Roads and Maritime Services/Sydney Airport Corporation Limited

Sydney Gateway Road Project

Environmental Impact Statement/ Preliminary Draft Major Development Plan

Chapter 20 Socio-economic impacts

November 2019

Contents

Tables

Figures

Chapter 20

Socio-economic impacts

This chapter describes the existing socio-economic (including business) environment, identifies potential impacts during construction and operation, and provides measures to mitigate and manage the impacts identified. Further information is provided in Technical Working Paper 11 (Socio-economic Impact Assessment) and Technical Working Paper 12 (Business Impact Assessment).

The relevant SEARs and MDP requirements are listed below. Full copies of the SEARs and MDP requirements, and where they are addressed in this document, are provided in Appendices A and B respectively.

Reference	Requirement	Where addressed
Key issue SEARs		
6.	**Socio-economic, land use and property**	
6.1	The Proponent must assess social and economic impacts in accordance with the current guidelines.	Section 20.3 and 20.4
6.2	The Proponent must assess the social and economic impacts from construction and operation on potentially affected properties, infrastructure, utility services, businesses (including impacts to freight management associated with the reduction of container storage, and consequent impacts to the broader industry), recreational users and land and water users.	This chapter (sections 20.3 and 20.4) assesses the potential socio-economic impacts of the project. Section 20.3.4 considers potential impacts on the freight industry focussing on potential impacts on the availability of land for empty container storage. Potential property, land use and utility impacts are considered in Chapter 19 (Land use and property).
6.3	The assessment must address as relevant, how environmental changes in the locality may affect people's: (a) way of life; (b) community; (c) access to and use of infrastructure, services and facilities (including recreational facilities and open space); (d) culture; (e) health and wellbeing; (f) surroundings; and (g) relevant statutory rights including personal and property rights. It must also consider how different groups may be disproportionately affected and communities severed by the proposal.	Sections 20.3 and 20.4 For the purpose of this assessment, culture is defined as community values and way of life. No personal property rights would be affected by this project. Potential impacts on land use and properties are considered in Chapter 19 (Land use and property), including information about relevant statutory rights. Health and wellbeing from a socio-economic perspective are considered in this chapter. Further information about potential health impacts is provided in Chapter 23 (Health, safety and hazards). Sections 20.3 and 20.4

Reference	Requirement	Where addressed
Major development plan requirements *(in accordance with Section 91 of the Airports Act)*		
91(1)(ga)	The likely effect of the proposed developments that are set out in the major development plan, or the draft of the major development plan, on: (iii) the local and regional economy and community, including an analysis of how the proposed developments fit within the local planning schemes for commercial and retail development in the adjacent area	This chapter considers the effect on the local and regional economy and community. An analysis of the consistency with local planning schemes is provided in Chapter 19 (Land use and property).

20. Socio-economic impacts

20.1 Assessment approach

Constructing and operating a major a new road link creates access and economic benefits for the wider community and economy. It may also cause amenity impacts and disturbance to local communities and businesses, particularly during construction. A key element of planning and developing the project has been developing an understanding of the potential impacts in order to optimise outcomes for the community.

Where a project has the potential to impact the community and surrounding businesses, a socio-economic assessment is undertaken to assess the potential for adverse impacts, and recommend mitigation and management measures to minimise impacts that cannot be avoided.

The socio-economic assessment for the project has been undertaken by social sustainability and business impact specialists experienced in infrastructure development. The purpose of this assessment is to inform project development and ensure that the overall project design is appropriate for its context, optimises community and social outcomes, and avoids or minimises adverse impacts as far as reasonable and feasible. Due to the number of significant businesses in the vicinity of the project site, a business impact assessment was also undertaken.

An overview of the approach to these assessments is provided below, including the legislative and policy context and a summary of assessment methodologies.

20.1.1 Legislative and policy context to the assessment

The assessment has been undertaken in accordance with the SEARs and MDP requirements (provided in Appendices A and B) and with reference to the following:

- Relevant legislation, including the EP&A Act, the Airports Act and associated regulations
- *Environmental Impact Assessment Practice Note: Socio-economic assessment* (Roads and Maritime Services, 2013c)
- *Social Impact Assessment Guidelines for State significant mining, petroleum production, and extractive industry development* (NSW Department of Planning and Environment, 2017)
- *International Principles for Social Impact Assessment* (Vanclay F., 2003)
- *Sydney Airport Master Plan 2039* (SACL, 2019a)
- *Sydney Airport Environment Strategy 2019-2024* (SACL, 2019b).

20.1.2 Methodology

Study area

Socio-economic impact assessment

The socio-economic impact assessment study area is shown on Figure 20.1. It includes the project site, as described in Chapter 2 (Location and setting), and surrounding suburbs that could be directly affected by the project (Mascot, Tempe and St Peters).

The regional study area was also considered in relation to the potential for indirect impacts. The regional study area includes part/all of the Sydney, Inner West, Bayside and Randwick local government areas.

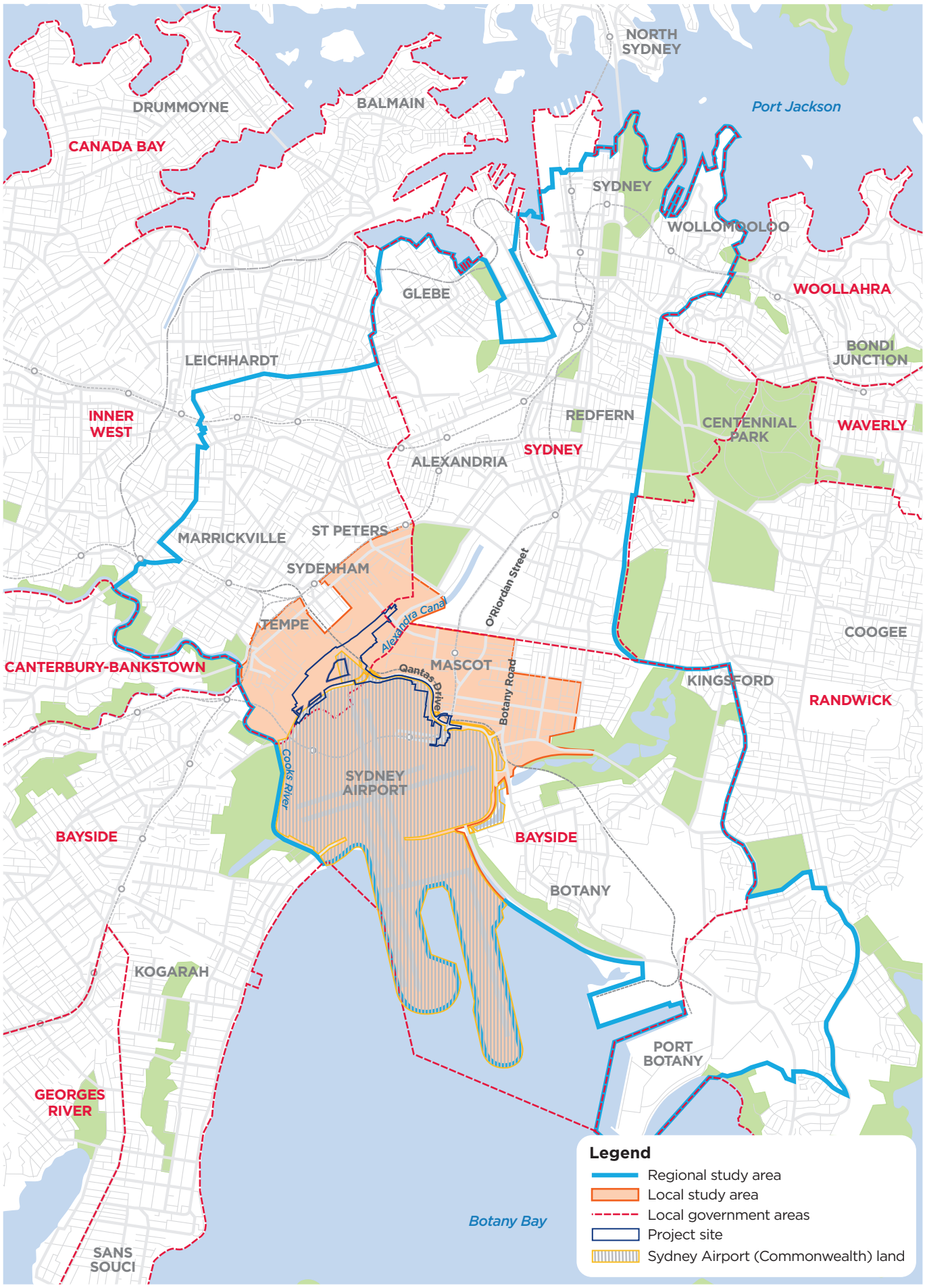

Figure 20.1 **Socio-economic impact assessment study area**

Business impact assessment

The Australian Bureau of Statistics (ABS) geographic boundaries (referred to as Statistical Area Level 2) were used to define the business impact assessment study area. The Statistical Area Level 2 is the smallest area for the release of ABS statistics. The study area for the business impact assessment (see Figure 20.2) is defined by the extents of the statistical areas that overlap with or contain businesses within a one kilometre radius of the project site.

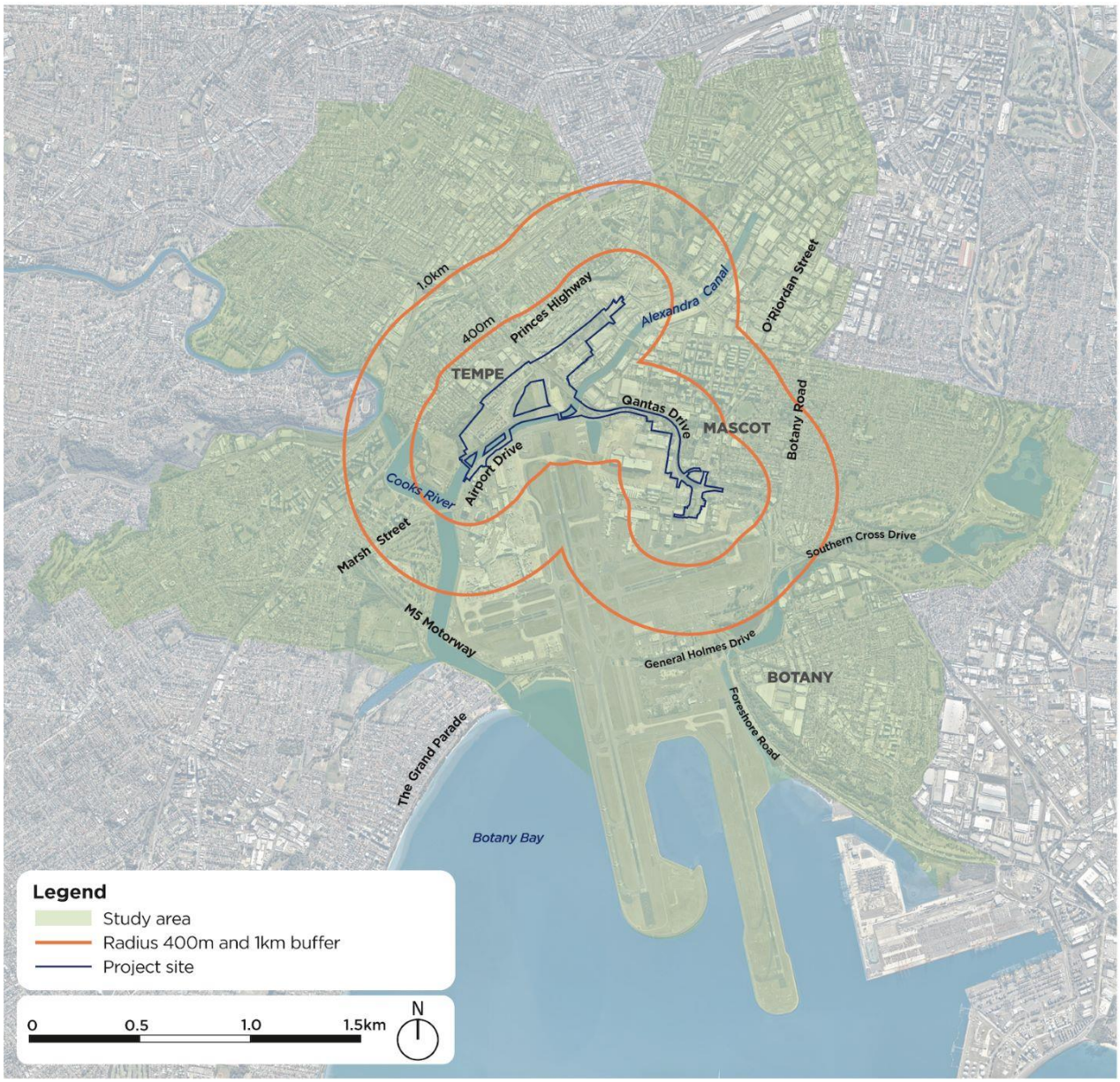

Figure 20.2 Business impact assessment study area

Key tasks

Socio-economic impact assessment

The socio-economic impact assessment involved:

- Confirming the study area for the purposes of the assessment
- Reviewing background information and data relevant to the study area, including:
  - ABS Census 2016 (ABS, 2016)

  - NSW population and household projections (Department of Planning and Environment, 2016)
  - Local council community plans, strategies, studies and other available information
  - Relevant consultation outcomes from other recent major projects in the study area
- Describing the existing socio-economic environment of the study area, including developing a demographic profile for communities with the potential to be affected by the project
- Visiting the study area to assist with understanding the social characteristics of the communities
- Identifying and mapping community infrastructure and facilities within 500 metres of the project site
- Reviewing other technical papers prepared for the impact assessment to understand the nature, scale and significance of potential impacts, and identify associated socio-economic impacts
- Taking into account issues raised by the community and relevant stakeholders during consultation (see Chapter 4 (Consultation))
- Assessing the potential socio-economic impacts during construction and operation, including the likely significance of these impacts (as described below)
- Identifying measures to mitigate the potential impacts.

