

Appendix I

Southern Employment Lands Infrastructure Plan



# Draft Southern Employment Lands Infrastructure Plan

March 2015



Sydney 2030 / Green / Global / Connected

## STATUS OF THIS DOCUMENT

This Draft Southern Employment Lands Infrastructure Plan (Plan) is to be considered by Council in parallel with the *Planning Proposal: City of Sydney Employment Lands* (Planning Proposal), associated development control plan amendment (DCP amendment) and *Draft Employment Lands Affordable Housing Program* (Program), collectively the draft controls.

The draft controls reflect a more contemporary understanding of the role of the southern employment lands in the metropolitan Sydney context and are the first major step in the evolution of the area which has long been considered an industrial precinct.

This Plan has been prepared and written on the premise that the draft controls are adopted by Council and the Planning Proposal is adopted by the Central Sydney Planning Committee.

## EXECUTIVE SUMMARY

The City's southern employment lands are some of the most strategically important employment lands in the Sydney metropolitan area and the only remaining area zoned exclusively for employment uses in the City of Sydney. Located in the Global Economic Corridor just south of the Green Square Town Centre and between Sydney Airport and the Central Business District, the southern employment lands accommodate a wide variety of employment generating activities.

They include areas that are 'traditional industrial' in character and function, as well as areas distinguished by lighter industrial activity, such as warehouses and distribution centres. They also include more diverse areas with a range of employment based activities ranging from light and high tech industrial uses to 'cheap to rent' creative spaces for artists and designers.

With new planning controls introduced in 2015, the area is expected to enter into a period of growth and change. More jobs will locate in the southern employment lands with only modest amounts of residential development being provided at the peripheries of the area.

The delivery of the infrastructure needed to support rezoning and development of the southern employment lands cannot be done by the City alone. The participation and engagement of all stakeholders is key.

This Infrastructure Plan (Plan) has been prepared by the City of Sydney (City) to support growth in the southern employment lands. It highlights infrastructure provision and prioritisation across both the City and the NSW Government agencies, to optimise community and business benefit and ensure that the different levels of Government (and their responsibilities) are best placed to respond to the emerging challenges and demands associated with the growth of the southern employment lands.

This Plan identifies who is responsible for the provision of infrastructure across the different levels of Government and seeks to work with the relevant agencies to ensure the delivery of infrastructure is provided in an efficient, integrated and timely way.

The Implementation Action Plan (Action Plan) located in Section 12 identifies infrastructure items required, the responsible delivery agent and timeline of when the infrastructure should be provided. Further, the Action Plan will provide a basis for discussion with the relevant agencies to ensure the delivery in an efficient, integrated and timely way.

It is intended that the Plan will be kept up-to-date so that that all parties can be assured that issues are being addressed and/or are being planned for. The Plan will be a 'living' document that will be reviewed and updated regularly by a City's internal working group. The review process will involve liaison with stakeholders, including NSW agencies. This review will include updating the status of projects, initiatives and the prioritisation of issues and projects in the Action Plan to ensure it responds to development pressures, timeframes and funding availability.

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## 1. Introduction

The southern employment lands are located within the suburbs of Rosebery, Alexandria and St Peters. Overlapping with the Green Square Urban Renewal Area, it is an area of about 265 hectares that stretches from the south-west corner of the Green Square Town Centre to the south-west corner of the Sydney Local Government Area (LGA).

The southern employment lands are some of the most strategically important employment lands in the Sydney metropolitan area. Located in the Global Economic Corridor just south of the Green Square Town Centre and between the Central Business District and Sydney Airport and Port Botany, the southern employment lands accommodate a wide variety of employment generating activities.

The recognition of the southern employment lands as a place of urban renewal and change is still in its infancy. In March 2015, Council and the Central Sydney Planning Committee (CSPC) adopted the *Planning Proposal: City of Sydney Employment Lands* (Planning Proposal), associated development control plan amendment (DCP amendment) and *Draft Employment Lands Affordable Housing Program* (Program), collectively the “planning controls”, to guide growth and change in the southern employment lands.

The change to the planning controls reflected a more contemporary understanding of the role of the southern employment lands in the wider Sydney context and was the first major step in the evolution of the area which has long been considered an industrial precinct.

This *Southern Employment Lands Infrastructure Plan* (Plan) has been developed early in the urban renewal of the southern employment lands. It is intended to be a living document that will be adjusted over time to respond to new information, emerging opportunities and external influences.

### 1.1 Purpose of this Plan

Planning for the long term delivery of infrastructure requires a coordinated strategic approach. Understanding demands and requirements ahead of development is critical to maximising the social, economic and environmental outcomes of new development.

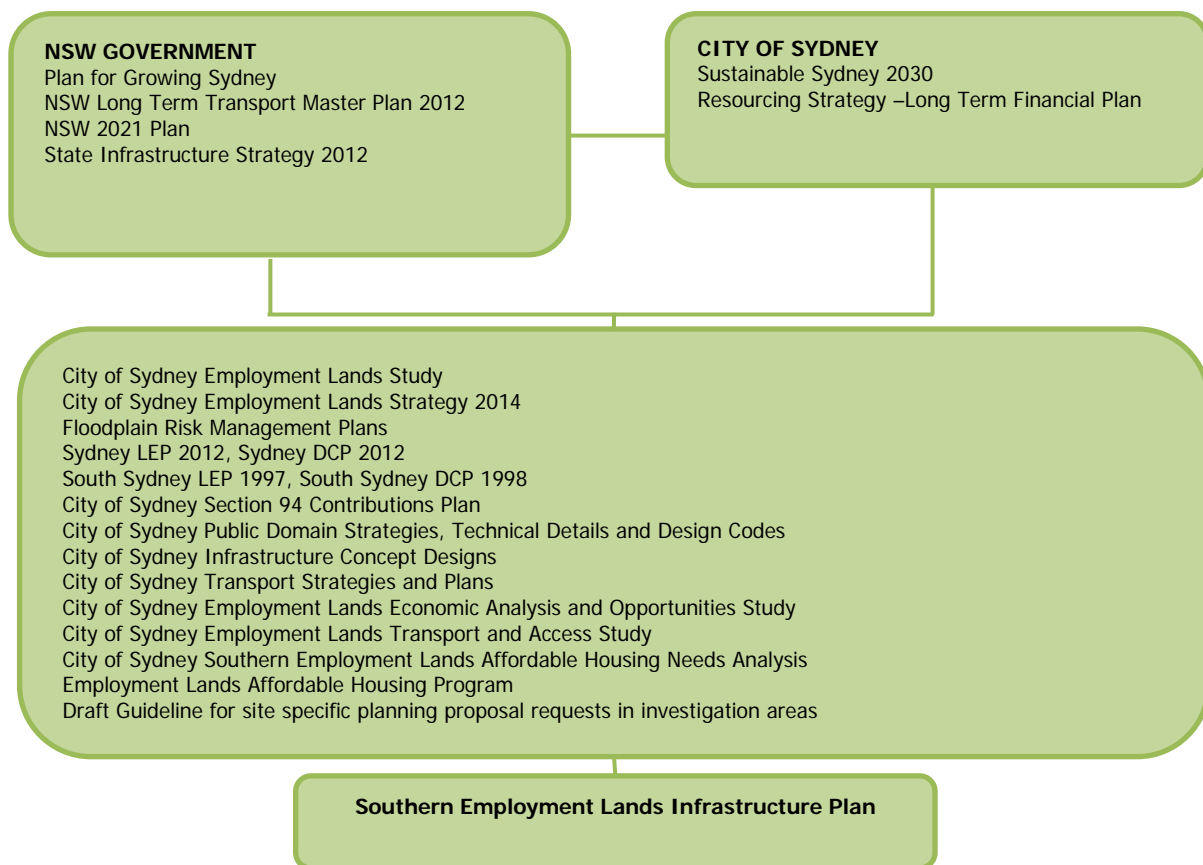
This Plan is to provide a strategic review of the existing infrastructure in the southern employment lands and an implementation plan for the infrastructure that will be provided to support the projected growth in the area. It also identifies who is responsible for its provision, and where available, indicative costs.

This Plan seeks continued partnership with NSW Government agencies to ensure the delivery of infrastructure is provided in an efficient, integrated and timely way.

### 1.2 Methodology

This Plan has been prepared by the City of Sydney and informed by consultation with government, community and industry stakeholders. It is prepared with reference to a number of NSW government and City of Sydney strategies, plans and studies that together set the direction for infrastructure delivery in the southern employment lands. The key documents are shown in the diagram at Figure 1.





**Figure 1: Background documents to the Infrastructure Plan**

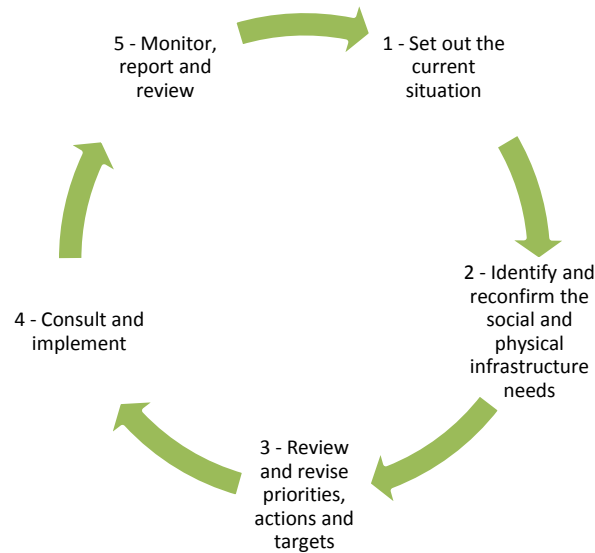
A Strengths Weaknesses Opportunities and Threats (SWOT) analysis was undertaken in the preparation of this Plan. The purpose of the SWOT was to identify the opportunities and challenges associated with the delivery of infrastructure.

The outcomes of the SWOT informed the preparation of a strategy and appropriate benchmarks for infrastructure planning in the southern employment lands. This will allow the City to measure over time how effectively it is responding to changes in priorities or demands as development progresses.

*Sustainable Sydney 2030*, the City’s overarching strategic plan, establishes the objectives for development in the southern employment lands and the benchmark from which infrastructure delivery is assessed. Each chapter details the relevant Sydney 2030 Direction, identifies the risks for infrastructure delivery, and provides actions to ensure infrastructure is provided.

Further consultation will be necessary with relevant partners to incorporate new or updated information about infrastructure delivery. Subsequently, the City will undertake regular reviews of this Plan in consultation with NSW agencies to reflect identified shifting needs, priorities and opportunities.

The process for developing and maintaining the accuracy and relevance of this Plan is illustrated at Figure 2.



**Figure 2: Plan preparation and review process.**

### 1.3 Structure of this Plan

This Plan is in three parts:

- Part 1 provides an introduction to the southern employment lands, its location, history and demographic information;
- Part 2 includes information on specific subject, what has been done so far and highlights any gaps or next steps for infrastructure provision;
- Part 3 provides for governance/partnerships, community and stakeholder engagement, and the implementation of the Plan.

It details specific issues that are to be addressed and where possible what actions are being taken to address them. These issues have been assessed against current policies, projects and general operational services to establish if there is a sufficiently established process in place to deliver infrastructure to meet the increased demand associated with development in the southern employment lands. Those services that are not the responsibility of the City, for example public transport provision, are highlighted as items to be addressed with relevant NSW agencies.

The Implementation Action Plan in Section 12.2 provides a summary of the actions identified to deliver infrastructure and the agency responsible for its delivery.

## PART 1: ABOUT THE SOUTHERN EMPLOYMENT LANDS

The southern employment lands, shown in Figure 3, are located within the suburbs of Rosebery, Alexandria and St Peters and are generally bounded by Gardeners Road to the south, the Euston Road/McEvoy Street to the west, Wyndham Street and Botany Road to the north and Mentmore and Rothschild Avenues to the east.

The western boundary of the southern employment lands borders the Marrickville local government area which extends to the Alexandra Canal. The boundary is dominated by industrial activity, including the Alexandra Land Fill site, Sydney Park, a significant open space of 40 hectares. North of Sydney Park, also forming the western boundary, is the older residential areas of Erskineville and north-western Alexandria.

