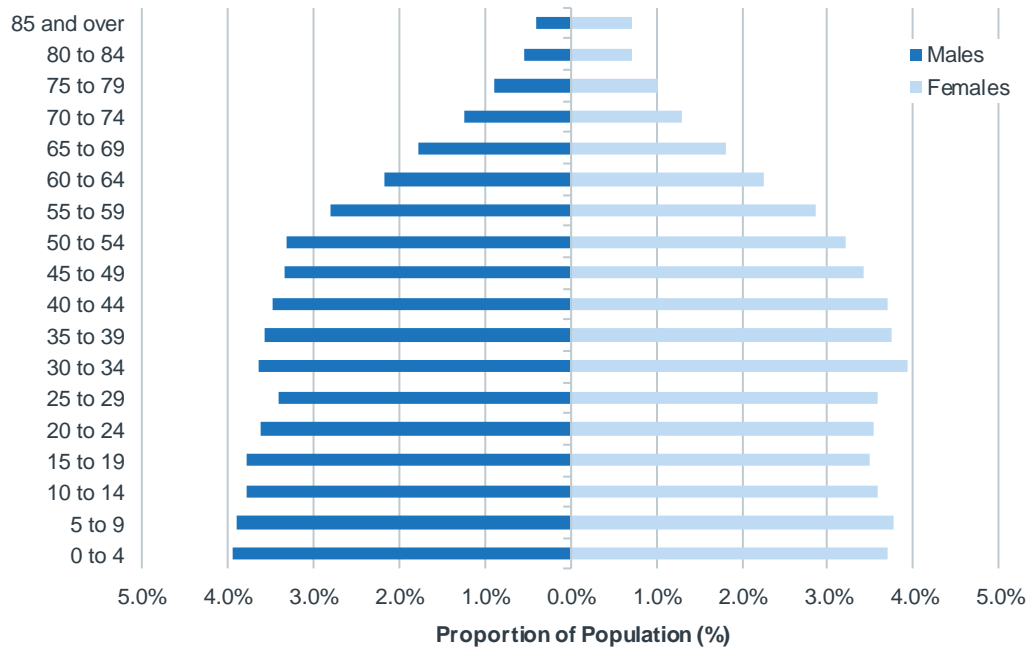
## REGIONAL SNAPSHOT

Figure A. 1 Historical and Projected Population, 2006 to 2041, Liverpool and New South Wales



Note: (a) The shaded area is representative of projections. (b) Projections were developed by applying TPA and Profile.ID growth projections to the Profile.ID population estimates, as indicated.  
 Source: Profile.ID (2019a,b), TPA (2016a),

Figure A. 2 Population by Age and Sex, 2016, Liverpool

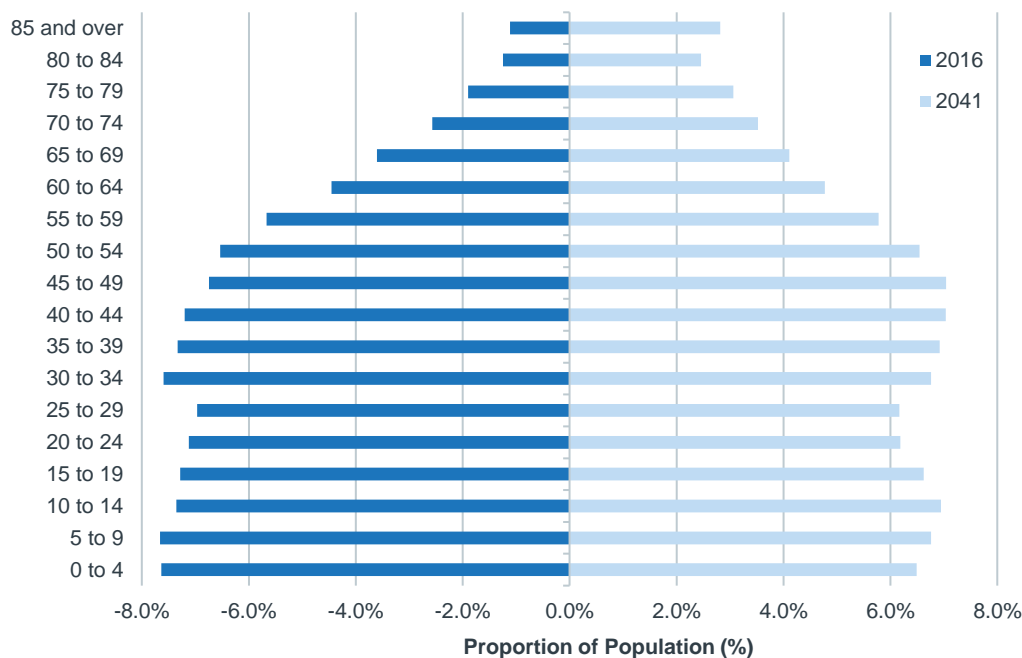


Source: Profile.ID (2019a).

**Table 6.6. Average Age, 2011 and 2016, Liverpool**

Indicator	2016	2011	Change
Average Age	34.7	33.9	0.9

Source: Profile.ID (2019a)

**Figure. A 1. Population Projections by Age, 2016 vs. 2041, Liverpool**

Source: Profile.ID (2019a), TPA (2016a).

**Table A. 1. Index of Relative Socio-Economic Disadvantage, Liverpool, 2016**

Area	Index of Relative Socio-Economic Disadvantage
<b>SA2s</b>	
Ingleburn - Denham Court	993
Mulgoa - Luddenham - Orchard Hills	1,072
Ashcroft - Busby - Miller	749
Austral - Greendale	974
Cobbitty - Leppington	1,065
Badgerys Creek	890
Cecil Hills	1,036
Green Valley	931
Hinchinbrook	979
Hoxton Park - Carnes Hill - Horningsea Park	1,014
West Hoxton - Middleton Grange	1,036
Cabramatta West - Mount Pritchard	846
Casula	977
Chipping Norton - Moorebank	1,037
Holsworthy - Wattle Grove	1,074
Liverpool	845
Lurnea - Cartwright	818
Prestons - Edmondson Park	1,031

Area	Index of Relative Socio-Economic Disadvantage
Warwick Farm	818
<b>LGA</b>	
Liverpool	952

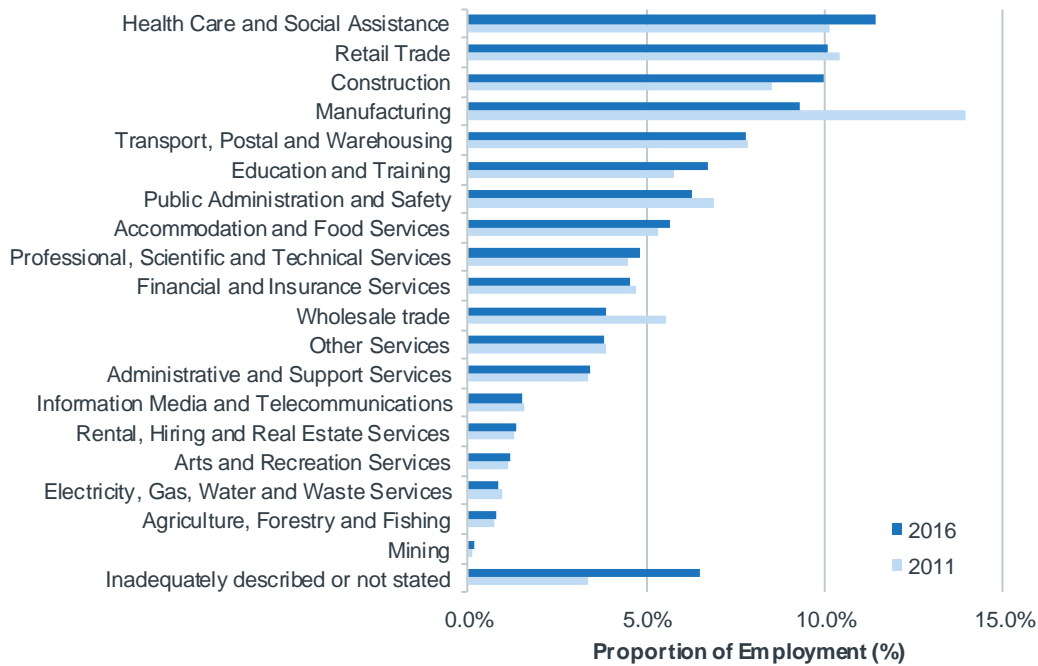
Note: The index scores are standardised to a distribution where the average equals 1,000 and the standard deviation is 100.  
Source: ABS (2017a).