Business impact assessment

The business impact assessment formed an important input to the overall socio-economic assessment. It involved:

- Defining the study area and local business precincts
- Reviewing strategic planning and policy documents to determine the existing and future proposed characteristics of the study area
- Preparing a profile of the existing business environment including zoning, amenity and business types
- Calculating the number of businesses, employment levels and economic contribution of industries in the study area
- Consulting with businesses and undertaking a business survey (as described below) to develop an understanding of business characteristics, values and sensitivities, and how they could be impacted by the project
- Assessing the potential direct and indirect business impacts during construction and operation, including the likely significance of these impacts (as described below)
- Identifying measures to manage potential impacts.

Consultation

Consultation with the community and key stakeholders has been conducted prior to, and during, the impact assessment process, as described in Chapter 4 (Consultation). Consultation with residents, businesses and the community is planned to continue throughout the planning, construction and operation stages of the project. The outcomes of consultation were used to inform the socio-economic impact assessment.

Business surveys

A survey was undertaken of those businesses anticipated to experience direct or indirect impacts from the project (generally located within a one kilometre radius of the project site). A total of 115 surveys were completed between November 2018 and March 2019. The aim of the survey was to identify key business characteristics, issues and concerns regarding the project. The survey included a range of questions relating to awareness of the project, existing access and delivery requirements, and issues associated with construction and operation. The results of the survey informed the business impact assessment.

Significance of impacts

The potential significance of identified impacts was determined based on the sensitivity of the receptor and the magnitude of the project. For negative impacts, sensitivity refers to the qualities of the receptor, which influence its vulnerability to change and capacity to adapt. Magnitude refers to the scale of the proposed changes as a result of the project.

The level of significance of the potential impacts was assessed by combining the level of sensitivity and magnitude of impacts (see Figure 20.3). This assessment took into account the mitigation measures provided in section 20.6 and those identified in other relevant chapters of this document.

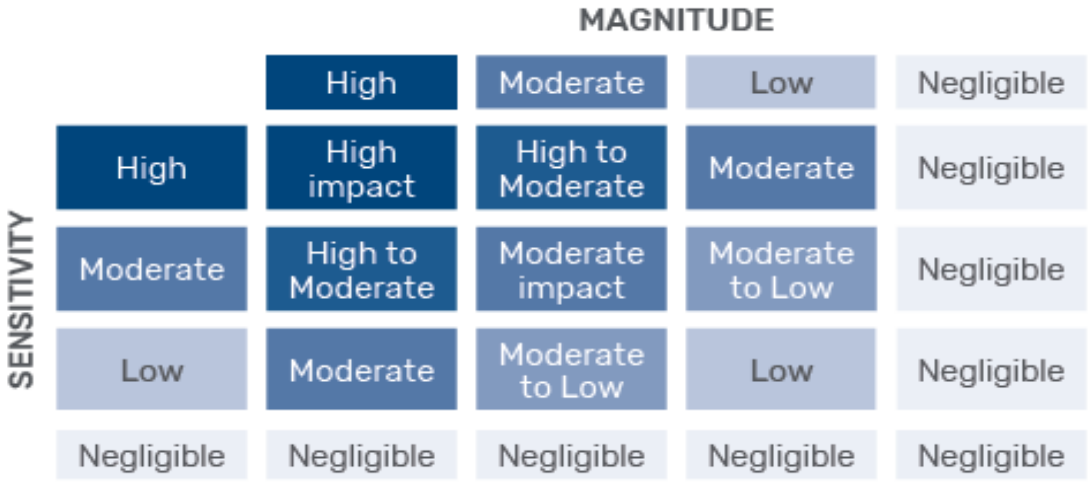

Figure 20.3 Impact significance rating matrix

20.1.3 Risks identified

An environmental risk assessment was undertaken as an input to the impact assessment (see Appendix G). This involved identifying potential environmental risks during construction and operation, and rating the potential risks according to likelihood, consequence and overall level of risk, in general accordance with *AS/NZS ISO 31000:2009 Risk management – Principles and guidelines*. Socio-economic risks with an assessed level of medium or above, identified by the environmental risk assessment, included:

- Impacts on some businesses as a result of the land requirements for the project (acquisition and lease cessation)
- Impacts on community infrastructure as a result of the project's temporary and permanent land requirements
- Community and business amenity impacts during construction and operation, including as a result of changes to traffic, noise, air quality and the visual environment
- Temporary impacts on community values and lifestyle for local residents, workers and visitors, due to changes to travel patterns
- Temporary access restrictions or changes resulting from construction sites and activities, which may affect how people access community infrastructure, and how they use the existing road infrastructure
- Impacts on amenity and the use of nearby community facilities and areas within the Tempe Lands and Tempe Recreation Reserve because of the presence of project infrastructure.

These potential risks and impacts were considered by the socio-economic and business impact assessments.

20.2 Existing environment

20.2.1 Overview of local study area

The local socio-economic study area is highly urbanised with a combined population of 21,473 people in 2016 (ABS, 2016).

Mascot, which is located in the Bayside local government area, is one of Sydney's fastest growing suburbs with a population of 14,772 in 2016. Growth is expected to continue, with a 22.64 per cent increase in the population projected between 2016 and 2036 (NSW Department of Planning and Environment, 2016). The demographic profile of Mascot is changing, as more high-density dwellings are built, attracting new residents to the suburb. With the growth of residential areas, there has also been a transition from heavy industry to lighter industrial and warehousing areas, and an increase in business and commercial spaces. A large area within Mascot is dedicated to Sydney Airport and airport-related businesses and operations, including airline services, freight and trade businesses, and passenger services such as car parks and hotels.

Tempe is located in the Inner West local government area and is a relatively small suburb compared to others in the local government area, with a population of 3,556 people in 2016. The population of the Inner West local government area population is expected to increase by 21 per cent between 2016 and 2036 (NSW Department of Planning and Environment, 2016). Tempe was once a hub of tram and rail infrastructure and other industry, with pockets of residential uses. In recent years, the suburb has transformed to become a semi-industrial and commercial area, with pockets of residential uses. Tempe has been identified as an area for future residential growth (Inner West Council, 2018a), with new transport infrastructure connecting the area to the Sydney central business district, and a new creative precinct commissioned in the neighbouring suburb of Sydenham.

St Peters is located partly within the Inner West local government area and the City of Sydney. The residential area in St Peters is within the Inner West local government area. The suburb is characterised by semi-industrial, commercial and residential areas. In 2016, the population of St Peters was 3,145. The suburb has undergone change in recent years, with construction of the M4-M5 Link and the New M5 requiring acquisition of residential properties. Once the projects are operational, it is anticipated that the suburb would experience a change in amenity due to changes in connectivity and road traffic.

20.2.2 Demographic profile

The main demographic characteristics of the study area, including comparisons with the characteristics of the local government and Greater Sydney statistical areas as a whole (where relevant), are provided below.

- Age profile:
  - Mascot and St Peters had a younger median age (32 and 34 years respectively) compared to the local government areas ((35 years in the Bayside local government area and 36 years in the Inner West local government area) and Greater Sydney (36 years)). Tempe had an older median age (38 years) compared to the Inner West local government area and Greater Sydney.
- Cultural diversity:
  - Mascot had a higher proportion of people who were born in countries where English is not the main language (46.3 per cent) than the Bayside local government area (41.1 per cent) and Greater Sydney (29.3 per cent).
  - Mascot had a similar proportion of people who speak a language other than English compared to the Bayside local government area, and a greater proportion of people compared to Greater Sydney (35.8 per cent). The top languages spoken in Mascot other than English included Mandarin, Indonesian, Cantonese and Greek.

  - Tempe had a higher proportion of people identified as Aboriginal or Torres Strait Islander (2.1 per cent) than the Inner West local government area (1.1 per cent) and Greater Sydney (1.5 per cent).
  - Tempe had a higher proportion of people who speak a language other than English (61.1 per cent) compared to the Inner West local government area (28.4 per cent) and Greater Sydney overall. The top languages spoken in Tempe included Macedonian, Vietnamese and Cantonese.
  - St Peters had a lower proportion of the population who speak a language other than English (24.4 per cent) compared to the Inner West local government area and Greater Sydney overall. The most commonly spoken languages in St Peters included Cantonese, Vietnamese, Macedonian, Mandarin and Greek.

- Employment:
  - Mascot had a lower unemployment rate (5.2 per cent) than both the Bayside local government area and Greater Sydney (six per cent). Tempe had a similar rate of unemployment (4.6 per cent) compared to the Inner West local government area (4.8 per cent) but a lower rate than Greater Sydney. St Peters had a lower rate of unemployment (3.9 per cent) than the Inner West local government area and Greater Sydney.
- Need for assistance:
  - Mascot had a lower level of need for assistance with core daily activities (3.4 per cent) compared to the Bayside local government area (5.3 per cent) and Greater Sydney (4.9 per cent).
  - Tempe had a higher proportion of people who require assistance (5.5 per cent) than the Inner West local government area (4.5 per cent) and Greater Sydney (4.9 per cent).
  - St Peters had a lower proportion of people who require assistance (2.9 per cent) than the Inner West local government area (4.5 per cent) and Greater Sydney (4.9 per cent).
- Journey to work:
  - Mascot had a higher proportion of people who travel to work by public transport (32.7 per cent by train and 7.7 per cent by bus) compared to the Bayside local government area (27.1 and 5.8 per cent respectively) and Greater Sydney (16.3 and 6.1 per cent respectively), reflecting a lower level of car reliance.
  - Tempe had a higher proportion of people who drive to work (42.9 per cent) compared to the Inner West local government area (38.9 per cent), although this was lower than Greater Sydney (52.8 per cent).
  - St Peters had a higher proportion of people who travel to work by train (40.5 per cent) compared to the Inner West local government area (26.8 per cent) and Greater Sydney (16.3 per cent).
  - Tempe had a lower proportion of people who walk to work (4.3 per cent) compared to the Inner West local government area (5.6 per cent) and a similar proportion to Greater Sydney (four per cent).
  - Tempe had a similar proportion of people who cycle to work (2.8 per cent) compared to the Inner West local government area (2.8 per cent), which is higher than Greater Sydney (0.7 per cent).
  - St Peters had higher proportions of people who cycle and walk to work (3.5 and 5.9 per cent respectively) compared to the Inner West local government area (2.8 and 5.6 per cent respectively) and Greater Sydney (0.7 and four per cent respectively).
  - St Peters had a lower proportion of people who drive to work (35.6 per cent) compared to the Inner West local government area (38.9 per cent) and Greater Sydney (52.8 per cent).
  - Mascot had higher proportions of people who walk or cycle to work (7.4 and 1.1 per cent respectively) than the Bayside local government area (3.7 and 0.7 per cent respectively) and Greater Sydney (four and 0.7 per cent respectively).

- Socio-economic disadvantage:
  - In Mascot, the ABS's Index of Relative Socio-Economic Disadvantage ranked Mascot at decile nine, which means the suburb has a low rate of socio-economic disadvantage.
  - Tempe was ranked at decile 8, which means the suburb has a low rate of socio-economic disadvantage.
  - St Peters was ranked at decile 10, which means the suburb has a very low level of socio-economic disadvantage.

20.2.3 Community infrastructure and facilities

Community infrastructure and facilities include services and facilities identified as having social value to the community. Community infrastructure and facilities within 500 metres of the project site are listed in Table 20.1 and shown on Figure 20.4.

Table 20.1 Community infrastructure and facilities

Facility type	Facility name	Suburb
Community centre/library	Komuniteti Shqiptar Ne Sydney	Mascot
	Mascot Library	Mascot
Recreation facility	Robyn Webster Sports Centre	Tempe
	Tempe Golf Range and Academy	Tempe
	Tempe Jets – Basic X Music Business Hub	Tempe
	Sydney Model Autosports	Tempe
	Australian Academy of Parkour, Exercise and Self Defence	Tempe
Open space	Coleman Reserve	Mascot
	High Street Reserve	Mascot
	John Curtin Reserve	Mascot
	Tempe Recreation Reserve	Tempe
	Tempe Lands	Tempe
	Kendrick Park	Tempe
	Lori Short Reserve	Tempe
Child care	Aero Kids Early Learning Centre	Mascot
	The Joey Club – Sydney	Mascot
	SDN Children's Services	Mascot
	Guardian Early Learning Centre	Tempe
	Betty Spears Child Care Centre	Tempe
	Helping Hands	St Peters
School	Mascot Public School	Mascot
	St Peters Public School and St Peters Community Preschool	St Peters
Place of worship	Citygate Fellowship Church	Mascot
	St Peter and St Paul Catholic Church	Tempe
	Uniting Church in Tempe	Tempe
	True Buddhist Temple	Tempe

Facility type	Facility name	Suburb
	Al Hijrah Mosque	Tempe
	St Peters Anglican Church	St Peters
Medical	Mascot Medical and Dental Centre	Mascot
	Just Better Care Inner West	St Peters

20.2.4 Community values

Community values refer to tangible and intangible characteristics and aspects of a community, such as amenity and character, lifestyle, access, connectivity, community cohesion and community health and safety.

Values held by communities in the study area were identified a review of consultation outcomes and local government strategic and community planning documents. Community values for the local study area are discussed together as values that are likely to be similar.

It is noted that the Bayside local government area was formed in September 2016 following the amalgamation of the former Rockdale and Botany Bay local government areas. In the absence of a specific community plan for the Bayside local government area, the community values of the Mascot community were identified based on a review of the *Botany Bay Planning Strategy 2031* (City of Botany Bay, 2009), *Bayside 2030: Community Strategic Plan 2018-2030* (Bayside Council, 2018) (Bayside 2030), *2017–2021 Disability Inclusion Action Plan* (Bayside Council, 2017a), *Bayside Crime Prevention Strategy* (Bayside Council, 2017b), and a review of consultation outcomes.