To the north is the Green Square Urban Renewal Area (Green Square) that is expected to grow to 53,000 residents and 22,000 workers by 2030. At the heart of Green Square are the Green Square Train Station and the Green Square Town Centre. Green Square also includes the old residential suburb of Beaconsfield immediately adjacent to the southern employment lands.

To the east of the southern employment lands is the residential area of Rosebery, a low scale area consisting of mostly one and two storey dwellings.

To the south is the boundary between the City of Sydney and Botany local government areas along Gardeners Road. On the Botany side of the boundary, uses to the eastern end are generally low scale residential with local shops and businesses. Between Botany Road and O'Riordan Street development is generally low scale industrial and retail uses. From O'Riordan a number of recent medium density residential developments have been approved by Botany council immediately adjacent to the City's industrial zone.





## 2. The Vision

In 2030 the southern employment lands will be a dynamic employment precinct that supports Sydney's growth. The area will nurture new business and industry opportunities, provide employment across a range of sectors, and support essential urban services and business that supports strategic activity, including Sydney airport.

A broad spectrum of the population will work and live in the southern employment lands, from students, to parents, to highly skilled technicians, to artists, to entrepreneurs. They may be highly paid, paid minimum wage, work part time, require childcare or come from different cultural backgrounds. All will require a well-functioning urban environment, with good public transport, services and recreation opportunities. The area will provide a range of social and cultural services and facilities to support the requirements of these diverse groups, including the provision of some affordable housing for very low to moderate income households.

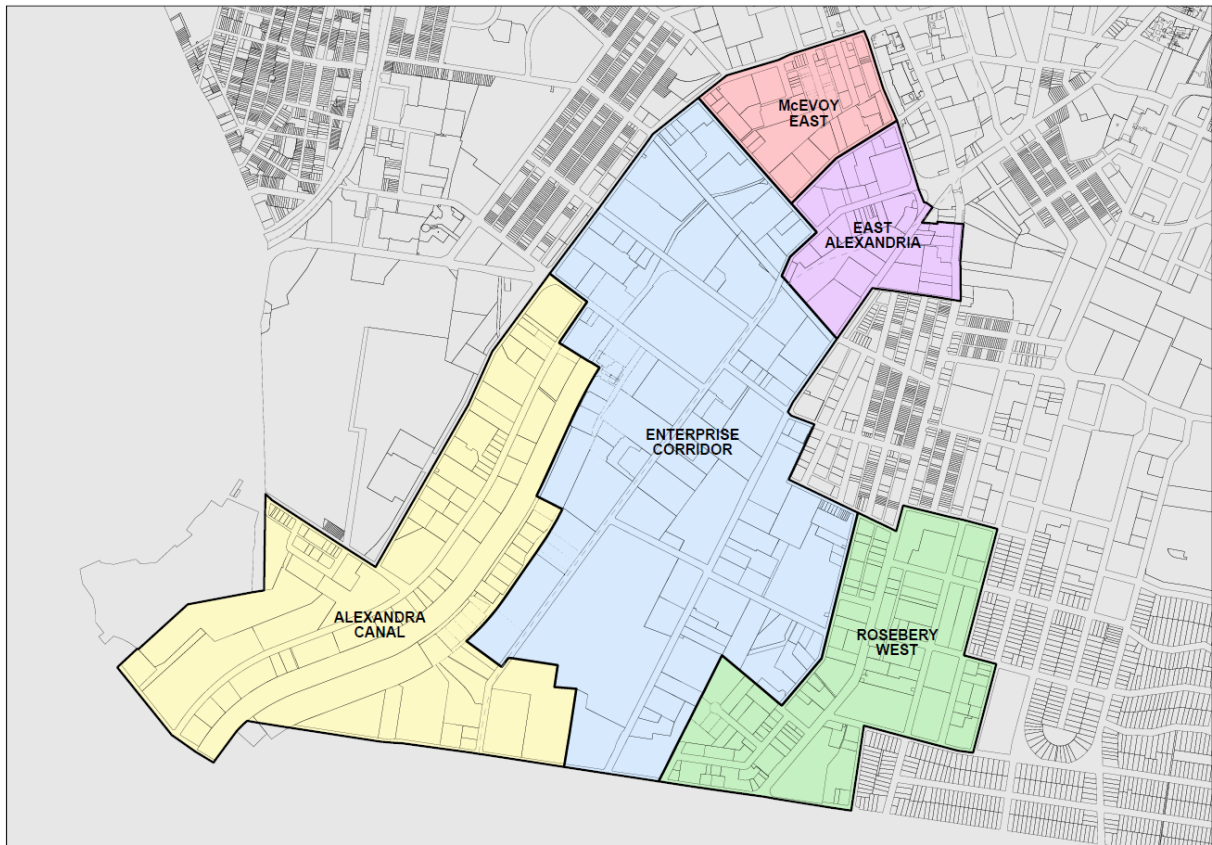
The southern employment lands will be a truly mixed employment precinct, with a strong central employment precinct and some residential development locating in the peripheries of the area. A tolerant and co-operative community will appreciate the needs of their neighbours to live, work and operate their business, whatever that may be.

Pockets of open space will provide relief from the dense urban environment, and a fine grain road network will support active street frontages and provide an attractive, permeable and safe environment that encourages walking and cycling in favour of driving.

The built form will support and respect the precinct's industrial past. It will respond to the functional requirements of a mixed business zone, but also be of a high design quality and demonstrate sustainable principles.

Five distinct localities make up the southern employment lands and are shown at Figure 4. While the form, scale and infrastructure requirements of development will vary across them, each locality has a unique role in supporting the City's economic growth and achieving the vision for the area.





**Figure 4: Southern employment lands localities map**

## 2.1 Localities

### *Enterprise corridor*

In 2030 the Enterprise Corridor will be a thriving corridor of mixed industrial and business activities that will locate in the area and provide services and support to the airport, port and the growing residential population uses.

These activates will range from ‘big box’ warehousing and distribution centres and light industrial, but will also include higher order uses, including high tech industrial, design warehouses and some retail and offices. About 14,962 people will work in this locality.

Traversed by two major north-south transport routes along Bourke Road and O’Riordan Street, the Enterprise Corridor will experience a high level of demand on the road network. Trips that can be taken by sustainable forms of transport will be encouraged by a good level of public transport provision and an expansive pedestrian and cycle network which will link the area to train stations at Mascot and Green Square and the amenities and services available in those town centres.

### *Alexandra Canal*

In 2030 the Alexandra Canal will be an industrial precinct which supports the uses required for the airport and port. Industrial activities that need to locate close to the CBD, or that are critical to service the inner-City residential population will also locate in the locality. About 3,853 workers will work in this locality.

Development will be of low scale, with a large lot subdivision pattern that supports the industrial uses that locate in the area.

The WestConnex interchange at St Peters will provide convenient access for trucks, but will also deliver substantial non-associated traffic directly into the locality. Sustainable transport options will be encouraged by an expanded pedestrian and cycle network.

### *McEvoy East*

In 2030 McEvoy East will be a mixed uses precinct with a commercial hub supporting a medium density residential neighbourhood. A mix of dwelling options, which includes affordable rental housing, will house a small but diverse population. A fine grain street network and high quality public domain will attract new industries, which support a range of employment opportunities, including small specialty retail, business associated with the creative and knowledge economies, flexible industrial and office spaces. About 2,039 people will work in this locality.

At its heart, the attractive built environment around Hiles Street, McCauley Street and Stokes Avenue will be the focus of community and commercial activity.

Residents and workers alike will be linked with a range of transport options and the amenities at Green Square and adjoining neighbourhoods by a network of public open spaces and publicly-accessible through-site links. These will encourage walking and cycling for local trips and reduce pressure on the surrounding road network.

### *East Alexandria*

In 2030 East Alexandria will be a thriving employment neighbourhood which accommodates a range of higher density employment uses that prefer to locate close to centres. This will include high tech industrial, retail development, business support services and high density commercial development.

These uses will support the function of the Green Square Town Centre as the Planned Major Centre for the southern part of the City and provide employment opportunities close to home for the growing population.

A new road will connect the area directly into the Green Square Town Centre and all the amenities and services that will be located there. The high quality public domain, excellent access to public transport and the cultural, recreational and commercial opportunities in the Town Centre will attract and sustain a dense worker population.

### *Rosebery West*

In 2030 Rosebery West will be a buzzing mixed use precinct. A diverse offer of commercial, recreational and cultural activities will support a medium density residential neighbourhood. About 4,893 people will work in this locality.

Traversed by Botany Road which forms a spine of shop-top housing, the areas around Hayes Road and Dunning Avenue to the east, and Birmingham and Bradford Streets to the west will be the focus of community and commercial activity.

Small scale speciality retail, cafes and restaurants, and fine grain spaces for start-up business will be attracted to the area by the active fine grain road network, the gritty architectural character and leafy streets.

A mix of residential development types, including affordable rental housing, will respect the industrial heritage of the area and the adjoining low density residential neighbourhood of Rosebery to the east and will support a socially-economic diverse living population.

An extensive network of pedestrian paths, cycleways and through site links will encourage active transport choices for local trips and good public transport along Botany Road will reduce the pressure on the road network from local traffic.

### 3. Planning the southern employment lands

A range of state and local strategic policy documents relate to the southern employment lands. The strategic policies most relevant include the NSW Government's Plan for Growing Sydney (the Sydney Plan), the *NSW Government's Long Term Transport Master Plan* (NSW Transport Master Plan), *Sustainable Sydney 2030*, the *City of Sydney Employment Lands Strategy 2014-2019* and *Sydney Local Environmental Plan 2012* (Sydney LEP 2012 and *Sydney Development Control Plan 2012* (Sydney DCP 2012).

#### *Plan for Growing Sydney*

In December 2014, the NSW Government published *A Plan for Growing Sydney* (the Sydney Plan), the new overarching strategic plan for the Sydney metropolitan area to 2031.

The Sydney Plan establishes four overarching goals to guide the NSW Government's vision for Sydney as a strong global city and a great place to live. The overarching goals include:

- a competitive economy with world-class services and transport;
- a city of housing choice with homes that meet our needs and lifestyles;
- a great place to live with communities that are strong, healthy and well connected; and
- a sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

Subregional plans are currently being developed by the NSW government, in consultation with stakeholders. Subregional planning is the link between the big picture planning directions set out in the Sydney Plan and detailed planning controls for local areas. The subregional plans are expected to detail housing and employment targets for each subregion. In the absence of the new subregional plan, targets are assumed from the *Draft Metropolitan Strategy for Sydney to 2031* which was released by the NSW Government in March 2013, for interim analysis.

The Sydney Plan places significant emphasis on enhancing the capacity of Sydney's gateways and freight networks, including the airports and Port Botany, recognising the economic importance of providing both short and long term growth opportunities for these facilities.



In the southern employment lands, growth will contribute to the achievement of the overarching goals and directions of the Sydney Plan by protecting strategically significant employment lands and locating jobs close to the projected residential populations in Green Square and in Mascot Town Centre, being 53,000 and 11,000 residents, respectively.

With regard to job targets in the future subregional plan, it is likely that the City of Sydney will continue as the principal location of future jobs growth in the Sydney metropolitan area. With regard to dwelling projections, the City expects targets will be achieved.

### *NSW Long Term Transport Master Plan*

The NSW Transport Master Plan is the NSW Government's 20-year vision for public transport, roads and freight network. It seeks to:

- integrate transport services;
- modernise the NSW transport system;
- grow the networks to meet future demand (including corridor preservation); and
- maintain important road and public transport assets.

In and around the southern employment lands, the Master Plan highlights a number of future constraints, particularly with regards to capacity of major roads and public transport. In addition it acknowledges mass transit solutions will be required to accommodate the growth of the Green Square and Mascot Station Precinct and proposes a number of actions that work towards improving freight connections, improving road capacity and providing traffic solutions.

The NSW Transport Master Plan also introduces the proposed WestConnex, a 33 kilometre motorway connecting the M4 and M5 corridors. In November 2014, the NSW Government announced the location of the planned interchange for Stage 2 of the WestConnex in the south east of the southern employment lands, at the corner of Campbell Street and Burrows Road, St Peters. It is certain WestConnex will have an impact on the southern employment lands in the longer term, although detailed traffic modelling and information about associated road upgrades are not available at this time.