**Table A. 2. Country of Birth, 2016, Liverpool and NSW**

Country	Liverpool	New South Wales
Australia	55.8%	70.3%
Middle East	9.4%	2.3%
Mainland South-East Asia	5.5%	1.9%
Southern Asia	4.4%	3.6%
South Eastern Europe	4.4%	1.4%
Polynesia	4.2%	0.7%
Maritime South-East Asia	3.2%	2.4%
Southern Europe	2.1%	1.1%
New Zealand	1.8%	1.7%
South America	1.8%	0.8%
Chinese Asia (includes Mongolia)	1.6%	4.2%
United Kingdom, Channel Islands and Isle of Man	1.3%	3.9%
North Africa	1.1%	0.4%
Southern and East Africa	0.9%	0.9%
Eastern Europe	0.6%	0.6%
Western Europe	0.5%	1.0%
Central and West Africa	0.4%	0.1%
Central America	0.3%	0.1%
Northern America	0.2%	0.6%
Central Asia	0.2%	0.2%
Japan and the Koreas	0.2%	0.9%
Ireland	0.1%	0.3%
Northern Europe	0.1%	0.1%
Melanesia	0.1%	0.1%
Caribbean	0.0%	0.0%
Micronesia	0.0%	0.0%
Antarctica	0.0%	0.0%
At sea	0.0%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

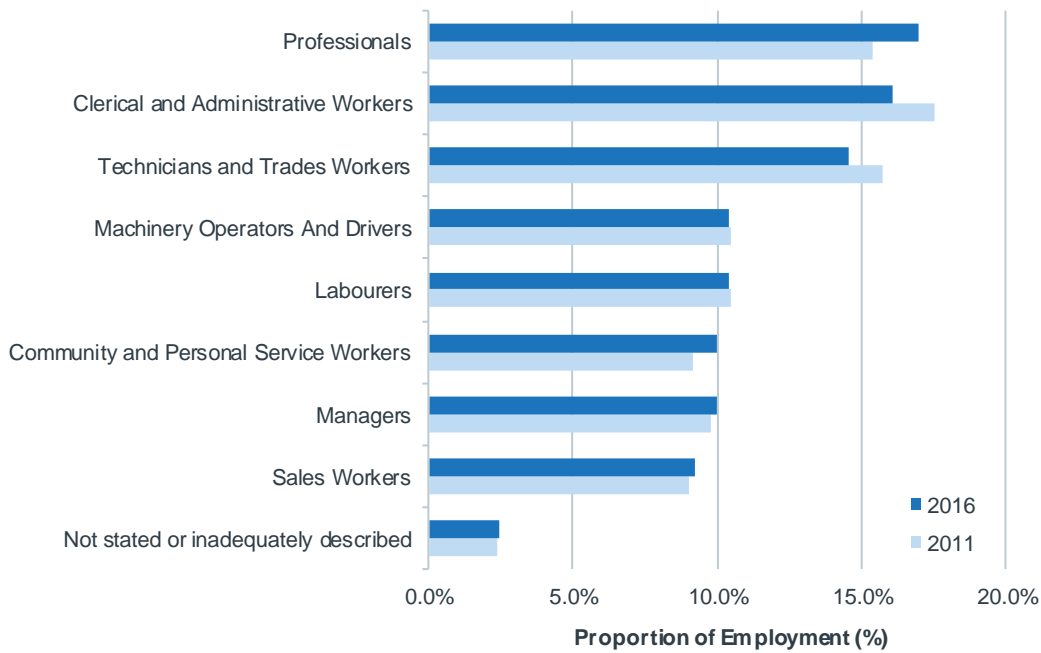
Sources: ABS (2017a).

**Figure A. 3. Employment by Industry PoUR, 2011 and 2016, Liverpool**



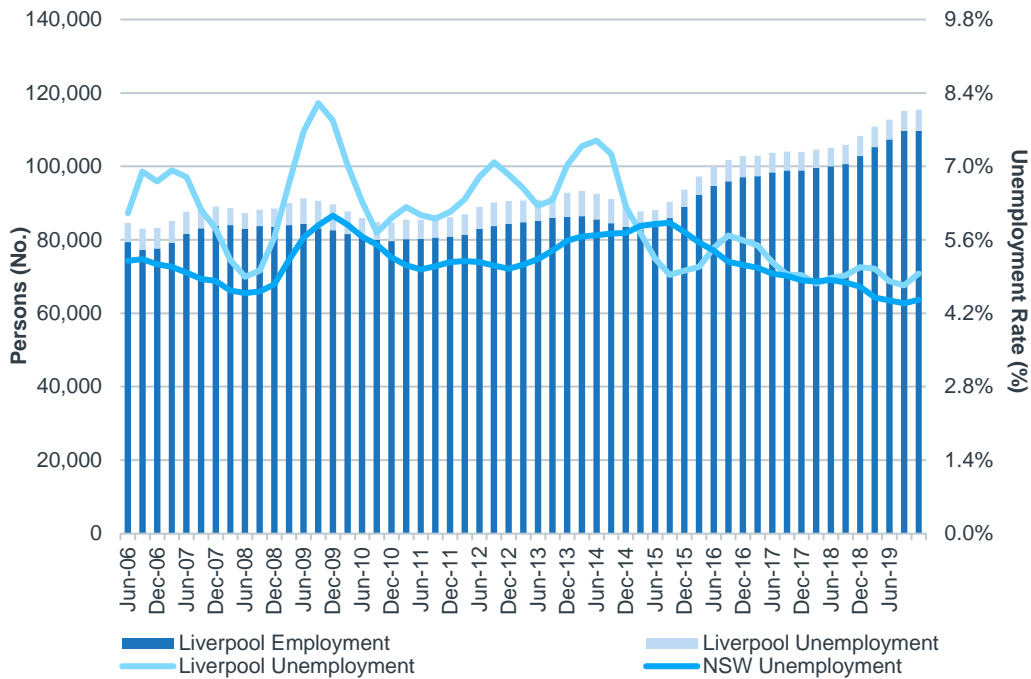
Source: Profile.ID (2019a).

**Figure A. 4. Employment by Occupation PoUR, 2011 and 2016, Liverpool**



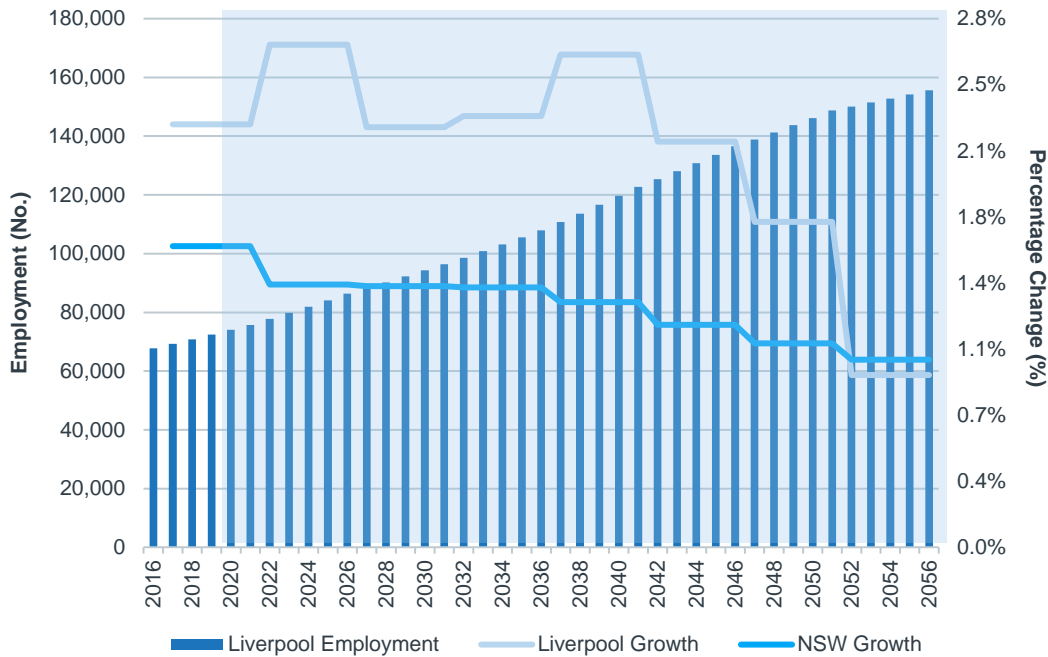
Source: Profile.ID (2019a).

