Roads and Maritime Services/Sydney Airport Corporation Limited

Sydney Gateway Road Project

Environmental Impact Statement/ Preliminary Draft Major Development Plan

Technical Working Paper 11

Socio-economic Impact Assessment

November 2019

Roads and Maritime Services

Sydney Gateway Road Project

Technical Working Paper 11 – Socio-economic Impact Assessment

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G2S JV Gateway to Sydney Joint Venture

WSP Australia Pty Limited and GHD Pty Ltd

ABN: 55 836 411 311
Project Office
Level 27 Ernst & Young Centre
680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001
Australia
Tel: +61 2 9272 5100
Fax: +61 2 9272 5101

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Glossary

ABS	Australian Bureau of Statistics
Airports Act	*Airports Act 1996* (Cwlth)
Airports Regulations	*Airports (Environment Protection) Regulations 1997* (Cwlth)
Amenity and character	The noise, air quality, and visual amenity of the area provide for the enjoyment of residents and create a recognisable and distinctive character.
CBD	Central business district
Commonwealth land	Commonwealth-owned land leased to Sydney Airport Corporation for the operation of Sydney Airport
Community cohesion	Community or social cohesion can be understood as "the bonds and relationships people have with their family, friends and the wider community. Day to day interactions between people in a community build trust and reciprocity and contribute to cohesion" (ABS, 2010).
Community infrastructure	Community infrastructure refers to the "community facilities, services and networks which help individuals, families, groups and communities meet their social needs, maximize their potential for development and enhance community wellbeing. They include: ▪ Universal facilities and services such as education, training, health, open space, recreation and sport, safety and emergency services, religious, arts and cultural facilities, and community meeting places. ▪ Lifecycle-targeted facilities and services, such as those for children, young people and older people ▪ Targeted facilities and services for groups with special needs, such as families, people with disabilities, and Indigenous and Cultural and linguistically diverse people" (Clarence Valley Council, 2009: pg 7) Within this report, the following community infrastructure facilities have been included: education and child care facilities, accommodation facilities, aged care, health centres and services, disability services, youth and community spaces, religious facilities, indoor and outdoor sport and recreation, and passive open space such as parks and gardens.
Community severance	Community severance refers to reduced access to local amenities and disruption of local social networks caused by a physical barrier running through a community (eg road or other transport route). Community severance may also be caused by significant increases in traffic flow on a road that was not originally regarded as a barrier.
Community values	Community values are those elements held as being important to quality of life and wellbeing. They include tangible (physical) elements such as parks, buildings, and landscape, and intangible (social) elements such as sense of belonging and com unity diversity. Community infrastructure such as churches, schools, public places and community centres is also highly valued in local communities, as are demographic characteristics and local features.
Connectivity	People have the ability to move through their community and access a range of places in and outside their community safely and conveniently (Paranagamage et al., 2010).

Construction compound	An area used as the base for construction activities, usually for the storage of plant, equipment and materials, and/or construction site offices and worker facilities.
Culture	Culture can be understood in many different ways, and in many different contexts. In urban settings, culture can be particularly difficult to define (Fox, 2018). For the purpose of this report, culture is related to community values and way of life.
Cultural heritage	Indigenous and non-Indigenous items and areas (commonly referred to as places) that are a significant indicator of historical and cultural events and practices.
Cycleway	A path devoted to the exclusive use of bicycles.
DDA	*Disability Discrimination Act 1992* (Cwlth)
Demography	The range of different groups existing in a particular populace, as distinguished by factors such as age, ethnicity and social background.
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning & Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
Household	One or more persons usually resident in the same dwelling (ABS, 2016b)
IRSAD	Index of Relative Socio=Economic Advantage and Disadvantage
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LGA	Local government area
Local study area	Includes the local government areas (municipalities) and suburbs intersected by the project. These areas would be directly and indirectly affected by the project activities especially during construction and would experience both positive and negative effects of the project.
MDP	Major development plan
Neighbourhood	In the context of this SEIA, neighbourhood means an area that is considered to be within a comfortable walking distance (around 500 m) from a person's place of residence or work. What is defined as a neighbourhood would be subjective to each individual.
Project	The construction and operation of the Sydney Gateway road project.
Project site	The area that would be directly affected by construction (also known as the construction footprint). It includes the location of operational project infrastructure, the area that would be directly disturbed by the movement of construction plant and machinery, and the location of the storage areas/compounds etc. that would be used to construct that infrastructure.
Qualitative	Relating to or concerned with quality or qualities, rather than quantity or measured value.
Quantitative	An assessment based on quantifiable, measured data.
Regional study area	Includes the City of Sydney LGA, southern-eastern portion of Inner West LGA, eastern half of Bayside LGA, Port Botany suburb, and the southern part of Matraville suburb
Reserve	Land reserved for community or public purposes.

Resident	In the context of this SEIA, resident refers to people living in the area.
Statistical Areas Level 4 (SA4)	Geographical areas created by Australian Bureau of Statistics. The Statistical Areas Level 4 districts are the largest sub-State districts, and have been designed for the output of a variety of regional data.
Secretary's environmental assessment requirements (SEARs)	Requirements and specifications for an environmental assessment prepared by the Secretary of the Department of Planning and Environment under section 5.16 of the *Environmental Planning and Assessment Act 1979* (NSW).
Shared path	Used by pedestrians and cyclists.
SEIA	Socio-economic impact assessment
SEIFA	Socio-economic Indexes for Areas
Socio-economic Indexes for Areas	A product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage.
Stakeholder	Person or group affected by or concerned with an issue.
Study area	The study area is defined as the wider area including and surrounding the project site, with the potential to be directly or indirectly affected by the project (eg by noise and vibration, visual or traffic impacts). The actual size and extent of the study area varies according to the nature and requirements of each assessment and the relative potential for impacts.
Tempe Lands	Tempe Lands consist of land owned by Inner West Council that was formerly the Tempe landfill. The land was remediated and now contains a number of open space and recreation facilities (including the Temp Golf Range and Academy, dog exercise area, car park, and Tempe Wetlands).
Vulnerable group	The inability of people to withstand or adapt to change due to characteristics of the group they are a part of. This report considers the following groups: socio-economically disadvantaged persons as identified by the Index of Relative Socio-Economic Advantage and Disadvantage, the elderly and very young, culturally and linguistically diverse people, people who need assistance with core activities such as self-care, movement and communication due to a severe or profound disability.

1. Introduction

1.1 Overview

1.1.1 Sydney Gateway and the project

Sydney Kingsford Smith Airport (Sydney Airport) and Port Botany are two of Australia's most important infrastructure assets, providing essential domestic and international connectivity for people and goods. Together they form a strategic centre, which is set to grow significantly over the next 20 years. To support this growth, employees, residents, visitors and businesses need reliable access to the airport and port, and efficient connections to Sydney's other strategic centres.

The NSW and Australian governments are making major investments in the transport network to achieve this vision. New road and freight rail options are being investigated to cater for the forecast growth in passengers and freight through Sydney Airport and Port Botany. Part of this solution is Sydney Gateway, which comprises the following road and rail projects:

- Sydney Gateway road project (the subject of this assessment)
- Botany Rail Duplication.

Sydney Gateway will expand and improve the road and freight rail networks to Sydney Airport and Port Botany to keep Sydney moving and growing. The Sydney Gateway road project forms part of the NSW Government's long-term strategy to invest in an integrated transport network and make journeys easier, safer and faster.

Roads and Maritime Services (Roads and Maritime) and Sydney Airport Corporation propose the Sydney Gateway road project (the project). It comprises new direct high capacity road connections linking the Sydney motorway network at St Peters interchange with Sydney Airport's terminals and beyond. It involves constructing and operating new and upgraded sections of road connecting to the airport terminals, four new bridges over Alexandra Canal, and other operational infrastructure and road connections.

The project and its location is shown in Figure 1-1.

1.1.2 Overview of approval requirements

The project is subject to approval under NSW and Commonwealth legislation. Parts of the project are located on Commonwealth-owned land leased to Sydney Airport. This is subject to the Commonwealth *Airports Act 1996* (the Airports Act). In accordance with the Airports Act, these parts of the project are deemed major airport development. A major development plan (MDP), approved by the Australian Minister for Infrastructure, Transport and Regional Development, is required before a major airport development can be undertaken at a leased airport.

Parts of the project located on other land are designated State significant infrastructure in accordance with the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). As State significant infrastructure, these parts of the project require approval from the NSW Minister for Planning and Public Spaces. An environmental impact statement (EIS) is required to support the application for approval for State significant infrastructure under the EP&A Act.

A combined EIS and preliminary draft MDP is being prepared to:

- Support the application for approval of the project in accordance with NSW and Commonwealth legislative requirements
- Address the environmental assessment requirements of the Secretary of the then Department of Planning and Environment (the SEARs), issued on 15 February 2019
- Address the MDP requirements defined by section 91 of the Airports Act.

This report was prepared on behalf of Roads and Maritime and Sydney Airport Corporation to support the combined EIS/preliminary draft MDP.

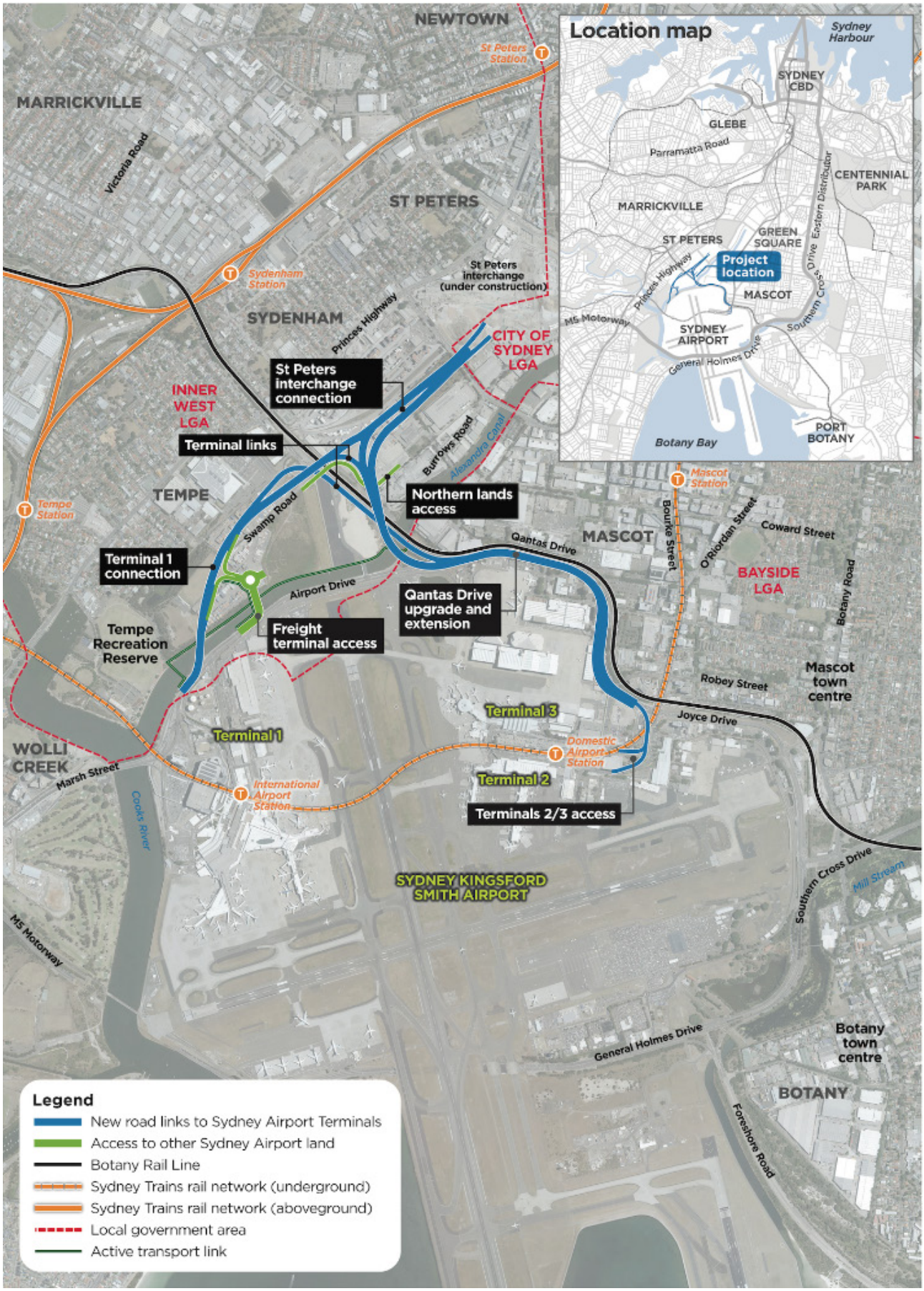


Figure 1-1 Project location

1.2 Purpose and scope of this report

The purpose of this report is to assess the potential socio-economic impacts from constructing and operating the project. This Socio-economic Impact Assessment (SEIA) addresses the relevant SEARs and the MDP requirements according to the Airports Act, as outlined in Table 1-1 and Table 1-2. The report:

- Identifies the socio-economic area of influence including local government areas (LGAs), suburbs, communities and community infrastructure likely to be affected by the project (referred to as the 'study area' – refer to section 3.2.2)
- Describes the existing socio-economic environment of the study area to establish a social baseline by which potential impacts can be predicted and assessed
- Predicts and assesses the potential socio-economic impacts and benefits of the project during construction and operation
- Identifies mitigation and management measures to avoid or minimise potential adverse impacts and maximise benefits to the stakeholders and communities.

Table 1-1 Secretary's Environmental Assessment Requirements relevant to this report

Secretary's environmental assessment requirements	Section where addressed in this report
6. Socio-economic, Land Use and Property – desired performance outcome *The proposal minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.* *The proposal minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.*	
1. The Proponent must assess social and economic impacts in accordance with the current guidelines.	Section 3.1 outlines the approach to the SEIA, including applicable guidelines that were used to inform the SEIA process.
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, and	Section 6.1 and 6.4 (construction) and section 7.1 and 7.4 (operation) assess the impacts on employment, economy and community infrastructure facilities and users. Refer to Technical Working Paper 12 – Business Impacts for assessment of impacts on businesses.
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.	Section 6.2, 6.3 and 6.4 (construction) and section 7.2, 7.3 and 7.4 (operation). Refer to EIS/preliminary draft MDP Chapter 19 – Land Use and Property for information about relevant statutory rights including personal and property rights. Refer to Technical Working Paper 12 – Business Impacts for assessment of property rights related to businesses.

Table 1-2 MDP requirements relevant to this assessment

MDP key issues	Requirements	Where addressed in this report
Airports Act 1996 (Cwlth), Part 5, Division 4, Section 91(1) (Contents of major development plan)		
Consistency with Master Plan	91(1) A Major development plan, or a draft of such a plan, must set out: (d) if a final master plan for the airport is in force—whether or not the development is consistent with the final master plan.	Section 6.6 (construction) and section 7.6 (operation).
	(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 development fits within the local planning schemes for commercial and retail development in the adjacent area	Section 6.1 (construction) and section 7.1 (operation).
Assessment of environmental impacts	(h) the airport-lessee company's assessment of the environmental impacts that might reasonably be expected to be associated with the development.	Section 6.2, 6.3 and 6.4 (construction) and section 7.2, 7.3 and 7.4 (operation).
Plans for dealing with environmental impacts	(j) the airport-lessee company's plans for dealing with the environmental impacts mentioned in paragraph (h) (including plans for ameliorating or preventing environmental impacts).	Section 9.

1.3 The project

1.3.1 Location

The project is located about eight kilometres south of Sydney's central business district and to the north of Sydney Airport on both sides of Alexandra Canal. The northern extent of the project is located at St Peters interchange, which is currently being constructed to the north of Canal Road in St Peters. The western extent of the project is located near the entrance to Sydney Airport Terminal 1 on Airport Drive, to the north of the Giovanni Brunetti Bridge and south-west of Link Road. The eastern extent of the project is located near the intersection of Joyce Drive, Qantas Drive, O'Riordan Street and Sir Reginald Ansett Drive.

The project is located mainly on government owned land in the suburbs of Tempe, St Peters and Mascot in the Inner West, City of Sydney and Bayside local government areas.

1.3.2 Key design features

The project provides a number of linked road connections to facilitate the movement of traffic between the Sydney motorway network, Sydney Airport Terminal 1 (Terminal 1) and Sydney Airport Terminals 2 and 3 (Terminals 2/3). The project would connect Terminal 1 and Terminals 2/3 with each other and with the Sydney motorway network. The project would also facilitate the movement of traffic towards Port Botany via General Holmes Drive. It would provide three main routes for traffic:

- Between the Sydney motorway network and Terminal 1, and towards M5 motorway and Princes Highway
- Between the Sydney motorway network and Terminals 2/3, and towards General Holmes Drive, Port Botany and Southern Cross Drive
- Between Terminal 1 and Terminals 2/3.

The key features of the project include:

- Road links to provide access between the Sydney motorway network and Sydney Airport's terminals, consisting of the following components:
  - St Peters interchange connection – a new elevated section of road extending from St Peters interchange to the Botany Rail Line, including an overpass over Canal Road
  - Terminal 1 connection – a new section of road connecting Terminal 1 with the St Peters interchange connection, including a bridge over Alexandra Canal and an overpass over the Botany Rail Line
  - Qantas Drive upgrade and extension – widening and upgrading Qantas Drive to connect Terminals 2/3 with the St Peters interchange connection, including a high-level bridge over Alexandra Canal
  - Terminal links – two new sections of road connecting Terminal 1 and Terminals 2/3, including a bridge over Alexandra Canal
  - Terminals 2/3 access – a new elevated viaduct and overpass connecting Terminals 2/3 with the upgraded Qantas Drive
- Road links to provide access to Sydney Airport land (Commonwealth land):
  - A new section of road and an overpass connecting Sydney Airport's northern lands either side of the Botany Rail line (the northern lands access)
  - New section of road, including a signalised intersection with the Terminal 1 connection and a bridge connecting Sydney Airport's existing and proposed freight facility either side of Alexandra Canal (the freight terminal access)
- An active transport link approximately 1.3 kilometres in length along the western side of Alexandra Canal to maintain connections between Sydney Airport, Mascot and the Sydney central business district
- Intersection upgrades or modifications
- Provision of operational ancillary infrastructure including maintenance bays, new and upgraded drainage infrastructure, signage and lighting, retaining walls, noise barriers, flood mitigation basin, utility works and landscaping.

1.3.3 Construction overview

A conceptual construction methodology has been developed based on the preliminary project design to be used as a basis for the environmental assessment process. Detailed construction planning, including programming, work methodologies, staging and work sequencing would be undertaken once construction contractors have been engaged.

1.3.3.1 Timing and work phases

Construction of the project would involve four main phases of work. The indicative construction activities within each phase are outlined below:

Table 1-3 Timing and work phases

Phase	Indicative construction activities
Enabling works	■ Construction of the temporary active transport link ■ Modification of various road intersections to facilitate main construction works.
Site establishment	■ Installing site fencing, hoarding and signage ■ Establishing construction compounds, work areas and site access routes.
Main construction works	■ Clearing/ trimming of vegetation ■ Removal (or partial removal) of a number of buildings and other existing infrastructure eg concrete hardstand areas, drainage infrastructure, sheds, advertising structures, containers, etc ■ Roadworks, including bridge and viaduct construction and drainage works ■ Utility works.
Finishing works	■ Erecting lighting, signage and street furniture, landscaping works and site demobilisation and rehabilitation in all areas.

Specific construction issues that will require careful planning and management and close co-ordination with relevant stakeholders include:

- Works within the prescribed airspace of Sydney Airport
- Works interfacing with the Botany Rail Line
- Piling in the vicinity of the T8 Airport and South line underground rail tunnels
- Works within the former Tempe Tip site and State Heritage Register listed Alexandra Canal which are subject to remediation orders and specific management plans
- Excavation, storage and handling of contaminated soils generally within the project site and contaminated groundwater from the Botany Sands aquifer.

Construction is planned to start in mid 2020, subject to approval of the project, and is expected to take about three and a half years to complete. Further information on construction is provided in Chapter 8 (Construction) of the EIS.

The project would include work undertaken during recommended standard hours as defined by the *Interim Construction Noise Guideline* (DECC, 2009):

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sundays and public holidays: no work.

It would also include work outside these hours (out-of-hours work) to minimise the potential for aviation and rail safety hazards.

1.3.3.2 Construction footprint

The land required to construct the project (the construction footprint) is shown on Figure 1-2. The construction footprint includes the land needed to construct the proposed roadways, bridges and ancillary infrastructure and land required for the proposed construction compounds. Utility works to support the project would generally occur within the construction footprint, however, some works (such as connections to existing infrastructure) may be required outside the footprint.

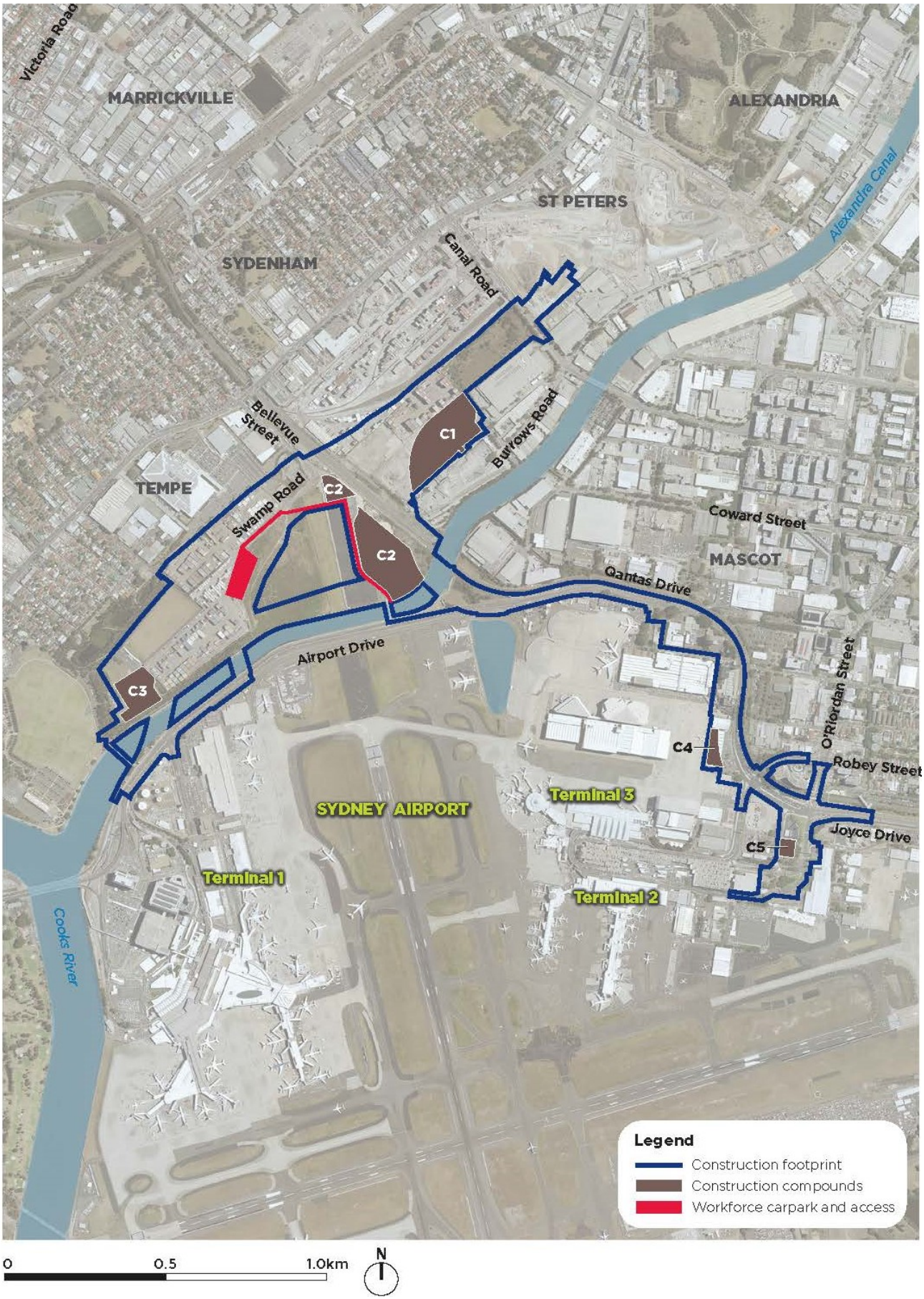


Figure 1-2 Construction footprint and facilities

1.3.3.3 Compounds, access and resources

Construction would be supported by five construction compounds located to support the main construction works (shown on Figure 1-2). Construction compounds would include site offices, staff amenities, storage and laydown areas, workshops and workforce parking areas.