### *Sustainable Sydney 2030*

*Sustainable Sydney 2030* is the City of Sydney's overarching strategic plan which guides growth and change in the local government area to 2030 and beyond. It includes ten strategic directions as well as ten targets against which to measure progress, including:

- **Direction 1** - A globally competitive and innovative City – The southern employment lands play an important role both in supporting the growth of new economic activities in Sydney (creative uses, knowledge industry, flexible office space) as well as providing for strategic activities associated with the airport and port and essential services for the City's growing population.
- **Direction 2** – A leading environmental performer – New growth in the southern employment lands is to incorporate sustainable principles and encourage sustainable choices.
- **Direction 3** - Integrated transport for a connected city – The southern employment lands contain the main transport corridor between the airport and port and the City. This strategy proposes the City work with the NSW Government to find solutions to improve the transport network and public transport system that service the employment lands.

- **Direction 4** – A city for walking and cycling – Planning for the southern employment lands has identified future opportunities to expand the City’s pedestrian and cycling network. As new development occurs the ‘liveable green network’ will be expanded and consolidate.
- **Direction 5** – A lively and engaging City – The southern employment lands are to accommodate a diverse range of land uses, including cultural and recreational activities.
- **Direction 6** – Vibrant local communities and economies – The southern employment lands plays an important role in the local economy. It provides an area for essential industrial activity to locate, which in turn provides access to critical services for a growing population.
- **Direction 7** - A cultural and creative City - The southern employment lands are to accommodate a diverse range of land uses, including cultural and recreational activities. The lower rents will ensure start-up businesses can locate and grow in the area and will create opportunities for innovation to flourish.
- **Direction 8** - Housing for a Diverse Population – while providing housing is not the primary focus of the southern employment lands, this strategy seeks to create opportunities for the provision of affordable housing.
- **Direction 9** – Sustainable development, renewal and design – As the southern employment lands grow, and new jobs and business locates in the area, new development is maximise sustainability measures, be well designed and fit for purpose.

#### *City of Sydney Employment Lands Strategy*

In June 2014, Council adopted the *City of Sydney Employment Lands Strategy 2014-2019* which formed the basis for the rezoning of much of the industrial land in the local government area in 2015. The Strategy contains objectives and actions to ensure that sufficient infrastructure is provided as new business and jobs locate in the southern employment lands.

Some of the strategic directions suggested within the Strategy include:

- advocate a subregional approach to the protection of employment lands;
- recognise and address traffic and transport issues in the southern employment lands;
- recognise and address flooding issues in the southern employment lands;
- improve the public domain in the southern employment lands;
- implement planning solutions that work towards the objectives and targets provided by Sustainable Sydney 2030;
- encourage a sustainable, high quality and functional built form that respects the history of the southern employment lands;
- ensure the southern employment lands are adequately serviced by public infrastructure; and
- ensure that key works can access affordable housing.

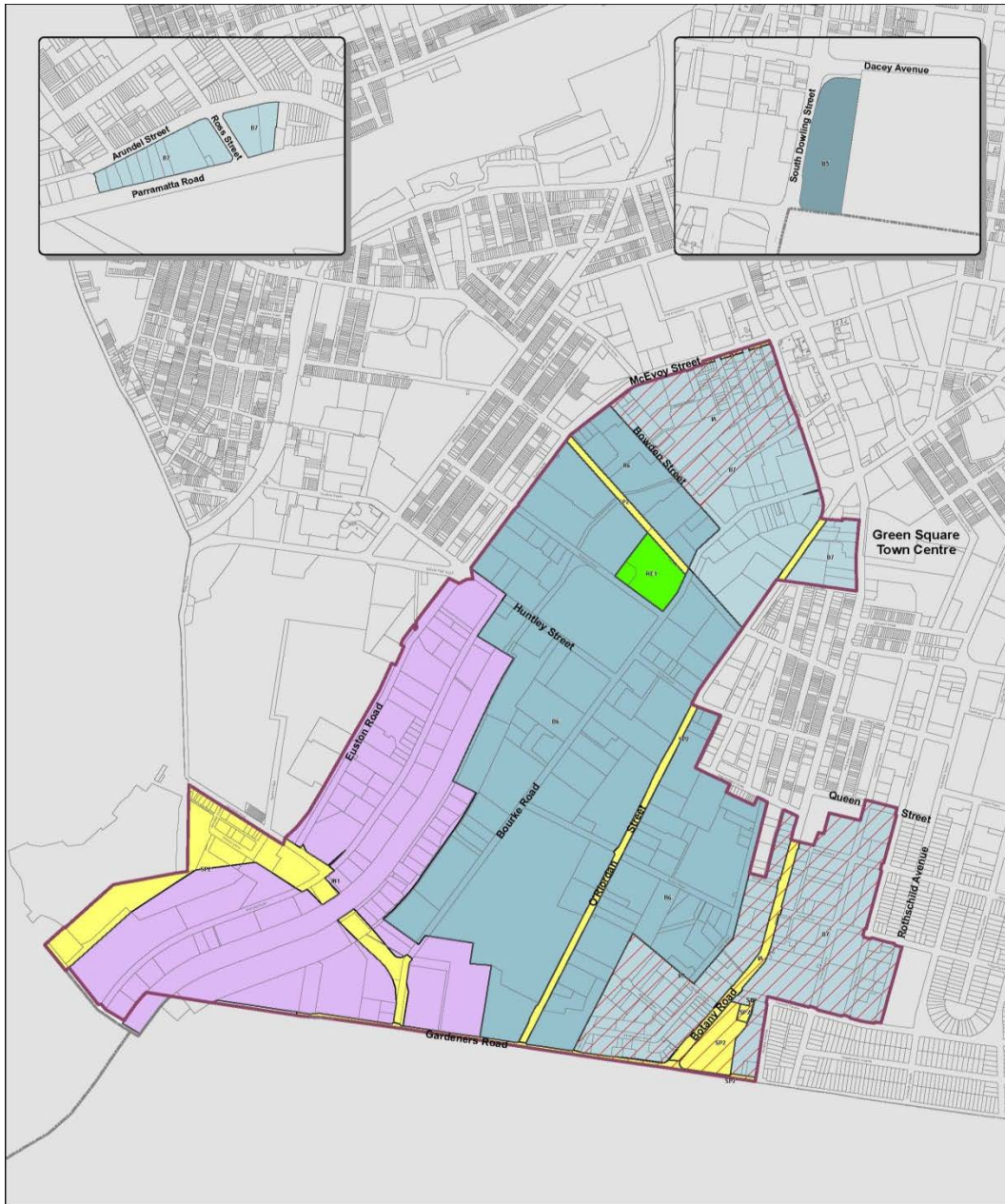
### **3.1 Planning controls**

The current planning controls for the southern employment lands are contained in the *Sydney Local Environmental Plan 2012* (Sydney LEP) and *Sydney Development Control Plan 2012* (Sydney DCP). In March 2015, Council and CSPC adopted *Planning Proposal: City of Sydney Employment Lands*, associated development control plan amendment (DCP amendment) and *Draft Employment Lands Affordable Housing Program* (Program), collectively the “planning controls”. At the time of preparing this Plan the planning controls were not yet ‘made’.

The new planning controls establish the primary role of the southern employment lands as to facilitate new business and industry opportunities; provide employment across a range of sectors; and provide land for strategic industrial activity and essential urban services. They include:

- two areas zoned B7 Business Park, including the Parramatta employment lands and two areas at the north and south east periphery of the southern employment lands;
- a core area zoned B6 Enterprise Corridor; and
- an area to the south-west to be zoned for industrial activity (IN1 General Industrial).

The primary planning controls (zoning) relating to the southern employment lands is shown at Figure 5.



KEY	
	EMPLOYMENT LANDS STRATEGY BOUNDARY
	IN1 GENERAL INDUSTRIAL
	B5 BUSINESS DEVELOPMENT
	SP2 INFRASTRUCTURE
	RE1 PUBLIC RECREATION
	B6 ENTERPRISE CORRIDOR
	B7 BUSINESS PARK
	INVESTIGATION AREA



**Figure 5: Zoning in the southern employment lands**

The planning controls support a flexible approach to land use, providing opportunities for the range of non-residential land uses that are needed to support the growth of Sydney Airport and Port Botany, but also a growing residential population.

## 4. Projected growth

### 4.1 Jobs

The new planning controls facilitate a wider range of land uses and more intense forms of development in the southern employment lands. The projected jobs growth to 2031 is provided at Table 1.

**Table 1: Southern employment lands job projections**

Proposed zone	FSR Range	Current job density / ha	Current jobs	Projected job density / ha	Projected jobs
B7 Business Park (North)	1.5 - 4:1	93	2,357	160	4,059
B7 Business Park (South)	1.5	86	3,013	140	4,893
B6 Enterprise Corridor	1.5	76	9,528	120	14,962
IN1 General Industrial	1.5	60	3,847	60	3,853
<b>TOTAL</b>			<b>18,745</b>		<b>27,766</b>

The likely staging of development to 2031 is provided at Table 2.

**Table 2: Anticipated development timeframes in the southern employment lands**

Proposed zone	Projected jobs growth to 2031	2014 - 2017	2018 - 2022	2023 - 2027	2028 - 2031
B7 Business Park (North)	1,702	Moderate levels of new development	Moderate levels of new development	Substantial levels of new development	Substantial levels of new development
B7 Business Park (South)	1,880	Moderate levels of new development	Moderate levels of new development	Substantial levels of new development	Substantial levels of new development
B6 Enterprise Corridor	5,434	Nominal new development	Moderate levels of new development	Moderate levels of new development	Substantial levels of new development
IN1 General Industrial	6	Nominal new development	Nominal new development	Moderate levels of new development	Moderate levels of new development

The rate of growth is sensitive to demand factors, the provision of public transport and proximity to planned centres and amenities.

## 4.2 Dwellings

Only a limited amount of residential development will occur in the southern employment lands to 2031, with most land being zoned exclusively for employment purposes. The new controls continue to permit 'shop-top' housing along Botany Road and also permit affordable housing in the B7 Business Park zones at the north and south east of the area.

In addition the *Employment Lands Strategy* identifies 'investigation areas' where site specific planning proposal requests will be considered by Council for some residential development where it supports the broader strategic objectives of the area.

For the purposes of this Plan, a conservative estimated of up to 4,000 dwellings will be assumed to locate in the area to 2031, mostly in the investigation areas.

## 5. History

The Carrahdigang clan (Cadigal and Gadigal are also used) of the Eora nation are the traditional owners of the area. The Carrahdigang people, who are from the Darug language group, were amongst the first Aboriginal people to make contact with Europeans in 1788, and were led by the renowned Bidjigal warrior, Pemulwuy, in their resistance to British occupation.

The European history of the southern employment lands has been characterised by the transformation from an area of farming and market gardens, to polluting industries relocated from the city boundaries, to more warehouse and distribution industries supporting the city and airport.

Land grants in the south of the City of Sydney area were originally given to Colonial Officers from 1793, for the purpose of farming which primarily involved crops and livestock production and also some timber milling. Alexandria was settled first in 1794 by John King, who received a land grant to clear land in the area. The Botany area was settled later with the first land grant being to Edward Redmond around 1809.

The southern employment lands were part of a large estate granted to William Hutchinson in 1823. Later, parts of the estate were leased and used for grazing and market gardening, which remained a significant industry in the region until the early 1900s.

In the 1830s, the abundance of natural resources in the area led to the establishment of quarrying industries, with brick making and pottery industries also established. The wool industry associated with the washing of wool and the manufacture of textiles was also occurring in the area prior to the 1850s.

Whilst agriculture and horticultural activities were common uses within the southern Sydney region because of the area's good natural supply of water and fertile soil, the area, because of its isolation, in the 1850s also became home to many of the colony's high water demanding and polluting industries. Significant industries in the area included abattoirs, smelting works, tanneries and fellmongers, wool washers, boiling down works, brick works and chemical companies.

The area continued in its role as a food producing area and, in addition to the horticultural land uses, dairies became an important agricultural industry from the 1860s. Dairies were prominent until the

early 1900s when the industry declined and ceased in the 1930s. Pig farms and abattoirs were also located within the general area in the 1880s and 1890s.

In 1890, the construction of Alexandra Canal was commenced as a public work formalising the drainage works that had been occurring over the last 70 years. Aided by the construction of the canal, manufacturing industries expanded significantly. The development of canal was also significant in the demise of the market gardening industry as the canal's widening resumed land previously used for this purpose.