Figure. A 2. Employment and Unemployment, SALM, Jun-06 to Mar-20

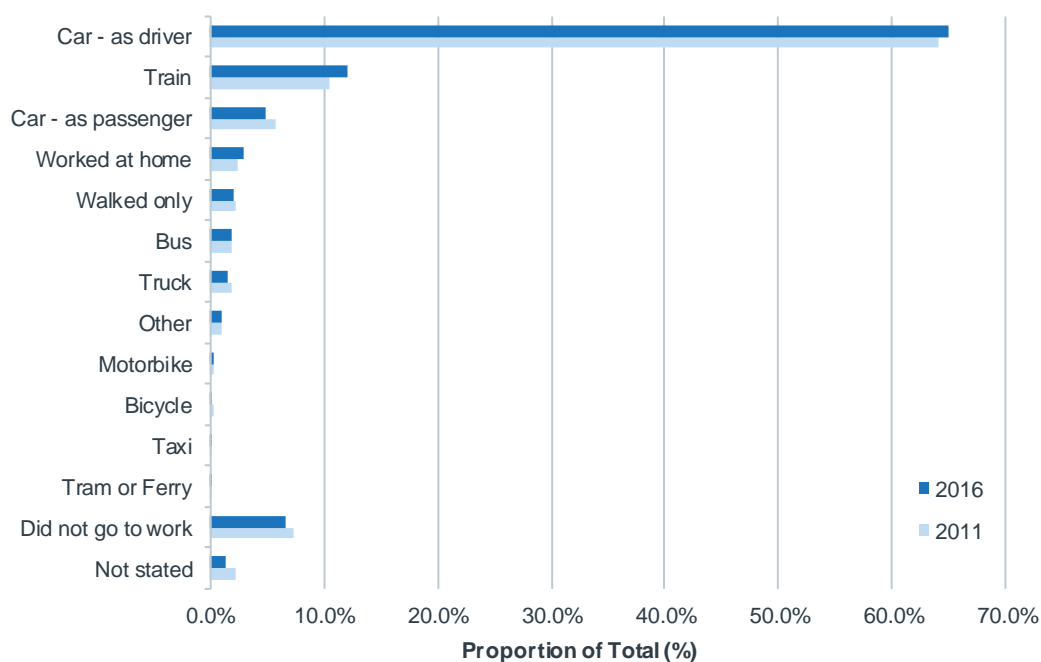


Sources: DoESSFB (2020)

Figure A. 5. Historical and Projected Employment (PoW), 2016 to 2056, Liverpool and NSW



Notes: Employment projections were developed using Transport for NSW's Travel Zone Projection 2016 (TPA, 2019) model to understand the future level of employment in Liverpool. Growth rates from this model were applied to 2016 base employment by place of work (provided by Profile.ID) to project forward employment. Whilst TPA employment projections are an important baseline gauge for future employment growth, these projections do not incorporate current population or employment growth expectations and/or commitments to all major infrastructure projects (e.g. Western Sydney International Airport and Western Sydney Aerotropolis).  
 Source: Profile.ID (2019a). TPA (2016b).

**Figure A. 6. Method of Travel to Work, 2011 and 2016, Liverpool**

Source: Profile.ID (2019a).

**Table A. 3 Average Weekly Personal Income (\$) by Industry PoW, 2016, Liverpool**

Industry	Liverpool	NSW
Mining	\$1,605	\$2,057
Electricity, Gas, Water and Waste Services	\$1,494	\$1,718
Transport, Postal and Warehousing	\$1,488	\$1,250
Wholesale Trade	\$1,275	\$1,438
Public Administration and Safety	\$1,237	\$1,538
Education and Training	\$1,229	\$1,270
Professional, Scientific and Technical Services	\$1,220	\$1,640
Agriculture, Forestry and Fishing	\$1,210	\$958
Financial and Insurance Services	\$1,198	\$1,887
Manufacturing	\$1,197	\$1,275
Health Care and Social Assistance	\$1,144	\$1,173
Construction	\$1,076	\$1,252
Retail Trade	\$993	\$809
Administrative and Support Services	\$920	\$989
Rental, Hiring and Real Estate Services	\$881	\$1,404
Other Services	\$878	\$940
Accommodation and Food Services	\$796	\$642
Arts and Recreation Services	\$782	\$975
Information Media and Telecommunications	\$524	\$1,672

Source: ABS (2017a).



**Table A. 4. Education Attainment, 2011 and 2016, Liverpool**

Education Attainment	Liverpool		NSW	
	2016	2011	2016	2011
Year 12 Completion	52.1%	47.1%	52.1%	47.6%
Non School Qualification	41.9%	37.6%	50.4%	45.8%

Source: Profile.ID (2019a).

**Table A. 5. Non School Qualifications, 2011 and 2016, Liverpool**

Non School Qualifications	Liverpool		NSW	
	2016	2011	2016	2011
Bachelor or Higher degree	15.7%	12.5%	23.4%	19.9%
Advanced Diploma or Diploma	9.0%	7.8%	8.9%	8.3%
Vocational	17.1%	17.3%	18.1%	17.7%
No qualification	47.6%	50.1%	39.1%	42.8%
Not stated	10.5%	12.3%	10.5%	11.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Profile.ID (2019a)

**Table A. 6. Education Containment, 2011 and 2016, Liverpool**

Year	Liverpool	NSW
2011	89.4%	88.9%
2016	92.7%	91.8%
Change	3.3%	2.9%

Source: ABS (2017a).

## JOURNEY TO WORK ANALYSIS

**Table A. 7. Journey to Work Overview, 2016, Liverpool**

Indicator	Liverpool LGA
Workers - Place of Work	70,979
Workers - Place of Residence	84,076
Self Sufficiency	38.2%
Self-Containment	32.3%

Source: ABS (2017a).

**Table A. 8. Summary of Liverpool Labour Destinations (Where Liverpool Residents Work), 2016**

LGA	% of Total PoUR Workforce
Liverpool	32.3%
Sydney	10.5%
Fairfield	9.5%
Canterbury-Bankstown	8.4%
Parramatta	6.0%
Cumberland	4.6%
Campbelltown	4.5%
Blacktown	4.1%
Bayside	2.8%
Penrith	2.0%
Rest of New South Wales	15.2%

LGA	% of Total PoUR Workforce
Rest of Australia	0.2%
<b>Total</b>	<b>84,076</b>

Source: ABS (2017a).

**Table A. 9. Summary of Liverpool Labour Sources (Where Liverpool Workers Reside), 2016**

LGA	% of Total PoW Workforce
Liverpool	38.2%
Campbelltown	11.0%
Fairfield	9.9%
Camden	6.5%
Canterbury-Bankstown	5.9%
Blacktown	3.4%
Sutherland Shire	3.2%
Penrith	2.9%
Cumberland	2.9%
Wollondilly	2.3%
Rest of New South Wales	13.6%
Rest of Australia	0.3%
<b>Total</b>	<b>70,979</b>

Source: ABS (2017a).

**Table A. 10. Liverpool Labour Summary by Industry - 1 Digit, 2016**

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Agriculture, Forestry and Fishing	60.9%	39.1%	100.0%	0.3%
Mining	45.8%	54.2%	100.0%	0.1%
Manufacturing	27.2%	72.8%	100.0%	7.5%
Electricity, Gas, Water and Waste Services	23.6%	76.4%	100.0%	0.7%
Construction	40.7%	59.3%	100.0%	7.2%
Wholesale Trade	25.1%	74.9%	100.0%	3.2%
Retail Trade	42.0%	58.0%	100.0%	6.6%
Accommodation and Food Services	58.7%	41.3%	100.0%	3.4%
Transport, Postal and Warehousing	36.7%	63.3%	100.0%	6.3%
Information Media and Telecommunications	48.3%	51.7%	100.0%	1.3%
Financial and Insurance Services	50.9%	49.1%	100.0%	4.4%
Rental, Hiring and Real Estate Services	33.2%	66.8%	100.0%	1.0%
Professional, Scientific and Technical Services	43.4%	56.6%	100.0%	3.9%
Administrative and Support Services	45.9%	54.1%	100.0%	2.4%
Public Administration and Safety	32.3%	67.7%	100.0%	4.3%
Education and Training	36.5%	63.5%	100.0%	4.4%
Health Care and Social Assistance	36.2%	63.8%	100.0%	7.1%
Arts and Recreation Services	57.9%	42.1%	100.0%	0.8%
Other Services	43.9%	56.1%	100.0%	2.7%
<b>Total</b>	<b>27,138</b>	<b>43,840</b>	<b>70,979</b>	<b>56,938</b>

Source: ABS (2017a).