Values of the Tempe and St Peters communities were identified based on a review of *Our Inner West 2036: A Community Strategic Plan for the Inner West Community* (Inner West Council, 2018a) (Our Inner West 2036) and the *Recreation Needs Study – A Healthier Inner West* (Inner West Council, 2018b) and a review of consultation outcomes from recent projects in the study area.

Local amenity and character

All three suburbs include former industrial areas and industrial precincts that are still operating. This unique amenity, character and diversity is valued by the community (Inner West Council, 2018a; Bayside Council, 2018).

According to the *Botany Bay Planning Strategy 2031*, communities living in Mascot value the heritage character, good quality urban design and the amenity of local residential areas. The strategy recognises the potential challenge presented to residential amenity by future expansion of airport and port activities, and a resulting increase in truck and rail freight.

Consultation with Bayside communities to inform Bayside 2030 highlighted that communities aspire to have places focused on people and reflect what is meaningful to local communities, such as incorporating public open space.

Figure 20.4 **Community infrastructure and facilities**

According to Our Inner West 2036, Inner West residents value the amenity and character of their communities, as well as the diversity of each suburb's unique character. Preserving this character and the heritage of each area is important to local communities. Residents also value the green and natural spaces throughout the local government area and want to ensure they are protected. They also aspire for urban environments that are green, cool and rich with biodiversity (Inner West Council, 2018a and Roads and Maritime, 2015d). Consultation with people living in Tempe indicated the high level of importance residents place on wetlands and open space in the Tempe Lands and Tempe Recreation Reserve.

Community consultation has indicated that residents are concerned about noise, air pollution and visual impacts during construction and operation.

Access and connectivity

According to the *Botany Bay Planning Strategy 2031*, local connectivity within some suburbs in the Bayside local government area (including Mascot) is a challenge due to the lack of transport options and isolation. Outcomes from community consultation undertake for Bayside 2030 indicated that communities are seeking improved connectivity, places that are accessible and create a sense of belonging, and integrated transport. The community aspires to have more walking paths, cycleways and transport corridors to support local connectivity.

During community consultation for the project and others in the study area, Mascot residents raised issues associated with local traffic and access and the importance of connectivity through the suburb, particularly pedestrian and public transport connectivity given the high levels of traffic.

According to Inner West community satisfaction results (Inner West Council, 2018a and Micromex, 2018), residents identified that the top priority areas for the council to focus on in the next 10 years are:

- Managing development, adequate planning and over development
- Traffic management and congestion
- Availability of, access to, and improvement of public transport.

Collectively, these priority areas contribute to the overall connectivity within the local government area's suburbs and with other areas of Sydney. These priority areas are also reflected in Our Inner West 2036, which states that the community desires accessible services, efficient and convenient movement around the local government area, improved transport networks, and reduced traffic congestion through new public transport and road infrastructure.

Consultation with the community identified that access and connectivity is a priority for vehicle users and active transport users. Concerns were raised about the lack of footpaths in residential areas of Tempe. In addition, residents commented that workers and visitors to Sydney Airport should be encouraged to park at the airport rather than on local residential streets in Tempe.

The suburbs of Tempe and St Peters do not have their own town centre, making access and connectivity with neighbouring suburbs essential to access services and promote community cohesion (Roads and Maritime, 2015d). Access and connectivity is a challenge faced by all three suburbs in the local study area, primarily due to dedicated land uses (such as industrial uses) that interrupt residential corridor connectivity. In response to community feedback, people in the Bayside and Inner West local government areas have identified access and connectivity as an area for improvement in the future.

A description of the existing transport and traffic environment in the study area is provided in Chapter 9 (Traffic, transport and access) and Technical Working Paper 1 (Traffic, Transport and Access).

20.2.5 Regional economy

Sydney Airport, Port Botany and their associated industries are the second largest employment area in Greater Sydney. The Sydney central business district is the largest employment area in Greater Sydney (Ernst & Young, 2011). The economic centres of Sydney Airport and Port Botany are regionally significant because of the job opportunities they provide as well as their involvement in regional economic trade.

Sydney Airport

Sydney Airport associated businesses are significant sources of employment for skilled workers across Greater Sydney, with around 32,700 jobs at the airport itself (SACL, 2019a). Major industries of employment at Sydney Airport are outlined in Table 20.2.

Table 20.2 Major areas of employment in Sydney Airport

Area	Employment proportion (%)
Transport and storage	63
Construction	8
Retail, cafes and accommodation	9
Government services	7
Property and business services	5
Maintenance, cleaning and engineering services	2

Source: *Economic contribution of Sydney Airport* (Deloitte Access Economics, 2018)

Deloitte Access Economics reported that in 2017, Sydney Airport generated $6.2 billion in value added and employed 30,900 full time employees (Deloitte Access Economics, 2018).

Australia's tourism industry is heavily reliant on Sydney Airport. In 2018, the airport supported 159,900 full-time equivalent tourism jobs in Australia (Deloitte Access Economics, 2018).

Port Botany

Port Botany is a major trade centre for NSW and is integral to the economy of Sydney and broader NSW. The port is a major source of employment, supporting 21,000 jobs. It supplies goods to businesses in metropolitan Sydney and Greater Sydney, which also supports employment. Over 4,000 people are employed at the port, which operates 24 hours per day, seven days a week.

The area surrounding Port Botany and Sydney Airport hosts industries that work to enable and service the regional freight movements from the port. Two container freight facilities, Tyne Container Services and the Cooks River Intermodal Terminal, are within and adjacent to the project site. The management of empty containers is fundamental to the overall logistics process serving Port Botany and Sydney Airport container trade. Access to container storage facilities is critical to the function of the port and other freight trade.

Connectivity and access to Sydney Airport and Port Botany

Connectivity to Sydney Airport is provided by road, public transport (trains and buses) and active transport. People travelling to and from the airport rely on these connections to continue to other destinations, such as travelling to work or meeting family and friends.

Connectivity for local workers and freight movements to Port Botany is primarily provided by road. The Botany Rail Line, which is located within and adjacent to the project site, provides access for freight containers via rail.

The existing traffic, transport and access environment is described in Chapter 9 (Traffic, transport and access).

20.2.6 Local business characteristics

Eight local business precincts were defined based on the extent of business, industrial or special purpose land use zonings and the characteristics of businesses in these areas. Business precincts within the study area are shown on Figure 20.5 and described in Table 20.3.

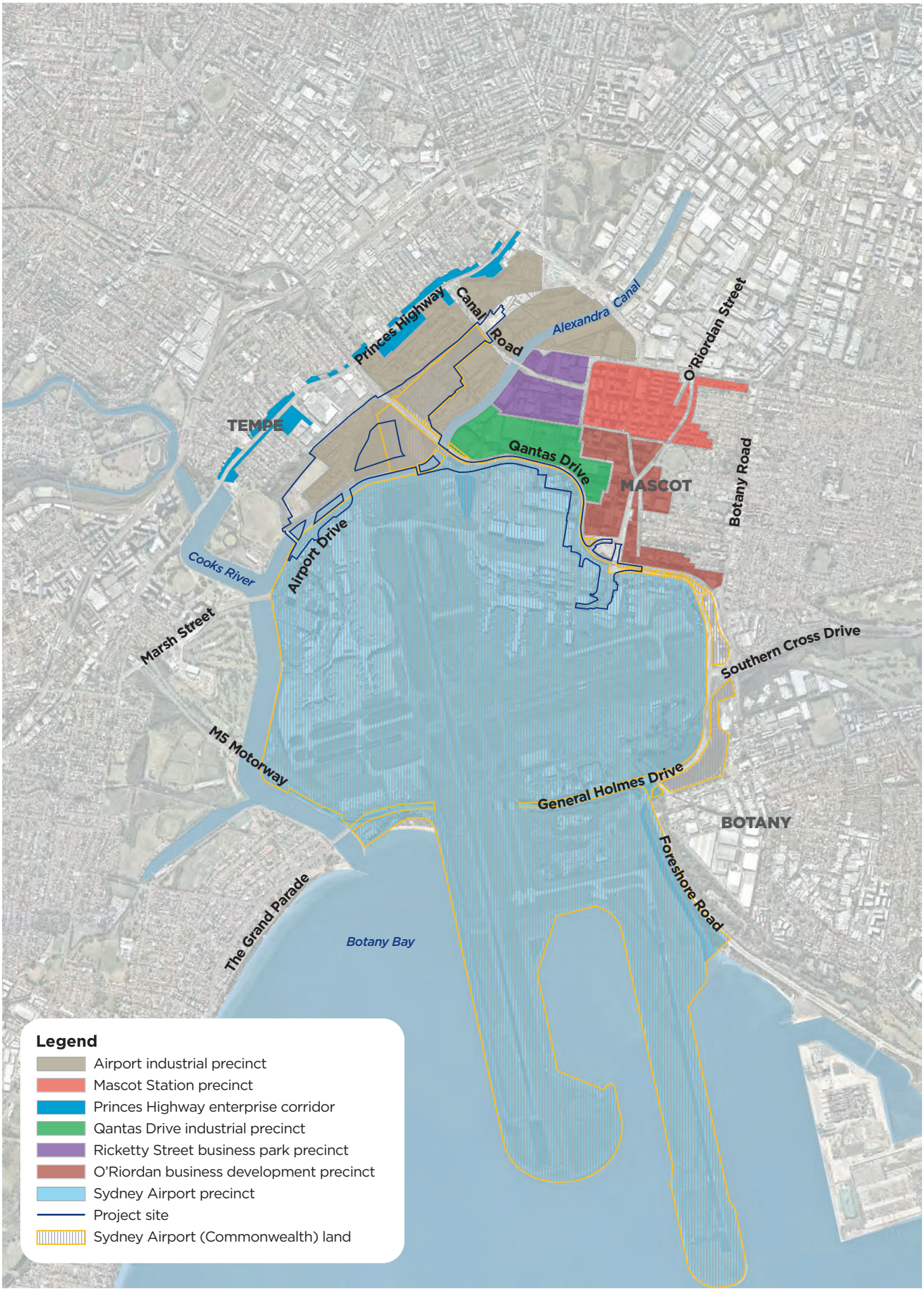

Figure 20.5 **Business precincts**

Table 20.3 Local business characteristics in the study area

Business precinct	Description
Sydney Airport	Sydney Airport is Australia's busiest airport, servicing domestic and international passenger airline activities and associated support activities, including catering, baggage handling, maintenance and refuelling. Sydney Airport also incorporates businesses associated with: ■ Retail (such as a car dealership, newsagencies, clothing and duty-free stores) ■ Hospitality (including accommodation and on-site food and beverage options) ■ Ground transport, including terminal shuttle buses and taxi services ■ Security and other government services, including Australian Border Force, Australian Quarantine and Inspection Services, Australian Federal Police and security contractors ■ Dedicated freight and logistics business ■ Other corporate/office-based businesses. Businesses on Sydney Airport land cater to domestic and international markets. Air freight is a vital economic activity at Sydney Airport, with about half of Australia's international air freight passing through the airport. The retail and hospitality businesses have a relatively captured market. Ground transport services are particularly sensitive to delays in travel time, road alterations and congestion. Office and accommodation businesses are generally more sensitive to changes in amenity.
O'Riordan Street business precinct	The O'Riordan Street business precinct has a large number of hotels, car rental services and airline corporate headquarters. Businesses in this area demonstrate strong synergies with Sydney Airport. Hotels would most likely be sensitive to alterations in amenity and reduced connectivity with the airport. Businesses in the precinct generally cater to the local government area and wider region.
Ricketty Street business park	The Ricketty Street business park precinct includes urban services (such as automotive repairs, storage, postal services etc), suppliers, distribution/warehousing centres, wholesale trade and manufacturing. Businesses in this area service the local government area and wider region and depend on access and connectivity. Businesses are unlikely to depend on passing trade and business exposure as their customer base extends beyond the local catchment. It is expected that the majority of businesses would have a low sensitivity to amenity impacts. The hospitality uses in the precinct predominantly service local workers and are unlikely to depend on passing trade.
Mascot Station precinct	This precinct is located around Mascot Station and provides commercial and retail services to support the local community. Buildings in the area generally contain ground floor shopfront premises with housing above. Some hotels are also located in the area. Businesses in the area would support a predominantly local catchment, including residents and workers. Businesses in this area are likely to depend on passing trade, business visibility and good amenity.
Qantas Drive industrial precinct	The Qantas Drive industrial precinct is closely linked to airport and freight activity, with a high presence of distribution centres, logistic and freight services. Businesses would generally service a regional, interstate and potentially international client base. Most businesses would be highly dependent on access and connectivity, have a lower dependency on passing trade, and rely on efficient access to arterial roads. The businesses would have lower sensitivities to changes in amenity.
Sydney Airport industrial precinct	The Sydney Airport industrial precinct includes mixed industrial uses such as container storage, urban support services, wholesalers, manufacturing, specialist suppliers and services. Businesses in the precinct generally cater to the local government area and wider region. The container service/freight businesses would cater to both a domestic and international market. Empty container parks aid in the servicing of containerised trade. Businesses would depend on access, connectivity and efficient access to arterial roads.

Business precinct	Description
Princes Highway enterprise corridor	The Princes Highway enterprise corridor extends around 2.5 kilometres along the Princes Highway from the Cooks River in the south, to around Albert Street in the north. Businesses in this area mainly consist of bulky goods/large format retailers (such as Ikea), fast food restaurants, manufacturing wholesalers, hotels, transport and warehousing and some urban services. The majority of businesses front the Princes Highway with passing trade, and accessibility for customers, workers, and services to and from the highway, are particularly importance to these businesses. Businesses serve the local government area and wider region.

20.2.7 Summary of the socio-economic characteristics of Sydney Airport (Commonwealth) land

A description of the existing environment and demographic profile of the local study area, including Sydney Airport land, is provided in section 20.2. A description of the overall economic importance of Sydney Airport is provided in Chapter 5 and section 20.2.5.