Materials would be transported to and from work areas via construction haul routes, which have been selected to convey vehicles directly to the nearest arterial road.

The construction workforce requirements would vary over the construction period based on 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, starting around the fourth quarter of 2021. Either side of this peak, workforce numbers are expected to reduce to about two thirds.

1.4 Structure of this report

The structure of the report is outlined below:

- **Section 1 – Introduction** – provides an introduction to the report
- **Section 2 – Legislative and policy context** – describes the legislative and policy context for the assessment
- **Section 3 – Methodology –** describes the methodology for the assessment, including the relevant guidelines and principles
- **Section 4 – Existing environment** – describes the existing social environment of the project location and surrounds
- **Section 5 – Stakeholder consultation** – summarises the outcomes from Roads and Maritime consultation relevant to this assessment
- **Section 6 – Assessment of construction impacts** – assesses the socio-economic impacts during construction
- **Section 7 – Assessment of operation impacts** – assesses the socio-economic impacts during operation
- **Section 8 – Cumulative impacts** – assesses the cumulative socio-economic impacts with other projects in the area
- **Section 9 – Recommended mitigation and management measures** – provides recommended mitigation and management measures to address potential impacts
- **Section 10 – Conclusion** – provides a conclusion to the report.

1.5 Personnel

This SEIA was prepared by Lauren Harding, with a technical review undertaken by Dr Pallavi Mandke. Qualifications of all staff who worked on this SEIA are provided in Table 1-4 below.

Table 1-4 Staff qualifications

Name	Position/Role on project	Qualifications	Relevant experience
Dr Pallavi Mandke	National Technical Lead – Social Impact Assessment Technical Reviewer	PhD Social Development	20+ years
Lauren Harding	Senior Social Sustainability Consultant Lead Author	Master Social Science (Social Planning) BA Anthropology	10+ years
Carmen Lau	Social Sustainability Consultant Researcher and report author	Bachelor of Planning (Hons)	5+ years
Chloe Sullivan	Social Sustainability Consultant Researcher and report author	Master of Human Rights BA Anthropology	2 years

2. Legislative and policy context

A number of legislative and policy documents were reviewed to identify their relevance to this SEIA. The following sections summarise the relevant Commonwealth legislation, NSW legislation and local government policies.

2.1 Commonwealth legislation

Table 2-1 summarises the Commonwealth legislation and policies relevant to this SEIA.

Table 2-1 Commonwealth legislation and policies

Legislation and policy	Relevance to this SEIA
Airports Act 1996 (Cwlth) and associated regulations	The project site includes areas of Commonwealth-owned land leased by Sydney Airport Corporation. The Airports Act and associated regulations provide the assessment and approval process for development on Commonwealth-owned land, and land leased to Sydney Airport Corporation for the operation of Sydney Airport. Section 89 of the Airports Act specifies types of development that constitute 'major airport development'. Section 90 of the act determines that a MDP approved by the Australian Government Minister for Infrastructure and Transport is required before major airport development can be undertaken at a leased airport. The Airports Act and regulations are the statutory controls for ongoing regulation of development activities on Commonwealth-owned land leased from the Australian Government for the operation of Sydney Airport. Section 70 of the Airports Act requires there to be a final master plan for the airport that has been approved by the Australian Government Minister for Infrastructure and Transport. Part 5 of the Act also requires that each airport develop an environment strategy which is included in its master plan. Once approved, Sydney Airport and all persons who carry out activities at the airport are obliged to take all reasonable steps to ensure compliance with the environment strategy.
Airports (Environment Protection) Regulations 1997 (Cwlth)	The objective of the *Airports (Environment Protection) Regulations 1997* (Airports Regulations) is to establish a system of regulation for activities at airports that generate or have potential to generate pollution or excessive noise. The Airports Regulations impose a general duty to prevent or minimise environmental pollution and have as one of their objects the promotion of improved environmental management practices at Commonwealth-leased airports. The Airports Regulations contain detailed provisions setting out: ▪ Definitions, acceptable limits and objectives for air, water and soil pollution, and offensive noise ▪ General duties to prevent or minimise pollution, preserve significant habitat and cultural areas, and to prevent offensive noise ▪ Monitoring and reporting requirements for existing pollution. Part 2 of the Airports Regulations defines pollution in relation to air (including odour), water, soil and offensive noise. Schedules 1–4 of the Airports Regulations provide the acceptable limits of pollutants and offensive noise, which, in conjunction with other national environment protection measures, provide the system of environmental regulation at airports. Under the regulations, air pollution occurs when it results in unreasonable inconvenience to a person. Offensive noise occurs when it intrudes on individual, community or commercial amenity including sensitive receptors. Relevant to this SEIA is the assessment of air quality and noise level change and the resulting social impacts on sensitive receptors, such as dwellings, hotels, child care, hospital and places of worship.

Legislation and policy	Relevance to this SEIA
Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)	The *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) is administered by the Australian Government Department of the Environment and Energy and provides a legal framework to protect and manage nationally important flora, fauna, ecological communities and heritage places defined as 'matters of national environmental significance'. Under the EPBC Act, proposed actions (ie activities or projects) with the potential to significantly impact matters protected by the EPBC Act must be referred to the Australian Government Minister for the Environment to determine whether they are controlled actions, requiring approval from the Minister. The following matters are defined as protected matters by Part 3 of the EPBC Act: ■ Matters of national environmental significance ■ The environment of Commonwealth land ■ The environment in general if an action is being carried out by an Australian Government agency. The project has the potential to affect the environment of Commonwealth owned land. The Minister may determine, as part of the provision of advice on the MDP (as required under section 160(1)) that the project is a controlled action requiring approval. Section 160(1) requires an agency of the Commonwealth to authorise the adoption or implementation of a MDP. Therefore, as part of the assessment of the draft MDP, the Department of Infrastructure, Regional Development and Cities will, on behalf of the Minister for Infrastructure and Transport, seek advice from the Australian Minister for the Environment under section 160(1) of the EPBC Act.
Sydney Airport Master Plan 2039	As part of the planning framework established by the Airports Act, airport operators are required to prepare a master plan for the coordinated development of their airport. *Sydney Airport Master Plan 2039* outlines the strategic direction for Sydney Airport's operations and development over the next 20 years. It acknowledges that the continued growth of Sydney Airport is vital to achieving local, state and national employment, tourism and development objectives. In accordance with the requirements of the Airports Act*, Sydney Airport Master Plan 2039*: ■ Establishes the strategic direction for efficient and economic development at Sydney Airport over the planning period ■ Provides for the development of additional uses of the Sydney Airport site ■ Indicates to the public the intended uses of the Sydney Airport site ■ Reduces potential conflicts between uses of the Sydney Airport site, to ensure that uses of the site are compatible with the areas surrounding the airport ■ Ensures that operations at Sydney Airport are undertaken in accordance with relevant environmental legislation and standards ■ Establishes a framework for assessing compliance with relevant environmental legislation and standards ■ Promotes continual improvement of environmental management at Sydney Airport. The *Sydney Airport Master Plan 2039* states that development and urbanisation in areas around the airport coupled with passenger growth has increased demand on road infrastructure. The *Sydney Airport Master Plan 2039* aims to improve road network performance in and around the airport to enhance connectivity for airport users and the local community, which is directly relevant to this SEIA.

Legislation and policy	Relevance to this SEIA
Sydney Airport Environment Strategy 2019–2024	The *Sydney Airport Environment Strategy 2019–2024*, which forms part of *Sydney Airport Master Plan 2039*, provides strategic direction for the environmental performance and management of Sydney Airport for the five year period between 2019 and 2024. The purpose of *Sydney Airport Environment Strategy 2019–2024* is to: ■ Establish a framework for assessing compliance and ensuring that all operations at Sydney Airport are undertaken in accordance with relevant environmental legislation and standards ■ Promote the continual improvement of environmental management and performance at Sydney Airport and build on the achievements and goals of previous strategies ■ Realise improvements in environmental sustainability by minimising Sydney Airport's environmental footprint and working towards a more efficient and resilient airport. One of the objectives of the *Sydney Airport Environment Strategy 2019–2024* is to minimise traffic-related environmental impacts such as air and noise emissions on local communities. Three main sources of traffic in and around the airport include freight travelling to and from Port Botany, vehicles associated with the daily operation of the airport (passengers and their family/friends, freight, and workers) and commuter and residential traffic. Relevant to this SEIA are the changes to access in and around the airport and the resulting potential impacts on airport passengers and local communities.
Disability Discrimination Act 1992 (Cwlth)	The *Disability Discrimination Act 1992* (Cwlth) (DDA) is designed to protect people with disability from discrimination. This SEIA considers the changes to the existing environment that may affect accessibility.
Infrastructure Priority List (Infrastructure Australia, 2019)	The project is categorised as a high priority initiative in the Infrastructure Priority List. The project would aid in improving connectivity at the State level as well as reducing urban congestion through eastern Sydney and other trade corridors. The document states that road congestion in and around Sydney Airport and Port Botany causes significant delays to road users, which affects the access of both airport passengers and local communities. Relevant to this SEIA includes the changes to access and the resulting socio-economic impacts from the Sydney Gateway road project on these road users.
Australian Infrastructure Plan (Infrastructure Australia, 2016)	The *Australian Infrastructure Plan* makes recommendations about Australia's national infrastructure and connectivity. One of the challenges faced in Australian cities is population growth with increased demand on transport infrastructure resulting in delays and congestion to road users. Increased travel times for commuters results in lost productivity in work and social life. Recommendations made in the Plan highlight the need for increased efficiency and connectivity between Sydney Airport and Port Botany. Infrastructure improvements can create opportunities for economic growth and development, and connect people to jobs, services and social opportunities.

2.2 NSW legislation and policies

Table 2-2 summarises the NSW legislation and policies relevant to this SEIA.

Table 2-2 NSW legislation and policies

Legislation and policy	Relevance to this SEIA
Environmental Planning and Assessment Act 1979 (EP&A Act) (NSW)	Roads and Maritime is seeking approval, as State significant infrastructure, for those parts of the project subject to the EP&A Act under Part 5, Division 5.2 of the EP&A Act. Clause 94 of *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) applies to development for the purpose of a road or road infrastructure facilities and provides that these types of works are permissible without consent if being undertaken by or on behalf of a public authority. The project is for the purpose of a 'road' and 'road infrastructure facilities' under ISEPP. Roads and Maritime has formed the opinion that the project is likely to significantly affect the environment and would require the preparation of an EIS. On this basis, pursuant to Section 5.12(2) of the EP&A Act, the project is declared to be State significant infrastructure under Clause 14 of State Environment Planning Policy (State and Regional Development) 2011. The project requires approval from the NSW Minister for Planning and Public Spaces under Section 5.14 of the EP&A Act. The SEARs for the project were issued on 15 February 2019. The SEARs identify the assessment requirements for the project. A copy of the relevant SEARs for this SEIA, and where they have been addressed in this report, is provided in section 1.
Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people (Greater Sydney Commission, 2018)	Sydney Airport and Port Botany are located in the Eastern region of Greater Sydney and are highlighted as key trade centres within the eastern economic corridor. The Plan proposes to extend these existing trade centres out to Greater Sydney through dedicated road and rail trade networks. Sydney Gateway road project would improve community accessibility between well-established economic precincts along and near the corridor, as well as contribute to the integrated transport network connecting Sydney's strategic centres. This would increase community access to job opportunities and productivity, as well as provide access to housing and recreation activities.
Eastern City District Plan – connecting communities (Greater Sydney Commission, 2018b)	The *Eastern City District Plan* emphasises the importance of Sydney Airport and Port Botany within the eastern economic corridor. The plan identifies growing the international trade gateways as a priority to create conditions for a stronger economy. The plan states that the planning and design of communities should take a balanced approach to minimising the negative impacts of freight movements and support more efficient freight movements.
Future Transport Strategy 2056 (Transport for NSW, 2018)	The Strategy highlights the importance of the Sydney transport network to a productive economy, in particular by linking road and rail to form part of an integrated and connected network across the Greater Sydney region. Transport is considered an enabler of economic and social activity. The project is a key part of this Strategy and will increase the efficiency and capacity of these intermodal networks, and as such enhance long term economic and social outcomes.
NSW Freight and Ports Plan 2018–2023 (Transport for NSW, 2018)	The Plan highlights Sydney Airport and Port Botany as key centres for NSW's trade and economy. Key actions of the plan include improving safety and efficiency, improving travel times and reliability, and boosting the efficiency of trade gateways to support producers, operators, customers and communities. Planning for freight and logistics uses and infrastructure will need to balance the needs of the freight industry with local communities, including aims to improve community amenity and ways to minimise negative impacts on local communities.

2.3 Local government policies

Table 2-3 summarises the plans and policies for each LGA relevant to this SEIA.

Table 2-3 Local government plans and policies

LGA	Policy	Relevance to this SEIA
Bayside Council	*Community Strategic Plan 2018–2030*	The Plan highlights that maintaining the industrial centres of Port Botany and Sydney Airport are important for the future of the LGA. Ease of transport connectivity, both within the LGA and externally will be a primary focus for the council, who will work with Transport for NSW to make transport accessible for workers and residents of the area. The Plan states that efficient transport will attract diverse business and skilled employees. Growth in services to the local community will generate social benefits such as increased employment, a thriving community and livelihoods.
Bayside Council	*Mascot Station Town Centre Precinct Masterplan*	The Mascot Station Town Centre Precinct has been an important focus for Bayside Council (and the former Botany Bay Council) since 2012. The Masterplan determines the residential and employment uses for land across the Mascot suburb centre. The Plan also determines the suitable provision of public open space, transport and built form outcomes. This Plan has been essential to the ongoing development of Mascot Station precinct, the local amenity and character of the area, and the community infrastructure located within the suburb. These aspects of the existing environment are described in this SEIA.
Bayside Council	*Delivery Program 2018–2021 and Operational Plan 2018–2019*	The Plan highlights the significant employment opportunities and potential for economic development through the Port Botany and Sydney Airport corridor. The Plan also states that the council remains an advocate for the improvement of traffic issues in the local area, in particular to do with freight movements associated with Port Botany and Sydney Airport. These issues are considered as part of this SEIA.
Former City of Botany Bay (now Bayside Council)	*The Botany Bay Planning Strategy 2031* (2009)	The Planning Strategy identifies principles relevant to this SEIA, including: ■ Enhancing existing urban character, improving amenity and protecting areas of cultural and environmental significance ■ Containing and intensifying Sydney Airport and Port related activities around these economic nodes ■ Separating regional and local traffic, rail and road movements. Despite the Botany Bay Council merging with the former Rockdale Council in 2016, this Strategy remains relevant to the future direction of the LGA, in particular the area adjacent to the project.
Inner West Council	*Our Inner West 2036 – Community Strategic Plan* (2018)	The Plan highlights the impact that state infrastructure projects have already had on the landscape of the LGA. The council notes that these major infrastructure projects highlighted the need for sustainable, planned development and urban renewal that is designed to make life better for all of the community. The Plan notes that traffic congestion is an issue for people living and working adjacent to main roads, including the Princes Highway. Connectivity throughout the LGA is a key strategy identified in the Plan. This includes ongoing support for public transport, pedestrian and cycling paths, and reducing traffic congestion on local roads. These issues are considered as part of this SEIA.
Inner West Council	*Recreation Needs Study – A Healthier Inner West* (2018b)	This study assesses the current and future recreation needs for the Inner West community. It includes analysis of the current use and capacity of the Tempe Recreation Reserve, which is adjacent to the Tempe Lands that would be affected by the Sydney Gateway road project. According to the study, Tempe Recreation Reserve is highlighted as a potential space for the council to further develop active and recreation facilities. It also reports that currently the reserve's sporting fields are utilised at around 115% capacity on average, meaning that it is in use for more hours than its denoted opening times. The study's primary recommendations are to enhance the use and capacity of existing council open space areas to meet community needs.

3. Methodology

3.1 Approach to the SEIA

This SEIA has been prepared in accordance with a comprehensive assessment under the *Environmental Impact Assessment Practice Note: Socio-economic assessment* (Roads and Maritime Services, 2013), and the *Significant impact guidelines 1.2 Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* (Department of Sustainability, Environment, Water and Communities, 2013). It has also given consideration to the *Social Impact Assessment Guidelines for State significant mining, petroleum production, and extractive industry development* (NSW Department of Planning and Environment, 2017) and the social impact assessment principles and methods endorsed by the International Association for Impact Assessment (Vanclay, 2003 and Vanclay F, et al, 2015).

3.1.1 Defining socio-economic impacts

As per Roads and Maritime's *Environmental Impact Assessment Practice Note: Socio-economic assessment* (2013), and the International Association for Impact Assessment's *International Principles for Social Impact Assessment* (Vanclay, F. 2003), socio-economic impacts can involve direct or indirect, permanent or temporary changes including to:

- How people live, work, play and interact with one another on a daily basis
- How people move about their area for personal or business purposes, including by vehicle, walking, cycling or public transport
- People's culture, including shared beliefs, customs and values, attachment to land and places, and sense of belonging
- People's community, including the level of community cohesion, local character and sense of place
- People's access to and use of community services, facilities and social networks
- Health and wellbeing including stress levels, happiness and sense of security
- Personal and property rights such as property, housing or business
- People's personal or business incomes and expenses
- Employment, including location, availability and types of employment and labour force availability
- People's environment, including the quality of air and water people use, the level of hazard or risk, dust and noise they are exposed to
- Fears and aspirations including perceptions about safety and their fears about, and aspirations for, the future of their community.

The types of socio-economic impacts that may be experienced as a result of the Sydney Gateway road project are described in section 3.2.5.

3.2 Steps to prepare the SEIA

The following steps were undertaken to prepare the SEIA:

- Reviewing the project description
- Determining the study area
- Preparing a socio-economic baseline study
- Reviewing outcomes of relevant stakeholder consultation activities
- Reviewing the findings of other relevant technical studies prepared for the combined EIS/preliminary draft MDP
- Identifying, describing and assessing impacts
- Developing impact mitigation and management measures.

3.2.1 Reviewing the project description

A thorough review of the project description was undertaken to determine the scope and extent of the potential socio-economic impacts. The review included understanding the project design and activities to be undertaken during pre-construction, construction and operation, and the potential for cumulative impacts, with reference to potential changes to local amenity, access and connectivity, community infrastructure facilities and community values.

3.2.2 Determining the study area

The project site and its surrounds were analysed to identify the study area. The communities that live and work in this area and those who visit this area are considered most likely to be impacted by the project. It is acknowledged that socio-economic impacts are not contained within statistical or geographical boundaries, because people travel across such boundaries regularly as part of their lives, hence to include a wider area that maybe influenced by the project, the study area includes a number of components as outlined below:

- The regional study area, which provides an overview of the broader population and network within which the project is located. The regional study area for this SEIA is the Sydney – City and Inner South Statistical Area Level 4 (SA4) within which the project is located. This level has been selected to provide an overview of the regional community which may experience indirect socio-economic benefits and effects of the project.

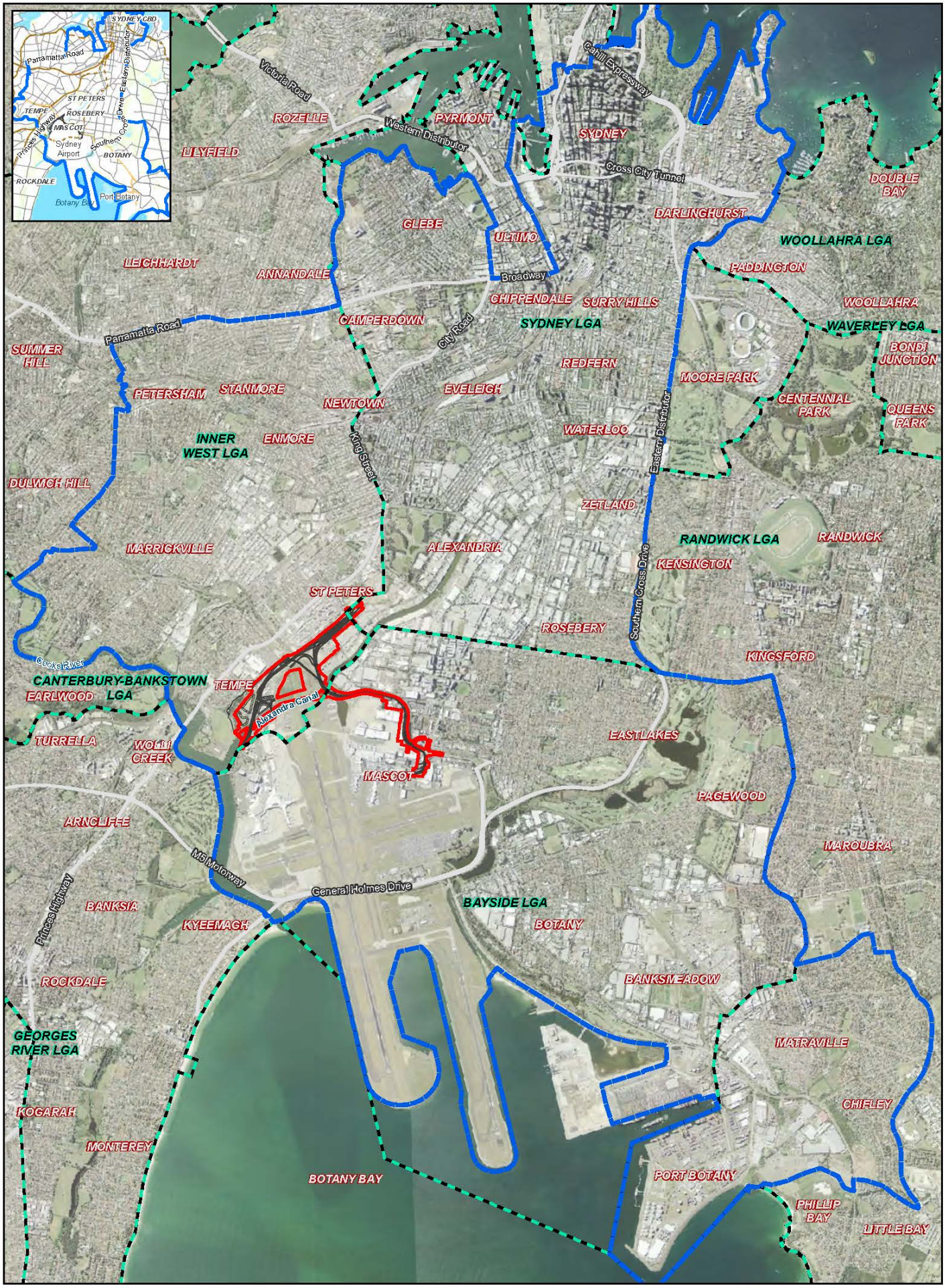
  The regional study area includes:

  - City of Sydney LGA
  - South-eastern portion of Inner West LGA
  - Eastern half of the Bayside LGA
  - Port Botany and the southern part of Matraville suburb, both located in the City of Randwick

- The local study area which comprises the following statistical suburb areas intersected by the project footprint:

  - Mascot
  - Tempe
  - St Peters.

The local study area is shown in Figure 3-2. Figure 3-2 also identifies the project site, suburb, LGA boundaries, Commonwealth land and the construction footprint.