**Table A. 11. Liverpool Labour Summary by Industry - 2 Digit**

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Agriculture	62.0%	38.0%	100.0%	0.2%
Aquaculture	0.0%	0.0%	0.0%	0.0%
Forestry and Logging	0.0%	0.0%	0.0%	0.0%
Fishing, Hunting and Trapping	0.0%	0.0%	0.0%	0.0%
Agriculture, Forestry and Fishing Support Services	45.5%	54.5%	100.0%	0.0%
Coal Mining	0.0%	0.0%	0.0%	0.0%
Oil and Gas Extraction	0.0%	0.0%	0.0%	0.0%
Metal Ore Mining	72.7%	27.3%	100.0%	0.0%
Non-Metallic Mineral Mining and Quarrying	42.9%	57.1%	100.0%	0.0%
Exploration and Other Mining Support Services	0.0%	0.0%	0.0%	0.0%
Food Product Manufacturing	31.4%	68.6%	100.0%	1.5%
Beverage and Tobacco Product Manufacturing	0.0%	100.0%	100.0%	0.1%
Textile, Leather, Clothing and Footwear Manufacturing	41.9%	58.1%	100.0%	0.2%
Wood Product Manufacturing	37.2%	62.8%	100.0%	0.4%
Pulp, Paper and Converted Paper Product Manufacturing	26.6%	73.4%	100.0%	0.4%
Printing (including the Reproduction of Recorded Media)	20.2%	79.8%	100.0%	0.5%
Petroleum and Coal Product Manufacturing	36.8%	63.2%	100.0%	0.1%
Basic Chemical and Chemical Product Manufacturing	36.0%	64.0%	100.0%	0.6%
Polymer Product and Rubber Product Manufacturing	19.5%	80.5%	100.0%	0.5%
Non-Metallic Mineral Product Manufacturing	22.5%	77.5%	100.0%	0.4%
Primary Metal and Metal Product Manufacturing	29.0%	71.0%	100.0%	0.4%
Fabricated Metal Product Manufacturing	36.4%	63.6%	100.0%	0.5%
Transport Equipment Manufacturing	39.1%	60.9%	100.0%	0.5%
Machinery and Equipment Manufacturing	21.8%	78.2%	100.0%	0.9%
Furniture and Other Manufacturing	26.8%	73.2%	100.0%	0.4%
Electricity Supply	17.9%	82.1%	100.0%	0.3%
Gas Supply	0.2%	99.8%	100.0%	0.0%
Water Supply, Sewerage and Drainage Services	21.2%	78.8%	100.0%	0.1%
Waste Collection, Treatment and Disposal Services	34.0%	66.0%	100.0%	0.3%
Building Construction	36.3%	63.7%	100.0%	2.4%
Heavy and Civil Engineering Construction	24.3%	75.7%	100.0%	0.5%
Construction Services	44.6%	55.4%	100.0%	4.4%
Basic Material Wholesaling	22.1%	77.9%	100.0%	0.5%
Machinery and Equipment Wholesaling	22.4%	77.6%	100.0%	1.0%

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Motor Vehicle and Motor Vehicle Parts Wholesaling	22.8%	77.2%	100.0%	0.3%
Grocery, Liquor and Tobacco Product Wholesaling	28.2%	71.8%	100.0%	0.7%
Other Goods Wholesaling	32.5%	67.5%	100.0%	0.6%
Commission-Based Wholesaling	20.0%	80.0%	100.0%	0.1%
Motor Vehicle and Motor Vehicle Parts Retailing	25.2%	74.8%	100.0%	0.7%
Fuel Retailing	37.0%	63.0%	100.0%	0.2%
Food Retailing	48.9%	51.1%	100.0%	2.0%
Other Store-Based Retailing	41.3%	58.7%	100.0%	3.7%
Non-Store Retailing and Retail Commission-Based Buying and/or Selling	71.8%	28.2%	100.0%	0.1%
Accommodation	45.2%	54.8%	100.0%	0.4%
Food and Beverage Services	59.2%	40.8%	100.0%	3.1%
Road Transport	40.4%	59.6%	100.0%	2.3%
Rail Transport	40.0%	60.0%	100.0%	0.4%
Water Transport	66.7%	33.3%	100.0%	0.1%
Air and Space Transport	73.7%	26.3%	100.0%	0.7%
Other Transport	100.0%	0.0%	100.0%	0.0%
Postal and Courier Pick-up and Delivery Services	54.3%	45.7%	100.0%	1.1%
Transport Support Services	25.1%	74.9%	100.0%	0.8%
Warehousing and Storage Services	25.7%	74.3%	100.0%	1.0%
Publishing (except Internet and Music Publishing)	33.9%	66.1%	100.0%	0.2%
Motion Picture and Sound Recording Activities	64.3%	35.7%	100.0%	0.1%
Broadcasting (except Internet)	70.6%	29.4%	100.0%	0.1%
Internet Publishing and Broadcasting	0.0%	0.0%	0.0%	0.0%
Telecommunications Services	46.0%	54.0%	100.0%	0.7%
Internet Service Providers, Web Search Portals and Data Processing Services	50.0%	50.0%	100.0%	0.2%
Library and Other Information Services	44.4%	55.6%	100.0%	0.0%
Finance	42.3%	57.7%	100.0%	2.6%
Insurance and Superannuation Funds	62.7%	37.3%	100.0%	1.0%
Auxiliary Finance and Insurance Services	57.6%	42.4%	100.0%	0.7%
Rental and Hiring Services (except Real Estate)	21.2%	78.8%	100.0%	0.3%
Property Operators and Real Estate Services	38.0%	62.0%	100.0%	0.7%
Professional, Scientific and Technical Services (except Computer System Design and Related Services)	40.9%	59.1%	100.0%	2.9%
Computer System Design and Related Services	59.5%	40.5%	100.0%	1.0%
Administrative Services	37.3%	62.7%	100.0%	1.3%
Building Cleaning, Pest Control and Other Support Services	53.8%	46.2%	100.0%	1.0%

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Public Administration	26.0%	74.0%	100.0%	2.5%
Defence	42.3%	57.7%	100.0%	0.2%
Public Order, Safety and Regulatory Services	23.0%	77.0%	100.0%	1.7%
Preschool and School Education	35.7%	64.3%	100.0%	3.1%
Tertiary Education	25.5%	74.5%	100.0%	1.0%
Adult, Community and Other Education	54.5%	45.5%	100.0%	0.3%
Hospitals	30.1%	69.9%	100.0%	2.1%
Medical and Other Health Care Services	32.4%	67.6%	100.0%	1.7%
Residential Care Services	41.0%	59.0%	100.0%	1.6%
Social Assistance Services	49.1%	50.9%	100.0%	1.7%
Heritage Activities	55.6%	44.4%	100.0%	0.1%
Creative and Performing Arts Activities	87.5%	12.5%	100.0%	0.1%
Sports and Recreation Activities	56.5%	43.5%	100.0%	0.4%
Gambling Activities	43.8%	56.3%	100.0%	0.3%
Repair and Maintenance	38.2%	61.8%	100.0%	1.4%
Personal and Other Services	51.7%	48.3%	100.0%	1.4%
Private Households Employing Staff and Undifferentiated Goods and Service-Producing Activities of Households for Own Use	100.0%	0.0%	100.0%	0.0%
<b>Total</b>	<b>27,138</b>	<b>43,840</b>	<b>70,979</b>	<b>56,938</b>

Source: ABS (2017a).

**Table A. 12. Liverpool Labour Summary by Occupation - 1 Digit**

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Managers	34.7%	65.3%	100.0%	7.1%
Professionals	32.4%	67.6%	100.0%	12.1%
Technicians and Trades Workers	40.3%	59.7%	100.0%	10.2%
Community and Personal Service Workers	47.7%	52.3%	100.0%	5.9%
Clerical and Administrative Workers	31.2%	68.8%	100.0%	12.7%
Sales Workers	48.4%	51.6%	100.0%	5.4%
Machinery Operators and Drivers	34.7%	65.3%	100.0%	7.6%
Labourers	44.0%	56.0%	100.0%	6.8%
<b>Total</b>	<b>27,138</b>	<b>43,840</b>	<b>70,979</b>	<b>56,938</b>

Source: ABS (2017a).