Two of the business precincts identified in section 20.2.6 are located on Sydney Airport land – the Sydney Airport precinct and the airport industrial precinct. Businesses located on Sydney Airport land within, or partly within, the project site include Visy Recycling, Boral Recycling, an overflow area associated with the Cooks River Intermodal Terminal, the Sydney Airport livestock transfer facility (managed by Swissport), the mail handling unit (managed by Qantas Freight) and the Jet Base (currently occupied by Qantas and including the Qantas Flight Training Centre).

The majority of employees at Sydney Airport are employed in transport and storage (63 per cent), including airlines, taxis and transport support services (Deloitte Access Economics, 2018). Other major industries of employment are retail, cafes and accommodation (nine per cent), construction (eight per cent) and government services (seven per cent).

20.3 Assessment of construction impacts

The main potential for socio-economic impacts during construction would occur as a result of:

- Land requirements (eg acquisition and leasing)
- Changes to access arrangements and connectivity
- Amenity impacts as a result of construction work
- Employment generation and other economic benefits, including increased trade.

Potential impacts and benefits are summarised below.

20.3.1 Land requirements

The project would require the permanent acquisition and leasing of properties, including the temporary use of land for construction purposes. The project's temporary and permanent land requirements, and the property impacts of these requirements, are described in Chapter 19 (Land use and property).

Roads and Maritime has sought to minimise the requirement for permanent land acquisition. The project would not require the acquisition of residential properties. As described in section 19.3.1, where acquisitions are required on privately-owned land or land owned by the NSW or local government, they would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) and the land acquisition reforms announced by the NSW Government in 2016. As a result, land requirements would not infringe on people's personal rights.

For Sydney Airport land, Sydney Airport Corporation, as leaseholder, would notify tenants that their sub-lease agreements would be concluded. The termination of leases would be undertaken in accordance with

the contract terms with Sydney Airport Corporation and the tenant, and Sydney Airport Corporation would provide support to manage the return of lands and handover to Roads and Maritime.

The potential socio-economic impacts of the project's land requirements are considered in the following sections.

Business impacts as a result of the project's land requirements

The project's land requirements, and the resulting property impacts, would directly affect the following businesses:

- Maritime Container Services (as operators of Cooks River Intermodal Terminal)
- Boral Concrete St Peters
- Boral Recycling St Peters
- Visy Recycling
- Tyne Container Services
- Tempe Golf Range and Academy
- Qantas Flight Training Centre
- Swissport (as operators of Sydney Airport's livestock transfer facility)
- Qantas Freight (as operators of Sydney Airport's mail handling unit near Terminal 1).

Some of these businesses would be able to continue to operation in their existing location. Others (mainly those subject to lease arrangements that would need to be terminated as a result of the project's land requirements) would not be able to continue to operate in their existing location. The termination of leases and/or relocation of businesses may have the following effects:

- Disruption to business operations
- Loss of revenue and productivity
- Stress and anxiety relating to locating and leasing or purchasing a new site
- Difficulty finding alternative properties, particularly for those businesses with specific requirements
- Relocation and re-establishment costs
- Employee training costs for new employees
- Trade catchment alterations.

A summary of the potential business impacts as a result of the project's land requirements is provided in Table 20.4. These potential impacts would occur prior to or during construction, as this is when the land would be required. Table 20.4 also provides the level of significance of these impacts according to the significance assessment undertaken as described in 20.1.2.

Table 20.4 Business impacts as a result of the project's land requirements

Business	Summary of impacts	Sensitivity	Magnitude of potential impacts	Assessed significance of impacts
Maritime Container Services (as operators of the Cooks River Intermodal Terminal)	The Cooks River Intermodal Terminal provides a range of functions. It uses road and rail to transfer containers to and from Port Botany and regional NSW, and provides the largest empty container storage facility in the state. As well as the terminal site, the facility operators also lease an area on the adjoining site for empty container storage. A small section of the Cooks River Intermodal Terminal site is currently required for the project. However, the design is currently being refined with the aim of minimising the potential impacts on this property. In addition, the lease of the overflow area on the adjoining Sydney Airport land would need to cease. The business would be able to continue operations on the intermodal terminal site with a reduction in the overall container storage capacity. This would have the potential to impact business revenue and the ability for the broader empty container storage industry to meet demand. There would also be a potential impact on longer-term operation and expansion plans. Construction would also result in temporary impacts on the operation of the rail siding within the terminal. The business would be highly sensitive to the changes due to the impacts on the long-term expansion plans and operating capacity at a time when demand in the broader industry is high (see section 20.3.4).	High	Moderate	High to moderate
Boral Concrete St Peters	Boral Concrete is the largest concrete batching plant supplier in Sydney. The concrete plant is located on land owned by Boral Resources. A small area on the edge of the Boral Concrete site would be required. The business would be able to continue to operate on the site. Boral has received approval for a development application to upgrade and expand the concrete batching plant. The area that the development application applies to includes part of the area required for the project. It would need to be modified to reflect the project's land requirements. Boral Concrete also uses an area within the adjoining site (land leased from Sydney Airport Corporation for the Boral Recycling business) to park concrete trucks. This area would not be available during construction. Alternative arrangements for parking these trucks within Sydney Airport land are currently being confirmed.	Low	Moderate	Moderate to low
Boral Recycling	Boral Recycling, which is located on Sydney Airport land leased from Sydney Airport Corporation, is a construction materials handling facility. The land leased for this business would be required for the project and the business would need to cease operation and relocate (if an appropriate site is available). This may affect employment. There are other recycling facilities in the area that may benefit from an increase in demand for services.	Moderate	Moderate	Moderate

Business	Summary of impacts	Sensitivity	Magnitude of potential impacts	Assessed significance of impacts
Visy Recycling	Visy Recycling, which is located on Sydney Airport land leased from Sydney Airport Corporation, is a waste transfer facility. The land leased for this business would be required for the project and the business would need to relocate or close. It is noted that Visy Recycling is proposing to relocate its operations from the existing site in St Peters to a site in Alexandria. The project is given as the justification for the need to relocate the business, which is the subject of a current development application. Relocation would have the potential to result in relocation and re-establishment costs for the business.	Moderate	Moderate	Moderate
Tyne Container Services	Tyne Container Services, which is located on land leased from Inner West Council, provides a range of container services, including container storage, supply, modification and repair. The land leased for this business would be required for the project and the business would need to relocate (if an appropriate site is available) or close. Relocation of the business would have the potential for: ■ Relocation and re-establishment costs ■ Effects on existing employees ■ Loss of business revenue during the relocation period. If unable to relocate and the business decides to close, this would have the potential to affect the container freight industry at a time when land for empty container storage is at a critical supply level (see section 20.3.4).	High	Moderate (if business is able to relocate to a nearby location) High (if the business closes)	High
Tempe Golf Range and Academy	Tempe Golf Range and Academy, which is located on land leased from Inner West Council, provides a golf driving range, golf instruction and a golf shop on site. Land leased for this business would be required for the project and the business operation on this site would need to close. It is understood that the business is planning to relocate outside the study area. Relocation of the business would have the potential for: ■ Relocation and re-establishment costs ■ Impacts on customers needing to travel to an alternative golf driving range ■ Effects on existing employees ■ Benefits to other golf ranges in the surrounding areas from any increase in demand.	Low	Moderate	Moderate to low

Business	Summary of impacts	Sensitivity	Magnitude of potential impacts	Assessed significance of impacts
Qantas Flight Training Centre	The Flight Training Centre, which is located on the Sydney Airport Jet Base, includes sensitive flight simulators which are used by pilots and flight crews for periodic testing by simulating both aircraft and emergency procedural environments. The land requirements for the project would affect the Qantas Flight Training Centre, which would need to relocate. The facility may continue to operate in its current location during the early phases of construction. Relocation of the facility, which is subject to a separate planning and approval process, would result in potential impacts on training scheduling and an inconvenience to business operations.	High	Moderate	High to moderate
Swissport (livestock transfer facility)	The livestock transfer facility, which is located on Sydney Airport land near Terminal 1, is used for the transport and quarantine of animals. Construction would affect part of the area used to park and queue delivery trucks at the facility. In addition, an entry gate at the north-eastern end of the facility would be affected. This would require vehicles to use an alternate gate or reverse out of the facility. The business would be able to continue to operate with changes to vehicle movement patterns.	Low	Low	Low
Qantas Freight (mail handling unit)	Construction would temporarily impact 40 parking spaces along the northern boundary of the mail handling unit facility, located on Sydney Airport land near Terminal 1. The business would be able to continue to operate with changes to car parking arrangements for employees and customers. Changes to car parking would be managed by Sydney Airport Corporation as part of an upcoming lease renewal of this area.	Low	Low	Low
DHL	Construction would temporarily impact two car parking areas near Terminals 2/3 that are accessed off Ross Smith Avenue and Sir Reginald Ansett Drive respectively. The car parking areas, which have a combined capacity of 80 spaces, are used by the adjacent DHL business. Only one of these car parks would be occupied by construction works at any one time. The business would be able to continue to operate with changes to car parking arrangements for employees and customers. Further information on the potential impacts of the project on parking during construction are provided in section 9.3.7.	Low	Low	Low

Business	Summary of impacts	Sensitivity	Magnitude of potential impacts	Assessed significance of impacts
Advertising signs	Advertising signs are a prominent feature in the study area. A total of 30 advertising signs would be impacted by the project (see Table 19.3). Twenty-seven advertising signs would need to be permanently removed to facilitate construction. Views to three signs along Qantas Drive eastbound would be obstructed by the Terminals 2/3 access viaduct. Both the landowners and the companies that own and operate the signs would experience a loss in revenue due to removal of the signs, which could affect contract opportunities for businesses that lease and manage the signs and contractors or employees that maintain and change the signs. Companies that advertise on the signs would experience a reduction in exposure at this location. The final approach to mitigating the impacts on these structures would be confirmed during detailed design. Impacts to billboards on privately-owned land, or land owned by the NSW or local government, would be compensated in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).	High	Moderate	High to moderate

Community infrastructure impacts as a result of the project's land requirements

Construction would affect Tempe Lands, with land that is currently occupied by two facilities in Tempe Lands required during construction (see Chapter 19 (Land use and property)). The potential community infrastructure impacts of these land requirements are described below.

Tempe Golf Range and Academy

As well as operating as a business, this property also provides recreation opportunities for the community. The potential impacts on this business are summarised in Table 20.4. Relocating the golf range outside the local area could have the potential for the following community impacts:

- Increased distances and travel times for some users
- Disruption of established networks and the risk of social isolation for some vulnerable members (such as older people who may rely more on social networks and have less capacity to adapt to changes).

Users of the golf driving range could access Barton Park Driving Range, which is located about four kilometres from the Tempe Golf Range and Academy. This could result in increased competition for the use of Barton Park Driving Range, affecting existing members due to the increased demand.

Users of the Tempe Golf Range and Academy who walk or cycle to the facility may be required to travel further or change travel modes to access Barton Park Driving Range or other similar facilities. This could potentially deter some users and their active recreation opportunities. Users who drive or use public transport to access the facility may also be required to travel further. However, it is expected they would adapt to the change more easily.

Most users of the facility would be expected to have a low sensitivity to its relocation, as they are likely to have minimal vulnerabilities and a high ability to absorb or adapt to change. The magnitude of the impact would be moderate as it would only affect the users of that facility. The level of significance would therefore be moderate to low. Vulnerable users may have a moderate to high sensitivity, therefore the significance would be moderate to high-moderate.

Off-leash dog exercise area in Tempe Lands

The project would affect the existing off-leash dog exercise area. During construction, a temporary off-leash dog exercise area would be provided as close as possible to the existing area. The exact location of the temporary area would be confirmed in consultation with Inner West Council.

Depending on the location of the temporary area and its proximity to construction work areas, some users may prefer to use other off-leash dog exercise areas, such as at in Wolli Creek or Sydenham (around 1.4 kilometres and three kilometres away respectively). Alternatively, some users may prefer to use the southern part of Tempe Recreation Reserve and Kendrick Park to exercise their dogs (on-leash).

During construction, access would be maintained to the temporary off-leash dog exercise area and temporary parking spaces provided. During construction, the condition of the temporary off-leash dog exercise area would be regularly monitored and maintained.

Most users of the off-leash dog exercise area are expected to have a low to moderate level of sensitivity, and would be expected to have some ability to adapt to the change. The magnitude of the impact would be low as it would only affect users of the facility, therefore the level of significance would be low to moderate.

20.3.2 Access and connectivity

As discussed in Chapter 9 (Traffic, transport and access), construction would have the potential for:

- Changes to traffic conditions and access arrangements resulting in increased travel time
- Changed access or increased travel time to community places and facilities
- Changes to pedestrian and cyclist networks

- Loss of parking spaces
- Impacts on public transport, including the removal of bus stops.

These impacts would inconvenience residents, visitors, customers, businesses, and service providers travelling through the study area, as well as travellers and workers accessing Sydney Airport during the construction period. The potential social impacts of these changes are considered below.

Social impacts

Travel times

Changes to traffic conditions and access arrangements could affect residents, workers and general community members travelling through the study area, in particular Mascot, and travellers accessing Sydney Airport. The changes could also affect workers from other areas commuting to and from the airport and Port Botany by road. For people travelling to the airport, this could lead to delays to their journeys or missing flights. Additional time spent travelling could also reduce the amount of time people spend with families, undertaking leisure and social activities, and cause delays in getting to work or other commitments.

Most people travelling through the study area are expected to have a moderate level of sensitivity, as they may have a number of vulnerabilities associated with increased travel time and some ability to absorb or adapt to changes. Some people (such as flight passengers) may have a high level of sensitivity, as increased travel times could affect their onward journey. The magnitude would be moderate as the impacts would affect most people travelling through the local study area and the changes would be experienced throughout the construction period. The level of significance would be moderate for most people travelling through the study area, and high-moderate to moderate for flight passengers and airport workers.