0 600 1,200 m

Scale 1:40,000

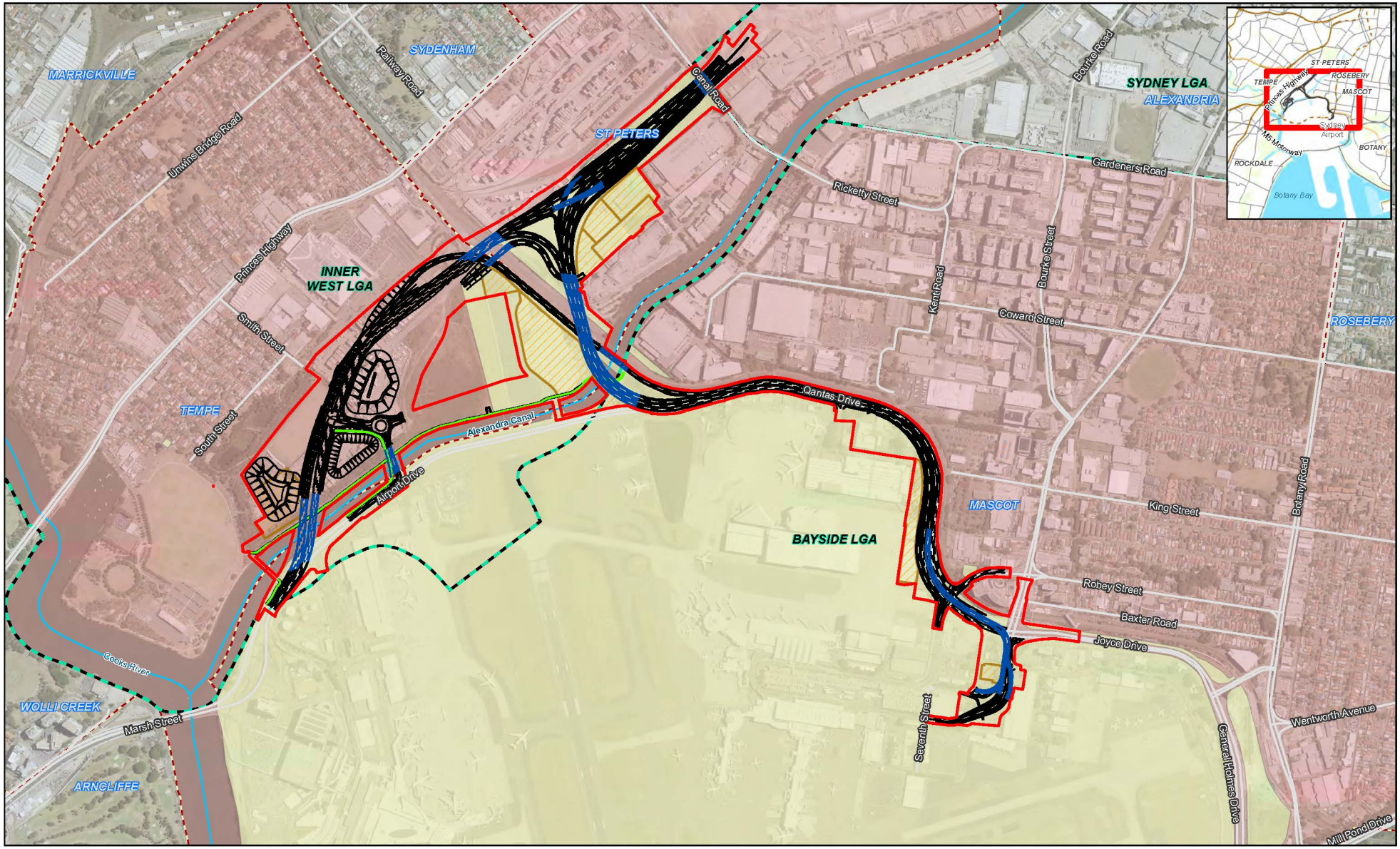
Author: David Naiken
Date: 26/04/2019
Map no: PS109315_GIS_271_A1

Legend

- Major Roads
- Project Alignment
- Local Government Area
- Project Site Boundary
- Sydney - City and Inner South Boundary

Figure 3-1

Regional Study Area Map



0 200 400 m

Scale 1:10,000

Author: David Naiken
Date: 25/07/2019
Map no: PS109315_GIS_272_A4

Legend

- Major Roads
- **EIS Design - Stage 1/3**
  - Design
  - Lanemarking
  - Shared Path
  - Elevated Design (Bridge)
- Suburb
- Local Government Area
- Sydney Airport (Commonwealth) Land Boundaries
- Local Study Area
- Construction Compound
- Project Site Boundary

Figure 3-2

Study Area Map

3.2.3 Preparing the socio-economic baseline study

The baseline study is required to understand the existing socio-economic conditions of the study area that may be potentially affected by the project. This study provides the basis for predicting and assessing the likely socio-economic impacts of the project. The baseline is described with reference to:

- An overview of the regional study area including description of the: existing amenity of the area, economic and business centres, population characteristics, traffic, transport and active transport connectivity, and community infrastructure
- A description of the local study area, including an overview of town centre and employment hubs, local character and amenity, and active transport networks
- The demographic profile of the local study area (Mascot, Tempe and St Peters) compared to the relevant LGA and Greater Sydney including: population, age profile, cultural diversity, income and employment, levels of social and economic disadvantage and need for assistance with core daily activities
- Community values including factors such as local amenity and character, access and connectivity, and community cohesion
- Community infrastructure facilities including both physical infrastructure (such as community facilities) and non-physical infrastructure (such as services, programs and networks) that helps individuals and communities meet their social needs and enhance community wellbeing, or have been identified as having social value or importance.

It is noted that Bayside LGA was formed in September 2016 following the amalgamation of the former Rockdale and Botany Bay LGAs. As this amalgamation occurred after the 2016 Census in August of that year, demographic data for Bayside LGA was not available from the Australian Bureau of Statistics at the time that this report was prepared. As a result, the demographic data for the two former LGAs was aggregated for the purpose of the social baseline study. Inner West Council was formed early in 2016 and was included in the 2016 Census, therefore no amalgamation of data was required for this LGA.

The local study area includes the suburbs where the project features are located and where most of the socio-economic impacts are expected to occur. A profile of the local study area is presented in section 4.3. In addition, a small number of residential properties in Sydenham are likely to experience some amenity related socio-economic impacts, and as such, the profile of the Inner West LGA is considered representative of the suburb of Sydenham for the purpose of this impact assessment. It is also noted that only a small section of the project site (St Peters Interchange connection) would be located on currently vacant land to the north of Canal Road in St Peters within the City of Sydney LGA. As a result, the demographic profile for the City of Sydney LGA has not been provided as part of the local study area. It is considered that any potentially affected residents would be captured as part of the demographic profile for St Peters suburb. A high level overview of the City of Sydney has been provided as part of the regional study area.

Community infrastructure facilities within 500 metres of the project site have been identified using online searches and are limited to those identified on Google maps. Within this report, the following community infrastructure facilities have been included: education and child care facilities, aged care, accommodation facilities, health centres and services, disability services, youth and community spaces, religious facilities, indoor and outdoor sport and recreation, and passive open space such as parks and gardens. This SEIA has assessed the potential socio-economic impacts to staff and users of community infrastructure facilities only.

A site visit of the study area was conducted by the SEIA team on 16 October 2018 to confirm the residential and community uses within proximity of the project.

Information for the social baseline study was sourced from:

- Australian Bureau of Statistics Census 2016 (ABS 2016 Census)
- Web sources such as Profile .id and the relevant council websites
- Department of Planning and Environment population projections (2016)
- Relevant council community plans, strategies and studies
- GIS, Google maps and images.

Specific reference to desktop information sources can be found in section 11.

3.2.4 Reviewing outcomes of relevant stakeholder consultation activities

The outcomes of relevant stakeholder consultations undertaken for the combined EIS/preliminary draft MDP by Roads and Maritime have been reviewed and incorporated into this SEIA where relevant. This includes consultation that was conducted with businesses to inform Technical Working Paper 12 – Business Impacts. Chapter 4 of the EIS details the activities undertaken, stakeholders engaged and key issues raised. Section 5 of this SEIA presents a summary of activities and outcomes relevant to this assessment.

3.2.5 Impact identification and assessment

This SEIA identifies and assesses the potential socio-economic benefits and impacts of the Sydney Gateway road project. Potential impacts have been identified and described based on an initial scoping of potential socio-economic issues, results of stakeholder consultation undertaken by Roads and Maritime and a review of other technical studies and chapters prepared for the combined EIS/preliminary draft MDP including:

- EIS/draft MDP Chapter 19 – Land Use and Property
- Technical Working Paper 1 – Transport and Traffic
- Technical Working Paper 2 – Noise and Vibration
- Technical Working Paper 4 – Air Quality
- Technical Working Paper 9 – Non-Aboriginal Heritage or Statement of Heritage Impact
- Technical Working Paper 12 – Business Impacts
- Technical Working Paper 13 – Urban Design and Visual Impacts
- Technical Working Paper 14 – Biodiversity Development Assessment Report
- Technical Working Paper 15 – Human Health.

Socio-economic impacts as a result of construction and operation of the project have been assessed. In addition, cumulative impacts have been assessed, taking into account other proposals that have been approved but where construction has not commenced, projects that have commenced construction and projects that have been recently completed in the surrounding area. The potential impacts have been presented through a summary of key findings followed by a detailed assessment. Within the detailed assessment, a summary of the construction and operation impacts from the project only on Commonwealth land and consistency with the *Sydney Airport Master Plan 2019* and *Sydney Airport Environment Strategy 2019–2039* has been provided.

The social impacts have been categorised based on the *Environmental Impact Assessment Practice Note: Socio-economic assessment* (Roads and Maritime Services, 2013). For this SEIA, the matters to be considered according to the Practice Note have been grouped into categories to ensure they are relevant to the nature of the project. The social impact categories are outlined in Table 3-1.

Table 3-1 Social impact categories

Social impact category	Matters to be considered
Economy, businesses and employment	High-level benefits and impacts on the local and regional economy including business development, freight efficiency and employment opportunities. Social implications of impacts to businesses resulting from changes to access and amenity, and land requirements for the project. This includes how business owners, employees and customers are affected by these changes. Social implications of changes to job availability and employment resulting from impacts on businesses
Amenity and community values	Changes to the acoustic, air quality or visual environment as a result of the project. Changes to amenity can impact people's way of life, and what people value about their community. This has considered the social impacts on residents, general community members as well as users of accommodation facilities. Social impacts associated with impacts on utilities and services are also considered.

Social impact category	Matters to be considered
Access and connectivity	Changes to how people move about an area for personal or business purposes. Changes to access can impact people's way of life, access to and use of community services, facilities and social networks, community cohesion, and perceptions about safety.
Community infrastructure	Changes that relate to community infrastructure facilities in the study area, including changes to the types or availability of community services and facilities to users, and changes to access and amenity that may affect the function of the facility. This includes changes to community infrastructure resulting from property acquisition. This also considers changes to community wellbeing or social cohesion of the area as a result of impacts on community infrastructure and users.

The assessment of impacts considers the level of sensitivity of receptors and the magnitude of the proposed changes based on the information available at the time, research undertaken to prepare this SEIA, other technical studies and review of consultation outcomes undertaken by Roads and Maritime.

For negative impacts, sensitivity refers to the qualities of the receptor which influence its vulnerability to change and capacity to adapt. In this context, the receptor may include the environmental characteristics, communities, businesses, business clusters, social infrastructure or residences. Table 3-2 describes the levels of sensitivity for negative impacts.

Table 3-2 Level of sensitivity

Sensitivity	Example
Negligible	No vulnerability and able to absorb or adapt to change
Low	Minimal areas of vulnerabilities and a high ability to absorb or adapt to change
Moderate	A number of vulnerabilities but retains some ability to absorb or adapt to change
High	Multiple vulnerabilities and/or very little capacity to absorb or adapt to change

Magnitude refers to the scale, duration, intensity and scope of the project including how it would be constructed and operated. Qualities of magnitude include, but are not limited to:

- Scale and intensity (the types of works, operational uses and built form etc)
- Spatial extent (eg the geographical area affected, which may be local, suburb, regional, State, International or to community groups etc)
- Duration (short, medium or long-term, hours of works, frequency, reversibility etc).

The levels of magnitude are set out in Table 3-3.

Table 3-3 Level of magnitude

Magnitude	Example
Negligible	No discernible positive or negative changes caused by the impact. Change from the baseline remains within the range commonly experienced by receptors.
Low	A discernible change from baseline conditions. The tendency is that the impact is on a small proportion of receptors over a limited geographical area and mainly within the vicinity of the project. The impact may be short term or some impacts may extend over the life of the proposal.
Moderate	A clearly noticeable difference from baseline conditions. The tendency is that the impact is on a small to large proportion of receptors and may be over an area beyond the vicinity of the project. The duration may be short term to medium or some impacts may extend over the life of the project.
High	A change that dominates over existing baseline conditions. The change is widespread or persists over many years or is effectively permanent.

Table 3-4 is used to assess the level of significance of the potential impacts. This is done by combining the level of sensitivity and magnitude.

Table 3-4 Assessing the level of significance

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
	Low	Moderate	Moderate-Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Positive impacts are discussed but not given a level of significance.

The level of impact within this SEIA has considered the implementation of recommended mitigation and management measures as outlined in section 9 and those identified in other relevant Technical Working Papers prepared for the EIS as described in section 3.2.6.

Potential impacts to Commonwealth land have been assessed using the *Significant impact guidelines 1.2 Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* (Department of Sustainability, Environment, Water and Communities, 2013). The guidelines assess the severity of an impact, based on intensity, scale, duration and frequency. The level of severity is based on the following criteria:

- Severe: Severe impacts generally have two or more of the following characteristics: permanent/irreversible; medium-large scale; moderate-high intensity
- Moderate: Moderate impacts generally have two or more of the following characteristics: medium-long term; small-medium scale; moderate intensity
- Minor: Minor impacts generally have two or more of the following characteristics: short term/ reversible; small-scale/localised; low intensity.

The potential changes resulting from the project must then be considered in the context of the environment and whether the change is likely to have an impact on sensitive or valuable components of the environment. Positive impacts are qualitatively assessed and not subject to the criteria.

The level of significance is then determined, using guidance questions associated with people and communities to determine if there is a chance or possibility that the project would:

- Substantially increase demand for, or reduce the availability of, community services or infrastructure which have direct or indirect impacts on the environment, including water supply, power supply, roads, waste disposal, and housing. For the purpose of this SEIA, impacts on roads are discussed in terms of impacts on access and connectivity. Water supply, power supply and waste disposal are discussed as utilities
- Affect the health, safety, welfare or quality of life of the members of a community, through factors such as noise and air quality (odours, fumes, smoke or other pollutants). Noise and air quality are discussed as aspects of amenity and character in this SEIA
- Cause physical dislocation of individuals or communities. Note that this SEIA refers to relocation as opposed to physical dislocation
- Substantially change or diminish cultural identity, social organisation or community resources. Social organisation and community resources form part of the assessment of impacts to community infrastructure.

If the answer is yes to any guidance questions related to the points outlined above, it is expected that the project would have a significant impact on the environment.

The assessment to impacts on Commonwealth land are described in sections 6.6 and 7.6.

3.2.6 Developing impact mitigation and management measures

Specific mitigation and management measures developed to avoid or minimise the socio-economic impacts are identified in section 0. These were formulated based on the findings of the socio-economic baseline study, results of stakeholder consultation undertaken by Roads and Maritime and the outcomes of the impact assessment.

In developing the mitigation and management measures, other technical studies from the combined EIS/preliminary draft MDP have been considered with regard to the effect of specific mitigation measures identified in those studies which contribute to mitigating potential socioeconomic impacts identified in this report. These measures can be found in the technical components of the combined EIS/preliminary draft MDP outlined in section 3.2.5.

3.2.7 Limitations and assumptions

This report should be read with the following qualifications:

- This assessment was undertaken at a point in time, and the findings reflect existing conditions within the study area at the time this report was prepared and information drawn from the ABS Census 2016
- As the proponent Roads and Maritime maintained ownership of the project's stakeholder relationships. Therefore, stakeholder consultation inputs into the SEIA were based on the outcomes of community and stakeholder engagement activities undertaken by Roads and Maritime and as provided to GHD. Outcomes of engagement activities are based on stakeholder views at the time of consultation undertaken by Roads and Maritime
- The assessment of socio-economic impact is based on project information, outcomes of Roads and Maritime community and stakeholder engagement activities (discussed in section 5) and findings of other technical studies listed in section 3.2.5 available at the time of preparation of the SEIA. It is also based on the assumption that mitigation measures recommended in other technical studies will be implemented.

4. Existing environment

4.1 Summary of key findings

The baseline has provided an overview of the existing socio-economic environment within the regional and local study areas. A summary of key findings from the existing environment is provided below.

- The regional study area is largely influenced by its proximity to both Sydney CBD in the north, and Sydney Airport and Port Botany infrastructure in the south. Residential areas in the region are generally characterised by a mix of higher density living in and around the CBD and town centres, and lower density dwellings in suburban areas near the airport and port. The amenity and character of these suburban areas are influenced by existing noise, air quality and visual effects from the nearby airport and port infrastructure. The region also features large parks, Botany and Tempe Wetlands and local waterways. A number of roads in the region provide important connectivity for commuter traffic, business and industry related traffic, freight and airport-related activity, and community access to destinations around the region as well as to other parts of Greater Sydney. These include the M5 Motorway, Princes Highway and General Holmes Drive. The regional study area includes key employment areas of Sydney CBD to the north, and Sydney Airport and Port Botany to the south, which attract workers from across Greater Sydney. Sydney Airport and Port Botany are also regionally significant due to their role in the region's trade network
- The local study area consists of the suburbs intersected by the project, including Mascot, Tempe and St Peters. The suburbs all feature a mix of residential, commercial and industrial uses. The interface between residential and industrial areas gives the area a unique character, which is valued by the local community. Residential areas in each suburb have varying degrees of exposure to existing amenity effects of the airport and port depending on proximity. The suburbs of Tempe and St Peters do not have their own town centres, making connectivity to neighbouring suburbs important for access to community infrastructure and a key value of these communities
- Mascot is located in Bayside LGA. The area has experienced an increase in high-density development in recent years, particularly in areas close to Sydney Airport and Mascot Train Station. Mascot's local roads currently experience large volumes of traffic. Local town centres are located along Botany Road near King Street and around Mascot train station where the new Mascot Station precinct is under development. A number of pocket parks are located throughout the suburb, including Coleman Reserve which is adjacent to the project site. There are a number of dedicated industrial precincts through the suburb which provide employment opportunities for local and regional workers. The residential population has large proportions of couples with children and culturally and linguistically diverse people
- Tempe is located in Inner West LGA. The Princes Highway bisects the suburb, providing the majority of retail and commercial opportunities for residents. The majority of residential properties in Tempe are located to the west of the Princes Highway, with a small portion to the east known as east Tempe. Located adjacent to east Tempe are Tempe Lands (including an off-leash dog exercise park and Tempe Golf Driving Range and Academy) and Tempe Recreation Reserve. The reserve caters to a range of active and passive recreational users, and provides access to the Cooks River for water-based recreation activities. The residential population includes large proportions of vulnerable residents including couples and single parents with children, people with a need for assistance, and culturally and linguistically diverse people. East Tempe residents are also likely to be affected by construction of WestConnex New M5 project
- St Peters is located within the Inner West and City of Sydney LGAs. The suburb is divided by the Princes Highway, with residential properties mainly located to the north of the Princes Highway. Converted industrial precincts off Mary Street, Unwins Bridge Road and the Princes Highway likely provide the largest opportunity for local employment. While St Peters does not have large proportions of residents from vulnerable groups, it is likely there are vulnerable residents living in the suburb. Residents of St Peters are also likely to be affected by construction of the St Peters Interchange which is part of the WestConnex New M5 project.

4.2 Overview of the regional study area

As described in section 3.2.2, within the regional study area, the project site is mainly located across the Inner West and Bayside LGAs with a small part within the City of Sydney LGA. Within the vicinity of the project site are Sydney Airport and Port Botany infrastructure, and the industries which support their operation. This section provides an overview of these features, the way they integrate within the suburb and regional network, and how they influence the characteristics of the region.

4.2.1 Amenity and character of the regional study area

The amenity and character of the regional study area is influenced by a mix of established, higher density residential areas throughout the inner city, Sydney CBD and industrial areas with lower density residential areas in the southern part of the regional study area. The CBD's cityscape is a dominating feature in the visual landscape of the regional study area.

Within the southern part of the regional area where the project site is located, the amenity and character are influenced by Sydney Airport and Port Botany infrastructure, including aeroplanes, freight containers, and crane infrastructure visible from many parts of the region. The industries, factories and warehousing that support Sydney Airport and Port Botany also contribute to the area's overall industrial character.

Due to the proximity of St Peters, Mascot and Tempe to Sydney Airport and Port Botany, residential development has been limited particularly in the parts of the suburbs that are adjacent to the airport and port industries. Residential areas that are located away from these uses are still exposed to the noise and visual effects associated with aircraft flying overhead and in some places views of the airport and port infrastructure.

The amenity and character of the regional area is also influenced by open and green space, such as the Botany Wetlands located on Commonwealth land to the east of the project site, as well as large parks and open spaces in Alexandria and Tempe, including Tempe Wetlands. Local waterways, such as the Cooks River and Alexandra Canal, provide the regional area with opportunities for recreational activities on the water, such as fishing, kayaking and boating. The waterways and surrounding open and green spaces also provide the community with visual relief. Alexandra Canal also contributes to the amenity of the regional area through its significance as an item of state heritage. It is one of only two navigable canals built in NSW and is characterised by its defined edges and sandstone embankment.

Existing noise amenity in the study area is generally dominated by transportation noise, with road, rail and aircraft noise affecting most locations during the daytime. Sydney Airport is operational for commercial and private flights between 6am and 11pm, with specific freight flights occasionally occurring outside of these hours. During the evening and night-time, the curfew period for Sydney Airport, existing noise levels typically decrease. This is also due to a reduction in road traffic volumes on the surrounding road network. Despite the proximity of the regional study area to the transport industries of Sydney Airport and Port Botany, the air quality in the area has improved since 2004 (see Technical Working Paper 4 – Air Quality).

4.2.2 Connectivity within the regional study area

As identified in Technical Working Paper 1 – Transport and Traffic, a number of roads within the regional study area provide important connectivity for commuter traffic, freight and airport-related activity, and community access to destinations around the region as well as to other parts of Greater Sydney. These include connections to key employment areas of Sydney CBD, Sydney Airport and Port Botany. Key roads include:

- Joyce Drive, General Holmes Drive and M1 and M5 Motorways – regional connections to and from the airport and port
- O'Riordan Street and Robey Street – an important north–south connection between Sydney Airport and Sydney CBD
- Bourke Street – connection from Mascot through to Sydney's eastern suburbs
- Botany Road – traverses the Mascot town centre connecting Sydney CBD to Botany
- Foreshore Road – a key regional connection to and from the port
- Airport Drive and Qantas Drive – an important east–west connection between the Terminal 1 and Terminals 2/3 precincts.

Many of these roads experience competition between airport traffic, local and through traffic, and freight traffic from Port Botany. There are a number of intersections within the project site where delays are currently experienced by road users, including the intersections of General Holmes Drive and Mill Pond Drive, Joyce Drive and O'Riordan Street, and Qantas Drive and Seventh Street, as depicted in Figure 3-2.

There are limited road crossings over the waterways that separate Sydney Airport and the Inner West, and southern suburbs of Sydney. These are:

- Canal Road and Ricketty Street at the crossing of Alexandra Canal
- Marsh Street at the crossing of Cooks River
- Princes Highway at the crossing of Cooks River.

There is also a new crossing currently under construction as part of WestConnex. This crossing will connect Bourke Street to St Peters Interchange over Alexandra Canal.

Bus routes along the Princes Highway provide community connectivity from Sydney's southern suburbs to the CBD. Bus routes 422 and 305 connect people from Inner West LGA through Bayside LGA.

Due to the constraints of the existing road network coupled with high traffic demand, regional and local commuters and residents travelling by private vehicle or bus likely experience delays as part of daily commutes and travel to leisure and social activities.