**Table A. 13. Liverpool Labour Summary by Occupation - 2 Digit**

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Chief Executives, General Managers and Legislators	34.8%	65.2%	100.0%	0.3%
Farmers and Farm Managers	81.9%	18.1%	100.0%	0.0%
Specialist Managers	27.5%	72.5%	100.0%	4.2%
Hospitality, Retail and Service Managers	38.8%	61.2%	100.0%	2.5%

Indicator	Live and Work Local	Imported Labour	Total Local Workers (PoW)	Exported Labour (% of Total PoUR Workforce)
Arts and Media Professionals	73.4%	26.6%	100.0%	0.2%
Business, Human Resource and Marketing Professionals	35.5%	64.5%	100.0%	3.6%
Design, Engineering, Science and Transport Professionals	28.2%	71.8%	100.0%	1.4%
Education Professionals	33.5%	66.5%	100.0%	2.5%
Health Professionals	30.5%	69.5%	100.0%	2.2%
ICT Professionals	34.6%	65.4%	100.0%	1.4%
Legal, Social and Welfare Professionals	28.8%	71.2%	100.0%	0.8%
Engineering, ICT and Science Technicians	32.8%	67.2%	100.0%	1.6%
Automotive and Engineering Trades Workers	36.2%	63.8%	100.0%	2.2%
Construction Trades Workers	46.3%	53.7%	100.0%	2.4%
Electrotechnology and Telecommunications Trades Workers	39.6%	60.4%	100.0%	1.6%
Food Trades Workers	44.8%	55.2%	100.0%	0.8%
Skilled Animal and Horticultural Workers	40.9%	59.1%	100.0%	0.3%
Other Technicians and Trades Workers	41.1%	58.9%	100.0%	1.1%
Health and Welfare Support Workers	28.8%	71.2%	100.0%	0.5%
Carers and Aides	53.2%	46.8%	100.0%	2.4%
Hospitality Workers	57.8%	42.2%	100.0%	1.1%
Protective Service Workers	35.8%	64.2%	100.0%	1.2%
Sports and Personal Service Workers	55.4%	44.6%	100.0%	0.8%
Office Managers and Program Administrators	37.6%	62.4%	100.0%	1.4%
Personal Assistants and Secretaries	51.8%	48.2%	100.0%	0.6%
General Clerical Workers	40.1%	59.9%	100.0%	2.0%
Inquiry Clerks and Receptionists	0.2%	99.8%	100.0%	2.7%
Numerical Clerks	43.0%	57.0%	100.0%	3.0%
Clerical and Office Support Workers	44.6%	55.4%	100.0%	0.9%
Other Clerical and Administrative Workers	28.8%	71.2%	100.0%	2.2%
Sales Representatives and Agents	32.1%	67.9%	100.0%	1.2%
Sales Assistants and Salespersons	51.1%	48.9%	100.0%	3.4%
Sales Support Workers	55.0%	45.0%	100.0%	0.8%
Machine and Stationary Plant Operators	32.2%	67.8%	100.0%	1.4%
Mobile Plant Operators	28.2%	71.8%	100.0%	1.3%
Road and Rail Drivers	41.0%	59.0%	100.0%	2.9%
Storepersons	29.9%	70.1%	100.0%	2.0%
Cleaners and Laundry Workers	49.8%	50.2%	100.0%	1.4%
Construction and Mining Labourers	39.8%	60.2%	100.0%	1.3%
Factory Process Workers	30.1%	69.9%	100.0%	2.1%
Farm, Forestry and Garden Workers	48.8%	51.2%	100.0%	0.2%
Food Preparation Assistants	68.8%	31.2%	100.0%	0.7%
Other Labourers	42.4%	57.6%	100.0%	1.1%
<b>Total</b>	<b>27,138</b>	<b>43,840</b>	<b>70,979</b>	<b>56,938</b>

Source: ABS (2017a).

## EMPLOYMENT PROJECTIONS

**Table A. 14. Liverpool Employment by Industry Projections, 2016 and 2031**

Industry	2016	2031	Change
Health Care and Social Assistance	11,850	17,947	6,096
Education and Training	6,497	10,787	4,291
Transport, Postal and Warehousing	4,791	8,560	3,770
Construction	7,096	10,461	3,365
Retail Trade	8,306	11,235	2,928
Professional, Scientific and Technical Services	2,441	4,806	2,365
Accommodation and Food Services	3,672	5,487	1,814
Wholesale Trade	3,000	4,613	1,613
Public Administration and Safety	6,237	7,684	1,448
Other Services	2,488	3,500	1,011
Financial and Insurance Services	863	1,642	779
Information Media and Telecommunications	450	985	535
Rental, Hiring and Real Estate Services	1,074	1,592	518
Administrative and Support Services	2,446	2,825	379
Electricity, Gas, Water and Waste Services	635	979	344
Arts and Recreation Services	731	913	182
Basic Chemical and Chemical Product Manufacturing	398	556	158
Fabricated Metal Product Manufacturing	499	561	62
Polymer Product and Rubber Product Manufacturing	466	524	58
Furniture and Other Manufacturing	369	421	52
Beverage and Tobacco Product Manufacturing	28	53	25
Primary Metal and Metal Product Manufacturing	346	365	19
Non-Metallic Mineral Product Manufacturing	327	328	1
Petroleum and Coal Product Manufacturing	47	47	0
Mining	57	52	-5
Wood Product Manufacturing	339	330	-9
Pulp, Paper and Converted Paper Product Manufacturing	174	135	-39
Transport Equipment Manufacturing	203	142	-61
Textile, Leather, Clothing and Footwear Manufacturing	202	88	-115
Agriculture, Forestry and Fishing	813	640	-172
Food Product Manufacturing	1,201	983	-218
Printing (including the Reproduction of Recorded Media)	873	566	-307
Machinery and Equipment Manufacturing	2,059	1,545	-514
<b>Total</b>	<b>70,979</b>	<b>101,351</b>	<b>30,372</b>

Source: ABS (2017a), TPA (2016b).

**Table A. 15. Liverpool Employment by Occupation Projections, 2016 and 2031**

Occupation	2016	2031	Change
Sales Assistants (General)	3,952	5,697	1,744
Truck Drivers	2,131	3,468	1,337
Secondary School Teachers	1,578	2,762	1,184
Registered Nurses	2,016	3,192	1,176



Occupation	2016	2031	Change
Storepersons	2,030	3,178	1,148
Primary School Teachers	1,588	2,729	1,141
General Clerks	1,676	2,611	935
Child Carers	1,464	2,360	896
Receptionists	1,130	1,804	674
Retail Managers	1,208	1,720	513
Accountants	639	1,140	500
Accounting Clerks	853	1,314	462
Office Managers	738	1,198	460
Education Aides	514	930	416
Motor Mechanics	885	1,279	393
General Practitioners and Resident Medical Officers	619	988	370
Nursing Support and Personal Care Workers	663	1,029	367
Forklift Drivers	939	1,305	365
Checkout Operators and Office Cashiers	734	1,086	352
Defence Force Members - Other Ranks	859	1,158	299
Construction Managers	611	900	289
Kitchenhands	536	822	286
Electricians	746	1,030	284
Secretaries	430	714	284
Aged and Disabled Carers	736	1,015	279
Bookkeepers	430	709	279
Purchasing and Supply Logistics Clerks	739	1,015	276
Sales Representatives	762	1,029	266
Real Estate Sales Agents	378	631	253
Keyboard Operators	457	704	248
Architectural, Building and Surveying Technicians	465	712	247
Information Officers	567	811	244
Bar Attendants and Baristas	415	647	232
Bank Workers	168	391	224
Solicitors	191	408	217
Bus and Coach Drivers	253	469	216
Welfare Support Workers	406	622	216
Couriers and Postal Deliverers	237	448	211
Plumbers	480	686	205
Transport and Despatch Clerks	315	518	203
Commercial Cleaners	910	1,101	191
Other Miscellaneous Labourers	427	606	180
Medical Technicians	287	465	177
Supply, Distribution and Procurement Managers	351	526	175
Fast Food Cooks	319	493	174
Call or Contact Centre Workers	368	542	174
School Principals	223	396	174
Contract, Program and Project Administrators	439	611	172



Occupation	2016	2031	Change
Building and Plumbing Labourers	456	620	164
Financial Brokers	121	283	162
Vocational Education Teachers	228	388	160
Early Childhood (Pre-primary School) Teachers	235	391	155
Medical Imaging Professionals	223	377	154
Waiters	340	487	147
Carpenters and Joiners	833	979	147
Automobile Drivers	390	536	146
Other Hospitality, Retail and Service Managers	271	415	144
Shelf Fillers	352	490	137
Cafe and Restaurant Managers	247	385	137
Social Workers	230	365	135
Motor Vehicle and Vehicle Parts Salespersons	314	445	131
Private Tutors and Teachers	255	386	131
Hairdressers	265	395	130
Enrolled and Mothercraft Nurses	225	353	128
ICT Support Technicians	270	398	127
Chefs	278	404	126
Inspectors and Regulatory Officers	316	437	121
Police	309	423	115
Advertising, Public Relations and Sales Managers	572	686	115
Special Education Teachers	182	296	114
Other Medical Practitioners	181	294	113
Human Resource Professionals	263	374	111
Transport Services Managers	163	268	105
Personal Assistants	239	344	105
Pharmacists	181	285	103
Midwives	174	277	103
Medical Laboratory Scientists	131	232	101
Pharmacy Sales Assistants	193	293	100
Nurse Managers	167	266	99
Welfare, Recreation and Community Arts Workers	180	279	99
Delivery Drivers	422	520	97
Earthmoving Plant Operators	208	302	94
General Managers	265	357	92
Payroll Clerks	214	306	92
Credit and Loans Officers	100	191	90
Health and Welfare Services Managers	204	293	89
Human Resource Managers	198	287	89
Call or Contact Centre and Customer Service Managers	271	359	88
Software and Applications Programmers	166	253	87
Other Specialist Managers	262	349	87
Freight and Furniture Handlers	143	226	84
Beauty Therapists	190	273	83