Active transport

Changes to pedestrian and cyclist networks near the project could increase travel times. This could reduce the amount of time that people spend with families, undertaking leisure and social activities, and cause delays in getting to work or other commitments. These impacts would be minimised through the provision of alternative cycle routes during construction, including a temporary active transport link on the western side of Alexandra Canal (see Chapter 8 (Construction)).

Active transport was identified as a key issue during consultation. The temporary active transport route may result in a small increase in travel distance and time for some commuter cyclists travelling to Sydney Airport. However, this is unlikely to deter most cyclists from using the route.

Cyclists may have a low to moderate level of sensitivity to these changes, associated with the small, inclined section of the temporary route. The magnitude would be low, as only a small section of the overall route would be more difficult. The level of significance would be low to moderate-low.

Most pedestrians are expected to have no vulnerability to changes to pedestrian networks and would be able to absorb or adapt to changes. The magnitude would be low and the level of significance would be negligible. There is potential for vulnerable community members (such as older people or people with a need for assistance) to be more sensitive to changes to pedestrian and shared paths as changes can be confusing and difficult to navigate, and may temporarily deter some people from using these paths even with diversions and signage. Vulnerable pedestrians may have a moderate sensitivity, therefore the significance would be moderate-low.

The removal of the pedestrian crossing on Airport Drive at Link Road may result in an increase in travel distance and time for freight terminal workers who may live in Tempe and walk to work. The increased time may deter workers from using this route. The magnitude of this change would be moderate for those affected. They would be expected to have low vulnerability and a high ability to adapt to these changes, therefore the level of significance would be moderate-low. More vulnerable workers may have a moderate level of sensitivity; therefore, the significance would be moderate.

Parking availability

Impacts on on-street parking as a result of construction would be limited as parking for the majority of construction workers would be provided in construction compounds to avoid the need for workers to park in nearby streets. Workers would also be encouraged to travel by public transport and car pool.

Consultation with the community identified concerns about the existing use of parking along residential streets in Tempe and Mascot by non-residents, which may include some airport workers and passengers. Further reductions in parking along local streets, if it was to occur, could cause further inconvenience and annoyance to these residents.

Public transport

Two bus stops on Qantas Drive at the Lancastrian Road intersection would be permanently removed. These stops are used by bus routes 400 and 420 and are not heavily used. The bus services would continue to operate during construction, and would be subject to the same delays, detours and diversions as general traffic.

Most bus passengers are expected to have a moderate level of sensitivity, as they may have a number of vulnerabilities associated with increased travel time, and some ability to absorb or adapt to changes. The changes would affect bus passengers throughout the construction period, therefore the magnitude would be moderate. Vulnerable bus passengers would have a moderate to high sensitivity. The level of significance for bus passengers would be moderate, and high-moderate to moderate for vulnerable bus passengers.

Community infrastructure and facilities impacts

Changes to traffic and transport conditions near the project site could affect the time and route taken to travel to community facilities. These changes may cause nuisance, reduce some people's ability to enjoy their usual social activities, and affect the values of local residents and their sense of enjoyment of their local area.

The potential use of parking spaces in Tempe Recreation Reserve and surrounding local streets for workers during construction could reduce the availability of parking for reserve users. This could temporarily inconvenience sporting groups and reduce access for passive users, which could affect active lifestyles and social interactions. The level of sensitivity is moderate to low. The magnitude would be low and the level of significance would be moderate-low to low.

Although pedestrian access would be maintained along Smith Street and South Street, construction traffic may temporarily deter some community members from walking or cycling to Tempe Recreation Reserve. This could potentially affect active lifestyles and social interactions for some users. The temporary loss of access for vulnerable residents (such as older people and people who need assistance) could lead to social isolation. Most people who walk to the facilities are expected to have low to moderate levels of sensitivity given the high value the local community places on these facilities. The magnitude of the impact would be low and the level of significance would be low to moderate-low. Vulnerable users are likely to have moderate to high levels of sensitivity and a moderate to moderate-low level of significance.

Business impacts

The study area contains a high number of businesses sensitive to changes in access and connectivity as they rely on servicing, deliveries and distribution. Potential impacts on businesses as a result of changes to access and connectivity during construction include:

- Temporary inconvenience for employees, customers, distributors and servicing and delivery providers due to extended travel distances and times
- Increased competition for on-street parking due to additional construction workers in the area
- Changes in employee and customer access affecting business productivity and personal time
- Reduced arrival reliability affecting airline passengers, staff and the freight and distribution businesses

- Reduced time for people to spend at shops and restaurants in the airport
- Heightened anxiety and stress experienced by workers, service providers and customers
- Potential financial and emotional burden on passengers if they miss flights
- Loss of passing trade for retail and hospitality businesses
- Changes to parking arrangements.

Although construction could result in temporary changes to access arrangements, properties containing businesses would remain accessible. Changes in access arrangements could temporarily inconvenience employees, customers and contractors and potentially deter customers from travelling to the area.

Many businesses in and around Sydney Airport, along with airlines, are likely to have a high sensitivity as they would be vulnerable to changes in travel times. The magnitude of these changes would be moderate, therefore the level of significance would be high to moderate.

Increased travel times may affect employees and customers of businesses at Sydney Airport. This could reduce the time available to spend with families, undertaking leisure and social activities, and cause delays in commuting to and from work. Most employees are likely to have a low to moderate level of sensitivity to increased travel times as they would be expected to have some vulnerabilities and some ability to adapt to changes in travel times. The magnitude would be moderate as the impacts would affect most travellers through the local study area. The level of significance would therefore be moderate to moderate-low. Potential access and connectivity impacts would be temporary and minimised as far as possible with the implementation of the measures provided in Chapter 9 (Traffic, transport and access). A stakeholder engagement and community consultation strategy would also be implemented (as described in Chapter 4 (Consultation) to communicate changes to relevant stakeholders.

20.3.3 Amenity

'Amenity' refers to the pleasant or normally satisfactory aspects of a location that contribute to its overall character and enjoyment by residents or visitors. Construction may result in the following impacts, which could affect amenity:

- Increase in noise and vibration levels as a result of construction plant and equipment
- Increase in dust generated during construction
- Changes in the visual outlook near compounds and construction work areas.

These potential impacts and relevant mitigation measures are considered in Chapters 9 (Traffic, transport and access), 10 (Noise and vibration), 12 (Air quality) and 21 (Landscape character and visual amenity). Amenity impacts would be temporary, and managed by the mitigation measures outlined in these chapters.

The potential for amenity impacts is considered below.

Social amenity impacts

Noise and vibration

Potential noise and vibration changes during construction could reduce amenity for residents and hotel guests in areas close to construction. This may cause nuisance, interrupt daily activities and affect people's enjoyment and pride in their local area. Potential noise and vibration impacts could lead to some people spending less time outdoors in backyards or on balconies engaging in recreational activities or relaxing, or closing windows while indoors. Noise at night-time may lead to disturbance in sleep patterns.

While most residents may be sensitive to daytime noise and vibration impacts, they would be likely to adapt to and absorb the change. The magnitude of the impacts would be low and the level of significance would be low.

During consultation, concern was raised about the potential for construction related noise to impact the operation and enjoyment of hotels. This could potentially lead to some people spending less time outdoors

or engaging in recreational activities or relaxing. It may also disturb or interfere with day-to-day activities. Hotel guests are considered to be less sensitive to noise and vibration impacts, due to the expected high performance facades and glazing, as well as the temporary nature of the guests' exposure to these impacts. Hotel guests would have a negligible level of sensitivity due to the temporary nature of their use of the facility. The magnitude would be low as the impacts would affect only some hotels, therefore the level of significance would be negligible.

During night work, there is potential for sleep disturbance at residential areas in the eastern part of Tempe, residential areas in Mascot, and hotels near the airport, as well as some residential properties in Sydenham. Most residents are likely to have a moderate level of sensitivity to night-time noise. The magnitude of the impacts would be low and the level of significance would be moderate-low. Hotel guests would have a low level of sensitivity to night-time noise due to the temporary nature of their use of the facility, therefore the significance would be low for these users.

There is potential for social impacts from increased noise and vibration to be greater on vulnerable groups who may be more sensitive to noise amenity changes and have less capacity to adapt to changes. The demographic profile identified high proportions of families with children and people with a need for assistance living in Tempe. Vulnerable residents would have a moderate to high level of sensitivity due to potential for multiple vulnerabilities and little capacity to adapt to change. The magnitude of the impact would be low for these residents. The level significance would therefore be moderate to moderate-low for vulnerable groups.

Visual amenity

Construction would result in temporary impacts on visual amenity in Tempe Lands and along Airport and Qantas Drive. Although this would result in changes to the overall visual amenity of the area, residents in Tempe near the project site would not have direct views of construction activities, and would be unlikely to experience a visual impact from their residences.

Changes to the visual surroundings of the area may impact local residents' sense of pride in their local area. Local residents are considered to have a moderate level of sensitivity to this change due to the value they place on the amenity and character of the area. The magnitude of the impact would be negligible and mainly visible to local residents while moving about the suburb rather than from their place of residence. The level of significance would be low.

Changes to views of Alexandra Canal may impact local heritage interest groups or members of the wider community who value Sydney's heritage. Sensitivity to these changes would be moderate for those interested in Sydney's heritage. The magnitude of change is likely to be low and the social impact from visual changes to Alexandra Canal is expected to be of low significance.

Construction activities on Qantas Drive and the northern lands would be visible from some windows at hotels adjacent to the project site. Hotel guests would have a negligible level of sensitivity due to the temporary nature of their use of the facility. The magnitude of the change would also be low as it would affect some hotels. Therefore, this is not anticipated to result in social impacts on hotel guests.

Air quality

Any increases in dust may lead to some residents altering their way of life, such as leaving windows of houses or vehicles shut, or spending limited time in backyards or on balconies. People may also need to spend more time cleaning due to settling dust. This may lead to temporary nuisance to these residents. People who may be more sensitive to dust include older people, children and people with medical conditions such as asthma.

Most residents would likely have a negligible to low sensitivity to dust, as they are likely to have minimal or no vulnerabilities and be able to adapt to change. The magnitude of the impacts would affect some residents in the local study area. The level of significance would be negligible to low. Vulnerable residents may have moderate to high levels of sensitivity, therefore the level of significance for these residents would be moderate to low.

Community infrastructure amenity impacts

Amenity impacts may affect the enjoyment of community facilities close to the project site, particularly for outdoor areas such as Tempe Lands, Tempe Recreation Reserve, Tempe Wetlands and Coleman Reserve. Changes in amenity may temporarily affect the use and enjoyment of outdoor areas and may deter some users from using areas close to construction activities.

Overall, most users of Tempe Recreation Reserve, Tempe Wetlands, the temporary off-leash dog area, the Cooks River and Coleman Reserve are likely to have negligible or low levels of sensitivity as they are likely to have minimal vulnerabilities and a high ability to absorb or adapt to amenity changes, particularly given the existing proximity to the airport. The magnitude of the impact would be low due to the number of users with the potential to be affected. The level of significance would therefore be negligible to low.

As outlined in Chapter 10 (Noise and vibration), noise increases are considered minimal at other community facilities in proximity to the project, including Guardian Early Learning Centre, Betty Spears Child Care Centre and Aero Kids Early Learning Centre, St Peters Anglican Church, and St Peter and St Paul Catholic Church. Any increases would potentially disturb learning and play activities at childcare centres, particularly where they are occurring outdoors and any services or other activities undertaken at the places of worship. Such impacts are considered minimal as predicted increases are based on the worst case construction scenarios and the implementation of mitigation measures provided in Chapter 10 would reduce potential impacts.

Most users of churches are expected to have negligible to low levels of sensitivity as they are likely to have minimal vulnerabilities and a high ability to absorb or adapt to amenity changes. The magnitude would be low due to the number of users affected. The level of significance would be negligible to low. However, most users of child care centres are likely to have moderate to high sensitivity to amenity impacts; therefore, the level of significance would be moderate to moderate-low.

Business amenity impacts

Changes in amenity can affect the enjoyment and desirability of the business environment, influencing how customers choose businesses in the study area.

As discussed in Chapter 10 (Noise and vibration), businesses close to the project site would experience an increase in external noise levels during construction. This could impact on worker productivity, employee health and wellbeing affecting business revenue. Vibration impacts may also cause increased stress and anxiety for employees and customers.

Construction may result in noise increases at the Mantra Hotel, the planned hotel on Ninth Street, Stamford Plaza, Ibis Budget Sydney Airport, Citadines Connect Sydney Airport, Quest Mascot and Travelodge. These businesses may experience reduced customer experience and satisfaction, resulting in a reduction in repeat or new customers.

The Qantas Flight Training Centre has several areas that are potentially sensitive to noise impacts, including the flight simulator facilities. Although Qantas is proposing to relocate the training centre to a new site (see Table 19.3), it may continue to operate in its existing location during the initial phases of construction. In a worst-case scenario, construction work would be immediately outside the facility, generating moderate to high noise exceedances.

Overall, most businesses in the study area have a low sensitivity to noise and the magnitude of change from the existing environment would be negligible. Construction noise would be noticeable, albeit intermittent and temporary, in locations immediately adjacent to the proposed construction compounds in the Sydney Airport (north eastern section), O'Riordan Street business precinct and Qantas Drive industrial precincts. The magnitude of impact would be low. Businesses in these precincts are mostly industrial and commercial, with low noise sensitivity, and would be able adapt to the change. A small number of receivers, including some of the hotels and the Qantas Flight Training Centre, have a moderate sensitivity to noise, with some ability to adapt to the change. The level of significance would be moderate-low.

Construction of the grade-separated road connection that forms part of the Terminals 2/3 access would reduce the exposure of businesses on the corner of Sir Reginald Ansett Drive and Qantas Drive. This

includes the AMG car dealership and service centre and the proposed airport hotel. This would impact these businesses due to the reduced visibility. Construction of the Terminals 2/3 access would also obstruct views to three advertising signs on Qantas Drive (eastbound). The change would have a consequence on advertising sales and business revenue.