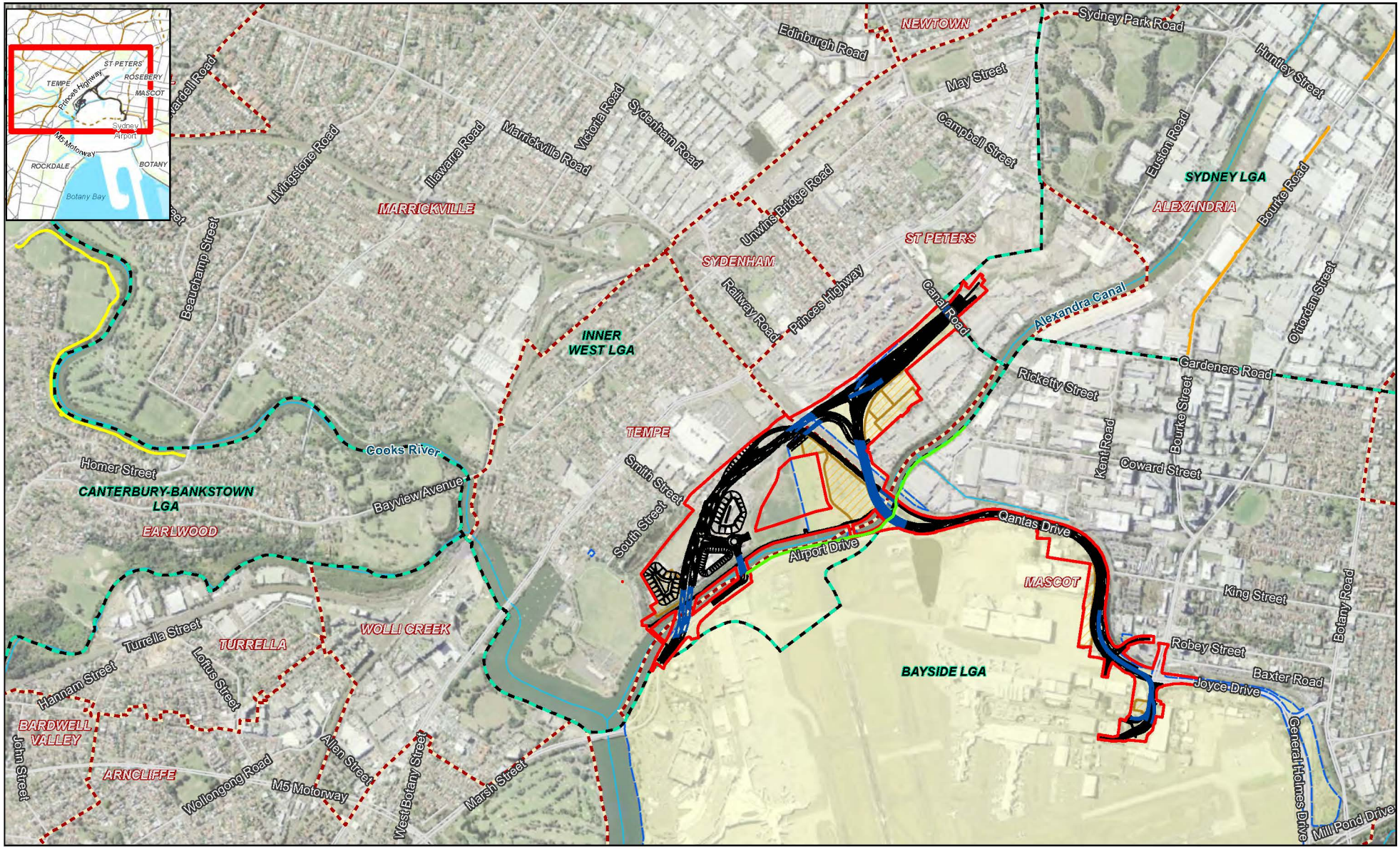
Residents and commuters in the region are also connected by rail services including:

- T4 Eastern Suburbs and Illawarra train line, which services regional passengers from the south of Sydney to the eastern suburbs with stops in the project area including Wolli Creek, Tempe and Sydenham
- T8 Airport and South Line, which services both Terminal 1 and Terminals 2/3 with connections to the CBD and south-western suburbs via Mascot.

From a social perspective, active transport provides connectivity as well as physical activity and recreation. The area also contains a number of cycleways used by both local and regional active transport users, including:

- Bourke Road Cycleway – connects the regional study area to Sydney's CBD and eastern suburbs
- Cooks River Shared Path – connects the regional study area to Sydney's inner western suburbs
- Alexandra Canal Shared Path – connects people from east to west across the regional study area.

Active transport networks are shown in Figure 4-1.



Author: David Naiken
Date: 25/07/2019
Map No: PS109315_GIS_307_A3

Figure 4-1

Active Transport Network within the Regional Study Area

4.2.3 Economic centres within the regional study area

Sydney Airport, Port Botany and their associated industries are the second largest employment area of Greater Sydney. The Sydney CBD is the largest employment area for Greater Sydney, meaning that the regional study area provides more job opportunities than anywhere else across Sydney. These areas are recognised by Greater Sydney Commission as part of the eastern economic corridor (discussed in more detail in section 2.2). This corridor connects strategic economic centres of Sydney, and by doing so has opened up economic opportunities along the corridor between the Sydney CBD and Sydney Airport and Port Botany.

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. Further detail on the economic significance of Sydney Airport and Port Botany is discussed below.

4.2.3.1 Sydney Airport

Sydney Airport is located in the suburb of Mascot within Bayside LGA. The airport is located on Commonwealth land leased by Sydney Airport Corporation. Sydney Airport is the only public international terminal in NSW. The airport provides people with access to domestic and international air travel to take personal and business trips, and opportunities to maintain personal connections including with friends and family. The airport also supports a significant and varied workforce.

Sydney Airport caters for around 40 per cent of Australia's international passenger movements, 46 per cent of domestic/regional passenger movements and 50 per cent of air freight (Sydney Airport 2014 and 2018; Department of Infrastructure, Regional Development and Cities, 2018b). According to the *Sydney Airport Master Plan 2039*, passenger trips to and from Sydney Airport are expected to grow to 66 million trips by 2039.

Sydney Airport is a significant source of employment for skilled workers across Greater Sydney (Sydney Airport, 2018). The airport and associated businesses employ around 31,000 jobs at the airport itself (Sydney Airport, 2019). The majority of employees within the 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).

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

Given the number of people who visit the airport, both as workers and passengers, in addition to the local and through traffic in the area, some vacant land around Sydney Airport is leased for advertising purposes. This is primarily in the form of large billboards. There are 16 billboards located on Commonwealth land, primarily along Qantas and Airport Drives. Billboards are leased by advertising companies from Sydney Airport Corporation, who then lease the billboard space to companies wishing to place their advertisements.

Connectivity to Sydney Airport

Connectivity to Sydney Airport is provided by road, public transport 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.

There are four primary road access points to Sydney Airport including:

- Marsh Street (connecting from the Princes Highway)
- O'Riordan Street
- Botany Road
- General Holmes Drive (off Southern Cross Drive).

These roads are also used by buses that stop at Sydney Airport terminals (route 400 and 420) and coach passengers travelling to and from the airport, as well as taxi, rideshare, Uber, and private car companies. People can also access the airport terminals via rail services on the T8 Airport and South Line.

Airport Drive includes a flat shared path which connects Marsh Street and Tempe Recreation Reserve with Alexandra Canal shared path. The shared path on Airport Drive continues under Giovanni Brunetti Bridge and becomes an elevated bridge to give pedestrians and cyclists direct access into Sydney Airport Terminal 1. The cycling routes are identified on the Roads and Maritime Cycleway Finder as low difficulty transport routes (Roads and Maritime Services, 2018a). This generally indicates that the path is accessible to cyclists of various skill levels, which may include commuter and recreational cyclists.

4.2.3.2 Port Botany

Port Botany is a major trade centre for NSW and is integral to the economy of Sydney and broader NSW. From a social perspective, the port is a major source of employment supporting 21,000 jobs (NSW Ports, 2015) and supplies goods to businesses in metropolitan Sydney and Greater Sydney Region which also support employment (Transport for NSW, 2018a). Over 4,000 people are employed at the port itself (.id, 2016). The port operates 24 hours per day, seven days a week.

The area surrounding the port and Sydney Airport hosts industries that work to enable the regional freight movements from the port. As noted in the Freight Management Assessment (see Technical Working Paper 12 – Business Impacts), two container storage facilities, Tyne Container Services and Qube, are located 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 to Port Botany

Connectivity for local workers and freight movements to Port Botany is primarily provided by road. Key roads which provide this connectivity include Botany Road, Foreshore Road, Bunnerong Road, Southern Cross Drive and General Holmes Drive as well as other local roads in and around the project area.

For regional workers and freight movements, key roads include the M5 Motorway, Hume Highway and the Princes Highway connecting the port to the south of NSW and ACT, the Cumberland Highway and the M4 connecting the port to the west of NSW, and the M7, M1 and M2 connecting the port to the north of NSW and Newcastle (Department of Infrastructure, Regional Development and Cities, 2018).

In terms of rail connectivity, the existing freight rail system connects Port Botany to the trade network for Greater Sydney and further to nationally significant freight corridors to the north and south (Department of Infrastructure, Regional Development and Cities, 2018).

4.2.4 Summary of health indicators

The existing health of the population is assessed in Technical Working Paper 15 – Human Health. The health of populations across NSW is profiled according to local health districts. The project area is located across the South Eastern Sydney Local Health District and the Sydney Local Health District, which includes a large portion of the regional study area for this SEIA.

Based on the assessment made in Technical Working Paper 15 – Human Health, the population in the study area can be characterised by:

- Similar occurrence of health related behaviours as the overall population of NSW
- Lower rates of physical inactivity compared to the overall population of NSW
- Lower rates of obesity compared to the overall population of NSW
- Lower rates of mortality and hospitalisations for respiratory and cardiovascular related causes than the NSW population.

This suggests that the population in the regional study area may be less vulnerable from a health perspective compared to the NSW average.

4.3 Overview of the local study area

As described in section 3.2.2, the local study area comprises the suburbs of Mascot, Tempe and St Peters, which would be intersected by the project. This section provides a description of the land use, amenity and character, economic centres, connectivity and local communities in each suburb.

4.3.1 Mascot

Mascot is located seven kilometres south of the Sydney CBD and is about nine square kilometres in size. It is located within Bayside LGA, one of the fastest growing areas of Sydney. This growth is expected to continue with a 22.64 per cent increase in the population projected between 2016 and 2036 (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 (Bayside Council, 2018).

4.3.1.1 Land use

Mascot is a residential, commercial and industrial area. In recent years, medium density redevelopment has predominantly occurred on former industrial lands centred around Mascot railway station, known as the Mascot Station Town Centre precinct.

A large portion of Mascot is dedicated to Sydney Airport and airport-related businesses and operations, including airline services, freight and trade centres and passenger services such as car parks and accommodation facilities.

The residential area of Mascot is situated between these airport uses to the west and Botany Wetlands to the south. The residential areas have developed around these fixed land uses, which has resulted in the interface between residential and industrial uses in the southern and western parts of the suburb. This has been most noticeable in areas that interact with heavy industry land uses or uses that require 24-hour access by heavy vehicles and rail freight, such as the Botany Rail Line corridor, concentrated freight operations and Sydney Airport terminals. These uses contribute to the overall industrial character of the project site and influence the amenity of the surrounding residential communities.

4.3.1.2 Amenity and character

The proximity of the residential area to the airport means that residents across the suburb are likely exposed to the noise, vibration and air quality effects associated with airport infrastructure. For residential areas in close proximity to Sydney Airport, in particular to the south west of the suburb, visual amenity is also largely influenced by airport infrastructure and associated industrial uses, including container storage facilities at east Tempe. Parts of this residential area are also in closer proximity to the Botany Wetlands and the streets are lined with more trees and vegetation. This provides some visual relief from industrial and airport related activities. Mascot has a number of pocket parks located within the suburb, including Coleman Reserve and High Street Reserve, which contribute to the amenity of the area for local residents.

4.3.1.3 Employment and economy

Local town centres are located along Botany Road near King Street and around Mascot Station. Key community and commercial services are located along Botany Road and O'Riordan Street.

There are a number of designated industrial precincts, including Mascot West Business Park Precinct, Mascot West Industrial Precinct, Mascot Business Development Precinct, and Mascot Industrial Precinct, all of which provide employment opportunities for the local and regional community.

As described in section 4.2, Sydney Airport supports a significant workforce. Based on worker data for the entire LGA, the area employs 73,872 workers, of which 23.9 per cent are also residents of the LGA (Profile id. 2018). The transport, postal and warehousing industry is the largest employer in Bayside LGA (30.5 per cent) representing almost a third of all jobs reflecting the airport and port industries. This is followed by retail trade (9.8 per cent) and construction (7.4 per cent) (Profile id. 2018).

4.3.1.4 Connectivity

Mascot's local roads currently experience large volumes of traffic due to heavy vehicles transporting goods to and from Port Botany and Sydney Airport, as well as regional traffic, local area traffic, and airport related traffic. Major roads include Southern Cross Drive, which connects Sydney with the southern suburbs and regions of NSW, Airport Drive, Qantas Drive, Joyce Drive, General Holmes Drive, and Botany Road.

The T8 passenger train line passes underneath Sydney Airport stopping at both Terminal 1 and Terminals 2/3, with Mascot Station located to the north of Mascot. The line connects the CBD with the south-west of Sydney. Multiple bus routes service the suburb, including routes 400, 307, 357, 301, 303, 309, and 310x, which connect Mascot to other parts of Sydney's east, and the CBD.

There are also a number of cycleways which travel through Mascot. A dedicated shared path connects Alexandra Canal to Green Square along Bourke Road. This is advertised as a low difficulty cycle option for local residents, and provides access to city-bound cycle routes (Roads and Maritime Services, 2018a).

4.3.1.5 Demographic profile

At the time of the 2016 Census (ABS, 2016), the main demographic characteristics of the Mascot community compared with Bayside LGA and Greater Sydney, were as follows:

- A younger median age (32 years) compared to both Bayside LGA (35 years) and Greater Sydney (36 years)
- A higher proportion of people who were born in non-main English speaking countries (46.3 per cent) than the LGA (41.1 per cent) and Greater Sydney (29.3 per cent)
- A similar proportion of people who speak a language other than English at home (51 per cent) compared to the LGA (52.7 per cent), however a greater proportion of people compared to Greater Sydney (35.8 per cent), the top languages spoken in Mascot other than English were Mandarin (10.7 per cent), Indonesian (6.7 per cent), Cantonese (3.9 per cent) and Greek (3.9 per cent)
- A higher proportion of people who completed Year 12 or equivalent (69.3 per cent) than both Bayside LGA (61.7 per cent) and Greater Sydney (60 per cent)
- Lower unemployment rates (5.2 per cent) than both Bayside LGA and Greater Sydney (6 per cent)
- Main industries of employment are professional, scientific and technical services (10.6 per cent), followed by accommodation and food services (10.3 per cent), and transport, postal and warehousing industry (9.3 per cent)
- A larger proportion of the population of Mascot live in apartments (55.4 per cent) compared to the LGA (40.8 per cent) and Greater Sydney (25.9 per cent)
- The predominant family type was couples with children (41 per cent) although this was lower than Bayside LGA (46.2 per cent) and Greater Sydney (49.5 per cent)
- Lower level of need for assistance with core daily activities (3.4 per cent) compared to Bayside LGA (5.3 per cent) and Greater Sydney (4.9 per cent)
- A high proportion of the households of Mascot do not have a motor vehicle (15.8 per cent) compared to Bayside LGA (13.5 per cent) and Greater Sydney overall (11.1 per cent)
- A higher proportion of people that travelled to work by public transport (32.7 per cent by train and 7.7 per cent by bus) compared to Bayside LGA (27.1 per cent and 5.8 per cent respectively) and Greater Sydney (16.3 per cent and 6.1 per cent respectively) reflecting a lower level of car reliance

- Higher proportions of people that walked or cycled to work (7.4 per cent and 1.1 per cent respectively) than Bayside LGA (3.7 per cent and 0.7 per cent respectively) and Greater Sydney (4 per cent and 0.7 per cent respectively)
- The socio-economic disadvantage as defined by the Australian Bureau of Statistics, Index of Relative Socio-Economic Disadvantage (SEIFA IRSD)[1] ranked Mascot at decile 9 which means the suburb has a low rate of socio-economic disadvantage.

A detailed demographic profile of Mascot is provided in Appendix A.

4.3.1.6 Community infrastructure

Community infrastructure, including health, medical and social services (as defined in section 3.2.3), is predominantly located to the north of the suburb, where the more populated residential areas and the town centre are located.

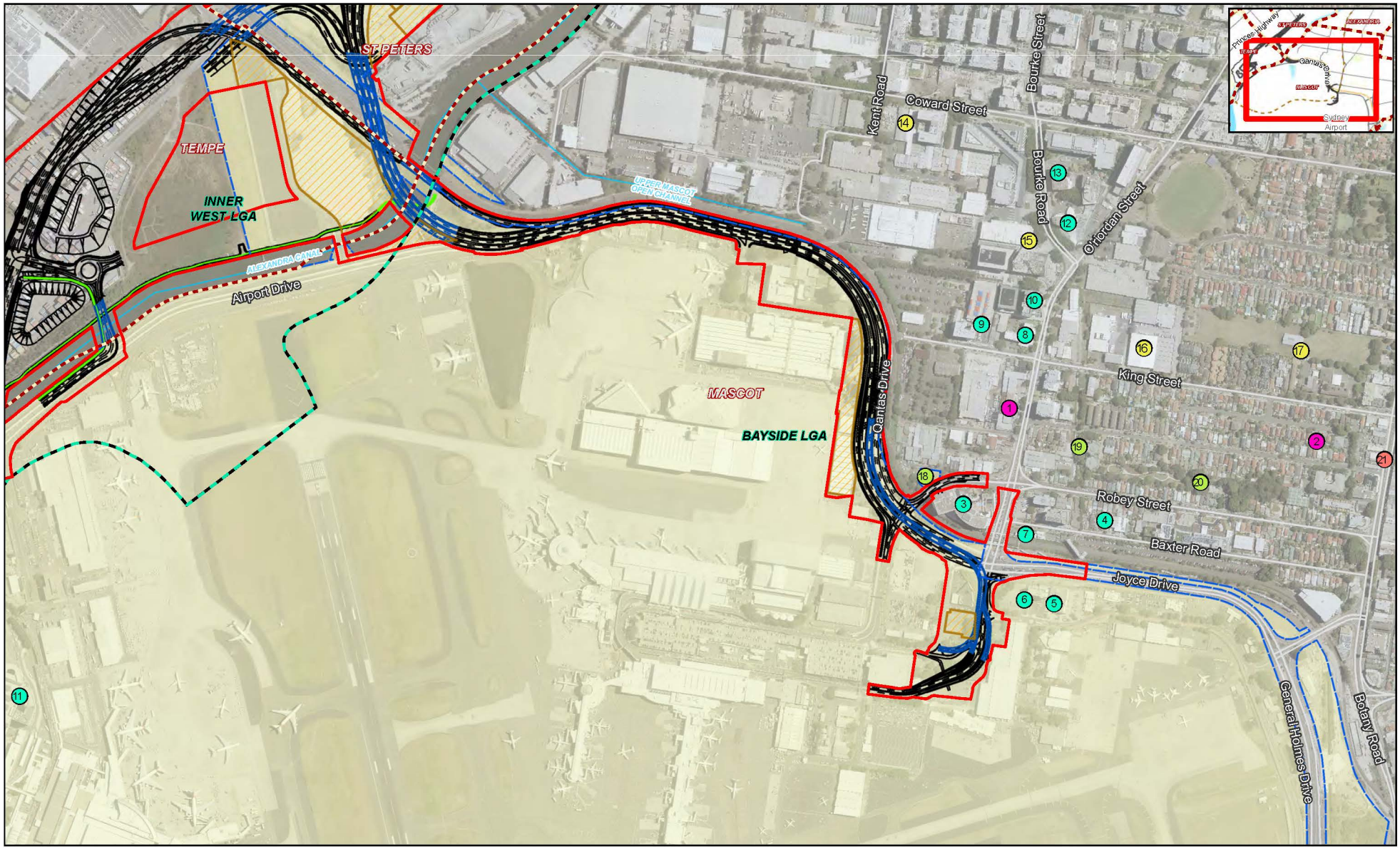
Community infrastructure located near the project site includes Coleman Reserve, three child care facilities, a community centre and several accommodation facilities. Given their proximity, the child care facilities likely service both residents and workers of Sydney Airport and surrounding businesses. Descriptions for these facilities are provided in Table 4-1 and a map of their locations in relation to the project site is provided in Figure 4-2.

Table 4-1 Summary of community infrastructure located near project site in Mascot

Facility type	Facility name	Description	Map reference
Community centre	Komuniteti Shqiptar Ne Sydney	This community facility is home to the Albanian Australian Community of NSW.	1
	Mascot Library	The library is open from Monday to Friday between 10am and 6pm, and on Saturday between 10am and 1pm. The library hosts community programs for families with babies and toddlers, school holiday programs, book clubs and Justice of the Peace services.	2
Accommodation facilities	Stamford Plaza Sydney Airport	The hotel has 314 rooms and is located on the corner of O'Riordan and Robey Streets. It is open 24 hours a day and contains conference centre facilities. Access to the hotel is via O'Riordan Street and it is also accessible by foot from Terminals 2/3.	3
	8Hotels – Citadines Connect Sydney Airport Hotel	This hotel has 150 rooms, and is located on Baxter Road in Mascot. It is open 24 hours a day.	4
	Ibis budget Sydney Airport	Located on Ross Smith Avenue, Ibis Sydney Airport provides 200 hotel suites. The hotel is located within Commonwealth land.	5
	Mantra Hotel at Sydney Airport	Located on 3 Ross Smith Avenue, Mantra Hotel provides 136 hotel suites, onsite parking and 24-hour reception services. The hotel is located within Commonwealth land.	6
	Quest Mascot	Quest Mascot is located on Robey Street, and is a serviced apartment style hotel, with 91 suites available for short or long term stays. The hotel also contains conference centre facilities	7

[1] *Socio-economic disadvantage as defined by ABS' Index of Relative Socio-Economic Disadvantage (IRSD), which indicates the level of relative socio-economic disadvantage in a specified area. Socio-economic advantage and disadvantage are defined broadly by the IRSAD in terms of people's access to material and social resources and their ability to participate in society (ABS, 2018c). In order to capture this broad definition, the IRSD includes a range of data points, including income, education, employment, occupation, and housing. The IRSD divides a population into ten equal groups. The lowest scoring 10 per cent of these groups are given a decile number of 1, which indicates the highest level of disadvantage, and the highest scoring 10 per cent of areas are given a decile of 10, which indicates the lowest level of disadvantage.*

Facility type	Facility name	Description	Map reference
	Ibis Sydney Airport	Ibis Sydney Airport is located on O'Riordan Street. It provides 200 rooms and is a short distance from both Terminal 1 and Terminals 2/3. The hotel has a reception available 24 hours a day, seven days a week.	8
	Travelodge Hotel Sydney Airport	Travelodge Sydney Airport has 210 rooms and is located on King Street.	9
	Pullman Sydney Airport	Pullman Sydney Airport has 230 rooms, a restaurant and conference facilities. It is located on O'Riordan Street.	10
	Rydges Sydney Airport	This hotel has 320 rooms. It is located on Arrival Circuit within Commonwealth land.	11
	Holiday Inn Sydney Airport	This hotel has 250 rooms and is located on O'Riordan Street. The hotel also has conference centre facilities with six meeting rooms available.	12
	Adina Apartment Hotel Sydney Airport	Located on Bourke Road, this hotel has 123 rooms, with 24 hour reception services. The hotel also has conference centre facilities.	13
Education and child care facilities	Aero Kids Early Learning Centre	Child care and early learning centre for babies through to pre-schoolers. It provides tailored education programs for each age group. The centre is open from 7:30am until 6:00pm Monday to Friday.	14
	The Joey Club – Sydney	The Joey Club is part of the KU Children's Services network. These centres specialise in providing child care to Culturally and Linguistically Diverse children and their families, as well as children with disability or increased support needs. The Joey Club specifically focuses on providing child care services for families of Qantas employees.	15
	SDN Children's Services	SDN Children services is a not for profit child care. The centre is open from 7:30am until 6pm.	16
	Mascot Public School	The local public school caters for students from pre-school to year six. The school community is multicultural, with 75% of students from non English speaking background. The school operates from Monday to Friday during school hours.	17
Open space	Coleman Reserve	Coleman Reserve is a small, passive open space located adjacent to Robey Street. The area contains some seating space and shade. It is located within Commonwealth land.	18
	High Street Reserve	High Street Reserve is a small open space, accessible via both High Street and King Street in Mascot. The reserve contains a small playground.	19
	John Curtin Reserve	John Curtin Reserve is named after Australia's former Prime Minister. This park is a linear park, with local access from both High Street and Robey Street in Mascot. The reserve accommodates a plant nursery.	20
Health services	Mascot Medical and Dental Centre	This practice has been operating since 1989 and is a bulk-billing family practice. The centre is open from Monday to Friday, and Saturday by appointment only.	21
Place of worship	Citygate Fellowship Church	This church is a dedicated space for the Indonesian community living in Sydney. Services are offered on Sunday at 10am. The church is part of the wider CityGate services.	22



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Scale 1:7,000

Author: David Naiken
Date: 25/07/2019
Map no: PS109315_GIS_304_A4

Legend

- Major Roads
- Local Government Area
- Suburb
- Sydney Airport (Commonwealth) Land Boundaries
- Construction Compound
- Project Site Boundary

EIS Design - Stage 1/3

- Design
- Lanemarking
- Shared Path
- Elevated Design (Bridge)

- Accommodation Facilities
- Community Centres and Spaces
- Education and Child Care Services
- Health Services
- Open Space
- Place of Worship

Figure 4-2

Community Infrastructure located in Mascot

4.3.2 Tempe

Tempe is located in the Inner West LGA, nine kilometres from the Sydney CBD. Tempe is a relatively small suburb in comparison to other suburbs in the LGA, with a population of 3,556 people in 2016. The population of Inner West LGA is expected to increase by 21 per cent between 2016 and 2036 (from 184,043 people to 232,100 people) (Department of Planning and Environment, 2016). Tempe was once a hub of tram and rail infrastructure, and in recent years has transformed to become a semi-industrial and commercial area, with pockets of residential streets. With new transport infrastructure connecting the area to the CBD and a new Creative Precinct commissioned in the neighbouring suburb of Sydenham, Tempe has been identified as an area for future residential growth (Inner West, 2018).