Occupation	2016	2031	Change
Cooks	172	254	82
Physiotherapists	144	226	82
Dental Assistants	154	234	80
Psychologists	159	236	77
Management and Organisation Analysts	141	214	73
Importers, Exporters and Wholesalers	206	276	70
Cafe Workers	132	199	67
Retail Supervisors	185	251	66
Security Officers and Guards	301	366	65
Production Managers	434	498	64
Specialist Physicians	120	185	64
Insulation and Home Improvement Installers	188	251	63
Conveyancers and Legal Executives	60	123	62
Packers	820	881	62
Metal Fitters and Machinists	427	488	61
Practice Managers	126	186	61
Telecommunications Trades Workers	167	228	61
Fitness Instructors	123	182	59
Ambulance Officers and Paramedics	99	157	59
Financial Investment Advisers and Managers	73	131	58
Airconditioning and Refrigeration Mechanics	303	361	58
Library Assistants	50	108	58
Counsellors	115	169	55
Sports Coaches, Instructors and Officials	105	159	54
Teachers of English to Speakers of Other Languages	65	119	54
Social Professionals	117	171	54
Child Care Centre Managers	112	166	54
Concreters	249	302	53
Court and Legal Clerks	59	112	53
Civil Engineering Professionals	163	216	53
Other Miscellaneous Clerical and Administrative Workers	87	139	53
Handypersons	220	272	52
Insurance, Money Market and Statistical Clerks	51	103	52
ICT Sales Assistants	71	123	51
Chief Executives and Managing Directors	308	359	51
Other Stationary Plant Operators	112	163	51
Painting Trades Workers	311	360	49
Livestock Farm Workers	240	288	48
Dental Practitioners	90	138	47
Car Detailers	134	181	47
Occupational Therapists	86	132	47
Graphic and Web Designers, and Illustrators	130	176	46
Training and Development Professionals	143	189	46
Filing and Registry Clerks	74	119	45

Occupation	2016	2031	Change
Audiologists and Speech Pathologists \ Therapists	84	128	44
ICT Managers	170	213	44
Ministers of Religion	84	127	43
Commissioned Officers (Management)	166	209	43
Librarians	38	78	40
Electronics Trades Workers	180	219	39
Tourism and Travel Advisers	69	108	39
Panelbeaters	117	156	39
Science Technicians	58	97	39
Photographers	38	76	38
Senior Non-commissioned Defence Force Members	131	169	37
Nurse Educators and Researchers	75	112	37
ICT Sales Professionals	40	77	37
Veterinary Nurses	27	64	37
Surveyors and Spatial Scientists	64	100	37
Ticket Salespersons	34	71	36
Gardeners	230	266	36
Cabinetmakers	220	254	34
Computer Network Professionals	79	113	34
Aircraft Maintenance Engineers	124	157	33
Mail Sorters	45	79	33
Surgeons	60	92	32
Wall and Floor Tilers	143	174	32
Other Education Managers	49	78	29
Bricklayers and Stonemasons	263	292	29
Finance Managers	208	236	29
Fire and Emergency Workers	82	111	28
Butchers and Smallgoods Makers	97	126	28
Plasterers	196	223	28
Optometrists and Orthoptists	46	73	27
University Lecturers and Tutors	33	60	27
Debt Collectors	54	80	26
Driving Instructors	77	104	26
Interior Designers	46	72	26
Vehicle Painters	86	112	26
Financial Dealers	29	56	26
Amusement, Fitness and Sports Centre Managers	66	92	25
Animal Attendants and Trainers	117	142	25
Other Health Diagnostic and Promotion Professionals	64	88	25
Other Miscellaneous Technicians and Trades Workers	160	184	24
Service Station Attendants	57	81	24
Air Transport Professionals	72	96	24
Anaesthetists	53	77	24
Structural Steel and Welding Trades Workers	368	391	23

Occupation	2016	2031	Change
Insurance Agents	25	48	23
Caretakers	58	81	23
Other Information and Organisation Professionals	74	96	23
Massage Therapists	66	89	23
Electrical Distribution Trades Workers	54	77	22
Other Personal Service Workers	54	75	21
Sportspersons	43	63	20
Education Advisers and Reviewers	31	50	20
Database and Systems Administrators, and ICT Security Specialists	103	122	19
Technical Sales Representatives	198	217	19
Telecommunications Engineering Professionals	19	38	19
Floor Finishers	77	95	19
Podiatrists	22	40	18
Psychiatrists	28	45	17
Housekeepers	80	97	17
Florists	69	86	16
Insurance Investigators, Loss Adjusters and Risk Surveyors	14	30	16
Architects and Landscape Architects	48	64	16
Signwriters	61	77	16
Other Sales Assistants and Salespersons	70	86	16
Nutrition Professionals	44	59	15
Licensed Club Managers	54	69	15
Dental Hygienists, Technicians and Therapists	26	41	15
Hotel and Motel Managers	47	61	14
Conference and Event Organisers	48	62	14
Advertising and Marketing Professionals	156	170	14
Recycling and Rubbish Collectors	19	33	14
Judicial and Other Legal Professionals	18	31	13
Print Finishers and Screen Printers	65	78	13
Glaziers	107	121	13
Other Natural and Physical Science Professionals	45	58	13
Paving and Surfacing Labourers	30	42	12
Intelligence and Policy Analysts	19	31	12
Other Mobile Plant Operators	24	36	12
Garden and Nursery Labourers	170	182	12
Upholsterers	13	25	12
Funeral Workers	20	31	11
Laundry Workers	63	74	11
Structural Steel Construction Workers	148	160	11
Electrical Engineers	116	127	11
Vending Machine Attendants	26	37	11
Other Construction and Mining Labourers	29	39	10
Fencers	56	66	10
Greenkeepers	61	71	10

Occupation	2016	2031	Change
ICT Business and Systems Analysts	65	75	10
Urban and Regional Planners	53	62	10
Bakers and Pastrycooks	269	278	9
Auditors, Company Secretaries and Corporate Treasurers	49	58	9
Actuaries, Mathematicians and Statisticians	13	22	8
Crane, Hoist and Lift Operators	50	58	8
Switchboard Operators	23	30	7
Personal Care Consultants	28	35	7
Vehicle Body Builders and Trimmers	29	36	7
Gallery, Library and Museum Technicians	22	29	7
Motor Vehicle Parts and Accessories Fitters	91	98	6
Occupational and Environmental Health Professionals	93	100	6
Indigenous Health Workers	8	14	6
Retail and Wool Buyers	13	19	6
Legislators	9	15	6
Veterinarians	28	33	5
Other Hospitality Workers	29	34	5
Chiropractors and Osteopaths	7	12	5
Roof Tilers	36	41	5
Civil Engineering Draftspersons and Technicians	43	47	5
Printers	208	213	5
Diversional Therapists	12	16	4
Barristers	6	10	4
Survey Interviewers	4	8	4
Other Accommodation and Hospitality Managers	9	12	4
Manufacturers	115	119	4
Jewellers	23	27	4
Prison Officers	13	16	3
Policy and Planning Managers	30	33	3
Film, Television, Radio and Stage Directors	15	18	3
Research and Development Managers	71	75	3
Agricultural and Forestry Scientists	0	3	3
Electronics Engineers	23	26	3
Gallery, Museum and Tour Guides	11	14	3
Railway Track Workers	5	7	3
Gaming Workers	6	8	2
Agricultural, Forestry and Horticultural Plant Operators	15	16	2
Travel Attendants	5	7	2
Other Farm, Forestry and Garden Workers	41	42	2
Hotel Service Managers	9	10	2
Automotive Electricians	26	28	1
Multimedia Specialists and Web Developers	15	16	1
Auctioneers, and Stock and Station Agents	16	17	1
Product Quality Controllers	111	112	1