In most instances, businesses in the study area would be unaffected by visual changes and would have a negligible sensitivity. However, a small number of businesses would be moderately sensitive. The magnitude of change experienced in most areas would be negligible; however, a small number of businesses would experience a moderate magnitude of change. The overall level of significance would be negligible, but would be moderate for individual businesses, such as AMG and owners of advertising signs.

Construction dust can result in increased operating costs, reduced hygiene or increased respiratory issues for employees or customers. Vehicle related businesses, including vehicle hire services, car dealerships and car washes, would also be sensitive to dust. There are several food handling and catering businesses close to the construction footprint in the Qantas Drive industrial precinct and in Sydney Airport along Ross Smith Avenue, which would have higher sensitivity to dust.

With the implementation of mitigation measures in section 12.7, air quality impacts would result in a low magnitude of change. In most instances, businesses in the study area would be unaffected by air quality changes and would have a negligible sensitivity. However, some businesses would have moderate sensitivity. The overall level of significance would be low.

The implementation of mitigation measures provided in other relevant chapters in Part B would assist in reducing the potential for amenity impacts on businesses.

20.3.4 Economic impacts and benefits

During construction, the project would provide some benefits to businesses, including increased demand for services or expenditure at businesses within the study area.

Expenditure and employment

Construction would directly benefit the economy by injecting economic stimulus into the local, regional and state economies. The economic benefits of construction would include:

- Increased expenditure at local and regional businesses through purchases by construction workers
- Direct employment associated with on-site construction activities
- Direct expenditure associated with on-site construction activities
- Indirect employment and expenditure through the provision of goods and services required for construction.

Over 12 per cent of businesses in the study area supply construction services or materials and products used in construction, such as Boral Concrete. These businesses may benefit from the increase in demand.

As noted in Chapter 8 (Construction), the construction workforce requirements would vary over the construction period in response to the activities underway and the number of active work areas. The workforce is expected to peak at about 1,000 workers for a period of about 13 months, indicatively from the fourth quarter of 2021. Either side of this peak, workforce numbers are expected to reduce by about a third. A smaller start-up/close-out workforce (fewer than 400 workers) would be on site for the initial and final months of the program. Final construction workforce requirements would be confirmed by the construction contractor(s). In addition to the above, it is estimated that the project would generate around 3,000 indirect jobs per year over the construction period.

Construction workers would generate additional sources of retail expenditure for nearby businesses. This would be spent predominantly on convenience-related items such as lunches, coffees, snacks, shopping etc. It is estimated that workers would spend an average of $2,400 per worker per year in the study area and retailers could capture about $1.79 million in additional expenditure annually. This additional

expenditure could total an additional $6.27 million over the construction period. Locations that may benefit from the increase in worker expenditure include:

- Mascot town centre, which is the largest retail centre close to the project site
- Takeaway food retailers along Ross Smith Drive and Princes Highway
- Hotels in the vicinity of Sydney Airport if workers are required to stay overnight
- Restaurants and cafes in the study area.

Overall, construction would produce medium to long-term job opportunities, skill development and economic benefit to the area.

Impacts on employment levels at Sydney Airport

Sydney Airport indirectly supports about 57,400 full-time equivalent jobs via economic contributions, with around 32,700 jobs at the airport itself (Deloitte Access Economics, 2018; SACL, 2019a). While construction has the potential to affect access and connectivity for employees using the road system to access the airport (see section 20.3.2), it is unlikely to affect employment levels at Sydney Airport.

Flow-on economic benefits related to construction

Using ABS multiplier tables and a construction cost estimate of $1.65 billion, the economic multipliers indicate that construction would generate around $2.2 billion of activity in production-induced effects and around $1.5 billion in consumption-induced effects. Overall, it is estimated that construction would have long-term economic benefit to the region, generating about $5.3 billion in total economic activity.

Broader effects on the freight management/container storage industry as a result of project impacts

As described in Chapter 19 (Land use and property) and section 20.3.1, the project would require land currently occupied by Tyne Container Services. This would mean that the business would no longer be able to operate at this site. The project would also require cessation of the lease over the area that is currently leased from Sydney Airport Corporation for overflow container storage by the Cooks River Intermodal Terminal. It may also affect a small area of land on the Cooks River Intermodal Terminal site.

The above areas provide empty container storage and services. The role and functions of empty container parks in the freight industry are discussed in Appendix D of Technical Working Paper 12 (Business Impact Assessment). A summary of the potential effects on this industry of the project's land requirements is provided below.

Eleven empty container parks operate in Sydney with a cumulative capacity of about 58,000 twenty-foot equivalent unit containers across an overall total storage area of 55 hectares. This includes the Tyne Container Services site and the Cooks River Intermodal Terminal. The Tyne Container Services site has an area of about 10 hectares, and the Cooks River Intermodal Terminal site has an area of about 12 hectares, representing about 40 per cent of the overall area of empty container parks in Sydney. This capacity has remained largely unchanged since 2015.

In recent years, the supply of empty containers requiring temporary storage prior to export/import has increased. The empty container park sector has reached a situation where the available capacity has been exhausted. Since 2017, trade imbalances and the drought have caused a substantial build-up of empty containers in Sydney. Empty container parks are reported to be at about 85 to 95 per cent of capacity, with an overflow of empty containers required at more than 20 transport depots.

This capacity issue would be worsened by the impacts on the Tyne Container Services site and the Cooks River Intermodal Terminal (mainly as a result of the cessation of the lease from Sydney Airport Corporation of the overflow storage area). As a result of the project's land requirements there would be an

estimated capacity loss of up to about 12,000 twenty-foot equivalent units (an average storage volume of 9,000 twenty-foot equivalent units) on the basis that:

- Efficiency improvements are not realised in the container supply chain
- Relocation of the existing storage is not possible.

The expected increase in empty container storage capacity at the new/expanded intermodal terminal developments at Moorebank, Enfield and St Marys, and expansion of the direct delivery of empty containers to Port Botany, may assist in offsetting the loss of capacity as a result of the project. This would depend on the ramp-up of operations at intermodal terminals between 2019 and 2021 before this land is required for the project. In addition, further expansion in the capacity of intermodal terminals and empty container parks after 2023 would be necessary to support the predicted growth in Port Botany's throughput.

There is a preference for empty container storage parks to be near Port Botany to reduce travel time and associated costs. Road transport presently accounts for around 85 per cent of the containers moved to and from Port Botany, with the balance carried by rail to and from metropolitan and regional intermodal terminals. The project has the potential to affect traffic and access during construction, which could create further time and cost inefficiencies for the empty container transport industry. Without a suitable nearby alternative for Tyne Container Services, local importers, exporters and shipping companies may face additional costs associated with accessing intermodal terminals. As a result, container turnover times may increase.

The industry is highly sensitive to changes in capacity. Assuming the worst-case scenario, the magnitude of impacts of the project would be moderate and the level of significance would be high to moderate. This scenario would include:

- Additional container storage is not available prior to closure of Tyne Container Services and the effects on container storage capacity at Cooks River Intermodal Terminal
- Efficiency improvements are not realised in the container supply chain.

In July 2019, Transport for NSW commissioned a study to identify broader issues associated with the management of empty containers, including impacts on the supply chain, availability of storage space and potential initiatives to improve container management. This study will investigate empty container management issues, impacts of container storage availability on the supply chain and immediate, short and longer-term initiatives to address these issues.

Transport for NSW is currently in the process of finalising the study and, once complete, it will engage stakeholders on recommended outcomes and actions. The draft study's emerging recommendations point towards a greater need for data sharing and transparency and the identification of opportunities to improve the efficiency of current empty container supply chain operations. This may include the need for industry and government to work collaboratively to solve these issues.

Roads and Maritime would continue to work closely with Transport for NSW in relation to management of empty containers, including the timing and implementation of any actions resulting from the project.

Employment land supply and economic productivity

The project's land requirements would reduce the supply of industrial and business zoned land (employment land) in the study area (see Chapter 19 (Land use and property)). Land in this area that is suitable for industrial uses is scarce and in high demand. The project would result in a loss of over 10 hectares of industrial zoned land. This would have the potential to affect the long-term economic productivity of the area and associated employment opportunities.

A reduction in the supply of employment land can increase demand for remaining land, affecting rents and potentially displacing less viable businesses. Due to the near city location of the study area and the limited availability of new employment land, the area is considered to be highly sensitive to changes in the supply of employment land. The magnitude of change is considered to be moderate, with the level of significance of these impacts considered to be high to moderate.

Impacts on utilities are likely to be temporary and would be managed in consultation with relevant utility service providers and the affected utility user in accordance with the mitigation measures provided in Chapter 19 (Land use and property).

20.3.5 Summary of impacts on Sydney Airport (Commonwealth) land

Considering the number of people employed at Sydney Airport and the number of passengers that travel to and from the airport, the airport and associated businesses are sensitive to changes in access and connectivity. Sydney Airport is located in a predominantly industrial/commercial area with a range of significant transport infrastructure, including the airport itself. As a result, most businesses on Sydney Airport land would not be sensitive to changes in amenity, with the exception of hotels, retail facilities and the Qantas Flight Training Centre.

Potential impacts on Sydney Airport land during construction are discussed in sections 20.3.1 to 20.3.4. In summary, the main impacts include:

- Socio-economic impacts as a result of the project's land requirements, including:
  - Relocation of the Qantas Flight Training Centre with potential impacts on training schedules and inconvenience to business operations
  - Relocation/closure of Boral Recycling and Visy Recycling, and alterations to land available for the Cooks River Intermodal Terminal overflow operations, with the potential for impacts on the business and employees
  - Impacts to the Sydney Airport mail handling unit, DHL and livestock transfer facility, including effects on parking and access
  - Removal of 18 advertising signs from Sydney Airport land, resulting in reduced exposure and potential loss of revenue for advertising companies/owners
- Changes to access and traffic, with the potential for:
  - Delays for airline passengers, crew and employees, potentially affecting business efficiency and revenue
  - More time needed for travel, affecting time available for leisure and social activities
  - Reduced efficiency of freight and product transfer
  - Amenity impacts (increases in noise, vibration and dust) at hotels and businesses on Sydney Airport land, with the potential to affect businesses, employees and customers
  - Reduced exposure for advertising signs and businesses.

The assessment of significance undertaken with consideration of the people and community guidance criteria defined by the *Significant impact guidelines 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies* (DSEWPC, 2013) (Significant Impact Guidelines 1.2) concluded that construction would not result in significant socio-economic impacts overall.

Local economy

Potential benefits on the local economy are described in section 20.3.4. Retailers on Sydney Airport land would benefit from the expenditure of the construction workforce, including those along Ross Smith Drive that offer takeaway food services, car park operators, car wash operators and hotels.

20.4 Assessment of operation impacts

The main potential for socio-economic impacts and benefits during operation would occur as a result of:

- The project's permanent land requirements
- Improved connectivity and travel times
- Community amenity benefits and impacts
- Economic impacts and benefits.

Potential impacts and benefits are summarised below.

20.4.1 Land requirements

Business impacts as a result of the project's land requirements

The majority of business impacts as a result of the project's land requirement would occur during construction and are discussed in Table 20.4. Some of the land would only be required during construction. This land would be returned to the land owner and would be available for the business on the site once construction is complete. Table 20.5 outlines the changes to business impacts as a result of changes to land requirements for operation, with all other impacts as per Table 20.4.

Table 20.5 Business impacts as a result of the project's land requirements during operation

Business	Summary of impacts
Maritime Container Services (as operators of the Cooks River Intermodal Terminal)	Up to about 0.9 hectares of land may continue to be required as part of the project's operational footprint. The potential business impacts of this land requirement are described in Table 20.4.
Boral Concrete	About 0.1 hectares (2.3 per cent) of the property would continue to be required as part of the project's operational footprint. The potential business impacts of this land requirement are described in Table 20.4.
Sydney Airport Jet Base	About 1.3 hectares of the overall site would continue to be required as part of the project's operational footprint. Areas used during construction that are not required for operation (about 3.2 hectares) would be available for other uses in accordance with the Master Plan.

Community infrastructure impacts as a result of the project's land requirements

The project would result in the permanent loss of around one hectare of land within Tempe Lands. This area includes land currently occupied by the Tempe Golf Range and Academy and the off-leash dog exercise area. However, upon completion of the project, up to 10 hectares of residual land would be available for use in this area. This would consist of land temporarily required during construction, including about four hectares currently occupied by recreational facilities within Tempe Lands, and land currently occupied by Tyne Container Services. Potential future uses could include open/space recreation or other future uses in accordance with the priorities of local and regional strategic planning and Inner West Council.

Inner West Council is developing a master plan to identify how this land could be used, which will consider the results of a recreational needs analysis prepared in 2018. The future use of this land would be subject to a separate assessment and approval process.

Roads and Maritime is continuing to consult with Inner West Council on the draft master plan, including providing feedback received from the community in relation to their preferences for the future use of this land. During consultation for the project, Roads and Maritime has received feedback from the local community and Council on future uses and amenities at Tempe Lands. This has included requests for:

- A new off-leash dog area

- Recreational facilities, including floodlit futsal fields and changing rooms
- Passive open space and walking paths
- Barbeque facilities, seating and shaded areas
- Children's playground
- Car parking.

Roads and Maritime would continue to consult with Council about compensation for the purposes of offsetting the loss of public open space and recreational facilities at Tempe Lands, and in relation to consistency between the project's urban design and landscape plan and Council's master plan for the future use of Tempe Lands and adjoining areas.

20.4.2 Access and connectivity

As discussed in Chapter 9 (Traffic, transport and access), the project would:

- Provide a new high capacity, direct and continuous connection between the Sydney motorway network and Sydney Airport's terminals
- Reduce daily traffic flows on Botany Road (through Mascot town centre) and O'Riordan Street by between 25 to 30 per cent
- Reduce daily traffic flows on the Princes Highway by about eight per cent in 2036
- Reduce delays at intersections within the study area, including in Mascot and the intersection of Bourke Street and Coward Street, which accommodate high pedestrian crossing activity
- Make it easier to access Terminals 2/3 and providing better separation for Sydney Airport and through traffic.