4.3.2.1 Land use

Tempe is characterised by industrial, commercial and residential areas. The majority of residential properties in Tempe are located to the west of the Princes Highway with a small portion to the east known as east Tempe. Freight, industry and some retail uses are situated along the Princes Highway and concentrated to the north of east Tempe, including bulky goods retail stores, a shipping container business (Tyne Container Services) and Inner West Council depot.

Tempe Recreation Reserve is one of three open spaces in east Tempe. It caters to a range of active and passive recreational users, and provides access to the Cooks River for water-based recreation activities. It is adjacent to the Tempe Lands and adjoining Lori Short Reserve, the other open spaces within the suburb, which comprises an off-leash dog area, passive and recreational uses, including a car park and Tempe Wetlands. These open space areas are valued by the Inner West community (refer to section 4.3.4).

4.3.2.2 Amenity and character

Residential areas of east Tempe are separated from Sydney Airport by Cooks River and Tempe Recreational Reserve. While Tempe is not directly adjacent to the airport, residents are likely to be exposed to the noise, air quality and traffic effects of industry and airport activity, as well as noise generated from traffic and freight movement on Princes Highway. The visual amenity of the area is characterised by airport activity, views of container yards and the Cooks River. In proximity to the wetlands of east Tempe is a Morton Bay Fig Tree of local heritage significance, which was reportedly planted in the years following the area's establishment in 1890.

4.3.2.3 Employment and economy

Residents of Tempe likely access essential shopping and daily needs services from the shopping and retail centre at the neighbouring suburb of Wolli Creek. The main employment hub for Tempe would likely be the commercial opportunities along the Princes Highway corridor.

Based on worker data for Inner West LGA, the LGA employs 62,402 workers, of which 31.3 per cent are residents of the area. The top industries of employment were health care and social assistance (13.2 per cent), retail trade (11.3 per cent) and education and training (8.7 per cent) (Profile. id 2018).

4.3.2.4 Connectivity

The Princes Highway carries local and regional traffic, and is part of the state-wide freight road network. Connectivity within the Inner West LGA has been identified by the council as a key focus area for future planning, with an increase in active transport networks, as well as the new road developments expecting to alleviate some traffic congestion and increase connectivity in the future, including through parts of Tempe and surrounding suburbs (Inner West, 2018).

The T4 train line stops in Tempe. It services the southern suburbs of Sydney and connects the Illawarra region to Sydney CBD. In addition to the train, the suburb is serviced by multiple bus routes along Princes Highway, including routes 348, 422 and 425. The Cooks River shared path provides an active transport connection to Tempe Recreation Reserve and Alexandra Canal shared path.

4.3.2.5 Demographic profile

At the time of the 2016 Census (ABS, 2016), the main demographic characteristics of Tempe community compared with Inner West LGA and Greater Sydney were as follows:

- An older median age (38 years) compared to Inner West LGA and Greater Sydney (both 36 years)
- A higher proportion of people identified as Aboriginal or Torres Strait Islander (2.1 per cent) than the LGA (1.1 per cent) and Greater Sydney (1.5 per cent)
- A higher proportion of people who spoke a language other than English at home (61.1 per cent) compared to the LGA (28.4 per cent) and Greater Sydney overall (35.8 per cent). Other than English, the top languages spoken in Tempe were Macedonian (5.1 per cent), Vietnamese (4.6 per cent) and Cantonese (4 per cent)
- A similar rate of unemployment (4.6 per cent) compared to the LGA (4.8 per cent) but a lower rate than Greater Sydney (6 per cent)
- A larger household size (2.7 persons per dwelling) compared to the LGA (2.4 persons), but consistent household sizes with Greater Sydney (2.72 persons)
- A similar proportion of the community living in family households (69.2 per cent), compared to the LGA (63.2 per cent), but a lower proportion compared to Greater Sydney (73.6 per cent)
- A similar proportion of households occupied by groups (9.8 per cent) compared to the LGA (9.3 per cent), but a higher proportion compared to Greater Sydney overall (4.7 per cent)
- Higher proportions of couples with children (48.6 per cent) and one parent families (17 per cent), compared to the LGA (42.6 per cent and 13.7 per cent respectively) although these levels were relatively similar to Greater Sydney (49.5 per cent and 15.2 per cent respectively)
- A higher proportion of people who require assistance (5.5 per cent) than the LGA (4.5 per cent) and Greater Sydney (4.9 per cent)
- A similar proportion of households that do not own a motor vehicle (15.2 per cent) or that own one motor vehicle (46.1 per cent) compared to the LGA (17.3 per cent and 48.8 per cent respectively), but a higher proportion compared to Greater Sydney (11.1 per cent and 31.1 per cent respectively)
- A higher proportion of people who drove to work (42.9 per cent) compared to the LGA (38.9 per cent) although this was lower than Greater Sydney (52.8 per cent)
- A similar proportion of people who cycled to work (2.8 per cent) compared to the LGA (2.8 per cent) which was a higher proportion of people compared to Greater Sydney (0.7 per cent)
- A lower proportion of people who walked to work (4.3 per cent) compared to the LGA (5.6 per cent) but similar to Greater Sydney (4 per cent)
- The SEIFA IRSD ranked Tempe at decile 8 which means the suburb has a low rate of socio-economic disadvantage.

A more detailed demographic profile of Tempe is provided in Appendix A.

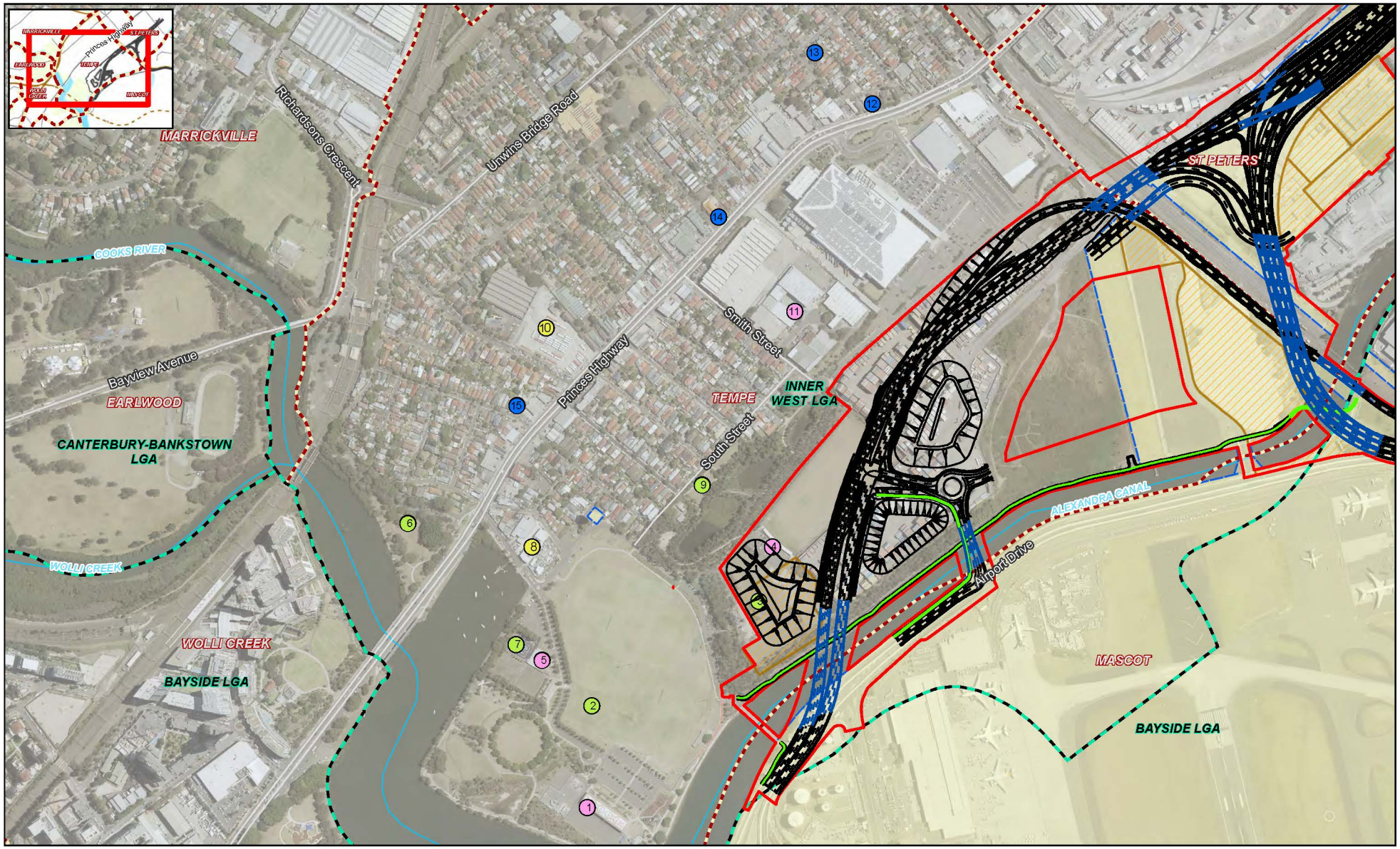
4.3.2.6 Community infrastructure

Health and social services accessed by residents of Tempe are located in neighbouring suburbs, such as Wolli Creek and Marrickville. The schools are located in the western part of the suburb.

Community infrastructure located near the project site in Tempe includes open spaces, recreational facilities and child care. Table 4-2 provides descriptions of the community infrastructure. Figure 4-3 shows the location of the community infrastructure in relation to the project site.

Table 4-2 Summary of community infrastructure located near project site in Tempe

Facility type	Facility name	Description	Map reference
Recreation facility	Robyn Webster Sports Centre	Sports recreation grounds and facility operated by the University of Sydney. The facilities are available for use and hire by schools, clubs, sporting teams, cultural groups and members of the public. The facilities include badminton courts, volleyball courts, indoor soccer and netball courts, and outdoor netball courts. The centre is open in the evening from 5pm until 10pm from Monday – Friday (closed Wednesdays), and is open from 12pm–10pm on Saturdays and 10am to 10pm on Sundays.	1
	Tempe Golf Driving Range and Academy	This facility is open from 9am to 9pm from Monday through to Friday, and from 8am to 8pm on weekends. It is open to both the public and to members at all times, and offers lessons in addition to range and putting facilities.	4
	Tempe Jets – Basic X Music Hub	Music and creative hub that supports independent musicians and live-music organisations. The centre is supported by Inner West Council, and has a range of facilities on offer for hire and use by musicians from across Sydney. Tempe Jets is open from Monday to Sunday 8am to 9pm.	5
	Sydney Model Autosports	Practice and competition space for model car racing. The facility is open on Tuesday evenings between 7pm and 11pm.	7
	Australian Academy of Parkour, Exercise and Self Defence	Gym facility that acts as a community space, primarily for parkour and self defence activities. The facility contains a cafe and other recreational spaces. Classes run daily throughout the afternoon and evening.	11
Open space	Tempe Recreation Reserve	Large open space with community facilities, located adjacent to the Tempe Lands. It includes the Cooks River Motor Boat Club, sporting facilities, toilets, playground with shade, barbecue and sheltered picnic facilities and Cooks River Cycleway.	2
	Tempe Park	Tempe Park (or Tempe Lands) is located neighbouring the Tempe Recreation Reserve. It contains an off-leash dog exercise area, walking paths, a golf driving range (Tempe Golf Driving Range and Academy), parking and the Tempe Wetlands. Local volunteer group, Tempe Birdos meet monthly to survey bird life and other fauna in the wetlands. Roads and Maritime consultation with the community living in the east of Tempe indicated that many residents value the off-leash dog exercise area and the open space provided by Tempe Park (section 5.3.3).	3
	Kendrick Park	Located off the Princes Highway and View Street in Tempe. It includes a playground, toilets, barbecue and sheltered picnic facilities, and the Cooks River Cycleway.	6
	Lori Short Reserve	Located adjacent to the Tempe Park, along South Street. The land is named in commemoration of Lori Short, an active community member who had strong links to the history of the suburb.	9
Child care facility	Guardian Early Learning Centre	Child care and early learning centre that provides long day care services from nursery through to kindergarten and preschool programs. The centre is open from 7am to 6pm Monday to Friday.	8
	Betty Spears Child Care Centre	Long day care centre for children aged six weeks to six years of age. The centre is open between 7.30am and 6.00pm from Monday to Friday. The centre is a community-based not for profit centre.	10
Place of worship	St Peter and St Paul Catholic Church	Located in Tempe, off the Princes Highway. It is open for walk-ins and regular Sunday services.	12
	Uniting Church in Tempe	Tempe church is a small local facility. No information regarding service times is available.	13
	True Buddhist Temple	No information regarding service times is available.	14
	Al Hijrah Mosque	This facility services in both a spiritual and an educational capacity.	15



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Scale 1:6,000

Author: David Naiken
Date: 25/07/2019
Map no: PS109315_GIS_305_A4

Legend

- Major Roads
- Local Government Area
- Suburb
- Sydney Airport (Commonwealth) Land Boundaries
- Construction Compound
- Project Site Boundary

EIS Design - Stage 1/3

- Design
- Lanemarking
- Shared Path
- Elevated Design (Bridge)

- Education and Child Care Services
- Open Space
- Place of Worship
- Recreation Facility

Figure 4-3

Community Infrastructure located in Tempe

4.3.3 St Peters

St Peters is located seven kilometres south of Sydney CBD, directly adjacent to Tempe. St Peters is partly located within the Inner West LGA, and partly located within the City of Sydney LGA. The residential area in St Peters is located within the Inner West LGA. The suburb has undergone change in recent years, with the construction of WestConnex requiring the acquisition of multiple residential properties. Once WestConnex is operational, the suburb will likely experience change as a result of increased connectivity and parts of the suburb may experience increased exposure to road traffic.

4.3.3.1 Land use

The suburb is characterised by semi-industrial, commercial and residential areas. It is traversed by the Princes Highway and Canal Road. Residential properties are mainly located to the north of the Princes Highway. To the south of the Princes Highway are mainly industrial buildings, and land that will be occupied by WestConnex road infrastructure. There is a dedicated creative precinct located within the suburb, as well as a precinct of converted warehouses, containing art studios and recreational facilities. The western border of the suburb is occupied by train-related infrastructure and industry.

4.3.3.2 Amenity and character

Similar to Tempe, residents are likely to be exposed to the noise, air quality and traffic effects of industry and airport activity, as well as road traffic from Princes Highway. The character of the area is influenced by the industrial precincts with a number of warehouses that have been converted to residences, businesses and recreational facilities. Local pocket parks and a sporting field provide the community with access to open green spaces.

4.3.3.3 Employment and economy

Residents of St Peters access shopping and other community infrastructure facilities and services located in neighbouring suburbs. The closest shops accessed by residents are located along the Princes Highway, King Street to the north and at Marrickville Metro shopping centre. This means that access to nearby suburbs is essential for accessing daily needs.

There are some shops located within St Peters' creative precinct, however these are specific-purpose retail stores or services. This area, along with the converted industrial precinct off Unwin's Bridge Road and businesses on the Princes Highway provide an employment hub in the suburb.

4.3.3.4 Connectivity

St Peters is bound by Princes Highway to the south, and intersected by Unwin's Bridge Road (converting into May Street) to the north. Unwin's Bridge Road is a local road which runs parallel to Princes Highway, and provides an alternate route for vehicles accessing parts of Tempe and Sydney Airport. In addition, the road provides east-west connection between Tempe and St Peters.

St Peters is serviced by the T3 and T8 rail lines, with St Peters station located at the north-east of the suburb. For residents living in the west of the suburb, the closest station would be Sydenham station. The 422 and 348 bus routes which travel along Princes Highway provide residents with connections to the CBD.

St Peters has limited access to dedicated active transport networks, with one shared path located along May Street, to the north of the suburb. Roads and Maritime identifies a number of on-road routes for cyclists to utilise within the suburb (Roads and Maritime, 2019).

4.3.3.5 Demographic profile

At the time of the 2016 Census (ABS, 2016), the main demographic characteristics of St Peters community compared with Inner West LGA and Greater Sydney, were as follows:

- A younger median age (34 years) compared to Inner West LGA and Greater Sydney (both 36 years)
- A lower rate of unemployment (3.9 per cent) than the LGA (4.8 per cent) and Greater Sydney (6 per cent)
- A lower proportion of the population who spoke a language other than English at home (24.4 per cent) compared to the LGA (28.4 per cent) and Greater Sydney overall (35.8 per cent). Other than English, the most commonly spoken languages in St Peters were Cantonese (2.3 per cent), Vietnamese (1.7 per cent) and Macedonian, Mandarin and Greek (all 1.4 per cent)
- A higher proportion of households occupied by group houses (14.9 per cent) than both Inner West LGA (9.3 per cent) and Greater Sydney (4.7 per cent)
- A similar proportion of households occupied by families (61.4 per cent) compared to the LGA (63.2 per cent), but a lower proportion of households compared to Greater Sydney (73.6 per cent)
- Lower proportions of couples with children (32.9 per cent) and one parent families (12.1 per cent) compared to the LGA (42.6 per cent and 13.7 per cent respectively) and Greater Sydney (49.5 per cent and 15.2 per cent respectively)
- A lower proportion of the population who require assistance (2.9 per cent) than the LGA (4.5 per cent) and Greater Sydney (4.9 per cent)
- A higher proportion of households that own one motor vehicle (52.3 per cent), compared to the LGA (48.8 per cent) and Greater Sydney (37.1 per cent)
- A higher proportion of people who travelled to work by train (40.5 per cent) compared to the LGA (26.8 per cent) and Greater Sydney (16.3 per cent)
- A lower proportion of people who drove to work (35.6 per cent) compared to the LGA (38.9 per cent) and Greater Sydney (52.8 per cent)
- Higher proportions of people who cycled to work (3.5 per cent) and walked to work (5.9 per cent) compared to the LGA (2.8 per cent and 5.6 per cent respectively) and Greater Sydney (0.7 per cent and 4 per cent respectively)
- The SEIFA IRSD ranked St Peters at decile 10, which means the suburb has a very low level of socio-economic disadvantage.

A summary of the demographic characteristics of St Peters is provided in Appendix A.

4.3.3.6 Community infrastructure

In St Peters educational facilities, places of worship, child care, medical facilities and accommodation facilities are noted to be in proximity to the project site. Table 4-3 provides descriptions of these community infrastructure facilities and Figure 4-4 shows the location with respect to the project.

Table 4-3 Summary of community infrastructure located near project site in St Peters

Facility type	Facility Name	Description	Map reference
Education and child care facilities	St Peters Public School and St Peters Community Preschool	St Peters Public School is a primary school facility, caters for children from kindergarten through to Year 6. The current enrolment is about 85 students and services the local St Peters and Sydenham area. St Peters Community Preschool is a non for profit preschool located at St Peters Public School. It is licensed for children aged 3 to 5 years old and cater for 27 children per day.	1
	Helping Hands	The Helping Hands Network provides children and their families support through before and after school care services, vacation care services. This particular centre services the St Peter Public School community. The centre is open from 7.30am to 9am for before care services, and from 3pm to 6pm for after school care services.	3
Place of worship	St Peters Anglican Church	The St Peters Anglican Church has regular church services at 9am on Sundays, followed by a community barbeque on the last Sunday of each month. The church also offers wedding services and venue hire for the community.	2
Medical facility	Just Better Care Inner West	Just Better Care Inner West is an aged care and disability support provider. Their services are primarily for in-home care and support, however they also have their drop-in centre in the St Peters location.	4
Accommodation facility	Southern Cross Hotel	The facility is both a pub and a hotel offering 14 rooms.	5

0 37.5 75 m

Scale 1:2,500

Author: David Naiken
Date: 25/07/2019
Map no: PS109315_GIS_306_A4

Legend

- Major Roads
- Local Government Area
- Suburb
- Project Site Boundary
- EIS Design - Stage 1/3 — Design
- Education and Child Care Services
- Accomodation Facilities
- Health Services
- Place of Worship

Figure 4-4

Community Infrastructure located in St Peters

4.3.4 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 safety. A project may impact on these aspects of a community through changes in noise and air quality levels, visual amenity, traffic and access, barriers to movement across the community, and use and enjoyment of community spaces.

Community values of neighbouring suburbs with Greater Sydney are likely to be similar and are often not confined to suburb boundaries. Hence community values for the local study area are discussed together in this section. Community values of the Mascot community that are relevant to this SEIA have been identified based on a review of the *Botany Bay Planning Strategy 2031*, *Community Strategy Plan 2030*, *Disability Inclusion Action Plan*, *Bayside Crime Prevention Strategy* and consultation to inform the combined EIS/preliminary draft MDP. Values of the Tempe and St Peters communities that are relevant to this SEIA have been identified based on a review of relevant consultation outcomes and documents. This includes: consultations by Roads and Maritime to inform the EIS/preliminary draft MDP (section 5 and Chapter 4 of the EIS); a review of council's *Our Inner West 2036 Community Strategic Plan* and the Community Satisfaction Research conducted by Micromex Research (2018); and review of relevant consultation outcomes from recent projects in the local study area . Values have also been identified through the analysis of the demography of the local study area.

4.3.4.1 Local amenity and character

All three suburbs within the local study area include former industrial areas, and industrial precincts that are still in operation. This unique amenity and character is valued by the community, in particular for its character and diversity (Inner West Council, 2018; Bayside Council 2018).

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

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

According to *Our Inner West 2036 Community Strategic Plan,* 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 LGA and want to ensure they are protected. They also aspire for urban environments that are green, cool and rich with biodiversity (Inner West Council, 2018; Roads and Maritime, 2016). Roads and Maritime consultation with communities living in Tempe also indicated the high level of importance residents place on the wetlands and open space provided by Tempe Lands and Tempe Recreation Reserve (see section 5) (Roads and Maritime, 2018c). Access, connectivity and community cohesion.

According to the *Botany Bay Planning Strategy 2031,* local connectivity within some suburbs of Bayside LGA (including Mascot) is a challenge due to lack of transport options and isolated suburbs. Outcomes from community consultation on the *Community Strategic Plan 2030* indicate that Bayside 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 throughout the LGA to support local connectivity.

During community consultation for the combined EIS/preliminary draft MDP by Roads and Maritime, residents in Mascot highlighted the importance of connectivity through the suburb, particularly pedestrian and public transport connectivity given existing high levels of traffic in the suburb (see section 5). Residents of Mascot also noted that local traffic and access as issues during consultation conducted for Airport East precinct (Roads and Maritime, 2015).

According to overall Inner West community satisfaction results (Inner West, 2018; Micromex, 2018), residents identified the top priority areas for the council to focus on in the next 10 years as:

- 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 LGA's suburbs and with other areas of Sydney. These priority areas are also reflected in *Our Inner West 2036 Community Strategic Plan*, which states that the community desires accessible services, efficient and convenient movement around the LGA, improved transport networks and reduced traffic congestion through new public transport and road infrastructure.

As summarised in section 5.2, consultation with the broader community for the project identifies that access and connectivity is a priority for vehicles and active transport users. Lack of footpaths in residential areas of Tempe means that pedestrian activity is limited. In addition, residents commented that workers and visitors to the airport should be encouraged to park at the airport rather than in local residential streets in Tempe.

As identified in sections 4.3.1 and 4.3.2, and through consultation conducted for WestConnex New M5 Project, the suburbs of Tempe and St Peters lack their own town centre, making access and connectivity with neighbouring suburbs essential in order to access services as well as promoting community cohesion (Roads and Maritime, 2016).

Access and connectivity is a challenge faced by all three suburbs in the local study area, primarily because of dedicated land uses that interrupt residential corridor connectivity. In response to community feedback, both Bayside LGA and Inner West LGA have identified access and connectivity as a strategic area for improvement for the LGAs in the future.

5. Stakeholder consultation

This section provides a summary of the stakeholder consultation undertaken by Roads and Maritime to inform this SEIA. This includes community consultation undertaken for the project and targeted consultation with active transport groups, businesses and residents of east Tempe. Relevant consultation outcomes from other projects in the area are also provided.