In this period, tanneries, leather manufacturers, and wool industries remained active within the region. Dennis Winston in his book *Sydney's Great Experiment – The progress of the Cumberland County Plan* (1957, p.15) states that "Today there are about 13,000 factory workers in Botany, mostly still in industries connected with animal products or textile manufacture". Whilst this pattern was still evident, the nature of industry within this region was changing, and chemical and new manufacturing businesses began to develop. New significant industries included paper manufacturing and printing, chemical industries, timberyard and joineries, gelatine manufacturing, iron, steel and metal manufacturing, food processing, pharmaceutical manufacturing, and motor vehicle assembly.

In 1912 the Rosebery Estate was laid out. This was a model suburb for both residential and industrial buildings – a 'living and working town' providing homes and employment for residents. From the start, the areas of Rosebery located closer to Botany Rd were used for factories and warehouses. The Botany Road Tramline extended from the city by 1891. The Rosebery Estate was subdivided and sold in 1914. This coincided with a period of general industrial expansion within Sydney due to increased population and overcrowding of the inner city area and the First World War, a period the nation was forced to become more self-sufficient and less reliant on imported goods.

In 1921 the Sir Charles Kingsford Smith Airport was developed at Botany, creating additional airport related manufacturing enterprises within the area. In 1930 Botany Bay was first used as a commercial port for oil and petroleum products.

Up to World War II, the rapid growth of industry in the area became a source of pride to the local community: the former Alexandria Council claimed in its 1943 publication *Alexandria – The Birmingham of Australia*, that it was the largest industrial area in the country. Industries that operated at this time included the manufacture of iron, steel, glass, matches, textiles, soap and candles, food products, paper, rubber and electrical equipment. The growth of industry was further enhanced by the Second World War. The self-sufficient nature of industry continued after the Second World War to the 1960s.

From the 1960s the region began to shed employment in the manufacturing sector as industry moved to cheaper land on the city's fringes, a process aided by the suburbanisation of the workforce.

During the 1970s the world entered a manufacturing recession which triggered the deindustrialisation of the Australian economy. Industries such as the manufacturing sector declined and were replaced by wholesaling, transport and storage activities which needed to be close to Botany Bay when the container industry shifted from Sydney Harbour to Port Botany.



From the 1990s urban renewal had been occurring in the residential neighbourhoods located to the east, north and north west of the southern employment lands. The southern employment lands however remain largely free of residential development, retaining the large blocks and buildings, and predominantly employment based zoning.

## 6. Economic context

### 6.1 Significance

The southern employment lands are within the 'Global Economic Corridor', the collection of assets and centres that runs between Parramatta and Castle Hill, through Chatswood and North Sydney, through the Central Business District (CBD) and on to Sydney Airport and Port Botany. They are bookended by two major planned centres, being Green Square Town Centre to the north and Mascot Station Precinct to the south, and transversed by the major transport corridor between Sydney CBD and the Sydney airport and Port Botany. They are some of the most strategically located employment lands in Australia, being of local, metropolitan, state and national economic significance.

The southern employment lands are located just three kilometres south of Sydney CBD. This is Australia's premier commercial hub, containing in the order of 300,000 jobs across a range of high value sectors including finance, insurance, business and technical services, education, technology, media, retail, arts, entertainment and tourism services. The Sydney CBD is the engine room of the business services economy of Australia and the gateway for international capital.

Sydney Airport is two kilometres south of the southern employment lands. It handles around 37 million domestic and international passengers per annum and is the gateway for most international visitors visiting Australia. The *Sydney Airport Master Plan 2033* projects that by 2033 the airport will accommodate about 74 million passengers and 388,000 passenger aircraft movements. Total freight is forecast to grow from 600,000 tonnes in 2012 to over one million tonnes in 2033. Sydney Airport directly and indirectly generates almost 300,000 jobs which will increase to 400,000 by 2033. Many of these jobs and economic benefits will be generated locally in Mascot, Marrickville and the southern employment lands.

Port Botany is just three kilometres to the south-east of the southern employment lands. It is Australia's second largest port in terms of freight volumes (behind Melbourne) with about 1.3 million Twenty-foot Equivalent Units (TEUs), expected to grow to around six million by 2030-31.

Green Square is a Planned Major Centre in the draft Metropolitan Strategy. The Green Square Urban Renewal Area, with the Green Square Town Centre and train station at its centre, overlaps with the northern section of the southern employment lands. This is Australia's largest urban renewal area that is expected to accommodate 53,000 residents and 22,000 additional workers by 2030.

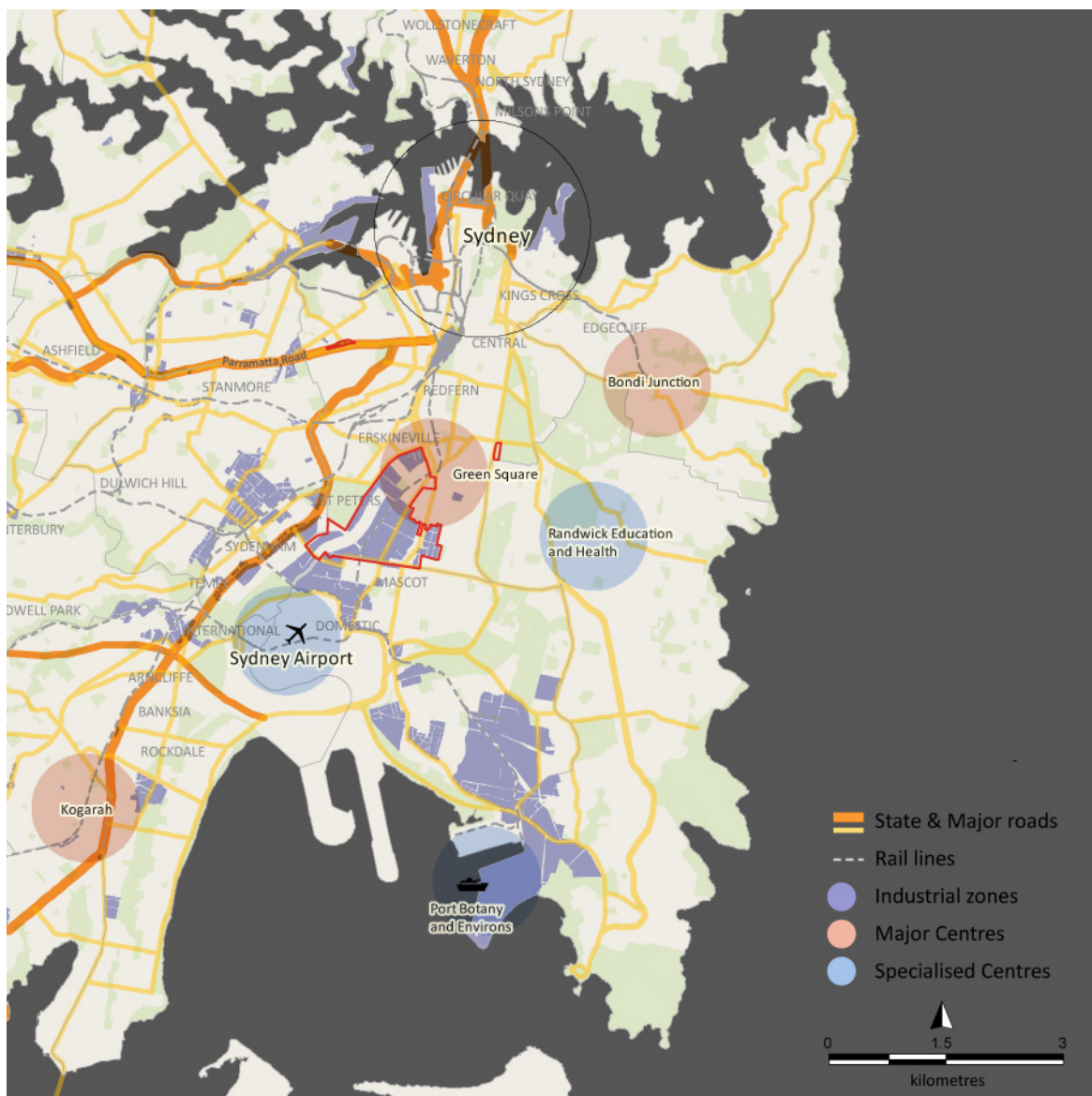
To the south of the southern employment lands is the Mascot Station Town Centre Precinct. In April 2012 a Master Plan of the precinct was completed by Botany Council to accommodate a future population of up to 11,000 people and 35,000 jobs. The Mascot Town Centre was initially identified by the Department of Planning and Environment as an 'Urban Activation Precinct', but more recently has been noted as a 'Priority Precinct' where further investigation and consultation is needed;



Between the southern employment lands and the Sydney CBD is the Redfern-Waterloo renewal area. This area is gradually being redeveloped, and is a focus for significant new investment in housing, including the redevelopment of public housing areas, employment primarily within the Australian Technology Park and community and cultural services with Redfern as the principal focus of the urban Aboriginal community in Australia.

The subregion contains major educational and health assets. Less than three kilometres to the east of the southern employment lands is the University of New South Wales in Kensington, which with the Prince of Wales Hospital and other medical facilities, forms part of the Randwick Education and Health Precinct, as defined in the draft Metropolitan Strategy. To the north-west of the southern employment lands and to the south-west of the Sydney CBD is the University of Sydney, the University of Technology of Sydney and the Royal Prince Alfred Hospital.

Elsewhere within the inner Sydney area, in the Botany Bay and Marrickville LGAs nearby, are additional significant and strategically important industrial areas, shown in Figure 6.



**Figure 6: Significant industrial areas**

## 6.2 Form and function

The southern employment lands currently host a range of employment generating activities that are essential to the efficient functioning of a city and that serve the population, such as panel beaters, depots and distribution centres. In addition, the employment lands also accommodate strategic activities associated with the airport and essential support services needing access to the Sydney CBD. The area is characterised by predominantly industrial development, with supporting commercial and retail uses including big-box and bulky goods retail, and some residential development along Botany Road in the east.

There are areas within the southern employment lands where distinct concentrations of industries have emerged. The *City of Sydney Floorspace and Employment Survey 2012* (FES 2012) found the industries most highly represented in terms of employment share in the southern employment lands are manufacturing, wholesale trade, transport and logistics related industries, postal activities, and warehousing. The floor space distribution of these land use categories generally show:

- higher concentration of factories and laboratories (general industrial) in the south, particularly the south-west;
- a fairly even distribution of freight and logistics uses, though the concentration is generally heavier in the south-west;
- large amounts of existing office space, mostly with other industrial uses (ancillary), along the Bourke Road and O’Riordan Street corridor stretching north to the Green Square Town Centre;
- retail showrooms along O’Riordan Street, which is representative of the bulky goods and motor showroom corridor; and,
- a high amount of vacant floor space, particularly in the centre corridor.

The built form in the southern employment lands largely reflects the predominant use:

- the southern and south-eastern portion is generally characterised by low scale industrial/warehouses of no more than two or three storeys, some of which have been adapted for restaurants, cafes and creative/design related uses;
- along Botany Road there is some shop-top housing with commercial or retail premises located at the ground floor and residential units above. The predominant height of these developments is around seven to eight storeys;
- in the south-west, heavier industrial warehouses are the predominant built form, rarely exceeding one or two storeys, but with large floor to ceiling heights;
- in the north-west, the subdivision pattern becomes much finer grain, with or two storey smaller scale older industrial warehouse buildings; and,
- in the north-east, close to the Green Square train station, large blocks remain, housing low scale industrial activities and buildings.

## 7. Current economic and demographic profile

### 7.1 Industry and Employment

#### *Floor space and Employment Survey*

The City's *Green Square and City South Village Summary Report (2012)* provides an analysis of employment and industry in the Green Square and City South Village (the Village Area), shown at Figure 7. The Village Area includes the southern employment lands, the residential area of Rosebery and the Green Square Urban Renewal Area.



**Figure 7: Green Square and City South Village (Map)**

The following table lists the top ten industries in the Village Area. It shows 28% of businesses and 35% of jobs relate to transport, logistics and manufacturing. The Village Area therefore remains an important inner city location for light industrial uses. There is however a transition underway with

the number of businesses and jobs in these industries decreasing since 2007 (-11 businesses and -42 jobs). Over the same period the number of business and jobs in retail, personal services, food and drink, professional services and business services has increased significantly (+231 businesses and +2,076 jobs in these industries).