Social impacts

The project would improve traffic flow and travel times for road users, including local residents, commuters and general community members, and travellers accessing Sydney Airport and nearby community infrastructure.

Reducing traffic along Botany Road through Mascot and on the Princes Highway has the potential to reduce barriers for travel across these roads. This would benefit pedestrians and people with mobility difficulties, with the potential for increased opportunities for community participation and greater cohesion for communities.

The project would benefit regional and Greater Sydney communities by providing faster and more efficient travel to Sydney Airport, Mascot and Port Botany and along the employment corridor between the Sydney central business district and these locations. Reduced travel times would allow people to spend more time on leisure and social activities.

Substantially improved bus travel times along key corridors would benefit several routes servicing the airport and surrounding areas. However, the removal of the bus stops at Lancastrian Road (on Qantas Drive) would change access arrangements for a small number of employees at the Jet Base who use bus routes 400 and 420. The business survey indicated that about three per cent of local employees travel by bus to work in the study area. A proportion of these would have high sensitivity to changes in the bus network. The nearest bus stops are at Terminals 2/3 about 750 metres away.

Business impacts

The project is expected to provide long-term benefits for businesses in the local area and Greater Sydney, including:

- Enhanced road network capacity and connectivity improving the efficiency of freight and commercial vehicle movements between major economic regions of Sydney, increasing trade catchments and business productivity, and reducing overhead costs

- Improved road network travel speeds, which would improve travel times for existing employees and customers, potentially attracting new employees and customers
- Additional employment opportunities and economic benefits if businesses attracted to the enhanced connections relocate to the area
- Improved connectivity to Sydney Airport and Port Botany for businesses across Greater Sydney, expanding economic supply chains and attracting new investment
- Unlocking the capacity for Sydney Airport and surrounding industrial land to expand operations and increase employment and economic output
- Redistribution of traffic (including heavy vehicles) from local to arterial roads, improving the amenity and safety of the business environment and enhancing access and connectivity
- Improvements in the reliability, connectivity and safety of the active transport and public transport network.

Reduced local traffic in Mascot along Botany Road (though the town centre), and along local roads in Mascot more generally, may improve amenity, creating the potential to attract new businesses, more customers, and improve performance. Retail and customer service businesses are most likely to benefit from this change. Conversely, a reduction in the volume of traffic on local streets may reduce business exposure and passing trade. Based on the business survey, businesses in this area are considered to have a higher dependency on passing trade from local residents and workers. The improvements to amenity of Mascot would have the potential to counter the effects of any reduction in vehicle passing trade.

The increased traffic on Qantas Drive may increase passing trade for takeaway food and car services along Ross Smith Avenue in the Sydney Airport precinct's north-east sector. It could also enhance the exposure of businesses fronting Joyce Drive and Qantas Drive, including the hotels in this area.

Improved travel times would benefit employees and customers travelling by car and bus. Commuting via the road network is the dominant journey to work method for residents in the study area. Connections to the freight and passenger terminals at Sydney Airport would be more direct and efficient. This could reduce stress and anxiety for people travelling to the airport and provide more time at the airport. Travel time efficiencies could also be achieved for servicing and deliveries at businesses in the Sydney Airport precinct, which could improve business productivity and reduce overhead costs.

20.4.3 Amenity

Social amenity impacts

Operation has the potential to generate some amenity changes, including increases to noise in some areas, and changes to visual amenity and air quality.

Noise and vibration

As discussed in Chapter 10 (Noise and vibration), the project has the potential to increase noise levels at some residential properties due to the presence of new road infrastructure and the removal of structures (such as buildings and shipping containers), which currently provide shielding to ground noise.

The assessment identified that residents are likely to be sensitive to noise. Residents in the eastern part of Tempe are considered to have a higher level of sensitivity to noise due to the level of concerns raised during the consultation process. The magnitude of impacts was considered to be low, as only some areas would have the potential to be affected. The overall level of significance of these impacts was considered to be low for Mascot residents and moderate-low for residents in the eastern part of Tempe. Hotel guests would have a negligible level of sensitivity due to the temporary nature of their occupancy. The magnitude would be low, as noise would only affect some facilities. Overall, the level of significance would be negligible. Vulnerable residents would have a moderate to high level of sensitivity, therefore the level of significance would be moderate to moderate-low.

The mitigation measures described in Chapter 10 would be implemented to minimise the potential for operational noise impacts.

Visual amenity

Residents, road users, community facilities users, pedestrians and cyclists are likely to experience changes in the visual amenity due to the presence of new road infrastructure. Visual amenity impacts would occur where permanent facilities are located. The presence of new road infrastructure would alter the character of Tempe Lands. As discussed in section 20.2.4, residents in the eastern part of Tempe value green and natural spaces, and may have low sensitivity to these visual changes. The magnitude of the change is considered to be low, due to the existing amenity and character of the area. The significance of the impact would be low.

The new elevated road infrastructure and loss of vegetation near Terminal 2/3 would alter views, which would permanently change the visual environment for people using Qantas Drive, potentially affecting what local residents value about their local area. Given most people would only be exposed to these visual changes while travelling along the road, it is unlikely to impact people's day-to-day activities or values. Most community members may have low sensitivity to these visual changes as they would be expected to have a high ability to adapt. The magnitude may be low to moderate as there would be long-term changes, but may only affect some community members. The significance would therefore be low to moderate-low.

Changes to the visual form of the heritage listed Alexandra Canal, including the introduction of new bridges and the new, shared path adjacent to the canal, would be of interest to heritage groups and other members of the community. People who value the significance of Alexandra Canal may have moderate sensitivity to these visual changes. The magnitude of the change is considered to be low due to the existing amenity and character of the area. The significance of the impact would be moderate-low. Mitigation measures in Chapter 17 (Non-Aboriginal heritage) would be implemented to minimise impacts on the heritage significance of the canal.

Mitigation measures in Chapter 21 (Landscape character and visual amenity) would be implemented to minimise impacts on visual amenity.

Air quality

The project would improve air quality on the M5 Motorway, Southern Cross Drive, Botany Road and Canal Road due to reduced traffic volumes. These roads traverse industrial, commercial, residential and open space areas, including Mascot town centre, and are used by local residents, commuters, pedestrians, cyclists, and workers at local businesses. Air quality changes are not expected to be noticeable to most people. Some people may perceive an improvement to air quality, which could lead to more people choosing to walk and cycle along these roads, increasing active travel.

The air quality assessment (see Chapter 12 (Air quality)) predicted minor increases in pollutants at some locations. The magnitude of this impact is considered negligible and is unlikely to change people's day-to-day activities. Some vulnerable community members may be more sensitive to air quality changes, such as older people, children, and people with medical conditions such as asthma.

Most people are expected to have a low to moderate sensitivity to air quality changes. Vulnerable residents may have moderate to high levels of sensitivity, however the magnitude of the impact is expected to be negligible therefore the level of significance for residents would be negligible.

Mitigation measures in Chapter 12 (Air quality) would be implemented to minimise impacts on air quality.

Community infrastructure amenity impacts

Users of the Tempe Recreation Reserve, Tempe Wetlands, the Cooks River, Coleman Reserve and Tempe Lands would potentially experience increased levels of noise and a change in the visual environment. The overall function of open space areas is not expected to be affected by the project.

Overall, most users of these facilities are likely to have low to moderate levels of sensitivity. Given the existing proximity to Sydney Airport and the associated noise, air quality and visual environment. The magnitude is considered to be low. The level of significance would therefore be moderate-low to low.

There is the potential for impacts on the amenity of Coleman Reserve (as a result of noise impacts and changes to the visual catchment), which would affect amenity for users of the reserve, including

pedestrians and workers who use the reserve during breaks. These users are expected to have negligible to low sensitivity. The magnitude would be low, therefore the significance would be low to moderate-low.

Business amenity impacts

Increased noise and visual alterations during operation would mainly affect businesses (including hotels) around the Qantas Drive, O'Riordan Street and Sir Reginald Ansett Drive intersection. Changes in amenity can affect the enjoyment and desirability of the business environment, influencing how many customers choose businesses. The business survey identified that the majority (55 per cent) of respondents stated that operation of the project would result in neutral impacts on amenity. Twenty-eight per cent stated the impacts would be positive, two per cent stated that impacts would be negative, and 14 per cent stated that they were unsure/not applicable.

Operational noise impacts are predicted to increase at businesses near O'Riordan Street in Mascot, due to the removal of several airport buildings adjacent to Qantas Drive, which were previously shielding businesses from on-ground aircraft noise. An increase in noise levels, particularly at night time, is predicted near the Joyce Drive and O'Riordan Street intersection, and on Baxter Road in Mascot. Hotels on Sydney Airport land may also experience increased noise levels. Hotels that do not have high performance facades have the potential to be sensitive to high noise levels, as they rely on providing a positive customer experience.

Overall, most businesses in the study area have low sensitivity to noise and the magnitude of change from the existing environment would be negligible. A small number of receivers, including some hotels and the Qantas Flight Training Facility, have moderate sensitivity to noise. The magnitude of change from the existing environment would be low, as noise increases would be confined to receptors in a limited geographic area. The level of significance would be low.

The increase in traffic volumes predicted along Qantas Drive and the new project alignment, compared to the current volumes, would increase exposure for existing signs.

Three advertising signs along Qantas Drive (eastbound) would be indirectly impacted. Views to the signs would be obscured by the grade-separated road connection to Terminals 2/3, resulting in reduced rent return and exposure. The proposed elevated viaduct could also reduce exposure to passing traffic for AMG. As a retail premises, the business would be moderately sensitive to reductions in business visibility. The magnitude of change would be moderate and the level of significance moderate.

The project would create the opportunity to deliver an entry statement design feature that would enhance the arrival and departure experience for visitors arriving to Sydney via Sydney Airport. The project would also provide the opportunity for advertising structures to be included in the design, which could support advertising signage in the future.

Overall, the amenity impacts described above are unlikely to affect the long-term function and viability of businesses. The overall benefits of the project, in conjunction with other major transport projects, would provide long-term benefits to businesses across Greater Sydney.

20.4.4 Economic impacts and benefits

The project would lead to improved travel times to Sydney Airport terminals, and the Mascot and Port Botany precincts. It would provide greater network capacity and resilience for more efficient distribution of freight to and from the airport and port, and logistic centres in Western Sydney. It is also expected to reduce congestion and heavy vehicle movements through the local road network.

Based on the above, the project is expected to result in economic benefits to Greater Sydney communities. Faster travel times and less congestion on the local road network would benefit workers who currently travel by road to and from the airport and port, including those employed in airport and port-related industries, surrounding employment areas, as well as passengers travelling via the airport for business purposes. This is expected to enhance overall productivity, while also benefiting individual workers.

The project would lead to improved efficiency of Sydney's economic supply chain and movement of goods to businesses in Greater Sydney. This could indirectly benefit business owners and employees through

increased productivity and reduce freight costs, which could increase income generation. This could also support the development of businesses and industry on land west of Alexandra Canal, including freight, catering, storage and maintenance, truck staging and vehicle storage. It would also provide the opportunity for expanded airport operations, including additional commercial development and freight airline movements. This would indirectly benefit the economy through increased business and tourism expenditure.

As discussed in section 20.3.4, the project would impact on areas available for empty container storage with the potential to have a broader consequence on the sustainability of the industry. However, this impact would be alleviated if proposed/expanded intermodal terminals are operational before construction of the project.

Local and regional operational economic effects

The *Sydney Airport Master Plan 2039* (the Master Plan) notes that with the project, Sydney Airport's northern lands could be developed for airside aviation support activities, including freight, catering, storage and maintenance, truck staging and vehicle storage. Increased road capacity would also provide an opportunity to expand airport operations, including additional commercial development and growth in passenger and freight airline movements in line with the Master Plan. This would indirectly support the economy by increasing employment opportunities, increased business and tourism expenditure.

The project has the potential to contribute to lower costs associated with transport and access to Sydney Airport, Port Botany and businesses in the study area, with associated opportunities for expansion of businesses local and regionally. Such expansion could increase job opportunities and provide economic benefits associated with increased trade and employment.

Other potential long-term benefits for the local and regional economies include:

- Broadening trade catchments
- Enhancing freight network efficiency
- Enhancing employment connectivity.

These are described below.

Altered trade catchments

Improvements in travel times would have the potential to expand catchment areas for some businesses, as customers further afield would be able to bypass inner city pinch points and access these businesses. This can benefit business and the economy by:

- Increasing efficiency and appeal of businesses to customers
- Increasing distribution capability and delivery times for businesses
- Reducing transport costs and improved reliability for businesses, employees and customers
- Linking regional importers, exporters and services to the trade gateways of Sydney Airport and Port Botany via enhanced connections to the Sydney motorway network.

The benefits would be long-term and positive.

Freight and efficiency costs

The freight industry is an important part of the NSW economy as an enabler of economic activity. Numerous industries depend on efficient transport to service operational requirements. In 2019, the transport, postal and warehousing industry contributed $22.6 billion to the national economy, representing 5.1 per cent of the total value generated by all industries (ABS, 2019).

Air freight handled by Sydney Airport is predicted to increase by about 58 per cent – from 643,000 tonnes in 2017 to around one million tonnes in 2039 (SACL, 2019a). The amount of container freight handled by Port Botany is predicted to significantly increase – from 14.4 million tonnes in 2016 to 25.5 million tonnes in

2036 (77 per cent increase) (Transport for NSW, 2018a). Transporting this freight to and from the airport will place additional demands on the road network in the study area.

As noted in section 20.4.2 and described further in Chapter 9 (Traffic, transport and access), the project would improve access, connectivity and travel times. Benefits of travel time improvements include:

- Reduction in operating costs (eg wear and tear associated with extended periods of slow movement)
- Reliability benefits (eg reduction in variance in travel time allowing for efficient scheduling)
- Direct travel time savings (eg reduction in real or opportunity costs associated with transit times).