5.1 Summary of key findings

Roads and Maritime has undertaken stakeholder and community consultation to inform the Sydney Gateway road project EIS. Stakeholder and community feedback relevant to this SEIA included concerns about:

- Increased noise and air pollution on Tempe residents generated by traffic from the new road infrastructure
- The removal of the existing shared path on Airport Drive affecting the access of active transport users
- Changes to vehicle or pedestrian access for Mascot residents
- Increased traffic on the road network affecting community connectivity, including access to Sydney Airport
- The need for better public transport to the airport
- Impacts to Tempe Recreation Reserve, Tempe Lands and local flora and fauna due to proximity of the new road infrastructure
- Based on relevant consultation from other projects, residents in St Peters were concerned about the increase in noise generated by construction and noted the importance of maintaining pedestrian connectivity.

The sections below provide relevant detail and outcomes from specific consultation activities undertaken by Roads and Maritime.

5.2 Summary of consultation activities

Four key stakeholder groups were engaged by Roads and Maritime during a series of consultation activities for Sydney Gateway road project. These groups were:

- Government organisations
- Directly impacted landowners
- Peak bodies, local businesses and interest groups
- General public and local community.

The following engagement activities were carried out with these groups over two periods of consultation:

- Preliminary design and project announcements (September to October 2018)
  - 27,000 community updates distributed
  - 139 residents and businesses in the local study area door knocked
  - 300 people engaged during four pop-up booths
  - 4,000 views of the Sydney Gateway project website
  - Individual stakeholder briefings
- Concept design display (May to June 2019)
  - 24,000 community updates distributed
  - 470 residents and businesses in the local study area door-knocked
  - 101 people engaged at three information sessions
  - 387 people engaged during five pop-up booths
  - 94,000 people engaged through Facebook
  - 8,500 views of Sydney Gateway project website
  - Individual stakeholder briefings.

Further information on consultation activities can be found in Chapter 4 and Appendix E of the EIS/preliminary draft MDP.

5.3 Outcomes of consultation relevant to this SEIA

5.3.1 Overview of consultation outcomes

Feedback received during the consultation activities outlined in section 5.2 was summarised in the *Sydney Gateway – Community consultation summary report*, and can be found in Chapter 4 and Appendix E of the EIS/ preliminary draft MDP.

Table 5-1 presents a summary of feedback that is relevant to this SEIA. The following sections provide more detail about consultations on topics particularly relevant to this SEIA.

Table 5-1 Community feedback relevant to this SEIA

Feedback theme	Comment	Relevance to this SEIA
Environment	Concern about increased noise and air pollution on Tempe residents generated by traffic from the new road infrastructure	Amenity (section 7.2)
	Concern about noise impacting hotel operations and guest enjoyment during construction	Business and Amenity (section 6.1 and 6.2)
	Measures to minimise the visual impact of the project for residents in east Tempe	Amenity (section 7.2)
Traffic and road safety	Concern about traffic congestion on Qantas and Airport Drive and reduced vehicle access into the International Terminal from Sydney Gateway road project	Access (section 6.3 and 7.3)
	Additional traffic on Campbell Street	Access (section 6.3 and 7.3)
	Concerns about traffic congestion on local streets during construction	Access (section 6.3 and 7.3)
	Concerns about changes to access and connectivity for residents in Mascot during construction	Access (section 6.3)
	Concern over travel delays on roads during construction that may impact retailers, pilots, cabin crew, suppliers and employees travelling to work at Sydney Airport	Business and access (sections 6.1 and 6.3)
Socio-economic	Concern over how travel delays may have financial implications for airlines	Business (section 6.1)
	Concern over potential impact on advertising revenue for advertisers due to construction and operation of the project	Business (section 6.1
	Cost to local businesses due to construction impacts	Business (section 6.1)
Pedestrians and cyclists	Concern about the removal of the existing shared path on Airport Drive and reduced community access and access for Sydney Airport employees	Business and access (sections 6.1 and 6.3)
	Lack of footpaths in east Tempe and the need for better active transport access	Access (sections 6.3 and 7.3)

Feedback theme	Comment	Relevance to this SEIA
Parking	Encourage more people to park at the airport rather than local residential streets in Tempe by reducing airport parking fees	Access (sections 6.3 and 7.3)
	Concern about lack of parking options during operation, as more people will be driving to Sydney Airport	Access (section 7.3)
Public transport	Request to increase bus services to the airport	Access (sections 6.3 and 7.3
	Remove the station access fee on journeys to the airport terminal train stations	Access (sections 6.3 and 7.3
	Insufficient public transport routes to the airport	Access (sections 6.3 and 7.3
Recreational facilities and open space	Concerns about any impact to: ■ Tempe Reserve and Tempe Wetlands ■ Tempe off-leash dog park ■ Local flora and fauna, especially in green spaces in Tempe.	Community infrastructure (sections 6.4 and 7.4)
	Relocation of Tempe Golf Driving Range and Academy	Community infrastructure (section 6.4)
	Proximity of the road to green space and potential impacts once in operation	Community infrastructure (section 7.4)

5.3.2 Consultation on active transport

Following community consultation held in September and October 2018, active transport was identified as a key focus area for the Sydney Gateway road project. As a result, Roads and Maritime has undertaken targeted consultation on Sydney Gateway road project's active transport network. A summary of these consultation activities is provided in the sections below.

5.3.2.1 Sydney Airport cycling forum

The Sydney Airport cycling forum was held in November 2018 to gain stakeholder feedback on the development of Sydney Gateway road project's active transport options. Feedback that is relevant to this SEIA includes:

- Airport/Qantas Drive shared path is a key link, minimising distance around the airport
- Stakeholders considered the removal of a section of shared path along Alexandra Canal as unacceptable. The existing route is highly desirable because it is direct and flat
- A replacement route for the Airport Drive shared path should be built first. There was concern that if the replacement route was not completed first, there would be reduced access for cyclists
- A notification strategy about construction works is important to alert diverse user groups of paths.

5.3.2.2 Sydney Gateway road project active transport workshop

The Sydney Gateway road project active transport workshop was held in November 2018 to gain feedback from interest groups on the development of Sydney Gateway road project's active transport options. Feedback that is relevant to this SEIA includes:

- Both community needs and commuter needs should be assessed
- Safety, including appropriate lighting, car and bike separation, gradient and air pollution, should be considered
- An east–west connection was requested to link existing active transport infrastructure and provide efficient travel.

Active transport is addressed in sections 6.3 and 7.3 of this report.

5.3.3 Consultation with east Tempe residents

The east Tempe community forum was held in December 2018 to gain feedback from local residents about the project. An additional meeting was held with residents of east Tempe in June 2019. Feedback focused on potential impacts to Tempe Recreation Reserve and Tempe Lands including the off-leash dog park and Tempe Wetlands. Concerns were also raised over the closure of the Airport Drive shared path.

Community members raised that an alternative active travel route during Sydney Gateway road project construction and operation should be equal to or better than the existing active transport network (refer to sections 6.3 and 7.3 for the assessment of potential impacts to active transport during construction and operation).

Residents in east Tempe also raised concern regarding noise and air pollution that may result from the new road infrastructure, particularly given their current exposure to noise as a result of Sydney Airport and traffic on the Princes Highway (Impacts to local amenity due to noise and vibration and air quality changes during operation are assessed in section 7.2.3). The community requested that noise mitigation options are explored.

5.3.4 Consultation with freight industry

As part of the consultation to inform the EIS/preliminary draft MDP, Roads and Maritime consulted with local businesses and peak bodies in the freight industry. Results of this consultation relevant to this SEIA include:

- Container trucks will still be required to use local roads, including Canal Road, Ricketty Street, Kent Road, Coward Street, Bourke Road and O'Riordan Street when accessing Port Botany (addressed in section 7.3)
- There was concern over lack of connection between Sydney Gateway road project and the Cooks River Intermodal Terminal, and how this may impact supply chains for businesses (addressed in section 7.1).

5.3.5 Summary of business surveys

As part of Technical Working Paper 12 – Business Impacts, business surveys were undertaken with a cross-section of businesses near the project site. Refer to Technical Working Paper 12 – Business Impacts for consultation outcomes with other commercial and industrial businesses affected by land requirements. This section summarises outcomes of these surveys that are particularly relevant to this SEIA. The potential impacts on the businesses discussed in this section are assessed in Technical Working Paper 12 – Business Impacts, and relevant socio-economic impacts to businesses are discussed in sections 6 and 7.

5.3.5.1 Tempe Golf Driving Range and Academy

Tempe Golf Driving Range and Academy is a golf training facility and driving range. The Tempe Golf Driving Range and Academy is located within the project site. The land on which the facility operates would be required for the project. It is a family-owned business with five employees. The business representative stated the business would need to close and relocate as a result of the project. They preferred to relocate nearby, or in the same location.

5.3.5.2 Qantas Flight Training Centre

The Qantas Flight Training Centre is a commercial and educational flight training facility and flight simulator. The centre is partially located within the project site. The land that is occupied by the current centre is required for the project, so the facility would need to be relocated. During consultation, concern over the potential increase in travel times for employees was raised, due to construction related traffic and changed access arrangements. Noise and vibration associated with construction activities was raised as a concern by Qantas due to the potential disruption to training.

5.3.5.3 Boral

Boral is a construction materials recycling plant, and a metropolitan concrete batching plant. Boral Recycling St Peters and Boral Concrete St Peters are located within the project site. Boral Recycling St Peters leases the land it operates on from Sydney Airport Corporation. Boral owns the land where Boral Concrete St Peters is located. Boral Recycling St Peters would no longer be able to operate at this location as a result of the project, however Boral Concrete St Peters would only be partially impacted by the project and would remain in operation. During consultation, concern was raised about the potential impacts on access for employees and business owners, including the potential disruption of the main access route.

5.3.5.4 Tyne Container Services

Tyne Container Services is a container storage facility, container supplier and container modification and repair service business. Tyne Container Services is located within the project site and would be required to relocate as a result of the project. The business raised concern over the impact that this relocation would have to staff, income and customer base.

5.3.5.5 Qube

Qube is major international logistics provider, which operates from premises within the project site. The alignment of Sydney Gateway road project would require a small portion of land of Qube's Maritime Container Services location in St Peters. This operation is responsible for the Cook River Intermodal Terminal, which provides a range of functions, and provides the largest empty container storage facility in the state. The project design is currently being refined with the aim of minimising the potential impacts on the property. The business would be able to continue operations on the site with a reduction in the overall container storage capacity. There are about 150 staff working at this location.

6. Assessment of construction impacts

This chapter documents a detailed description and assessment of potential socio-economic impacts that may result from construction of the project. Impact identification and description has been informed by various sources of information as described in section 3.2. Socio-economic impacts resulting from changes to local economy, business and employment, amenity and character, access and connectivity and community infrastructure due to the proposed construction works have been assessed in accordance with the impact assessment methodology in section 3.2.5. The chapter also includes a description and assessment of the potential socio-economic impacts on Commonwealth land and a discussion about the consistency of the project with the *Sydney Airport Master Plan 2039* and *Sydney Airport Environment Strategy 2019–2039* in terms of socio-economic impacts.

6.1 Economy, businesses and employment

This section draws on the findings of Technical Working Paper 12 – Business Impacts to discuss the potential social implications of impacts on the economy, businesses and employment as a result of construction. With regards to businesses, this section discusses potential impacts on business owners, employees and customers as a result of land requirements, changes to access and connectivity, changes to amenity and interruptions to utilities.

6.1.1 Economy

As identified in Technical Working Paper 12 – Business Impacts, the construction industry is a significant contributor to the Australian economy with strong linkages to other sectors. It estimates that total economic activity including flow-on economic benefits across all industries generated by construction would be about $5.3 billion. As a result the construction would have a long-term benefit to the regional economy. Regional economic benefits could lead to social implications such as the development of businesses and employment opportunities that would be available to Greater Sydney communities. This could increase the income generation opportunities for these communities.

6.1.2 Businesses

6.1.2.1 Income

As identified in Technical Working Paper 12 – Business Impacts, construction may lead to increased expenditure at local and regional businesses through purchases made by construction workers and project procurement for local goods and services for construction. Increased demand for services would lead to more income generation opportunities available to local business owners and employees. Local businesses that may benefit include construction, personal services and retail businesses, such as food and beverage. Depending on where construction workers are sourced from, accommodation facilities close to the project may benefit from increased demand for accommodation by construction workers sourced from outside Greater Sydney.

As identified in Technical Working Paper 12 – Business Impacts, the removal of 30 billboards would lead to reduced revenue for the landowners and businesses that own and operate these. As raised in consultation (see section 5.2), companies that advertise on the signs would also experience a reduction in exposure and therefore a potential reduction in revenue.

The potential for reduced revenue could lead to stress and worry for affected business owners. These impacts would have a low to moderate magnitude due to the small number of affected business owners and employees. Most business owners are likely to have a low to moderate level of sensitivity as they have an ability to adapt and absorb changes. The level of significance would therefore be moderate-low to low.

6.1.2.2 Travel times

As identified in Technical Working Paper 12 – Business Impacts, changes in travel time would affect the transportation of goods particularly related to the transport, postal and warehousing industry, which is the largest employer in Bayside LGA (section 4.3). This would result in a direct increase in cost to local businesses, including those located in the airport's cargo terminal area, O'Riordan Business Development area and Airport Drive Industrial area, which could also lead to broader freight inefficiencies.

Increased travel times could cause delays for airline employees and customers, which was raised as a concern during consultation (section 5). As identified in Technical Working Paper 12 – Business Impacts, the efficiency of airline operations are particularly sensitive to delays in arrival of passengers and crew, and could cause people to miss flights. This could deter some travellers from visiting some businesses in the terminals if they experience delays on their way to the airport. This could potentially affect revenue for businesses at the terminal.

Many businesses in and around the 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 sensitivity would be high-moderate.

As discussed in section 6.3.1, increased travel times may increase the daily commute time for business employees. People would likely need to allow for more travel time for their trips through the project area. This is likely to reduce the time available to spend with families, undertaking leisure and social activities, and cause delays in getting to work. Most employees may have a low to moderate level of sensitivity to increased travel times as they would be expected to some vulnerabilities and some ability to adapt to these changes to 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.

6.1.2.3 Amenity

Some businesses may also be affected by amenity impacts such as increased noise and vibration levels, decreased visual amenity and air quality during construction. These would be experienced by businesses located close to construction works, construction compounds and along haulage routes. Technical Working Paper 12 – Business Impacts identifies that many businesses located around the airport are located in industrial precincts and are likely exposed to existing noise and vibration effects from the airport and other industrial uses. However amenity changes have the potential to deter customers from visiting some businesses. Employees at affected businesses may also be affected by amenity changes which could disrupt activities in the workplace affecting workplace productivity. Construction activities may also obstruct views from passing traffic to a car dealership business located on the corner of Ninth and Sir Reginald Ansett Drive. This has the potential to reduce passing trade as less people may see the dealership or customers may have difficulty finding the premises. Businesses such as the car dealership, car hire and car wash may also be particularly sensitive to the effects of construction dust.

Technical Working Paper 12 – Business Impacts recommends implementation of a business management plan to assist businesses affected by amenity changes. Potential impacts on users of accommodation facilities are discussed in section 6.2.

Changes to access arrangements on the local road network may also deter some customers from visiting some businesses or affect businesses receiving or sending deliveries during construction. This could reduce income for business owners and disrupt or change their delivery schedules. The business management plan recommended in Technical Working Paper 12 – Business Impacts would include protocols for identifying reasonable measures to maintain pedestrian access, visibility and parking in consultation with affected businesses.

Even with the support measures in place for affected businesses, the potential for reduced business income and disruptions to business activities could lead to stress and worry for affected business owners. This would have a low to moderate magnitude due to the number of affected business owners and employees. Most business owners are likely to have a low to moderate level of sensitivity as they have a high or some level of ability to adapt and absorb changes. The level of significance would therefore be moderate-low to low. Employees at these businesses may have a negligible to low level of sensitivity to these changes, therefore the level of significance would be negligible to low.

6.1.2.4 Business relocation

Land requirements for the project would result in the relocation of the following businesses:

- Tyne Container Services (shipping container business)
- Boral Recycling St Peters and Visy Paper and Cardboard Recycling (both businesses are located on Commonwealth land)
- Tempe Golf Driving Range and Academy (private business leasing land in Tempe owned by Inner West Council) is planning to relocate, subject to finding a suitable location.

In Technical Working Paper 12 – Business Impacts, the potential impacts for each business as a result of the project land requirements are discussed. From a social perspective, business owners and employees would need time to understand the negotiation and potential relocation process, which could result in stress and worry for some individuals and disruption to business activities. Technical Working Paper 12 recommends mitigation measures to support businesses through the relocation process.

In addition, the business operating Tempe Golf Driving Range and Academy is likely to lose members if they are unwilling to travel and the associated revenue until it can build up a new membership base at the new location.

Business owners and employees are likely to have a moderate level of sensitivity to relocation requirements, and the magnitude of the impact would be moderate given the changes that would occur for each business. The level of significance would therefore be moderate.

At the time of writing this report, relocation of Tempe Golf Driving Range and Academy business to Campbelltown has not been confirmed. It is possible that Tempe Golf Driving Range the business would be required to relocate to an alternate location or at worst be required to close. This would likely affect income for business owners and employees, which may lead to stress and worry for some individuals. However, given the current negotiation process being undertaken, the likelihood of this business closing is considered to be low. The potential impacts related to job displacement resulting from relocation are discussed in section 6.1.3 below.

There is potential for other golf facilities in the area to benefit from the relocation of Tempe Golf Driving Range and Academy if current members chose to access alternate golf facilities. The nearest option is Barton Park Driving Range, which is located around four kilometres away in Arncliffe. The facility is open to the public seven days a week. It is expected this business could benefit from increased users and potentially increased membership if Tempe Golf Driving Range and Academy is moved outside the area.

Land which contains the Inner West Council depot located adjacent to Tyne Container Services would also be required for the project. This would result in the depot being relocated to another suitable location. Given that the depot is not publicly accessible, no social impact is expected as a result of its relocation. In the event that the business is unable to relocate, the business would close. The potential impacts related to job displacement resulting from relocation or closure are discussed in section 6.1.3 below.

6.1.2.5 Utilities

The project would require adjustments to a range of utilities and services. While a safe and compliant approach would be taken to the adjustments and businesses would be notified ahead of time, there is potential for interruptions to services such as power, water and gas. This could affect nearby businesses, and depending on the duration of interruptions, could result in lost productivity and business income. Most business owners are expected to have a moderate to low level of sensitivity to utility interruptions, particularly as business owners and employees would be notified about potential interruptions. The magnitude of the impact is expected to be low due to the number of businesses that would be affected, therefore the level of significance would be moderate-low.

6.1.2.6 Parking availability

Construction of the project would lead to temporary removal of several car parking areas located at Sydney Airport. These facilities are described below:

- A car parking area near Terminals 2/3 that is accessed off Ninth Street and owned by Sydney Airport with capacity for about 100 vehicles would be affected during construction. This a paid facility for Sydney Airport customers. The temporary loss of these spaces would be managed by Sydney Airport Corporation
- Two car parking areas near Terminals 2/3 that are accessed off Ross Smith Avenue and Sir Reginald Ansett Drive respectively, with a combined capacity for about 81 vehicles and are used by the adjacent DHL business. Only one of these car parks would be able to be used for construction at any one time, which is expected to reduce the impact for the users
- About 40 car parking spaces located along the northern boundary of a mail handling facility adjacent to Airport Drive at Terminal 1 would be removed during construction. These changes would be managed by Sydney Airport as part of an upcoming lease renewal for the facility.

It is expected that employees of the DHL business and the mail handling facility may experience inconvenience due to the reduction in available parking spaces. It is understood there are other parking spaces in the vicinity of the mail handling facility that would be available to employees. However, there is potential for some employees to have to find alternate parking further away, which could increase their commute to work. Most employees of these businesses are expected to have a low to moderate level of sensitivity as they may have some ability to adapt to these changes by accessing parking elsewhere in the vicinity or using public transport. The magnitude of this change would be low as it would affect some employees temporarily, therefore the significance would be moderate-low to low.

6.1.3 Employment

During construction, the projected construction workforce is expected to comprise around 1,080 (daytime), 150 (evening) and 500 (night time) workers. Construction would require a range of skilled workers such as trades and construction personnel, subcontract construction personnel and engineering, and function and administrative staff. As identified in the existing environment (section 4.2), the regional study area attracts construction workers from around Greater Sydney through the significant number of jobs associated with the airport and port, including construction (eight per cent of airport jobs). Construction is also one of the main industries of employment in Bayside LGA (7.4 per cent). Construction of the project would lead to increased job and income generation opportunities available to residents within the regional study area and Greater Sydney in the short term.

In some cases, relocation of businesses due to land requirements for the project would result in the potential displacement or loss of jobs within the local study area. The land requirements of the project would require the relocation of the Tempe Golf Driving Range and Academy. As discussed in section 6.1.2, the business is planning to relocate to Campbelltown, subject to negotiation with Campbelltown City Council. As identified in Technical Working Paper 12 – Business Impacts, the facility provides for five jobs, which could be displaced or at worst lost depending on the outcome of potential relocation of the facility to Campbelltown.

The project land requirements would require the relocation of Tyne Container Services. As identified in Technical Working Paper 12 – Business Impacts, the business provides for 60 to 70 contracting jobs. In the event that Tyne Container Services could not find a suitable location to relocate, the business would close, resulting in these jobs being lost. However there is potential for Tyne Container Services to continue operating across multiple sites on smaller footprints, potentially displacing or losing jobs from its existing location.

Partial use of the land that is sub-leased by Boral Recycling St Peters would result in the relocation of the recycling plant. This could lead to either a loss or displacement of jobs. Business surveys undertaken for Technical Working Paper 12 – Business Impacts did not obtain how many jobs are at Boral Recycling. As a result, the number of jobs that would be potentially lost or displaced as result of relocation is not available.

Should these businesses relocate outside the local study area and retain all existing jobs then there would be a displacement of jobs, should employees choose to remain with the businesses. If the businesses relocated locally and employees chose to seek and gain local employment elsewhere then some jobs would be retained in the local area.

From a social impact perspective, relocation of businesses and jobs may cause inconvenience initially to employees who would need to alter their daily commute to work particularly if they have to travel additional distance and potentially at greater cost, or on routes unfamiliar to them. Loss of jobs may lead to financial stress and worry for individuals and households. Technical Working Paper 12 – Business Impacts recommends an ongoing business support program to support businesses through property acquisition and relocation. Together with the continued consultation with affected businesses already being undertaken by Roads and Maritime, this program would ensure businesses and employees are given ample notice of relocation, and allow them to plan for the changes.

Most employees are expected to have a low to moderate level of sensitivity considering the mitigation measures discussed above. Depending on the outcome, the magnitude of job displacement or loss is likely to be moderate for the individuals affected. The level of significance would therefore be moderate or moderate-low depending on the individual circumstances of those affected.

6.2 Amenity and character

This section discusses the potential impacts that may occur due to changes to amenity within the local study area, which may affect the quality of life of residents and users of accommodation facilities in these areas. Changes to amenity relate to changes in noise levels, visual amenity, and air quality. Amenity changes and resulting social impacts on businesses are discussed in section 6.1, and on users of affected community facilities in section 6.4. This section also discusses potential social impacts resulting from interruptions to utilities in residential areas.

6.2.1 Noise and vibration

This section has involved a review of Technical Working Paper 2 – Noise and Vibration to understand the potential changes in the acoustic environment that would result in social impacts on residents and general community members within the study area. It is noted that Technical Working Paper 2 – Noise and Vibration has assessed the noise level change based on all equipment working during a construction activity as worst-case scenario. However, there would be frequent periods when not all equipment would be working at the same time, and construction noise levels would be lower than the worst-case levels assessed. There would also be times when no equipment would be in use and therefore no noise level change and associated social impact would be expected.

As noted in Technical Working Paper 2 – Noise and Vibration and section 4.3, existing noise levels in the local study area are influenced by airport, rail and road-related noise during the daytime, with noise levels reducing during the evening and night. Changes to noise levels are expected along the project site from construction activities. Given that the project site is primarily within industrial land and separated from existing residential areas, changes to the noise amenity at residential properties would be mainly limited to the residents in east Tempe and Mascot located in close proximity to construction activities. Other areas either have no residential receivers or receivers are sufficiently far from the works and compounds that noise level increases would be minimal and generally not noticeable.