Occupation	2016	2031	Change
Graphic Pre-press Trades Workers	36	37	1
Archivists, Curators and Records Managers	29	29	1
Aquaculture Farmers	0	0	0
Mixed Crop and Livestock Farmers	0	0	0
Caravan Park and Camping Ground Managers	0	0	0
Mining Engineers	0	0	0
Geologists, Geophysicists and Hydrogeologists	0	0	0
Middle School Teachers	0	0	0
Agricultural Technicians	0	0	0
Primary Products Inspectors	0	0	0
Shearers	0	0	0
Boat Builders and Shipwrights	0	0	0
Special Care Workers	0	0	0
Aquaculture Workers	0	0	0
Forestry and Logging Workers	0	0	0
Mixed Crop and Livestock Farm Workers	0	0	0
ICT Support and Test Engineers	29	29	0
Electrical Engineering Draftspersons and Technicians	52	52	-1
Precision Metal Trades Workers	43	42	-1
Corporate Services Managers	18	17	-1
Other Factory Process Workers	108	106	-1
Chemists, and Food and Wine Scientists	28	27	-1
Street Vendors and Related Salespersons	29	27	-1
Life Scientists	9	7	-2
Telecommunications Technical Specialists	16	14	-2
ICT Trainers	9	7	-2
Other Building and Engineering Technicians	48	46	-2
Land Economists and Valuers	34	31	-3
Nurserypersons	9	6	-3
Photographic Developers and Printers	8	5	-3
Complementary Health Therapists	17	14	-3
Other Sales Support Workers	39	36	-3
Journalists and Other Writers	27	23	-4
Deck and Fishing Hands	4	0	-4
Meat Boners and Slicers, and Slaughterers	4	0	-4
Economists	4	0	-4
Human Resource Clerks	69	65	-4
Canvas and Leather Goods Makers	18	13	-4
Safety Inspectors	15	10	-5
Sheetmetal Trades Workers	57	52	-5
Betting Clerks	15	10	-5
Electronic Engineering Draftspersons and Technicians	21	16	-5
Other Engineering Professionals	16	10	-5
Outdoor Adventure Guides	6	0	-6

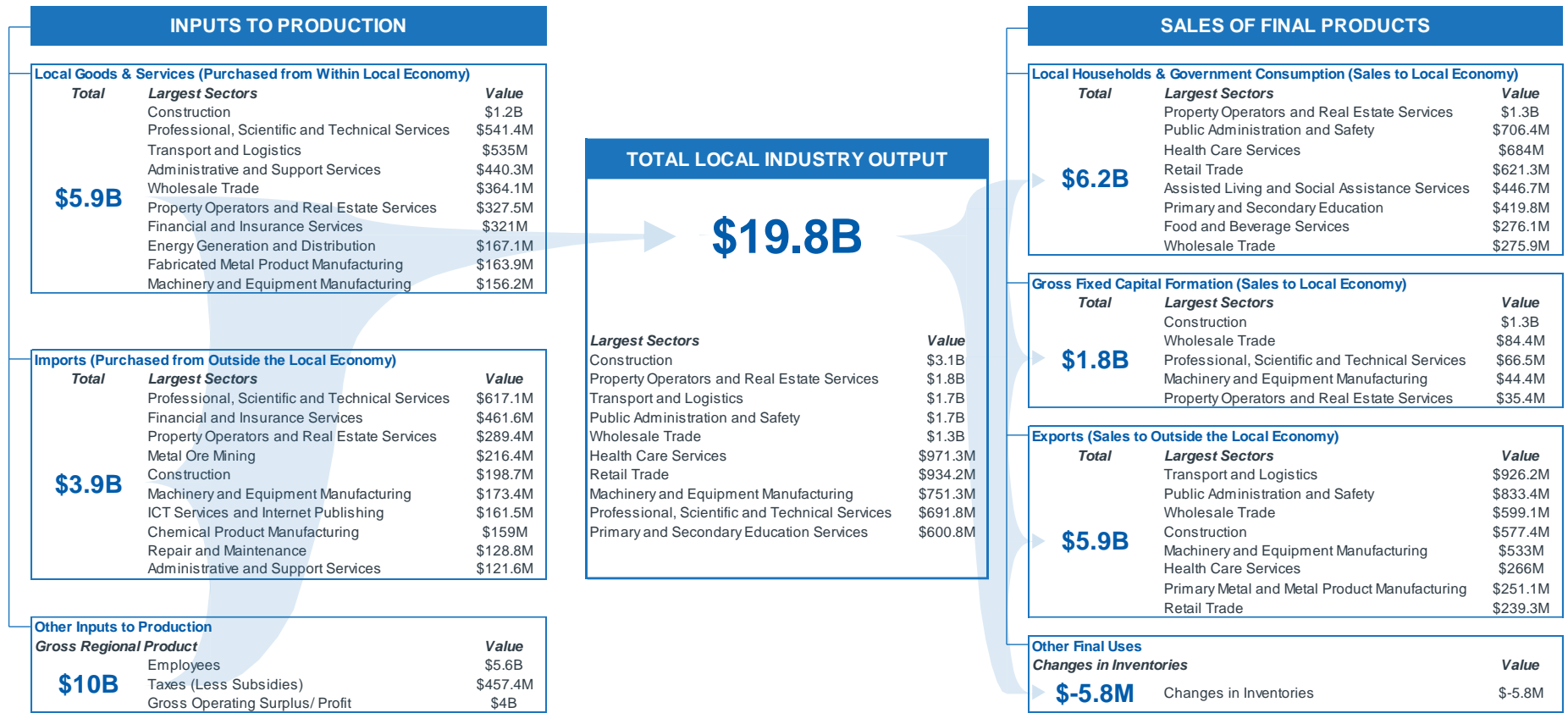
Occupation	2016	2031	Change
Public Relations Professionals	28	22	-6
Other Clerical and Office Support Workers	28	22	-6
Performing Arts Technicians	40	34	-6
Marine Transport Professionals	10	4	-6
Visual Arts and Crafts Professionals	6	0	-6
Timber and Wood Process Workers	24	18	-6
Actors, Dancers and Other Entertainers	14	7	-7
Environmental Scientists	17	10	-7
Chemical and Materials Engineers	7	0	-7
Authors, and Book and Script Editors	7	0	-7
Artistic Directors, and Media Producers and Presenters	8	0	-8
Food Trades Assistants	32	24	-8
Chemical, Gas, Petroleum and Power Generation Plant Operators	18	10	-8
Engineering Production Workers	277	269	-8
Visual Merchandisers	36	27	-9
Telemarketers	31	21	-9
Metal Engineering Process Workers	74	64	-10
Music Professionals	20	10	-10
Crop Farm Workers	93	83	-10
Mechanical Engineering Draftspersons and Technicians	27	17	-10
Wood Machinists and Other Wood Trades Workers	38	27	-10
Train and Tram Drivers	10	0	-10
Plastics and Rubber Factory Workers	38	27	-11
Metal Casting, Forging and Finishing Trades Workers	29	18	-11
Models and Sales Demonstrators	81	70	-11
Industrial, Mechanical and Production Engineers	119	108	-11
Drillers, Miners and Shot Firers	18	6	-12
Other Cleaners	58	45	-13
Textile and Footwear Production Machine Operators	13	0	-13
Other Machine Operators	239	224	-15
Livestock Farmers	84	68	-16
Product Assemblers	448	432	-17
Clothing Trades Workers	69	51	-17
Food and Drink Factory Workers	180	162	-18
Clay, Concrete, Glass and Stone Processing Machine Operators	58	38	-19
Printing Assistants and Table Workers	75	55	-20
Fashion, Industrial and Jewellery Designers	29	8	-22
Meat, Poultry and Seafood Process Workers	69	46	-23
Engineering Managers	97	71	-26
Toolmakers and Engineering Patternmakers	41	15	-26
Industrial Spraypainters	58	28	-31
Paper and Wood Processing Machine Operators	67	28	-38
Plastics and Rubber Production Machine Operators	170	129	-41
Crop Farmers	354	303	-52

Occupation	2016	2031	Change
Domestic Cleaners	178	110	-68
Sewing Machinists	181	42	-139
<b>Total</b>	<b>71,173</b>	<b>101,351</b>	<b>30,177</b>

Source: ABS (2017a), TPA (2016b).



## SUPPLY CHAIN ANALYSIS



Source: ABS (2012), ABS (2017b).

## APPENDIX B: LITERATURE REVIEW

### EMPLOYMENT OPPORTUNITIES

Liverpool is continuing to see an unprecedented level of investment and forward-planning, positioning the region to accommodate the strong anticipated population growth and become Sydney's third CBD. Liverpool's current major projects provide increased opportunities for local labour, as outlined below.

#### Liverpool City Centre

The Liverpool Civic Place project will transform the CBD, providing new public spaces, community facilities, job opportunities, and all the amenities needed to live, work, study and play within the area (Capstone Recruitment, 2019). Construction on stage one is expected to commence in mid-2020 and be complete by mid-2022. The \$400 million project has the potential to create up to 600 construction jobs, and increased employment opportunities once the space is created (Daily Telegraph, 2020).