As a result, the project would have the potential to

- Increase the efficiency and reliability of freight movements on the local and regional road network
- increase capacity for product distribution
- Reduce overhead costs for businesses
- Enhance transport and logistics scheduling and productivity.

Employment connectivity

Over 500,000 of Sydney's jobs are located in the Eastern Economic Corridor, which extends from Macquarie Park in the north via the Sydney central business district, to Port Botany and Sydney Airport (Greater Sydney Commission, 2018). The study area accommodates about a fifth of these jobs (ABS, 2016). Businesses surveyed identified that congestion is a significant factor in attracting and retaining employees. Congestion may also affect access to employment opportunities for some residents in the study area.

With the expected job growth across the eastern economic corridor, businesses within the study area would face further competition for skilled workers.

The project would address this issue by reducing travel times on key routes. These long-term improvements would assist in connecting Sydney Airport and local businesses with potential employees, while also increasing the employment catchments of local and regional residents affected by congestion.

For commuters, the project would contribute to a more reliable road network, with the potential for reductions in commuting time and lower vehicle operating costs. This would benefit Greater Sydney, particularly residents and businesses in Western Sydney who would have enhanced, direct motorway access to the study area and Sydney Airport.

20.4.5 Summary of impacts on Sydney Airport (Commonwealth) land

The project would provide socio-economic benefits to Sydney Airport, mainly related to improved connectivity and faster travel times. This could result in increased economic productivity and employment opportunity at Sydney Airport. The project would also provide opportunities for a new 'Gateway' entry statement to welcome domestic and international visitors.

General community members, workers and travellers commuting to and from Sydney Airport would experience increased connectivity and faster travel times. Reduced travel times could increase the time people spend with families or undertaking social activities.

Potential impacts on Sydney Airport land are discussed in sections 20.4.1 to 20.4.4. Key potential impacts include amenity impacts (increased noise, changes to air quality and visual amenity) at Coleman Reserve and businesses on Sydney Airport land, including hotels and AMG.

Changes to the visual environment as a result of the new elevated road infrastructure near Terminals 2/3 would alter views along the road corridor. Visual impacts are unlikely to affect most business owners, customers and employees. However, changes to visibility may affect some businesses such as AMG.

The assessment of significance undertaken with consideration of the people and community guidance criteria in the Significant Impact Guidelines 1.2 concluded that the project would not result in significant socio-economic impacts.

Employment levels

The project would facilitate the delivery of key planning directions in the Master Plan by delivering additional road capacity to Sydney Airport. It would have the potential to service and facilitate growth of airline services, aviation support facilities, freight and commercial services on airport land in accordance with the plan.

The Master Plan indicates that an additional 3,500 full time equivalent jobs could be created at Sydney Airport between 2019 and 2024. This project would assist in meeting the access and connectivity demands that this growth would generate.

Local and regional economy

The project would provide direct access to the Sydney motorway network for businesses on Sydney Airport land. This has the potential to benefit the local and regional economy by:

- Facilitating the achievement of key planning directions in the Master Plan
- Broadening trade catchments
- Enhancing the efficiency of the freight network
- Enhancing employment connectivity
- Enhancing customer connectivity
- Attracting new business investment.

The project would provide enhanced road connections to Sydney Airport, contributing to the future economic productivity and efficiency of the airport itself, as well as that of businesses on Sydney Airport land.

Consistency with the Sydney Airport Master Plan

The Master Plan forecasts significant commercial development and employment increases on Sydney Airport land, requiring enhanced ground transport connectivity, with the project supporting this growth by improving access (as described in Chapter 9 (Traffic, transport and access)).

The project is consistent with relevant social and economic directions of the Master Plan, as it aligns with its vision and objectives (see section 3.6), is identified as a key project, and is likely to deliver the benefits forecast. The project would improve connectivity and travel times to Sydney Airport, which would contribute to regional economic growth. Improved access to Sydney Airport would also benefit employees and visitors.

20.5 Cumulative impacts

20.5.1 Construction

Constructing the project concurrently with the Botany Rail Line Duplication and other projects, including the Airport North Precinct Upgrade, F6 Extension, M4-M5 Link and New M5, Sydney Airport Terminals 2/3 Ground Access Solutions and Hotel, would have the potential for the following cumulative socio-economic impacts:

- Further impacts on amenity from additional construction noise for some residents, business owners, employees, customers and guests of hotels close to the project sites where they are located in close proximity

- Access and connectivity impacts, which could cause annoyance and reduce time people can spend on leisure or other important activities
- Potential for construction fatigue where people experience impacts over an extended period of time from multiple projects. This can lead to annoyance, inconvenience, diminished sense of pride, reduced capacity to participate in work and community activities, affect personal relationships, and reduce social interactions. Further information on the potential for construction fatigue is provided in section 23.3.1
- Business owners may have greater difficulty attracting and retaining employees and customers, which could lead to stress and worry.

Cumulative benefits associated with constructing the project concurrently with other projects include job and income generation opportunities.

20.5.2 Operation

Once operational, the Sydney Gateway road project and Botany Rail Line Duplication, as well as the other major transport projects, are predicted to deliver cumulative benefits.

As discussed in Chapter 9 (Traffic and transport), the cumulative road network would carry more traffic and record a higher than average trip speed for vehicles. The inclusion of the F6 Extension and Western Harbour Tunnel would reduce the daily traffic volumes predicted on the A1, M1 Motorway and Southern Cross Drive. Additional traffic reductions within the study area are also predicted in both directions in Mascot along O'Riordan Street, the Princes Highway and on Botany Road.

The delivery of all major transport projects would provide cumulative benefits, including:

- Supporting Sydney's long-term economic and employment growth, through improved transport connectivity to key employment areas across the city
- Alleviating congestion and contributing to improved connectivity, speeds, reliability and safety of the broader road network, which is of particular importance to the contribution and efficiencies of the freight industry
- Generating economic effects and benefits to businesses through reduced operational expenses and opportunity for increased revenues from expanded trade catchments
- Improved business viability and centre regeneration opportunity as a result of new connections
- Improved connections across the network, enhancing accessibility for customers and employees and creating greater opportunity for business synergies
- Attraction of new business investment, enhancing agglomeration effects for existing businesses and local economic productivity
- Amplified productivity resulting from freight efficiency, benefiting businesses and employees
- Improved travel times on local roads, reduction in perceived barriers, and improved amenity in Mascot town centre
- Local and regional connectivity for commuter and recreational cyclists associated with the new active transport link.

While the project would generally be beneficial, it would increase the volume of vehicles travelling on some roads, including Qantas Drive. The increase in vehicles at the main motorway access locations would have the potential to affect the amenity of the local environment, associated with an increase in traffic noise and reduction in air quality. This is unlikely to have a noticeable impact.

In addition, the reduction of traffic on surface roads would improve the road network and allow for enhanced bus services. Cumulative time savings (with other approved projects) would be about 50 per cent during morning and evening peaks, representing significant time savings that may increase the attractiveness of bus services for local workers, further reducing costs associated with transit.

20.6 Management of impacts

20.6.1 Approach

Approach to mitigation and management

Approach to managing the key potential impacts identified

Comprehensive and appropriate communication and consultation with the community and other key stakeholders will play a key role in managing the potential for socio-economic impacts during construction and operation. Effective communication and engagement are fundamental to reducing risk and minimising potential impacts. Identifying, engaging and effectively communicating with stakeholders is critical to the successful delivery of the project. As described in Chapter 4 (Consultation), the approach to consultation aims to:

- Build relationships with key stakeholders
- Establish a broad understanding of the need for the project
- Provide clear, concise and targeted information which is readily accessible to all stakeholder groups
- Establish channels for feedback and dialogue
- Understand community and stakeholder issues
- Inform project development, construction planning and environmental assessment
- Create opportunities to raise awareness of the project.

Roads and Maritime and Sydney Airport Corporation would continue to engage with stakeholders and the community in the lead up to, and during, construction. A communications strategy would be developed for the construction phase to ensure that:

- The community and stakeholders have a high level of awareness and forewarning of all processes and activities
- Accurate and accessible information is made available
- A timely response is given to issues and concerns raised by the community
- Feedback from the community is encouraged
- Opportunities for input are provided.

In relation to the potential for socio-economic impacts, the strategy would include:

- Communication with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the project, and the likely nature, extent and duration of amenity and access changes during construction
- Protocols to identify and engage with vulnerable persons that might be affected by construction, including families with children, people with need for assistance, older people, people with disability, people with mobility difficulties or medical conditions, and culturally and linguistically diverse people
- Protocols for communicating information about potential access changes and delays in and around Sydney Airport and other relevant project information.

Further information about consultation during project delivery is provided in Chapter 4.

Business management plans would be prepared and implemented for businesses that would be affected by the project. The plans would be developed on a case by case basis and would detail specific measures, developed in consultation with the business operator. These would include:

- Protocols to identify, in consultation with each affected business, specific feasible and reasonable measures to maintain vehicular and pedestrian access during business hours, and visibility of the

business to potential customers during construction, including alternative arrangements for times when access and visibility cannot be maintained

- Measures to support affected businesses during the acquisition process.

Measures to manage the land acquisition process are provided in section 19.6.

Approach to managing other impacts

Implementing other relevant measures provided in Chapters 9 (Traffic, transport and access), 10 (Noise and vibration), 12 (Air quality) and 21 (Landscape character and visual amenity), would minimise the potential for socio-economic (amenity) impacts. These include the Construction Traffic and Access Management Plan, Construction Noise and Vibration Management Plan, the Operational Noise and Vibration Review, consultation with hotels to confirm façade performance, Construction Air Quality Management Plan, odour management strategy, and the urban design and landscaping plan.

Other measures are provided in Table 20.6.

Expected effectiveness

Roads and Maritime and Sydney Airport Corporation have experience managing potential socio-economic impacts during construction. The measures provided in section 20.6.2 are based on previous projects in urban environments and are designed to mitigate construction related impacts.

Community and stakeholder involvement has been and would continue to be tailored to each phase of the project. This would enable appropriate consideration and balancing of community and stakeholder issues to achieve best for project outcomes. A key approach to consultation would be to provide two-way communication channels to enable timely intervention aimed at resolving issues raised by the community and stakeholders.

Implementation of a comprehensive approach to consultation, communication and environmental management during construction, together with a rigorous monitoring program, would assist in minimising the potential for socio-economic impacts.

20.6.2 List of mitigation measures

Measures that will be implemented to address potential socio-economic impacts are listed in Table 20.6.

Table 20.6 Socio-economic mitigation measures

Impact/issue	Ref	Mitigation measure	Timing
Potential social and community impacts during construction	SE1	A communications strategy will be prepared to detail the process of communicating and engaging with the community and stakeholders in the lead up to, and during, construction. It will ensure that: ■ The community and stakeholders have a high level of awareness and forewarning of all processes and activities ■ Accurate and accessible information is made available ■ A timely response is given to issues and concerns raised by the community ■ Feedback from the community is encouraged ■ Opportunities for input are provided. In relation to the potential for socio-economic impacts, the strategy will include: ■ Communication with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the project, and the likely nature, extent and duration of amenity and access changes during construction ■ Protocols to identify and engage with vulnerable persons that might be affected by construction	Pre-construction, construction

Impact/issue	Ref	Mitigation measure	Timing
		▪ Protocols for communicating information about potential access delays in and around Sydney Airport and other relevant project information.	
Potential impacts on businesses	SE2	Business management plans will be prepared and implemented for businesses affected by the project. The plans will be developed on a case by case basis and will detail specific measures, developed in consultation with the business operator. These will include: ▪ Protocols to identify, in consultation with each affected business, feasible and reasonable measures to maintain vehicular and pedestrian access during business hours, and visibility of the business to potential customers during construction, including alternative arrangements for times when access and visibility cannot be maintained ▪ Measures to respond to identified impacts as far as possible.	Pre-construction, construction
Permanent land requirements at Tempe Lands	SE3	Roads and Maritime will continue to consult with Inner West Council to ensure: ▪ Impacts on open space and recreational facilities in Tempe Lands will be offset ▪ Consistency between the project's urban design and landscape plan and Council's master plan for Tempe Lands.	Detailed design
Safety of active transport links	SE4	Temporary and operational active transport links will be designed to ensure the safety of the users in accordance with crime prevention through environmental design principles.	Detailed design
Impacts on the off-leash dog exercise area	SE5	A temporary off-leash dog exercise area will be provided. Access to this area will be maintained throughout construction, and temporary parking spaces will be provided. The location of the off-leash dog exercise area and the number of temporary parking spaces will be confirmed in consultation with Council. The condition of the temporary off-leash dog exercise area will be regularly monitored and maintained.	Construction
Impacts on community facilities and infrastructure	SE6	Access to community facilities and infrastructure will be maintained during construction. Where alternative access arrangements need to be made, these will be developed in consultation with relevant service providers and communicated to users. Any changes to access arrangements will be managed in accordance with the Construction Traffic and Access Management Plan.	Construction

20.6.3 Managing residual impacts

Residual impacts are impacts of the project that may remain after implementation of:

- Design measures to avoid and minimise impacts (see sections 6.4 and 6.5)
- Construction planning and management approaches to avoid and minimise impacts (see sections 6.4 and 6.5)
- Specific measures to mitigate and manage identified potential impacts (see section and 20.6.2).

Residual socio-economic impacts would include:

- Minor impacts on some businesses, community facilities, employees and community members as a result of the project's land requirements
- Minor impacts on community members as a result of changes in noise and visual amenity
- Impacts on the exposure of AMG as a result of the new elevated viaduct

- Impacts on areas available for empty container storage with the potential to have a broader consequence on the industry – this impact would be alleviated if intermodal terminals are operational before construction
- Reduction in the amount of advertising space in the vicinity of the project site due to the removal of advertising structures. Detailed design would, where possible, seek to minimise impacts on these structures.