**Table 3: Top 10 Industries in Village Area by Number of Businesses and Jobs**

Sector	Industry	# of businesses (2012)	% of businesses (2012)	Change since 2007	# of jobs (2012)	% of jobs (2012)	Change since 2007
<b>Secondary Sectors</b>	Transport & Logistics	414	19.7%	-1.4%	6113	21.9%	-1.2%
	Manufacturing	176	8.4%	-2.8%	3606	12.9%	0.9%
<b>Tertiary Sectors</b>	Food & Drink	194	9.2%	35.7%	1377	4.9%	27.9%
	Prof & Business Services	177	8.4%	42.7%	2173	7.8%	73.8%
	Creative Industries <sup>1</sup>	176	8.4%	2.9%	2715	9.7%	0.6%
	ICT	174	8.3%	10.1%	2887	10.3%	-16.7%
	Motor Vehicle <sup>2</sup>	142	6.8%	8.4%	1825	6.5%	25.0%
	Property Development <sup>3</sup>	98	4.7%	16.7%	841	3.0%	18.1%
	Social Capital <sup>4</sup>	49	2.3%	113.0%	518	1.9%	295.4%
	Retail & Personal Services <sup>5</sup>	49	2.3%	71.3%	2779	9.9%	44.3%

Industry categories are City-Based Industry codes:

1. For example creative retailing, creative print and media, creative manufacturing, creative recreation, creative business, creative culture.
2. For example, motor vehicle manufacturing, motor vehicle wholesaling, motor vehicle retailing, motor vehicle services
3. For example, general construction, construction trade services, property services
4. For example, community care services, child care services, personal services, religious organisations, interest groups
5. For example, personal services, furniture & carpet, hardware & housewares, clothing & footwear, garden, entertainment & media, sports & toys, jewellery, camera, marine, news books & stationary, department & variety, repair

Table 4 lists the top 10 industries in the Village Area by internal floor space. It shows that transport, logistics and manufacturing uses make up 39% of all floor space in the Village Area (870,991sqm). Retail, personal services, motor vehicle, creative industries and information and communications technologies (ICT) make another 38% of the Village Area's floor space (856,697sqm).

**Table 4: Top 10 Industries in the Village Area by Floor space**

Sector	Industry	Floor space (2012)	% floor space (2012)	Change since 2007 (sqm)	Change since 2007 (%)	Workspace Ratio (2012)
<b>Secondary Sectors</b>	Transport & Logistics	605,690	26.9%	-84,709	-12.3%	99.1
	Manufacturing	265,301	11.8%	-122,479	-31.6%	73.6
<b>Tertiary Sectors</b>	Food & Drink	84,287	3.7%	9,303	12.4%	61.2
	Professional & Business Services	93,821	4.2%	34,859	59.1%	43.2
	Creative Industries	177,616	7.9%	12,645	7.7%	65.4
	ICT	159,209	7.1%	-69,085	-30.3%	55.1
	Motor Vehicle	217,862	9.7%	58,119	36.4%	119.4
	Community <sup>1</sup>	42,018	1.9%	-4,368	-9.4%	174.3
	Government	50,741	2.3%	12,344	32.1%	92.6
	Retail & Personal Services	302,000	13.4%	86,056	39.9%	108.7

1. For example, community public, community health, community education

The table also illustrates the aforementioned transition toward tertiary industries that is occurring within the Village Area. Since 2007 the amount of floor space associated with transport, logistics and manufacturing uses has decreased by 19% or 207,188sqm. In contrast floor space for retail, personal services, motor vehicle, professional and business services, creative industries, government and food and drink has increased by 30% or 213,326sqm.

### *Development capacity and growth projection*

The *City of Sydney Employment Lands Study* (2013) shows industries expected to experience the greatest growth between 2011 and 2031 in the southern employment lands are:

- Professional, scientific and technical services;
- Art and recreation services;
- Health care and social assistance;
- Education and training;
- Retail trade; and,
- Other services.

The demand for manufacturing, warehousing, transport and logistics, postal services and so on will remain high, albeit a shrinking proportion of growth over time.

## **7.2 Residential population**

Few residential dwellings are currently located in the southern employment lands, given its predominantly industrial character. The FES 2012 found a total of 387 dwellings, with the majority



(296) of those being located along Botany Road, between Gardner’s Road and Morley Avenue, where ‘shop-top housing’ is a permitted land use.

Detailed demographic data is not available for the residential population at this scale, however it can be broadly assumed that it shares similar characteristics to that of the wider Village Area. Population data for the Village Area is collated by .id data on behalf of the City. Some information has also been sourced from the 2011 Australian Bureau of Statistics (ABS) Census for the Statistical Local Area (SLA) which most closely aligns with the southern employment lands, which is Sydney (C) South (SLA Code 7205). A map showing the Sydney South SLA is provided at Figure 8.



**Figure 8: Sydney (C) South SLA**

Key findings from the demographic analysis include:

- **Population** - The Village Area's resident population was 20,013 in 2011 and is expected to increase by 34,069 people or 169% in the years between 2011 and 2031. It is noted that almost all of this growth is expected to be located in the Green Square Urban Renewal Area and the Ashmore Estate in Erskineville.
- **Age** - The Sydney South SLA's age profile has remained similar over the last decade, with the majority of residents aged between 20 and 44 years. This is also the fastest growing age group. The proportion of residents aged less than 15 years and over 65 years is low and decreasing.
- **Birth Place** - In 2011 nearly 70% of all residents in the Sydney South SLA were born in Australia or the United Kingdom. This is changing however. Since 2001 the proportion of residents born in China and other Asian countries has increased to 5% and 9% respectively.

- **Households** - Family households remain the most common type in the Sydney South SLA followed by single person households. However the number of Group Households in the Sydney South SLA is growing rapidly.
- **Education** - Between 2001 and 2011 the number of residents in the Sydney South SLA attending university increased by 2,428. In contrast, the number of residents attending pre-school and primary school increased by 408 over the same period. Residents of the Sydney South SLA have a high level of education attainment with 26% holding a Bachelor Degree in 2011. This is 7% higher than a decade ago and significantly higher than recorded for Greater Sydney.
- **Resident Workforce** - In 2011, 66% of the Sydney South SLA's residents were employed in tertiary industries in 2011 compared to 54% across Greater Sydney. The following five industries employed nearly 50% of the Study Area's working residents in 2011: Professional, scientific and technical services (15%); Health care and social assistance (9%); Financial and insurance services (9%); Education and training (8%); and Retail trade (7%). In 2011, 54% of the Sydney South SLA's residents were employed as managers or professionals, compared to 39% across Greater Sydney. Between 2001 and 2011 the proportion of residents employed as managers and professionals increased by 7% in the Sydney South SLA and 4% across Greater Sydney. In contrast the proportion of technicians, trade workers, machinery operators, drivers and labourers declined by 5% in the Sydney South SLA and 3% across Greater Sydney over the same period.
- **Resident Place of Work** - In 2011 nearly 60% of the Sydney South SLA's employed residents travelled to the Sydney Inner City to work. A further 23% of employed residents travelled to Botany, North Sydney, Eastern Suburbs, Chatswood, Lane Cove and Ryde for work.
- **Income** - In 2011 the Sydney South SLA's median household income was \$223 higher than the median for Greater Sydney. Since 2001 household incomes in the Study Area have increased by 80%, compared to 46% across Greater Sydney.
- **Dwellings** - Between 2001 and 2011 the number of dwellings in the Sydney South SLA increased dramatically (+7,821 or 46%). By comparison, the number of dwellings in Greater Sydney increased by 11% during the same period. Nearly 90% of new dwellings constructed since 2001 in the Sydney South SLA were flats, units or apartments and they represent 62% of the total dwelling stock. Whilst the Sydney South SLA's average household size was 2.0 people in 2011, a comparison of additional residents (18,056) and additional dwellings (7,821) between 2001 and 2011 suggests the size of new households is closer to 2.3.

In summary, the Village Areas/SLAs population is increasingly characterised by young professionals who are aged between 20 and 44 years, well-educated and work in white collar industries. The number of overseas students living in the Village Area is also growing. These trends have resulted in a high proportion of lone person and group households in the Village Area although family households remain the most common type. The majority of residents work in or near the Sydney CBD and over half take public transport or walk to work.

### 7.3 Working population

There are currently 18,000 jobs located in the southern employment lands. In 2006, manufacturing was the largest industry sector in the area employing around 3700 people (or 20 per cent of total jobs), followed by wholesale trade (19 per cent), and transport and warehousing (17 per cent).

Sixty per cent of workers in the southern employment lands are in the very low to moderate income group. A moderate income earner includes people whose income is less than 120 per cent of the Greater Sydney median personal weekly income<sup>1</sup>. Table 5 compares personal weekly income groupings in the southern employment lands with Greater Sydney workers.

**Table 5: Personal weekly income groupings**

Personal weekly income groupings	% of Southern Employment Lands workers	% of Greater Sydney workers
<b>Very low income</b>	10.9%	18.6%
<i>&lt; 50% of Greater Sydney median personal weekly income</i>		
<b>Very low to moderate income</b>	60.1%	70.1%
<i>&lt; 120% of Greater Sydney median</i>		

Note: Data is collated by destination zone. Destination zones are the spatial basis of the Bureau Transport Statistics data collection, transport modelling and analysis. The destination zones lining up most closely with the boundaries of the southern employment lands were used to derive information about the working population.

In 2011, the predominant origin of journey to work trips to the southern employment lands come from the residential areas to the south west. Figure 9 identifies where workers originate from.



**Figure 9: Origin of workers**

<sup>1</sup> In 2011, 120 per cent of median income was \$1192 per week



The above shows that trips to the southern employment lands are made mainly by car travel (driver and passenger) which represent 75 per cent of all trips. Public transport currently has a mode share of 20 per cent, and active transport (walking and cycling) has a mode share of 5 per cent.<sup>2</sup>

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<sup>2</sup> Bureau Transport Statistics Journey to Work data (2011) (JTW data) is collated by destination zone. Destination zones are the spatial basis of the Bureau Transport Statistics data collection, transport modelling and analysis. The destination zones lining up most closely with the boundaries of the southern employment lands were used to derive information about the working population.

## PART 2: INFRASTRUCTURE REQUIREMENTS

### 8. Transport and access

#### SUSTAINABLE SYDNEY 2030 STRATEGIC DIRECTIONS

Direction 3. Integrated Transport for a Connected City

Direction 4. A City for Walking and Cycling

Direction 9. Sustainable Development, Renewal and Design

#### RISKS

- Poor support from State Agencies to improve public transport options.
- Public transport not the responsibility of the City.
- Rail capacity on the Airport Line will not keep pace with development and passenger demand from Green Square and Mascot, which in turn will have an effect on residents and workers of the southern employment lands utilising the rail service.
- Bus capacity is not keeping pace with development and passenger demand from Green Square, Mascot and other surrounding areas.
- Increased congestion on main arterial roads means that passing through the southern employment lands may use local/neighbourhood routes.
- Increased congestion resulting from growth at Sydney Airport and Port Botany.
- Impact of development in the southern employment lands on freight corridors.

The strategic location of the southern employment lands and the potential impacts of future trip generators require a co-ordinated approach to the management of traffic and public transport. The cumulative impact of projected population and jobs growth in the Green Square, the southern employment lands and the Mascot Town Centre precinct will place considerable pressure on an already strained traffic and transport network.

Transport planning identifies transport solutions that maximise accessibility and ultimately improves the ability of an area to attract new business and residents. In order to achieve sustainable and environmental outcomes in the southern employment lands, an integrated approach between proposed land uses and transport planning is required.

The Sydney DCP 2012 includes a number of requirements relating to the provision of new streets and the general improvement of access within and through the southern employment lands. These requirements have emerged from a range of technical reports supporting the 2015 rezoning, state government transport policy, planning for Green Square and City-wide strategic directions. The following sections discuss the considerations influencing the delivery of streets and transport systems.

#### 8.1 Agency co-ordination

The City of Sydney actively works with NSW Government agencies on a range of transport related issues in Green Square. Agencies include the Department of Planning and Environment (DoPE), UrbanGrowth NSW, Transport for NSW, Roads and Maritime Services (RMS), Sydney Trains and Sydney Buses. Liaison with these agencies has been at both strategic planning and implementation stages.