As seen in Technical Working Paper 2 – Noise and Vibration, construction during the day would lead to noticeable increased noise levels at:

- Some residential properties in east Tempe to the north of Tempe Lands due to works at the former Tempe Tip site
- Some residential properties on Baxter Road (Mascot) due to proximity to the works near the intersection of Qantas Drive and Sir Reginald Ansett Drive
- Accommodation facilities near the airport, including Stamford Plaza Hotel, Mantra Hotel, Ibis Budget Sydney, Quest Mascot and Citadines Connect Sydney Airport Hotel. Increased noise may still be noticeable during some works, despite most facilities expected to have existing high performance facades and glazing required to mitigate airport-related noise.

Vibration that exceeds human comfort may be noticeable at residences and accommodation facilities adjacent to the construction areas, particularly near Airport Drive and Qantas Drive, and in east Tempe. Where vibration may be perceptible, it is likely to last for relatively short durations when equipment such as rockbreakers are operating nearby.

Daytime increased noise and vibration from construction may be a nuisance to some residents of east Tempe and along Baxter Road (Mascot). This could potentially lead to some people spending less time outdoors in backyards or on balconies engaging in recreational activities or relaxation, or closing windows while indoors. It also has the potential to disturb or interfere with day to day activities such as conversations, reading, listening to the radio and watching television. 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 would affect some residents in the local study area. The level of significance would be low.

During consultation, concern was raised over the potential for construction related noise to impact the operation and enjoyment of accommodation facilities (see section 5). Noise and vibration from construction may impact the users of the accommodation facilities identified above. This could potentially lead to some people spending less time outdoors or engaging in recreational activities or relaxation. It also has the potential to disturb or interfere with day to day activities. Users of accommodation facilities are considered to be less sensitive to the noise and vibration impacts, due to the expected high performance facades and glazing of the infrastructure as well as the temporary nature of the user's exposure to these impacts. Accommodation facility users 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 some hotels, therefore the level of significance would be negligible.

During night works, there is potential for sleep disturbance due to enabling works at residential properties in east Tempe, residential areas in Mascot and accommodation facilities near the airport as well as some residential properties in Sydenham. Disturbance to people's night-time peacefulness, relaxation or sleep can lead to tiredness which can affect people's moods, ability to concentrate on work and other activities, increase irritation and therefore potentially add to strain on personal relationships. Most residents are likely to have a moderate level of sensitivity to night time noise. The magnitude of the impacts would be low as it would only affect some residents in the local study area. The level of significance would be moderate-low. Users of accommodation facilities 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 these 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. While vulnerable groups are expected to live across the local study area, the demographic baseline (section 4.3.2) found there are high proportions of families with children and people with a need for assistance living in Tempe. Refer to Technical Working Paper 15 – Human Health for assessment of impacts on human health. Vulnerable residents would have a moderate to high level of sensitivity due to potential for multiple vulnerabilities and little capacity to adapt to change. As discussed above, the magnitude of the impact would be low for these residents. The level of significance would therefore be moderate to moderate-low for vulnerable groups.

Construction related traffic has the potential to temporarily increase in road traffic noise, in particular in areas adjacent to haulage routes (identified in section 6.3.1). As assessed in Technical Working Paper 2 – Noise and Vibration, Bellevue Street in Tempe is likely to experience an increase in noise levels as a result of construction traffic. This is unlikely to impact residents as it is not expected to be a noticeable increase from existing road traffic noise.

It is noted that people's perception of changes in noise levels is subjective and varies from person to person. Generally construction activities and equipment are likely to move within the construction sites and along the linear project area. The associated increase in noise levels is expected to be temporary in duration and sporadic in frequency. As the distance between the receiver and construction activities increases, noise is expected to decrease and be less noticeable. However, as noted in Roads and Maritime's stakeholder consultation (section 5) and review of Inner West Council policies (section 2.3), local communities value the existing overall amenity and character of the area. Therefore some community members may also perceive a greater impact to their amenity as a result of construction noise and vibration.

6.2.2 Visual and landscape

As noted in section 4.3.4, local communities value the amenity and character of green spaces. Findings from Technical Working Paper 13 – Urban Design and Visual Impacts have identified potential changes to the visual environment at Tempe Lands adjacent to the east Tempe community and along Airport and Qantas Drive due to construction activities. However although this would result in changes to the overall visual amenity of the area, residents near the project site would not have direct views of construction activities so would not necessarily experience a visual impact from their residences.

Construction activities may impact the visual amenity of Alexandra Canal, particular at those points where it is most visible (Marsh Street, Airport Drive, North Precinct Road, Ricketty Street and the Canal Road overbridge). This may alter the character of the area for local residents and users of shared use paths adjacent to the canal, which may contribute to the overall change to the amenity of the area.

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 (as discussed in section 4.3.4). The magnitude of the impact would be negligible and primarily visible to local residents while moving about the suburb rather than from their place of residence. The level of significance would therefore 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 as works would be managed in accordance with the mitigation measures outlined in Technical Working Paper 9 – Statement of Heritage Impacts and in consultation with Sydney Water and NSW Office of Environment and Heritage. Therefore, the social impact from visual changes to Alexandra Canal is expected to be of low significance.

Construction activities at Qantas Drive and the northern lands would be visible from some windows at accommodation facilities adjacent to the project site. Accommodation facility users 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 accommodation facilities. Therefore, this is not anticipated to result in social impacts on the users of accommodation facilities.

6.2.3 Air quality

Technical Working Paper 4 – Air Quality has assessed construction dust on receptors within 350 metres of the boundary of the site and/or within 50 metres of the routes used by construction vehicles up to a distance of 500 metres from the construction site entrances. Dust is expected to be temporary and would only occur during dry weather with the wind blowing towards a receptor when dust is being generated.

As identified in Technical Working Paper 4 – Air Quality, even with recommended mitigation measures, predicted increases in dust could potentially affect residential properties and community activities within proximity of construction areas. This may include the east Tempe residential area and residential properties and accommodation facilities near Joyce Drive in Mascot, as well as properties near haulage routes (identified in section 6.3.1). Increases in dust may lead to some residents altering their way of life, such as closing windows of houses or vehicles, or spending limited time in backyards or on balconies engaging in recreational activities. People may also need to spend more time cleaning indoor or outdoor surfaces due to settling dust. People who may be more sensitive to dust include older people, children and people with medical conditions such as asthma. Refer to Technical Working Paper 15 – Human Health for assessment of impacts on human health.

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.

6.2.4 Utilities

The project will require adjustments to a range of utilities and services in the vicinity of the project. While a safe and compliant approach would be taken to the adjustments, there is potential for interruptions to services such as power, water and gas. This could affect nearby residential areas and, depending on the duration of interruptions, could result in an inconvenience or interrupt the way of life and daily activities for affected residents.

Vulnerable residents may be more sensitive to utility interruptions, such as people with need for assistance and people with medical conditions who may rely on power. There are higher proportions of people who need assistance living in Tempe compared to the LGA and Greater Sydney average.

Most residents would likely have a low sensitivity to service interruptions, as they are likely to have minimal vulnerabilities and a high ability to absorb or adapt to change. The magnitude of the impacts would be low and may affect some residents in the local study area. The level of significance would be low. Vulnerable residents may have moderate to high levels of sensitivity, therefore the level of significance for these residents would be moderate to moderate-low.

6.3 Access and connectivity

This section discusses potential changes to access and connectivity resulting from construction activities and traffic which affect residents, workers and general community members in the local study area. The social implications of access and connectivity changes affecting businesses are discussed in section 6.1.2, and the social implications of access and connectivity changes for users of community facilities are discussed in section 6.4.

6.3.1 Travel times

Across all construction scenarios assessed in Technical Working Paper 1 – Transport and Traffic, construction activities resulting in road or lane closures would generally result in congestion and longer travel times within the local road network during peak periods. Across all construction scenarios, it is noted that road users accessing the Qantas Drive/Seventh Street/Robey Street intersection would experience increased travel times to Terminals 2/3 and throughout the Mascot area. Depending on the scenario, road users may experience increased travel times along O'Riordan Street and General Holmes Drive. These increases are estimated to be up to 1 minute in the AM peak period, and up to 3 minutes in the PM peak period.

These changes to traffic conditions and access arrangements are likely to affect residents, workers and general community members passing through the project area, in particular Mascot, as well as travellers accessing Sydney Airport. It would also affect many workers from across Greater Sydney commuting to and from the airport and Port Botany by road (discussed in section 4.2). These changes would temporarily increase people's travel time for daily commutes or other trips they make using these roads, particularly during peak periods. For travellers to the airport, this could lead to delays to their journeys. People would need to allow for more travel time for their trips through the project area and to and from the airport. Additional time spent travelling is likely to reduce the time people can spend with families, undertaking leisure and social activities, and cause delays in getting to work or other commitments.

Local residents raised concern about the potential for increased traffic on local roads due to construction (see section 5). Several residential streets in the local area would experience increased construction vehicle traffic, including Bellevue Street, Marsh Street, West Botany Street, and Robey Street. This is likely to temporarily increase the travel time for local residents along these streets, which would lead to similar social impacts described above.

Most residents, commuters and general community members travelling around the 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 travellers may have a high level of sensitivity, as increased travel times could affect their onward journey from Sydney Airport. The magnitude would be moderate as the impacts would affect most travellers through the local study area and the changes would be experienced throughout the construction period. The level of significance would be moderate for most travellers, and high-moderate to moderate for flight passengers.

6.3.2 Public transport

As noted in section 5.2, some community members are concerned about the lack of bus services to Sydney Airport. Two bus stops on Qantas Drive at the Lancastrian Road intersection would be permanently removed as part of the project. These stops are used by bus routes 400 and 420. Bus route 420 travels between Eastgardens and Burwood via Sydney Airport, while route 400 travels between Bondi Junction and Eastgardens via Sydney Airport. These services would continue to operate during construction, and would be subject to the same delays, detours and diversions as general traffic along their routes.

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 general bus passengers would be moderate, and for vulnerable bus passengers would be moderate to high-moderate.

No changes are expected on rail services to the Sydney Airport terminals.

6.3.3 Active transport

Changes to shared use and pedestrian paths would include:

- Temporary closures of footpaths on either side of Canal Road
- Permanent closure of the shared path along Airport Drive
- Permanent removal of the signalised pedestrian crossing on Airport Drive at Link Road
- Temporary closure of the shared path along Alexandra Canal at the Coward Street end.

Some construction works are expected to result in temporary changes to footpaths on Airport Drive, and a section of the pedestrian path on the northern side of Qantas Drive would be permanently removed.

A temporary active transport link would be provided on the western side of Alexandra Canal to maintain connectivity for pedestrians and cyclists while a new permanent active transport link is being constructed. Cyclists and pedestrians would access the temporary route via the existing footbridge near Tempe Recreation Reserve and the existing Nigel Love Bridge.

These changes are expected to result in minor increases to the travel distance and time of some pedestrians who use the footpaths along Alexandra Canal and Qantas Drive. Pedestrian access is expected to be maintained on the other footpaths through appropriate diversions. There is potential for vulnerable community members (eg older people, 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.

Most pedestrians are expected to have no vulnerability and would be able to absorb or adapt to changes. The magnitude would be low as the change would only affect those pedestrians using these paths, therefore the level of significance would be negligible. 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 increased travel distance and time for freight terminal workers who may live in Tempe and walk to work. The removal of this crossing would result in a significant detour and would likely deter workers who currently use this route from walking. The magnitude of this change would be moderate for those affected. Most pedestrians are expected to have low vulnerability and a high ability to adapt to these changes, therefore the level of significance would be moderate-low. Vulnerable pedestrians may have a moderate level of sensitivity; therefore, the significance would be moderate. As discussed in section 5.3.2, active transport was identified as a key issue during consultation for the Sydney Gateway road project. The active travel route along Alexandra Canal has been selected as a result of feedback received at a Sydney Airport cycling forum and an active transport workshop (see section 5.3.1). The alternate route would require cyclists travelling northbound to travel short distances over an incline from Tempe Recreation Reserve to the Tempe Lands and a decline towards Nigel Love Bridge. This may increase the difficulty of the route for some cyclists. The remainder of the route along the northern side of Alexandra Canal would be relatively flat. While the alternate route may result in a small increase in travel distance and time for some commuter cyclists and this is unlikely to deter most users from using the route, the small section of incline could deter some cyclists.

Cyclists may have a low to moderate level of sensitivity to these changes, particularly related to section of incline. The magnitude would be low due only a small section of the overall route being more difficult, therefore the level of significance would be low to moderate-low.

6.3.4 Parking availability

Construction workers may be travelling during peak periods to travel to their designated work area. Around 980 parking spaces would be available for construction workers within construction sites and compounds. Given that peak daytime workforce numbers (around 1,090) would exceed the parking spaces available, there is potential for some workers to utilise street parking within the local area, such as the parking spaces within Tempe Recreation Reserve, and along residential streets in east Tempe and Mascot. This could potentially reduce the spaces available to some Tempe and Mascot residents, and for people accessing the airport or nearby businesses who may park in local streets. Although airport workers have several parking options available to them (eg parking and shuttle bus service, and some with access to terminal parking), there is potential for some workers to also park in local streets.

As noted from Roads and Maritime's stakeholder consultation (section 5.2), there is community concern about existing use of parking along residential streets in Tempe by non-residents which may include some airport workers and passengers. Further reduced parking along local streets could cause an inconvenience and annoyance to these residents. To minimise loss to street parking near construction sites, the construction contractor would be required to provide shuttle bus transfers from the nearest public transport hub to the construction sites to encourage workers to travel by public transport, and workers would also be encouraged to car pool. To ensure street parking remains available parking restrictions would need to be enforced by Council.

6.4 Community infrastructure

This section identifies and describes impacts due to temporary land requirements, amenity changes and access and connectivity changes to affected community infrastructure facilities in proximity to the project site during construction. Community infrastructure facilities listed in section 4.3 but not discussed in this section are not likely to be impacted by the project as they are not located in proximity to construction works. The exception to this is accommodation facilities, which are assessed in section 6.2.

6.4.1 Community infrastructure affected by land requirements

The project land requirements during construction would affect an area of about 7.3 hectares within the Tempe Lands. Of this, five hectares are used for recreation purposes which include the Tempe Golf Driving Range and Academy and the off-leash dog area, remaining areas consist primarily of areas of vegetation. The impacts on users of these facilities are discussed in this section.

6.4.1.1 Tempe Golf Driving Range and Academy

As discussed in section 6.1, the project would result in the permanent loss of the Tempe Golf Driving Range and Academy within the Tempe Lands. The business is planning to relocate to Campbelltown subject to negotiation with Campbelltown City Council. As noted in section 5, the community is concerned about the potential relocation of Tempe Golf Driving Range and Academy.

As discussed in section 6.1, if Tempe Golf Driving Range and Academy is relocated outside the area, it is expected that users may access Barton Park Driving Range as an alternative (around four kilometres away). This could result in increased competition for use of Barton Park Driving Range, which has the potential to reduce access for existing members due to increased demand.

Users of Tempe Golf Driving Range and Academy from the local area who might walk or cycle may be required to travel further or change travel modes to access Barton Park Driving Range or other similar facilities in the local area. This could potentially deter some users and lead to reduced active recreation, due to the lack of a similar facility within reasonable walking or cycling distance. Users from the broader area who currently drive or use public transport to access Tempe Golf Driving Range and Academy may also be required to travel further, depending on where they are travelling from. However, it is anticipated they would more easily adapt to this change.

It is understood that Tempe Golf Driving Range and Academy provides membership, lessons and programs catered to adults and children. There is potential that some members have established social networks or sense of community through the facility. These networks could be disrupted as a result of the facility's relocation. These social impacts may lead to the risk of social isolation for some members. This would be of particular concern for any vulnerable users, such as older people who may rely more on social networks and have less capacity to adapt to changes.

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-low. Vulnerable users may have a moderate to high sensitivity, therefore the significance would be moderate to high-moderate.

6.4.1.2 Off-leash dog area and passive open space within Tempe Lands

This section discusses potential impacts on the off-leash dog area and open space within Tempe Lands resulting from land requirements for the project. Other impacts affecting users of these areas of open space in Tempe Lands (eg changes to amenity and access) are discussed in section 6.4.2.

Land requirements for the project would result in relocation of the existing off-leash dog area. Prior to relocation, a temporary off-leash area would be provided as close as possible to the existing area and in the vicinity of the compound. The exact location will be confirmed in consultation with Inner West Council. To accommodate land requirements for construction, the temporary facility may be smaller than the current facility. Proximity to the construction compound (see section 6.4.2) may result in some users preferring to use larger nearby off-leash dog areas such as at Wolli Creek or Sydenham (around 1.4 kilometres and three kilometres away respectively) or to instead use the adjacent open space to exercise their dogs on leash such as the southern part of Tempe Recreation Reserve and Kendrick Park. During construction, access would be maintained to the temporary off-leash dog area and temporary parking spaces would be provided. The number of temporary parking spaces would be confirmed during detailed design in consultation with Council. During construction, the condition of the temporary off-leash dog area will be regularly monitored and maintained. Based on the above, no impact is expected for users of the dog park.

The project would result in the temporary loss of about 2.3 hectares of vegetated passive open space within Tempe Lands. It is noted from Roads and Maritime's stakeholder consultation (section 5.2) and review of Inner West Council policies (section 2.3) that the off-leash dog park and Tempe Wetlands are highly valued by the community as they contribute to the amenity and character of the area and also due to limited open space areas available in Tempe (section 4.3.2). Roads and Maritime's consultation with the east Tempe community has identified that the passive open space located at Tempe Lands is regularly used by local community for recreation, including casual sport. The temporary loss of the vegetated passive open space would reduce the overall open

space area available to Tempe residents during construction. This would likely affect the values of local residents, such as their enjoyment of their local area. The social impacts associated with the permanent loss of public open space in Tempe Lands are assessed in section 7.4.1.

Alternate open space areas would be available within close walking distance such as the southern part of Tempe Recreation Reserve and Kendrick Park that allow for active and passive activities such as walking, jogging and cycling. It is considered that most users would use these alternate areas for passive recreation.

Given the high value residents of east Tempe place on Tempe Lands and open space in general, most users of this small area of passive open space are expected to have low to moderate levels of sensitivity, and would be expected to have some ability to adapt to the changes. The magnitude would be low as it would only affect users of the facility, therefore the level of significance would be low to low-moderate.

6.4.2 Other impacts on users of recreational facilities

This section discusses other potential impacts on users of recreational infrastructure located close to the project area beyond those associated with land requirements. These facilities include Tempe Recreation Reserve, Tempe Wetlands, Tempe Lands and Coleman Reserve.

During periods where the construction activities are in close proximity to Tempe Recreation Reserve, increased noise may be noticeable to users of the reserve's outdoor areas, such as recreational and competitive sport, recreational water users (eg boating or kayaking on Cooks River), walking, cycling and passive users of the surrounding open spaces. Users of these spaces are generally used to ambient noise which is influenced by the airport, road and rail nearby. In addition, active recreational users are generally moving around so may not be exposed to construction noise for long periods. As such, noise amenity changes would be unlikely to deter users of active recreation from continuing to use the areas, although increase in noise levels may cause minor nuisance and annoyance. Changes in noise amenity may potentially temporarily reduce the ability of passive recreational users to enjoy outdoor areas and sometimes may deter some users from using the areas that are in proximity to construction activities. Users of these spaces may also notice changes to air quality as a result of dust generated by construction activities. However, this would be unlikely to impact their ability to use the facilities. As noted in Technical Working Paper 13 – Urban Design and Visual Impacts, construction activities may be visible to some users within parts of the Tempe Recreation Reserve when they are facing to the east. This may reduce enjoyment of the reserve particularly passive recreational users. However, passive recreational users may continue to use other areas in the reserve to pursue recreational and social activities.

As noted in section 4.3.2, a community bird watching group (Tempe Birdos) uses the Tempe Wetlands and adjoining parks monthly to watch the fauna. It is noted from Roads and Maritime's stakeholder consultation (section 5.2) that community concern was raised about potential impacts to local flora and fauna at the wetlands. Technical Working Paper 14 – Biodiversity Development Assessment Report notes that fauna occupying habitats within the project site and adjacent areas are likely to be accustomed to existing noise levels generated by airport, rail and road-related noise as well as lighting from the urban environment and that there would be no direct effects on Tempe wetland habitat (refer to Technical Working Paper 14 for more detail). Some members of the Tempe Birdos may notice a change to their visual surroundings as well as changes in air quality due to dust generated from construction activities. However, this would be unlikely to deter them from visiting the Tempe Wetlands. Based on this, the group would be able to continue with bird watching activities during construction. While amenity changes are unlikely to affect the fauna that occur in the project site, temporary changes such as increased noise levels could still be a nuisance to some members of the Tempe Birdos and other users of the Wetlands. However, the users would be able to continue to engage in their usual activities.

The temporary off-leash dog area would be adjacent to the Tempe Lands compound. As a result, users would likely experience temporary changes in noise, visual and air quality amenity due to construction activities within the compound. There is potential that some users could be deterred from accessing the temporary facility during periods when noise intensive works are occurring within the compound. This may cause nuisance and annoyance as their ability to enjoy the area would be temporarily reduced. As discussed in section 6.4.1, alternate open space areas are available to dog walkers within close walking distance such as the southern part of Tempe Recreation Reserve and Kendrick Park. It is considered that some users may choose to walk their dogs in these alternate

areas during construction. Given the availability of alternate dog walking areas, it is unlikely that the active lifestyles of dog walkers would be affected.

Coleman Reserve is a small passive open space located in Mascot (refer to section 4.3.1 for facility description). The reserve provides a pedestrian connection between Robey and Coleman Streets and may be used by nearby workers for short periods during their breaks. It is considered unlikely that local residents would regularly utilise the reserve given that the nearest residents are around 230 metres to the east and would need to cross a busy road (O'Riordan Street) to access the reserve. The reserve also has limited features compared to other nearby reserves to local residents, such as the John Curtin Memorial Reserve (High Street). Based on the assessment of amenity change provided in section 6.2, there would be a moderate increase in noise, vibration and dust levels, and change to the visual environment that would reduce the overall amenity for users of the reserve. This may deter some users from spending time at the reserve and going elsewhere.

Overall, most users of Tempe Recreation Reserve, Tempe Wetlands, and the temporary off-leash dog area may have low to moderate levels of sensitivity due to the potential disturbance to activities (e.g. playing sport, bird watching) or the value users place on these facilities, particularly east Tempe residents (section 5.3.3). The magnitude of these amenity changes would be moderate for these users as they would be a noticeable change from the existing situation. The significance would therefore be moderate to moderate-low. Users of 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. The level of significance would therefore be negligible to low.

Construction traffic is not expected to use internal roads or public parking within the Tempe Recreation Reserve as access to the Tempe Lands compound would be via Bellevue Street/Swamp Road (mainly heavy vehicles) and Smith Street/South Street (light vehicles only). Parking would also be provided within this compound (250 spaces). As a result, construction traffic is not expected to change the internal access of users within the Reserve. However as discussed in section 6.3, even with construction vehicle parking and the implementation of other strategies, there is potential for construction workers to use parking in local streets. Use of parking spots at the Reserve and in surrounding streets would reduce availability of parking for users of the reserve, causing inconvenience, and potentially reducing access. This could cause temporary inconvenience or reduce access for sporting groups and could reduce access for passive users, which could affect active lifestyles and social interactions. Most users are expected to have low to moderate levels of sensitivity, particularly given concerns raised by community about non-resident parking in local streets in Tempe. The magnitude would be low due to the mitigation measures to be implemented and the number of users likely to be affected, therefore the level of significance would be negligible to moderate-low.

Although pedestrian access would be maintained along Smith Street and South Street, residents of east Tempe who walk or cycle to Tempe Recreation Reserve may perceive a barrier and safety concerns resulting from construction traffic. This may temporarily deter some residents from accessing the facilities, potentially decreasing active lifestyles and social interactions for some users. Particularly for vulnerable residents, such as older people and people who need assistance, temporary loss of access could lead to social isolation. Most users walking to the facilities are expected to have low to moderate levels of sensitivity given the high value the local community place on these facilities. The magnitude of the impact would be low due to the number of users likely to be affected, so the level of significance would be low to moderate-low. However vulnerable users are likely to have moderate to high levels of sensitivity, so the level of significance would be moderate to moderate-low.

6.4.3 Impacts on users of child care facilities and places of worship

Other community facilities near the project site include Guardian Early Learning Centre, Betty Spears Child Care Centre, Aero Kids Early Learning Centre, St Peters Anglican Church and St Peter and St Paul Catholic Church.