#### Liverpool Innovation Precinct

The Liverpool Innovation Precinct is a world class growth precinct, anchored around the Liverpool Hospital. The Precinct will become a hub for innovation and emerging technologies and is anticipated to assist in boosting health and education employment to approximately 30,000 by 2036. Existing anchors include medical facilities such as the Eastern Campus South Western Sydney Local Health District and Ngarra Centre, Liverpool Hospital Western Campus, Ingham Institute of Applied Medical Research and Healthscope Private Health. In addition, educational facilities such as the Liverpool Boys and Girls High Schools, NSW TAFE Liverpool, NSW TAFE International Education Centre, Liverpool Primary School and Western Sydney University Campus Building, as well as a Westfield Shopping Centre are located in the Precinct (Liverpool Innovation, 2019). The most recent advancement for the precinct involved the development of a Masterplan, which details the opportunities and direction forward.

#### Western Sydney International Airport (WSA) & Aerotropolis

Located within Liverpool, the WSA and Aerotropolis is anticipated to create substantial employment opportunities for local residents, particularly in knowledge and intensive industries. Operation of the facilities will result in permanent ongoing employment in airport operations, airport retail and the business park (industrial, office, hotels, petrol stations, food outlets, regional shopping centres and bulky goods). By 2031, there is anticipated to be approximately 13,169 direct jobs and 8,292 supply chain jobs related to airport operations and the business park (EY, 2017). This is anticipated to increase to approximately 24,046 direct and 12,821 supply chain jobs by 2041 (EY, 2017). It has been estimated that 40% of these employment opportunities will require low level skills (year 12 education and below), whilst 35% will require mid-level skills (those with advanced diplomas or certificate level qualifications), and the remainder high-level skills (bachelor or post graduate degrees holders) (EY, 2017).

**Table B. 1. Estimated Gross Jobs by Qualification**

Qualification Type	Jobs	Fields of Study
High School	20,650	
Advanced Diploma and Diploma Level	4,000	<ul style="list-style-type: none"> <li>• Engineering and related technologies</li> <li>• Food, hospitality, and personal services</li> <li>• Information technology</li> <li>• Management and commerce</li> </ul>
Bachelor's degree Level	4,200	
Certificate Level	9,400	
Graduate Diploma and Graduate Certificate Level	300	
Postgraduate Degree Level	1,550	

Source: EY (2017).

#### Moorebank Intermodal Terminal (MIT)

Located within Liverpool, the MIT is a 241-hectare intermodal freight precinct, which will increase the need for transport and warehousing jobs in Liverpool. It is anticipated that approximately 6,800 full time equivalent employment opportunities will be provided at full operation. This includes approximately 5,985 in warehousing

(including office space), 584 in transport (i.e. truck driving), 150 in ancillary services, 81 in terminal operations and 22 in site management.

**Table B. 2. Estimated Gross Jobs by Occupation**

Qualification Type	Jobs	Occupations
No Qualification	2,095	<b>Warehousing:</b> Packers
	29	<b>Transport:</b> Labourers store persons
	6	<b>Site:</b> Cleaning, waste disposal and security workers
	75	<b>Ancillary:</b> Sales assistants cashiers, primary rail support services (cleaning and painting)
Diploma Based	2,693	<b>Warehousing:</b> OH&S officers, admin, service advisor, forklift operators, quality/ risk assurance and purchasing workers
	526	<b>Transport:</b> Truck drivers, mechanics, fleet administration, driver trainers and depot manager/ supervisors
	61	<b>Terminal Ops:</b> Rail/ truck operators, control room operators, terminal locomotive operations, forklift operators, heavy machines mechanics, quality/ risk assurers and shunt and marshal workers
	13	<b>Site:</b> Receptionists, landscapers, pest controllers, plumbing services, maintenance electricians, and service advisors
	68	<b>Ancillary:</b> Supermarket managers, receptionists, fitness/ gym instructors, sports administrators, early education workers
Tertiary Education	1,197	<b>Warehousing:</b> Warehouse managers, logistics managers, procurement, back office (accounting, legal, HR and marketing) workers
	29	<b>Transport:</b> National transport managers, logistics support workers, HR workers
	20	<b>Terminal Ops:</b> Terminal managers, software engineers, electrical engineers, mechanical engineers
	3	<b>Site Management:</b> Electrical engineers, mechanical engineers
	8	<b>Ancillary:</b> Customs officers

Source: Deloitte (2017).

## EMPLOYMENT PATHWAYS AND FUNDING

Consideration of pathways towards employment is important in assessing whether there are sufficient education/ training opportunities and funding to fulfil industry demand. Employment pathway considerations begin in the late years of high school, through career conversations and career guidance counselling, and extends throughout the post school and post graduate years. The below sections highlight the various pathways to employment currently available in Liverpool/ for Liverpool residents.

### Apprenticeships and Traineeships

Apprenticeships provide an opportunity for students to become a qualified tradesperson through on the job training and study, whilst earning an income at the same time. A traineeship is similar, though concentrates on vocational careers or those involving administration, information technology or hospitality. An apprenticeship typically takes three to four years to complete, whilst a traineeship typically takes one or two years. As an increasingly popular pathway towards employment, apprenticeships/ traineeships evoke the highest level of wellbeing compared to other pathways, as revealed in the 2018 Youth Census (Skillsroad, 2018).

In Liverpool, a variety of providers offer this pathway to employment, including:

- TAFE (Liverpool campus)
- Apprenticeship Support Australia (Liverpool office)
- Flexible Training Solutions
- MTC Australia (Liverpool office)
- Be More

- CVGT Australia (Liverpool office)
- Other private businesses offering their own apprenticeships/ traineeships.

### TAFE Courses

TAFE specialises in meeting the educational needs of the entire community, including the long-term unemployed, people from non-English speaking backgrounds, people on bridging and temporary protection visas, people with a disability, sole parents, Indigenous, and youth at risk. (TAFE, 2019). As such, TAFE Liverpool offers a wide range of study options, ranging from online courses to diplomas and degrees, training and fulltime education. For high school students, TAFE offers specialised programs that can put students ahead of the curve or can count towards their HSC. For high school graduates, TAFE offers vocational courses, higher education degrees and tertiary preparation courses. TAFE also offers apprenticeships and traineeships for those of any legal working age and experience.

To support students in their education, TAFE offers a range of achievement and equity scholarships, including the 'mature age workers' scholarship, the 'smart and skilled fee-free' scholarship, the 'choosi futures' grant program, the 'real futures' grant program, and the 'destination Australia' scholarship (TAFE, 2019).

### University Courses

The Western Sydney University (Liverpool City Campus), University of NSW (Liverpool City Campus) and University of Wollongong (South Western Sydney Campus) both reside in Liverpool. Both universities offer a wide range of undergraduate and postgraduate courses in areas such as business, law, nursing, social work, sociology, psychology, agriculture and forestry, international studies, computer science and information technology, etc.

The Skills Road Youth Census (2018) revealed, of the youth sampled, the main influence for deciding on a university pathway was related to their chosen career requiring a university degree (66.0%), not knowing what else to do (15.0%) and feelings of expectations and pressure from society or school (11.0%).

Typically, there are requirements for entry into these university courses, based on HSC results (ATAR scores). Despite this, the Western Sydney University has a range of alternative options for students who do not fit the usual entry-mould, including the Aboriginal and Torres Strait Islander Pathway Program, Rural Entry Admission Scheme, Special Tertiary Admissions Test, and the College. The university also offers approximately \$24 million in undergraduate funding/ scholarships each year, based on both academic achievements and equity considerations (Western Sydney University, 2019). The University of Wollongong also offers scholarships/ funding for students, including academic scholarships, community scholarships, equity scholarships, corporate scholarship and sporting scholarships.

### Alternative Training

There are also a variety of alternative training options provided in Liverpool/ for Liverpool residents, such as:

- Productivity Bootcamp: A program (8-week duration) for high school students to work on a number of construction sites across Sydney to gain skills in formwork, concreting, steel fixing, carpentry, bricklaying and plumbing (Productivity Bootcamp, 2019)
- Macarthur Community College: A not-for-profit college providing a range of short courses, from English, Literacy and Numeracy to Business and Work Skills. Government funding is available under the 'ACE Program' (supports underprivileged groups) and 'Tech Savvy Small Businesses' Program (supports small business owners and their staff through fully subsidised training courses) (Macarthur Community College, 2019)
- Transition to Work Program: A government funded employment and youth service for Centrelink recipient jobseekers, which assists in the transition from school to work and connects employers with candidates (MTC Australia, 2019)
- Youth Frontiers Mentoring Program: A NSW government funded program, which connects students are 12-16 with adult volunteers to enhance inter and intra personal skills as well as create a vision for their future (MTC Australia, 2019).

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