In late 2013 a new Green Square Transport Working Group was established to provide cross-agency coordination between the NSW Government and the City of Sydney in the strategic planning and delivery of Green Square transport and road projects and the interrelationship of other major infrastructure and urban renewal projects within and outside Green Square, including the Ashmore Precinct. The working group is chaired by the City of Sydney. Its membership includes the City, Transport for NSW, RMS and UrbanGrowth NSW.

A key purpose of the working group is to ensure transport infrastructure is provided for residents and businesses across the urban renewal areas and that the timelines for delivery and implementation of transport and road projects are met.

The working group reports to the Green Square Transport Steering Committee chaired by UrbanGrowth NSW. It is intended to refer this Plan to the working group for input by member agencies, for the Plan then to be considered by the steering group.

## 8.2 Transport strategies and policies

A number of NSW Government and City transport strategies and plans have informed the planning for the southern employment lands and will continue to influence to integrated transport outcomes for the area.

### *NSW 2021*

The NSW Government's *NSW 2021* (2011), a 10-year plan, contains targets for improving transport services and shifting trips away from private vehicles towards public transport, walking and cycling. The plan also calls for job growth in centres close to where people live.

### *NSW Long Term Transport Master Plan*

The *NSW Long Term Transport Master Plan* (2012) identifies a direction for transport over the next 20 years by addressing key challenges around population growth, job creation and the need for a transport network that maximises the benefits to the economy and aligns with land use.

The plan identifies the Sydney Airport to CBD corridor as one of Sydney's most important corridors but also one experiencing high constraint. It recognises that managing the growing demand within and alongside this strategic corridor will be essential to securing Sydney's future economic growth and success.

### *Mascot Town Centre Precinct Transport Management and Accessibility Plan*

The Mascot Town Centre Precinct Transport Management and Accessibility Plan (TMAP), was prepared as part of an integrated land use and transport assessment, to assess the cumulative traffic and transport impacts of development options to achieve the employment and housing targets for the City of Botany Bay Council LGA up to 2031.

The Plan identifies multiple actions and responsibilities to manage transport infrastructure use and delivery in the Mascot area by key stakeholders.

### *Green Square Transport Management and Accessibility Plan*

Due to its proximity to the southern employment lands Green Square will significantly impact on the southern employment lands.

The Green Square Transport Management and Accessibility Plan (TMAP), prepared in 2008 by Transport for NSW in conjunction with NSW agencies and the City, incorporates a common understanding of actions and responsibilities to manage transport infrastructure delivery in Green Square by key stakeholders. In 2012 the TMAP was reviewed although its outcomes were never publicly released.

Since 2008 there have been significant changes the plans, policies and population projections affecting the Green Square area. At present there are a number of 'unknown' elements that are likely to have an impact on the transport network in the subregion. There remains varying levels of uncertainty about how these strategically important traffic and transport drivers might impact the area in the future, for example:

- a lack of publicly available transport modelling data that demonstrates the impacts and benefits of the proposed WestConnex motorway;
- the pace of development of the Mascot Town Centre, initially identified by the Department of Planning and Environment as an 'Urban Activation Precinct', now 'Priority Precincts', but that is now identified as a precinct needing further investigation and consultation;
- the status of the Green Square Transport Management and Accessibility Plan 2008 (TMAP), which was reviewed by Transport for NSW in 2012, but the review has not been publicly released;
- the timing of a second airport in the Sydney basin, which will likely impact on the function and transport demands on Sydney Airport and, by extension, the southern employment lands;
- the review of the airport train stations access fee and potential for its removal, currently not supported by the NSW Government;
- a second rail crossing across Sydney Harbour, which is required to alleviate capacity pressures at Green Square and Mascot train stations;
- potential introduction of a one way pairing on Bourke Road and O'Riordan Street, as identified in the NSW Government's Long Term Transport Master Plan;
- timing and extent of the planned realignment of the O'Riordan Street/Bourke Road/Botany Road intersection at the Green Square rail station;
- take-up of development opportunities in the employment lands as they are rezoned; and
- the pace of development of the commercial floor space in the Green Square Town Centre and staging of infrastructure around the Green Square rail station.

A further review of the TMAP will at some time be required, and given the potential of growth in the southern employment lands, it may be appropriate that it be included in the study area.

### *City of Sydney strategies*

The City has a range of strategies and policies that will continue to influence transport planning for the southern employment lands as the area grows and changes, the most relevant of these include:

- Connecting our City, the City's overarching strategic transport policy;
- Neighbourhood Parking Policy; to manage on-street parking demand;
- Car Share Policy, to support car share as a sustainable transport option;
- Economic Development Strategy, guiding the City's economic growth;
- Retail Strategy, to encourage retail to locate in appropriate locations;
- Liveable Green Network, to promote walking and cycling in the local government areas;
- draft Walking Strategy and Action Plan;
- Cycle Strategy and Action Plan; and,
- the Sydney LEP and DCP, the planning controls guiding development in the local government area.

#### **PROJECT T.1 TMAP 2012**

**Action:**

- Public release of TMAP 2012 by TfNSW with timeframes for delivery of key actions
- Potential inclusion of the southern employment lands in study area

**Responsibility:** TfNSW (lead) and RMS

**Timeframe:** 2015

## **8.3 Sustainable transport**

### *Public transport*

The southern employment lands are subject to a range of transport and access challenges. Transport and access constraints represent the biggest ongoing challenge to sustainable growth in the southern employment lands.

The area to the north of the southern employment lands is well serviced by the Green Square train station, as well as a number of bus services. This area is proposed to be zoned B7 Business Park which will encourage more dense employment activities and affordable rental housing in appropriate locations. Demand for public infrastructure will increase as the intensity of uses increases. More workers and residents will increase the public transport, which can have flow on effects upstream and downstream on transport services, thereby exacerbating the already well documented issue of near capacity

#### **PROJECT T.2 Establish long-term mode share targets and strategies**

**Action:**

- Undertake further assessment of cumulative transport impacts associated with subregional growth

**Responsibility:** CoS, RMS and TfNSW

**Timeframe:** ongoing (as identified traffic and transport drivers are resolved)

#### **PROJECT T.3 Forecast and implement bus service increases**

**Action:**

- Plan service increases in line with development and increased demand

**Responsibility:** TfNSW (Sydney Buses)

**Timeframe:** ongoing

## Walking

The City of Sydney is expecting an additional 100,000 residents and 110,000 additional jobs by 2030 and walking trips are expected to at least double from 2011 to 2030. Approximately 2.6 million trips per day will occur in the City Centre by 2030 based on population and job growth. As population density increases the need for efficient transport becomes more critical to the prosperity of a city.

Walking is the primary mode of transport within the City Centre – 93% of all trips made are completed by walking (1.3 million trips per day) and 46% of all trips in the City of Sydney are made by walking. However this mode share is not equally reflected across the LGA. In the southern employment lands only 3% of all trips to work are undertaken by walking.

The predominance of trips by car travel (driver and passenger) (75%) reflects the predominantly industrial/warehousing nature of the southern employment lands. Because there is only minimal residential development in the immediate area there is a greater dispersal of origin of journey to work trips.

As higher value jobs increase, and some residential development is facilitated at the peripheries of the southern employment lands, there will be a potential shift in the origin of workers and hence direction and mode of trips into the area.

The City has recently exhibited a draft *Walking Strategy and Action Plan* to outline benefits, set targets, actions and implement improvements for walking and includes all areas of the City including Green Square.

The strategy is intended to support and guide the creation of a walkable city. This aligns with the *Sustainable Sydney 2030* vision for a globally competitive and innovative city with integrated transport and land use, and a focus on creating a city for walking and cycling. Further, it reflects a trend in other global cities to encourage walking in acknowledgement of the health, economic and environmental benefits.

This strategy also seeks to further influence the NSW Government to unlock potential for local government to deliver walking infrastructure, though improved guidelines and technical directions for walking related infrastructure. Further, the strategy will assist in addressing a national increase in obesity rates – in 2010-11, over 60% of the Australian population was overweight or obese – which, if trends continue, is predicted will increase to over 80%.

The strategy will also build upon other strategies, policies and action plans, including:

- Connecting our City
- Corporate Plan
- Neighbourhood Parking Policy
- Car Share Policy
- Economic Development Strategy
- Retail Strategy
- Tourism Strategy
- Liveable Green Network
- Wayfinding Strategy

- History and Culture Walks
- 'OPEN' Sydney
- The Sydney LEPs and DCPs and DCPs
- Cycle Strategy and Action Plan
- NSW State Government City Centre Access Strategy
- NSW State Government Walking Strategy released in December 2013.

**PROJECT T.7** Establish walking facilities improvement programme

**Action:**

- Improve amenity and security through upgrades to signage and lighting
- Expand on the current pedestrian network and align networks with public transport routes and other activity nodes

**Responsibility:** CoS (lead) and RMS

**Timeframe:** ongoing

### Cycling

The City has a *Cycle Strategy and Action Plan* to provide a network of safe, connected, separated cycleways to accommodate the levels of future demand for cycling that is likely to be generated by development in the City's south. Infrastructure such as separated cycleways allows people of all bike-riding ability to choose to use a bicycle to safely travel through Green Square and the adjacent neighbourhoods. It connects between homes, community facilities, place of work and retail areas.

The City prioritises separated cycleways for bike riders to maintain the safety of all road users. These can be through dedicated lanes where street widths allow, short links using shared paths with pedestrians, shared zones and contraflows where expected number of users will be low. Bike riders are provided for at intersections, given priority where possible and given their own phase at traffic signals to ensure compliance.

The City's broader cycle network connects with Green Square and the southern employment lands and is linked to regional routes that will connect bike riders to major trip generators including Central Sydney, Sydney Airport, the Inner West and Eastern Suburbs, plus the three nearby Universities. Way-finding signage gives directions to bike riders and provides other information, such as distances. Links to major transport hubs are being looked at with improved cycling facilities at these locations including high density, secure bike parking at railways stations like Green Square station.

**PROJECT T.6** Implement local and regional cycle plans

**Action:**

- Create cycle links through large sites to improve permeability and promote active transport use

**Responsibility:** CoS (lead) and RMS

**Timeframe:** ongoing

### Liveable Green Network

The Liveable Green Network is part of the City's plans to link neighbourhoods and make them green. It aims to create a pedestrian and cycling network that connects people with the City and village

centres as well as major transport and entertainment hubs, cultural precincts, parks and open spaces. The focus of the Liveable Green Network is active transport by making walking and cycling more attractive particularly for short trips, and a viable alternative transport choice to using the private motor vehicle.

It is important that residents, workers and visitors are able to walk and cycle around a city as large and diverse as Sydney. Many global cities have cycling and pedestrian networks with a focus on recreation and leisure, which often frame parklands, foreshores and other scenic attractions.

*Sustainable Sydney 2030* sets goals to improve the local area's sustainability by 2030 by encouraging 10% of local journeys to be made by bicycle and at least half to be made on foot by 2030. The City also wants residents to be within walking distance to services and facilities such as fresh food markets, child care, health care and public parks.

The *Liveable Green Network Strategy and Masterplan* report develops and refines the Sustainable Sydney 2030 project idea by undertaking background research and case studies, reviewing previous cycle and pedestrian network planning studies, and undertaking route assessments to identify network gaps and amenity shortfalls.

There is significant potential for greater walking and cycling paths under the Liveable Green Network. Every day in metropolitan Sydney people make more than 16 million trips that are less than 10km, including 392,000 bicycle trips – more than the number of ferry trips each day. The cycling share for trips less than 10km has grown from 1.9% to 2.5% since 2010 and since 2006 the number of people riding to work has increased by 50%.

These are considerable figures and highlight the need for the Liveable Green Network to be rolled out across the City of Sydney. The City is working towards building a 200km cycling network including 55km of separated cycleways.

Routes laid out for the Liveable Green Network will encourage cycling and walking. Improvements will include separated cycleways, lower speed limits, widened footpaths and improved crossings. Cycling routes will be clearly marked with easy-to-read maps and signage. More seats, bubblers and bike parking will be built along major cycling paths.

*Sustainable Sydney 2030* identifies 10 prime corridors that form the basis of the Liveable Green Network. These corridors traverse both north-south and east-west across City in an equal distribution grid. The corridors also align with the historic drainage channels which cut through Green Square into the Alexandra Canal. The network is shown at Figure 10.

The DCP includes provisions that specifically address the delivery of the City's Liveable Green Network along the Alexandra canal. Provisions include requirement for setbacks, active frontages to the canal, landscaping and so on. In addition, the DCP includes indicative future roads and links to improve access to the canal east and north through the proposed B6 Enterprise Corridor zone.

Similar to other strategies discussed in this Plan, the Liveable Green Network is a major consideration from the planning through to the detailed design and is incorporated in the traffic management and public domain plans discussed in this Plan.





Figure 10: City of Sydney 'Liveable Green Network'

**PROJECT T.9** Implement a Liveable Green Network

**Action:**

- As new development occurs, secure setbacks for the Liveable Green Network
- Provide an expanded pedestrian and cycle network along the City's Liveable Green Network

**Responsibility:** CoS

**Timeframe:** ongoing

## 8.4 Roads

The southern employment lands contain the main corridor between the Sydney CBD and Sydney Airport and Port Botany. The NSW Transport Master Plan identifies this corridor as highly constrained. The Master Plan also identifies much higher traffic volumes are expected as the airport and port both expand operations and Green Square and Mascot Station precincts grow. In addition, southern employment lands are themselves an origin for significant business to business (freight and small commercial vehicle), heavy truck movements that service heavier industries towards the south west, and commuter traffic and workers (residents nearby leaving or workers in the precinct arriving).

The principal north-south roads near or through the southern employment lands include the Princes Highway to the west, the Eastern Distributor to the east, Botany Road on the east and O'Riordan Street through the centre connecting the airport to Green Square. Bourke Road is a local but major distributor road which also runs north-south through the southern employment lands. Botany Road, O'Riordan Street, Bourke Road and Bourke Street (running to the north) form a five way junction at Green Square train station just on the north east edge of the southern employment lands.

### *WestConnex*

In November 2014, interchanges for Stage 2 of the NSW Government's WestConnex were announced with an interchange planned in the south east of the southern employment lands at the corner of Campbell and Burrows Roads, St Peters. Stage 2 of the WestConnex will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, with future Stages of the project intended to connect to the airport and Port Botany precincts. As yet future stages of the project are not funded.

Transport modelling is still being refined by the WestConnex Delivery Authority, and needs to be monitored to confirm implications for the southern employment lands. Nonetheless, the impacts of the planned WestConnex interchange in to south-west of the southern employment lands are likely to add significant pressure on a constrained network.

**PROJECT T.10** Develop the parameters of a Stage 2 transport and access study

**Action:**

- Work with Transport for NSW and RMS to develop a brief for a Stage 2 transport and access study
- Undertake Stage 2 study and make relevant amendments to planning controls if required

**Responsibility:** CoS; RMS; TfNSW

**Timeframe:** ongoing

## 9. Public domain

### SUSTAINABLE SYDNEY 2030 STRATEGIC DIRECTIONS

Direction 6. Vibrant Local Communities and Economies

Direction 7. A Cultural and Creative City

Direction 9. Sustainable Development, Renewal and Design

Direction 10. Implementation Through Effective Governance and Partnerships

### RISKS

- The City cannot provide all infrastructures necessary to support the scale of redevelopment.
- Uncertainty about development timeframes.
- The availability and sufficiency of funding for open space given escalating land prices
- Sufficiency of the amount of open space to accommodate growth

### 9.1 Stormwater management

The NSW Government released a Flood Prone Land Policy as part of the *Floodplain Development Manual 2005*. The policy aims to reduce the impact of flooding on individual owners and occupiers of flood prone property and to reduce private and public losses resulting from floods. It is directed towards providing solutions to existing flood problems in developed areas and ensuring new development is compatible with the flood hazard and does not create additional flooding problems in other areas. Under existing conditions a significant portion of the southern employment lands is subject to flooding in large storm events. These lands are within the Alexandra Canal hydraulic catchment.

The policy recognises the benefits of use, occupation and development of flood prone land. The policy promotes a merit based approach to balance social, economic, environmental and flood risk aspects. It states that individual councils have the primary responsibility for floodplain risk management and the NSW Government will, if required, provide technical and, in some cases, financial support.

The *Floodplain Development Manual 2005* sets out a six stage process for identifying flood risk and management:

1. Formation of a Committee by the councils and to include community representatives and NSW agency specialists.
2. Data collection such as historical flood levels, rainfall records and land use.
3. Preparation of a Flood Study to identify the nature and extent of flooding.
4. Preparation of a Floodplain Risk Management Study to investigate and evaluate available flood mitigation solutions or options with respect to both existing and proposed development.
5. Formulation of a Floodplain Risk Management Plan, including preferred solutions and/or options and formal adoption by the council.
6. Implementation of the Floodplain Risk Management Plan.



In 2008 Council established a Floodplain Risk Management Committee to assist the City in the development and implementation of Floodplain Risk Management Plans. The preparation and implementation of Floodplain Risk Management Plans are critical components in improving the way the City plans and manages flood risks, including the requirements for infrastructure design and upgrades.

In March 2014 the Alexandra Canal Floodplain Risk Management Study and Plan was adopted by the City. It recommends a comprehensive suite of flood management measures for the Alexandra Canal catchment, both structural and non-structural.

The City also completed the *Green Square - West Kensington Catchment Floodplain Risk Management Plan* which is a sub-catchment of the Alexandra Canal catchment. A key measure identified is a flood mitigation solution for the affected areas - the construction of a 2.5 kilometre trunk stormwater drain from Link Road, Zetland to the Alexandra Canal.

It is intended that the cost of implementing the Flood Risk Management Plan will be funded by allocations made within the City's Long Term Financial Plan, NSW and Federal Government Grants and contributions from developers. The City's Long Term Financial Plan has allocated \$59 million for drainage capacity upgrade works arising from flood risk management plans over the next 10 years.

**PROJECT SM.1 Alexandra Canal Flood Risk Management Plan**

**Action:**

- Implement Flood Risk Management Plan actions into planning controls
- Provide a green corridor along Alexandra Canal and its tributaries to assist in managing the impacts of flooding and to improve safety and amenity

**Responsibility:** CoS, NSW Agencies and Developers

**Timeframe:** TBC/Ongoing

## 9.2 Open space and outdoor recreation (existing and future)

The City is recognised as a leader in delivering high quality open spaces that cater for a range of uses and activities. The provision of open spaces is essential to ensure a healthy, vibrant and sustainable community and will be key to increased amenity of the southern employment lands.

The City's residents, workers and visitors have access to approximately 380 hectares of regional and local open space. This equates to a relatively low ratio of open space per head of population (approximately 2 hectares per 1,000 residents).

The City's parks provide crucial recreational opportunity for the City's large, and growing, population. The limited amount of space available means that all open spaces have to be flexible to cater for a wide range of needs.

The City generally relies on development to provide smaller local parks. In the southern employment lands the new open spaces are identified in the planning controls. Table 6 established the requirements for open space by locality in the southern employment lands.

**Table 6: Provisions for open space by locality**

<b>Locality</b>	<b>Requirements</b>	<b>Guidelines</b>
<b>McEvoy East &amp; East Alexandria</b> (note localities overlap with Area A of Section 5.2.6)	One active park with an area not less than 8,000sqm at corner of Bowden and Mandible Streets.	To include one half-sized sports field, subject to flooding/stormwater management restrictions.
	One local park adjoining Balaclava Lane with an area not less than 2,500sqm.	
	The Liveable Green Network will operate as a Linear Park with an area of about 1,200sqm being in the McEvoy East and East Alexandria Locality.	Refer to provisions for Liveable Green Network in Section 5.7.3.3.
<b>Rosebery West</b>	One local park with an area not less than 4,000sqm, or two parks, with the size of one park no less than 3,000sqm.	Ideally to be located west of Botany Road. Location and configuration of open space to be determined by Council.
<b>Enterprise Corridor</b>	One local park located at the corner of Ralph and Doody Streets with an area not less than 5,500sqm.	Where possible it is to be located adjacent to the Liveable Green Network via Alexandra Canal. To include landscaping for habitat enhancement.
	At least 3 pocket parks, ideally connected to the Liveable Green Network, totalling no less than 600sqm.	Location and configuration to be determined by Council.
	Sydney Pipes Park (10,000sqm) a 20 metre wide linear park or ecological reserve located in the existing location of Sydney water pipes, or alternative linear park of minimum width 15m.	Location and configuration to be determined by Council.
	One active park of at least 6,000sqm, incorporating a half-sized sports field.	Location and configuration to be determined by Council.
	The Liveable Green Network will operate as a Linear Park with an area of about 11,500sqm in the Enterprise Corridor.	Refer to provisions for Liveable Green Network in Section 5.7.3.3.
<b>Alexandra canal</b>	At least 3 pocket parks connected to the Alexandra Canal, totalling no less than 600sqm.	Location and configuration to be determined by Council.
	The Liveable Green Network will operate as a Linear Park with an area of about 30,000sqm in the Alexandra Canal locality.	Refer to provisions for Liveable Green Network in Section 5.7.3.3.
<b>Outdoor courts in all localities</b>	Multiple outdoor courts, including rooftop courts	Location and configuration to be determined as opportunities arise. Courts should generally be 31x 18m to allow for multiple uses. Courts can be co-location with community hubs and/or sports field. They may also be accommodated on rooftops in some circumstances.

A number of planning incentive schemes operate in the southern employment lands to encourage the provision of open space as development occurs.

In addition, the City is currently reviewing its *Section 94 Contributions Plan 2006* which includes a review open space delivery mechanisms. The aim of the review is to ensure open space targets set out in a new plan are realistic and land is acquired to achieve the targets.

The review will result in an Open Space Delivery Plan which will guide the City's approach to open space delivery. The plan will also establish funding options and guide allocation of funding to ensure the City can proactively acquire sites.

### **Green roofs and walls**

Given the limited amount of green open space in the southern employment lands, it is essential that opportunity for softening of hard surfaces through the landscaping of roofs and podium levels and vertical surfaces be encouraged. Moreover, green roofs and facades can improve urban amenity and provide the green space necessary for human health and wellbeing. They can provide noise attenuation, improve local air quality, minimise the urban heat island effect, slow and clean stormwater, create habitat for flora and fauna and establish opportunities for community interaction and recreational spaces.

<p><b>PROJECT PD.1</b> Open Space and outdoor recreation</p> <p><b>Action:</b></p> <ul style="list-style-type: none"><li>• As development occurs, negotiate with landowners for the dedication of open space</li><li>• Encourage green roofs and walls by improving access to information and support for interested landowners</li></ul> <p><b>Responsibility:</b> CoS and landowners/developers</p> <p><b>Timeframe:</b> ongoing</p>
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## **10. Sustainability**

The City's *Urban Ecology Strategic Action Plan 2014* is based on a survey of the plants and animals that live in the local area and outlines the best ways to keep them there and help them thrive. Whilst it is recognised that biodiversity in the southern employment lands has been greatly reduced from its original state, there is potential to improve or enhance vegetation and fauna species, alongside with improving community awareness and appreciation of biodiversity.

The plan aims to restore and conserve resilient ecosystems. A key component of this in the southern employment lands is to ensure the management of existing biodiversity as redevelopment occurs, especially in regards to the Liveable Green Network. This is undertaken through planning controls with specific planning provisions that seek to protect and conserve biodiversity, and through the creation of new open spaces and landscaped setbacks by ensuring appropriate species are planted that encourage ecosystems to flourish.

## **PROJECT S.1 Ecology**

### **Action:**

- Continue to implement planning controls and work with landowners/developers to maximise opportunities for increased biodiversity

**Responsibility:** CoS

**Timeframe:** ongoing

## **11. Social infrastructure**

### **SUSTAINABLE SYDNEY 2030 STRATEGIC DIRECTIONS**

Direction 6. Vibrant Local Communities and Economies

Direction 8. Housing for a Diverse Population

Direction 10. Implementation Through Effective Governance and Partnerships

### **RISKS**

- Some services, such as education and health provision are not the responsibility of the City.
- Differing cultural backgrounds, beliefs and traditions can potentially lead to cultural isolation.

### **11.1 Supporting Community Wellbeing**

Social sustainability can be broadly defined as the maintenance and improvement of social wellbeing for current and future generations. In the context of the southern employment lands, social sustainability is about supporting the development of a local working community and future residential community that is strongly connected through a shared sense of trust and vision of the future. It relies on effectively addressing the social impacts of the urban renewal process and associated population growth.

Social infrastructure and services play a critical role in supporting community connectedness and the development of social capital. This is particularly important in the case of a community that is rapidly growing and changing. The social infrastructure needed to serve a community depends on the size and characteristics of that community, including age and cultural background.

Social infrastructure is typically provided on the basis of applied service planning methodologies, which may include particular population or geographic benchmarks or catchments. Some social infrastructure, such as child care centres, libraries and community centres, are delivered on a local basis, whereas other forms of social infrastructure, including tertiary education facilities and hospitals, are delivered on a regional basis or catchment, serving a larger population.

Social infrastructure is funded and delivered by a range of organisations, including local, state and federal governments, the not-for-profit and private sectors. For example, schools are delivered by state government, whereas child care centres are delivered by local government, the not-for-profit and private sectors, with some funding provided by state and federal governments.

The southern employment lands community will need access to a range of local and regional social infrastructure, much of which is being provided in Green Square Town Centre and Mascot Station Precinct.

## 11.2 Social Infrastructure Provision

The City's vision is for the delivery of a diverse network of community facilities distributed across the City's neighbourhoods and four Service Planning Areas (North, South, East and West) to provide relatively equal access to all members of the community. This network includes an appropriate balance of large integrated, multi-purpose community "hubs" and smaller localised "satellite" facilities, along with specialist facilities such as libraries, aquatic facilities, creative cultural facilities and children's services such as childcare.

The City's strategic community facilities planning is focused on ensuring that facilities will continue to meet the social, cultural and recreation needs of current and future populations. One document that guides the facilities planning is the *Cultural Policy and Action Plan 2014*, adopted August 2014. This plan provides foundation principles, and a 10-year action plan which proposes a series of initiatives and investment across six priority areas: precinct distinctiveness and creativity in the public domain; new avenues for creative participation; sector sustainability; improving access, creating markets; sharing knowledge; and global engagement. Planning is undertaken on a long term basis, taking into account forecast population growth and change to 2030, with interim provision targets for the short to medium term (to 2021).

The City needs to balance supply and demand across a wide geographic area. In the short to medium term, delivery of new supply is focused on the Green Square and City South Village Group, which included the southern employment lands, due to the relative population growth associated with this area compared with other parts of the City.

The *Cultural Policy and Action Plan 2014* identifies that the City's property portfolio and infrastructure assets can be used effectively to support its cultural and other infrastructure goals. Some of the new facilities that will be delivered by the City at Green Square, including the new aquatic centre, creative arts facilities and open spaces, are expected to draw people from a wider geographic area, such as the southern employment lands, than the local neighbourhood. They have been designed to accommodate this wider demand.

### *Identified priorities for local community facilities and services provision*

Analysis of population growth and change along with existing facilities supply in Green Square and wider service planning catchment has informed the City's following priorities for facilities and services provision:

- **Child care** – both delivered directly by the City and facilitated through private development.
- **Integrated community hubs** – providing a range of co-located community spaces and services to meet the needs of a wide range of people, and which are accessible during extended hours.
- **Cultural/creative facilities** – including facilities providing areas for active creative participation and workshop spaces; Green Square provides an opportunity to meet wider regional needs for large scale cultural/creative workshop space.



- **Indoor recreation facilities** – providing a range of facilities and services suitable for both the young population and growing older population.
- **Library** – including programming for children and families, and spaces for young people to socialise.
- **Spaces and infrastructure for night time events** – for example night markets and open air cinemas, including in the public domain.

As part of the City’s strategy for the supply of new facilities, the need to upgrade, repurpose and review the uses of the existing small, standalone facilities is identified. Decisions on these facilities would only be made after further analysis, including through community engagement.

### **Social Indicators**

There is a growing consensus in many contexts around the world that traditional economic indicators of ‘growth’ are not adequate to provide a balanced assessment of progress. The City is currently developing a set of community indicators that have the potential to measure the success of infrastructure in Green Square compared to other areas of the local government area. The indicators cover five areas:

- Social (healthy, safe and inclusive communities);
- Cultural (culturally rich and vibrant communities);
- Engagement (democratic and engaged communities);
- Economic (dynamic, resilient, local economies); and
- Environmental (sustainable environments).

These indicators will assess holistically the community wellbeing over time by bringing together a diverse range of information from internal and external sources such as community surveys and census data. This will allow ongoing tracking and should be able to provide a comprehensive evaluation of community need to assist in prioritising of infrastructure, services and activities.

It is anticipated that the City-wide community indicators work will be reported to Council in 2015, and can be used in subsequent reviews of this Infrastructure Strategy and Plan.

<p><b>PROJECT OS.1</b> To develop a set of social indicators that will assess holistically the community wellbeing over time</p> <p><b>Action:</b></p> <ul style="list-style-type: none"> <li>• Develop measures and begin recording baseline data</li> </ul> <p><b>Responsibility:</b> Cos</p> <p><b>Timeframe:</b> 2015</p>
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## **11.3 Affordable housing**

Affordable housing refers to ‘reasonable’ housing costs in relation to income. A common benchmark is that affordable housing is housing that does not absorb more than 30 per cent of a very low, low or moderate income household’s gross income. Affordable housing is not social housing. It can be private or publicly owned, but available at a price that is less than 30 per cent of household income.

Affordable rental housing is dwellings for rental which are affordable to very low, low and moderate income households. These households typically comprise key workers such as childcare workers, cleaners and bus drivers. Because of the cost of private accommodation in the City, it is unlikely that 'affordable rental housing' will be delivered by the market. Moreover, any 'affordable' accommodation will not necessarily be accessed by very low, low or moderate income households.

Affordable housing is to be provided in and around the southern employment lands as employment grows and the demand for low paid essential workers, such as child care workers and cleaners, increases. Without provision of more affordable forms of housing, the market can be expected to continue to produce more expensive housing in the area, so that housing will only be affordable to households on relatively high incomes. Lower income households would need to move out of the area or may be prevented from finding housing in the area close to new employment opportunities.

### *Affordable housing contributions scheme*

One strategy for affordable housing is set out in the City's planning controls which allow the Council to impose a condition on a development consent requiring a contribution to affordable housing. Approximately 700 dwellings have resulted from the three Schemes that currently operate in the City of Sydney.

The provision in the LEP requires development to make a monetary or in-kind contribution equivalent to three per cent of residential floor area and one per cent of non-residential floor area. The Employment Lands Affordable Housing Program and the Green Square Affordable Housing Program, both of which operate in the southern employment lands establish the operational guidelines for the collection and expenditure of funds.

### *Affordable rental housing in the B7 Business Park zone*

In the B7 Business Park zone, which covers some lands in the southern employment lands, the planning controls permit affordable rental housing, where:

- it is provided in accordance with the affordable housing Program;
- it is compatible with current and future development in the vicinity;
- no residential uses are provided adjacent to an existing or proposed road; and,
- it will not adversely impact on the environment.

While uncertain how much affordable rental housing is likely to occur in the B7 Business Park zone, it is anticipated that by permitting only affordable rental housing, as opposed to other forms of residential development, it will provide a competitive advantage for community housing providers who will be more able to compete for land. In consulting with community housing providers a common theme is the difficulties they generally experience in securing land in the City of Sydney. This is mostly due to the very high cost of land, but also the highly competitive nature of the residential market.

**PROJECT OS.2 Affordable Housing**

**Action:**

- Work with government, Community Housing Providers and the private sector to ensure a sufficient amount of affordable housing is provided in and around the southern employment lands

**Responsibility:** CoS

**Timeframe:** ongoing

## PART 3: INFRASTRUCTURE PLAN DELIVERY

### 12. Implementation

#### 12.1 City of Sydney advocacy

To deliver this Plan, the City will be charged with a number of responsibilities. Some of these refer to direct responsibilities, where the City will undertake to deliver tasks and actions, and others may be of a more indirect nature, where the City's role will be to advocate, lobby and support various initiatives to be undertaken by external parties.

The core roles to be assumed by the City throughout the implementation and delivery of this action plan will include:

- planning, designing, delivering and maintaining assets and infrastructure that creates places for people;
- initiating and implementing ideas, programs and strategies that creates a sense of place for Alexandra canal and the Liveable Green Network;
- fostering relationships, partnerships and alliances with stakeholders from government and private sectors and community members to deliver the vision for the southern employment lands;
- promoting and advocating participation and collaboration with NSW Government agencies, private sector organisations, including developers, private residents and workers to deliver the vision for the southern employment lands; and
- supporting existing businesses through the services provided by City Operations such as the City's cleaning and public domain services to ensure existing and new customers find the quality of the public domain attractive and appealing to do business. The quality of these services contributes to the community identity and well-being.

#### 12.2 Implementation Action Plan

This Plan gives an overview of the necessary infrastructure that will support the growth of the southern employment lands and seeks to establish when the infrastructure needs to be in place. The Implementation Action Plan identifies infrastructure items required, who is responsible for their delivery and timeline for delivery.

The Action Plan seeks to establish continued partnership with the relevant agencies to ensure the delivery in an efficient, integrated and timely way.

List of abbreviations used:

CoS	City of Sydney
RMS	Road and Maritime Services
TfNSW	Transport for NSW

PROJECT	DELIVERY TIMEFRAME	RESPONSIBILITY	ACTION
<b>T. TRANSPORT</b>			
T.1 TMAP 2012	2015	TfNSW (lead)/ RMS	Public release of TMAP 2012 by TfNSW with timeframes for delivery of key actions Potential inclusion of the southern employment lands in study area
T.2 Establish long – term mode share targets and strategies	Ongoing (as identified traffic and transport drivers are resolved)	Cos, RMS and TfNSW	Undertake further assessment of cumulative transport impacts associated with subregional growth
T.3 Forecast and implement bus service increases	Ongoing	TfNSW (Sydney Buses)	Plan service increases in line with development and increased demand
T.4 Botany Road Transit Corridor Action Plan	2015	TfNSW (lead) RMS CoS	Progress detailed corridor action plan between the Town Centre and Central Sydney with timeframes for delivery
T.5 Improve neighbourhood transport infrastructure	Ongoing	TfNSW (lead) RMS CoS	Necessary upgrades for local transport infrastructure
T.6 Implement local and regional cycle plans	Ongoing	CoS (lead) RMS	Create cycle links through large sites to improve permeability and promote active transport use
T.7 Establish walking facilities improvement programme	Ongoing	CoS (lead) RMS	Improve amenity and security through upgrades signage and lighting Expand on the current pedestrian network and align networks with public transport routes and other activity nodes
T.8 Bus network review	Ongoing	TfNSW (Sydney Buses)	Review, amend and implement bus use network, providing priority measures, improved fleet capacity and passenger information
T.9 Implement a Liveable Green Network	Ongoing	CoS	As new development occurs, secure setbacks for the Liveable Green Network Provide an expanded pedestrian and cycle network along the City's Liveable Green Network
T.10 Develop parameters of a Stage 2 transport and access study	CoS, RMS, TfNSW	Ongoing	Work with Transport for NSW and RMS to develop a brief for a Stage 2 transport and access study Undertake Stage 2 study and make relevant amendments to planning controls if required
<b>PD. PUBLIC DOMAIN</b>			
PD.1 Open Space and recreation	Ongoing	CoS Landowners/ developers	As development occurs, negotiate with landowners for the dedication of open space Encourage green roofs and walls by improving access to information and support for interested landowners
<b>SM. STORMWATER MANAGEMENT</b>			
SM.1 Alexandra Canal Flood Risk Management Plan	TBC/Ongoing	CoS NSW agencies Developers	Implement Flood Risk Management Plan actions into planning controls Provide a green corridor along Alexandra Canal and its tributaries to assist in managing the impacts of flooding and to improve safety and amenity
<b>S. SUSTAINABILITY</b>			
S.1 Ecology	Ongoing	CoS	Continue to implement planning controls and work with landowners/developers to maximise opportunities for increased biodiversity
<b>OS. Social infrastructure</b>			
OS.1 To develop a set of social indicators that will assess holistically the community wellbeing over time	2015	CoS	Develop measures and begin recording baseline data
OS.2 Affordable housing	ongoing	CoS	Work with government, Community Housing Providers and the private sector to ensure a sufficient amount of affordable housing is provided in and around the southern employment lands