As identified in Technical Working Paper 2 – Noise and Vibration, there would be minimal noise level increases on these facilities. The majority are adjacent or close to major existing roads and are therefore exposed to high existing noise levels, which are comparable to predicted construction noise levels. However child care centres in particular cater to a vulnerable user group being young infants and children, who may be more sensitive to some amenity changes. There is some potential for noise to disturb learning and play activities particularly in the outdoor areas of both centres.

Most users of the 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, therefore 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.

6.5 Summary of key findings and assessment of construction impacts

The assessment of potential socioeconomic impacts presented in Table 6-1 is based on the methodology provided in section 3.2, and considers the implementation of recommended mitigation measures recommended in other technical reports as identified in section 0.

Construction of the project would lead to socioeconomic effects for local and regional communities, particularly associated with changes to local businesses, employment changes, local amenity, access and connectivity, and impacts on community infrastructure.

Socioeconomic benefits during construction would include increased construction jobs and income for businesses which supply construction activities.

Socio-economic impacts during construction would include:

- There would potentially be displacement of around 75 jobs due to land requirements on which three businesses are located. The relocation process could cause stress and changes to way of life for affected business owners and employees
- There would be reduced amenity for residents, users of accommodation facilities and users of community facilities located in areas close to project works due to noise, dust and visual changes. This may cause nuisance, interrupt daily activities and affect people's enjoyment and pride in their local area
- There would be increased travel times and distances resulting from lane closures, increased construction vehicles, changes to pedestrian paths, and temporary active travel route. This could lead to frustration and people spending less time engaging in social or other activities. Delays in arrival of airline passengers and crew could cause them to miss flights, which could potentially affect the efficiency of airlines
- There would potentially be impacts to social networks and active recreation users of Tempe Golf Driving Range and Academy, Tempe Lands and Tempe Recreation Reserve resulting from perceived and actual changes to access and amenity due to construction activities.

Table 6-1 Assessment of socio-economic impacts during construction

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
ECONOMY, BUSINESSES AND EMPLOYMENT						
Economy						
Economic activity generated by construction equivalent to $5.3 billion flow-on economic benefits for the regional economy	Direct and indirect benefit to the regional economy, which would lead to social implications such as the development of businesses and employment opportunities. This could increase income generation opportunities for Greater Sydney communities.	Positive Direct and indirect Long term	Regional communities	N/A	N/A	N/A
Businesses						
Increased expenditure at local and regional businesses through construction	Increased demand for goods and services for construction activities and to service construction workforce such as cafes and eateries, would lead to additional income generation opportunities for local businesses.	Positive Direct Short term	Local business owners	N/A	N/A	N/A
Reduced revenue for landowners and businesses due to removal of billboards, as well as companies that advertise on the signs	This could reduce income for affected business owners which could lead to stress and worry for affected business owners and employees.	Negative Direct Short term	Business owners and employees	Low	Low to moderate	Low to Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Construction works and traffic, changes to access arrangements and temporary lane closures on the local road network leading to increased travel times	Increased travel times for businesses including in the transport, postal and warehousing industry. This may result in a direct increase in cost to local business owners, including those located in the airport's cargo terminal area, O'Riordan Business Development area and Airport Drive Industrial area.	Negative Direct Short term	Business owners and employees	High	Moderate	High-moderate
	Increased travel times leading to increased commute for airline employees. People would likely need to allow for more travel time. These changes could result in less time people can spend engaging in leisure and social or other activities they consider important to them. Delays in arrival of airline passengers and crew could cause them to miss flights, which would affect the efficiency of airlines. Airline passengers and staff may also have less time to spend visiting businesses in the airport terminals. This could potentially affect revenue for businesses at the terminal.	Negative Direct Short term	Airline employees	High	Moderate	High-moderate
	Increased travel times leading to increased commute for employees of businesses located in the airport's cargo terminal area, O'Riordan Business Development area, Airport Drive Industrial area and businesses in and around the airport	Negative Direct Short term	Employees of businesses in and around the airport	Low to moderate	Moderate	Moderate to Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Increased noise, decreased visual amenity and air quality for surrounding businesses. Construction works and traffic, changes to access arrangements may also cause some customers to be deterred from visiting some businesses. Construction activities may also reduce visibility of a car dealership business	A reduction in customers and disruptions to businesses could lead to reduced income for some businesses. These changes could lead to stress and worry for affected business owners and employees.	Negative Direct Short term	Local business owners, employees	Low	Low to Moderate	Low to Moderate-low
	Construction activities may disrupt workplace activities which could affect productivity.	Negative Direct Short term	Local business employees	Negligible to Low	Low	Negligible to Low
Land requirements for the project leading to relocation of Tempe Golf Driving Range and Academy, Tyne Container Services and Boral Recycling St Peters. Should a suitable location not be found, this would result in the closure of these businesses.	Potential for stress and worry for business owners and employees resulting from the land requirements and business relocation process.	Negative Direct Long term	Business owners and employees	Moderate	Moderate	Moderate
Relocation of Tempe Golf Driving Range and Academy to a location outside of the area	Potential for loss of membership and associated revenue until new membership base established at new location.	Negative Direct Long term	Business owners	Moderate	Moderate	Moderate
	Potential for increased revenue at Barton Park Driving Range if users of Tempe Golf Driving Range and Academy choose to use this facility during construction.	Positive Direct Long term	Business owners	N/A	N/A	N/A
Utility adjustments in the vicinity of the project may interrupt services such as power, water and gas.	Depending on the duration of the interruption, nearby businesses may be affected by lost productivity and income.	Negative Direct Temporary	Business owners	Low-moderate	Low	Moderate-low to low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Temporary removal of parking spaces near Terminals 2/3 that are used by DHL employees and around 40 parking spaces located near a mail handling unit facility at Terminal 1.	Employees facility may experience inconvenience due to the reduction in available parking spaces. It is understood there are other parking spaces in the vicinity of the mail handling facility that would be available. DHL employees would have access to some parking spaces. Some employees may need to park in locations further from their workplace leading to increased commute times.	Negative Direct Temporary	Employees	Low to moderate	Low	Low to moderate-low
Employment						
Increased construction job opportunities available to local and Greater Sydney residents	Increased job and income generation opportunities to skilled workers from the region and Greater Sydney.	Positive Direct Short term	Skilled workers across Greater Sydney	N/A	N/A	N/A
Potential displacement or loss of around 75 jobs from the relocation or closure of Tempe Golf Range and Academy, Tyne Container Services and Boral Recycling St Peters	Potential jobs displacement could result in some employees continuing employment in an alternate location. If relocation is unsuccessful, these jobs would be lost. This may cause stress and worry for some individuals.	Negative Direct Short term	Employees of Tempe Golf Driving Range and Academy, Tyne Container Services and Boral Recycling St Peters	Low to Moderate	Moderate	Moderate-low to Moderate
Potential loss of jobs for people or contractors due to removal of billboards	Potential loss of jobs may cause stress and worry for some individuals seeking other employment.	Negative Indirect Short term	Employees of businesses that manage and operate billboards	Low to Moderate	Low	Low to Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
AMENITY						
Noticeable noise level increase and vibration may be perceived at some residential properties in east Tempe and Mascot	Temporary and sporadic noise and vibration may be a nuisance to these residents and potentially lead to some people spending less time outdoors in backyards or on balconies engaging in recreational activities or relaxation, or closing windows while indoors. Noise at night time may lead to disturbance in sleep patterns.	Negative Direct Temporary	Local residents	Low	Low	Low
	Temporary and sporadic noise and vibration may impact vulnerable residents living in Tempe and Mascot, including residents requiring assistance, couples and single parents with children and culturally and linguistically diverse people.	Negative Direct Temporary	Vulnerable groups	Moderate to High	Low	Moderate-low to Moderate
Noticeable noise level increase and vibration at some accommodation facilities near the airport	Temporary and sporadic noise and vibration may be a nuisance to users of accommodation facilities.	Negative Direct Temporary	Users of accommodation facilities	Negligible	Low	Negligible
Potential sleep disturbance on some residential properties in east Tempe, Mascot and Sydenham, and accommodation facilities near the airport	From a social impact point of view, sleep disturbance can lead to tiredness which can affect people's moods, ability to concentrate on work and other activities, increase irritation and therefore potentially add to strain of personal or other communication and relationships.	Negative Direct Temporary	Local residents and users of accommodation facilities	Moderate	Low	Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
	Potential sleep disturbance for vulnerable residents.	Negative Direct Temporary	Vulnerable groups	Moderate to High	Low	Moderate-low to Moderate
Potential sleep disturbance on some accommodation facilities near the airport	Potential sleep disturbance, however accommodation facilities have high performance facades and glazing.	Negative Direct Temporary	Users of accommodation facilities	Low	Low	Low
Changes to the overall visual amenity of the area due to construction activities	This may change the surroundings for local residents, and affect the visual amenity values of local residents potentially diminishing their sense of pride in their local area.	Negative Indirect Short term	Residents	Moderate	Negligible	Low
Changes to view of Alexandra Canal as a result of construction activities	Altered views of Alexandra Canal due to construction activities may impact the sense of pride in that area for local interest groups or members of the wider community who value Sydney's heritage.	Negative Direct Short term	Local heritage groups, wider community	Moderate	Low	Low
Views of construction activities from accommodation facilities adjacent to the project site	Construction activities at the northern lands and along Qantas Drive may be visible from some rooms of accommodation facilities adjacent to the project site. This is not likely to be noticeable by users of accommodation facilities.	Negative Direct Temporary	Users of accommodation facilities	Negligible	Negligible	Negligible

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Increased dust at residential properties within proximity of construction activities during dry weather conditions and when wind is blowing towards receptors. This may affect the east Tempe residential area, residential properties and accommodation facilities near Joyce Drive in Mascot, as well as properties near haulage routes	Increased dust may lead to some residents altering their way of life, such as leaving windows of houses or vehicles shut, or spending reduced time in backyards or on balconies. People may also need to spend more time cleaning indoor or outdoor surfaces due to settling dust. This may lead to temporary nuisance to these residents.	Negative Direct Temporary	General community	Negligible to Low	Low	Negligible to Low
	Vulnerable residents may be more sensitive to dust. This may include older people, children and people with medical conditions such as asthma. There are high proportions of children and people who need assistance living in east Tempe.	Negative Direct Temporary	Vulnerable residents	Moderate to High	Low	Moderate to Low
Utility adjustments in the vicinity of the project may interrupt services such as power, water and gas	Depending on the duration of interruptions, nearby residents could be inconvenienced or their way of life and daily activities interrupted.	Negative Direct Temporary	Residents	Low	Low	Low
	Vulnerable residents may be more sensitive to utility interruptions, such as people with need for assistance and people with medical conditions who may rely on power. There are high proportions of people who need assistance living in east Tempe.	Negative Direct Temporary	Vulnerable residents	Moderate to High	Low	Moderate-low to Moderate

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
ACCESS AND CONNECTIVITY						
Travel times						
Construction works and traffic, changes to access arrangements and temporary lane closures on the local road network leading to increased travel times. These increases could range between 3:45 minutes up to 12:51 minutes in the AM peak period, and between 1:14 minutes up to 4:52 minutes in the PM peak period. Increased travel times would vary depending on construction scenario	Increased congestion and travel times for motorists, cyclists and bus passengers may increase frustration for these users. For travellers to the airport, this could cause delays if people don't factor in additional travel time. People would need to allow for more travel time for access to and from the airport. These changes could result in less time people can spend engaging in leisure and social or other activities they consider important to them.	Negative Direct Temporary	Residents, commuters, general community members	Moderate	Moderate	Moderate
		Negative Direct Temporary	Flight passengers	High	Moderate	High-moderate to moderate
Permanent removal of bus stops at Sydney Airport for route 400. Alternative bus route is available for passengers travelling to Sydney Airport on this bus route from Eastgardens	Potential delays in travel times on routes 400 and 420 due to diversions and detours as a result of construction activities.	Negative Direct Short term	General workers and travellers going to Sydney Airport by bus	Moderate	Moderate	Moderate
		Negative Direct Short term	Vulnerable bus passengers	Moderate to High	Moderate	Moderate to High-moderate
Active transport						
Changes to pedestrian paths on Canal Road, Alexandra Canal Qantas Drive and Airport Drive	Minor increased travel distance and time for some pedestrians who use the footpaths along Alexandra Canal and Qantas Drive. Pedestrian access is expected to be maintained on the other footpaths through appropriate diversions.	Negative Direct Temporary	General pedestrians	Negligible	Low	Negligible

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
	Changes to routes can be confusing for some vulnerable groups and could be a deterrent for some journeys.	Negative Direct Temporary	Vulnerable groups	Moderate	Low	Moderate-low
Permanent removal of signalised pedestrian crossing on Airport Drive at Link Road	Significant increase in travel distance and time for pedestrians who walk from Tempe Recreation Reserve to the freight terminal. This could affect fright terminal workers who live in Tempe and walk to work.	Negative Direct Long term	General pedestrians	Low	Moderate	Moderate-low
		Negative Direct Long term	Vulnerable groups	Moderate	Moderate	Moderate
Temporary active transport route provided along western side of Alexandra Canal. Users would cross the canal at existing bridges located near Tempe Recreation Reserve and at the Nigel Love Bridge	Small increase in distance and incline for some commuter cyclists travelling to Sydney Airport. This may increase the difficulty of the route for some cyclists. The remainder of the route would be relatively flat. It is unlikely that most users would be deterred from using the route.	Negative Direct Short term	Cyclists	Low to Moderate	Low	Low to Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Parking availability						
Potential for reduced parking along local residential streets in Tempe and Mascot due to increased construction worker vehicles	The construction contractor would be required to provide shuttle bus transfers to other nearby construction areas where parking is not available and workers would be encouraged to car pool. However, there is still potential for construction workers to park in local streets, which could potentially reduce parking available to some Mascot residents leading to an inconvenience.	Negative Direct Temporary	Local residents in Mascot	Low	Low	Low
	Parking by construction workers in local streets in Tempe may exacerbate existing concerns about non-residents parking in local streets.	Negative Direct Temporary	Local residents in east Tempe	Moderate	Low	Moderate-low
COMMUNITY INFRASTRUCTURE						
Potential relocation of Tempe Golf Driving Range and Academy outside of local area. Should this occur, this may lead to increased distance and travel times for some users to access a similar facility in the area	This could potentially deter some users from the local area and lead to reduced active recreation. There is potential that some members have established social networks or sense of community through the facility. These networks could be disrupted.	Negative Direct Long term	General users	Low	Moderate	Moderate-low
	Vulnerable users of the facility, such as older people, may be at risk of social isolation if the facility is not relocated locally, or if it is not reinstated in the same location.	Negative Direct Short term or long term	Vulnerable users such as older people	Moderate to High	Moderate	Moderate to High-Moderate

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Users of Tempe Golf Driving Range and Academy may access Barton Park Driving Range during construction. This could result in increased competition for use of the facility	Potential for reduced access for existing members due to increased demand.	Negative Indirect Short term	General users	Low	Low	Low
Temporary loss of approximately 2.3 hectares of vegetated passive open space within Tempe Lands	Reduced overall open space areas available to east Tempe residents may affect their community values. Alternate open space areas are available within close walking distance such as the southern part of Tempe Recreation Reserve and Kendrick Park.	Negative Direct Short term	Tempe community	Low to moderate	Low	Low to Low-moderate
Temporary and sporadic increased noise and dust may be noticeable to users of the Tempe Recreation Reserve, Tempe Wetlands and temporary off-leash dog area close to construction activities. Some users of the Tempe Recreation Reserve may also have views of construction activities when facing east. Dog walkers using the temporary off-leash area would also experience visual changes	These changes may reduce people's enjoyment of the reserve, wetlands and temporary off-leash dog area. At times this may deter some users from utilising the areas closest to construction activities for passive or leisure activities. This could reduce social interactions for some users.	Negative Direct Short term	Users of the reserve, wetlands and off-leash dog area	Low to moderate	Moderate	Moderate to Moderate-low
Increased noise, vibration and dust levels and change in the visual environment on users of Coleman Reserve	Reduced overall amenity of the reserve on users who are likely to spend short durations within the reserve (eg workers on their break, passing pedestrians) which could cause nuisance to users.	Negative Direct Short term	Users of Coleman Reserve	Negligible to Low	Moderate	Negligible to Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Noise and visual impacts affecting users of the Cooks River	Recreational boaters and kayakers using the Cooks River near the project area may be affected by noise and views of construction activities, which may reduce their enjoyment of the river.	Negative Direct Short term	Users of the Cooks River	Negligible to Low	Moderate	Negligible to Moderate-low
Construction workers parking at Tempe Recreation Reserve and in surrounding streets despite provision of construction worker parking	This could cause an inconvenience and deter some sporting groups or passive recreational users including east Tempe residents from accessing the area, which could affect active lifestyles and social interactions.	Negative Indirect Short term	Sports groups and passive users at Tempe Recreation Reserve	Moderate to low	Low	Moderate-low to Low
Construction traffic using Smith Street and South Street to access the Tempe Lands compound may create a perceived barrier and safety concerns for east Tempe residents who walk or cycle to Tempe Wetlands and Tempe Recreation Reserve	This may deter some residents from accessing these facilities, which could decrease active lifestyles and social interactions for some users.	Negative Indirect Short term	East Tempe residents	Low to moderate	Low	Low to moderate-low
	Vulnerable residents in east Tempe, particularly older people and people with need for assistance, may be at risk of social isolation due to perceived barriers to accessing facilities.	Negative Indirect Short term	Vulnerable east Tempe residents	Moderate to High	Low	Moderate-low to Moderate
Increased noise may affect users of churches close to the project site	Increased noise may be a nuisance to users of St Peters Anglican Church and St Peter and St Paul Catholic Church and may disturb church services and functions.	Negative Indirect Short term	Users of churches	Negligible to Low	Low	Negligible to Low
Increased noise may affect users of child care centres close to the project site	Potential for increased noise to disturb learning and outdoor play activities at Guardian Early Learning Centre, Betty Spears Child Care Centre and Aero Kids Early Learning Centre particularly in outdoor areas.	Negative Indirect Short term	Users of child care centres	Moderate to High	Low	Moderate-low to Moderate

6.6 Impacts on Commonwealth land

6.6.1 Key findings and assessment of impacts

From a social impact perspective, construction impacts on Commonwealth land would mainly relate to amenity changes on adjacent land due to increased noise, vibration and dust on the future Airport Hotel, existing Ibis Budget Sydney Airport and Mantra Hotel (discussed in section 6.2), Coleman Reserve (section 6.4) , increased travel times to and from Sydney Airport, and loss of parking spaces.

Increased noise may be noticeable during some works, despite most accommodation facilities expected to have existing high performance facades and glazing required to mitigate airport-related noise. As noted in section 6.2, dust and vibration would likely last for relatively short durations. Dust would likely be experienced by users of the accommodation facilities in outdoor areas only. These amenity changes may be a nuisance to users of the facilities and increased noise levels may disturb or interfere with day to day activities such as conversations, reading, listening to the radio, watching television, resting or relaxation.

During night works, there is potential for sleep disturbance to the users of these accommodation facilities, which could potentially cause inconvenience and annoyance. Impacts of sleep disturbance are also discussed in section 6.2.1.

Since the existing views from these and other surrounding accommodation facilities are dominated by urban developments, it is unlikely that views of construction activities along Qantas Drive would result in loss of visual amenity. However, there is potential for a car dealership located on the corner of Ninth and Sir Reginald Ansett Drive to have reduced exposure due to construction activities that may obstruct views from passing traffic, which could have a possible effect on their sales. The potential for reduced business income could lead to stress and worry for affected business owners and employees.

Users of the QANTAS training facility may also be affected by amenity impacts during construction, which could disrupt training activities.

Impacts to users of Coleman Reserve are discussed in section 6.4. Temporary noise, vibration and visual change on Coleman Reserve would reduce the overall amenity for occasional users of the reserve including pedestrians and nearby workers using the reserve during their breaks. This could cause nuisance to these users.

General community members and travellers going to and from Sydney Airport in particular Terminals 2/3 by car or bus would experience increased travel times as a result of construction (discussed in section 6.3.1). This would also affect the many workers from across Greater Sydney commuting to and from the airport. Additional time spent travelling may reduce the time people can spend with families and undertaking leisure and social activities.

Increased travel times could also cause delays for airline employees, other airport based employees and customers of airport based businesses. The efficiency of airline operations is particularly sensitive to delays in arrival of passengers and crew, and could cause people to miss flights or for flights to be delayed. This could affect airline efficiency as well as deter some travellers from visiting businesses at the airport if they experience delays on their way to the airport. This could potentially affect revenue for businesses at the terminal.

Construction of the project would lead to temporary removal of several car parking areas located at Sydney Airport. These facilities are described below:

- A car parking area near Terminals 2/3 that is accessed off Ninth Street and owned by Sydney Airport with capacity for about 100 vehicles would be affected during construction. This a paid facility for Sydney Airport customers. The temporary loss of these spaces would be managed by Sydney Airport Corporation
- Two car parking areas near Terminals 2/3 that are access accessed off Ross Smith Avenue and Sir Reginald Ansett Drive respectively with a combined capacity for about 81 vehicles and are used by the adjacent DHL business. Only one of these car parks would be able to be used for construction at any one time, which is expected to reduce the impact for the users

- About 40 car parking spaces located along the northern boundary of a mail handling unit facility adjacent to Airport Drive at Terminal 1 would be removed during construction. These changes would be managed by Sydney Airport as part of an upcoming lease renewal for the area.

It is expected that employees of the DHL business and the mail handling facility may experience inconvenience due to the reduction in available parking spaces. It is understood there are other parking spaces in the vicinity of the mail handling facility that would be available to employees. However, there is potential for some employees to have to find alternate parking further away, which could increase their commute to work.

Table 6-2 Assessment of construction impacts on Commonwealth land

Change as a result of the project	Summary of potential impact	Nature, type, duration and frequency of impact	Affected stakeholder	Intensity	Scale	Impact severity
Noticeable noise level increase and vibration at future Airport hotel, ibis Budget Sydney Airport and Mantra Hotel	Temporary and sporadic noise and vibration may be a nuisance to users of accommodation facilities, and potentially lead to some people spending less time on balconies engaging in recreational activities or relaxation, or closing windows while indoors.	Negative Direct Temporary	Users of accommodation facilities	Negligible	Small	Negligible
Potential sleep disturbance for users of future Airport hotel, ibis Budget Sydney Airport and Mantra Hotel	From a social impact point of view, sleep disturbance can lead to tiredness which can affect people's moods, ability to concentrate on work and other activities, increase irritation and therefore potentially add to strain of personal or other communication and relationships.	Negative Direct Temporary	Users of accommodation facilities	Low	Small	Minor
Increased dust on of parts of future Airport hotel, ibis Budget Sydney Airport and Mantra Hotel within proximity of construction activities during dry weather conditions and when wind is blowing towards receptors	Increased dust may lead to some users of accommodation facilities altering their way of life, such as leaving windows of rooms shut, or spending limited time outdoors or on balconies relaxing or recreating.	Negative Direct Temporary	General community, users of accommodation facilities	Negligible to Low	Small	Minor
Construction activities have the potential to obstruct views from passing traffic leading to reduced exposure for a car dealership business	Amenity changes may lead to reduced income for some businesses, which could lead to stress and worry for affected business owners and employees.	Negative Direct Short term	Business owners, employees	Low	Small to Medium	Minor to Moderate

Change as a result of the project	Summary of potential impact	Nature, type, duration and frequency of impact	Affected stakeholder	Intensity	Scale	Impact severity
Construction activities may lead to noise and vibration impacts for users of the QANTAS training facility	Amenity impacts may disrupt training activities.	Negative Direct Short term	Users of the training facility	Low	Small	Minor
Increased noise, vibration and dust levels and change in the visual environment on users of Coleman Reserve	Reduced overall amenity of the reserve on users who are likely to spend short durations within the reserve (eg workers on their break, passing pedestrians) which could cause nuisance to users.	Negative Direct Short term	Users of Coleman Reserve	Negligible to Low	Small	Minor
Construction works and traffic, changes to access arrangements and temporary lane closures on the local road network. This may lead to increased travel times	People would likely need to allow for more travel time. These changes could result in less time people can spend engaging in leisure and social or other activities they consider important.	Negative Direct Temporary	General community members	Low	Small to Medium	Minor
		Negative Direct Temporary	Flight passengers	Moderate	Small to Medium	Moderate
	Delays in arrival of airline passengers and crew could cause them to miss flights. This could potentially affect the efficiency of airlines and revenue for businesses at the terminal.	Negative Direct Temporary	Business owners and employees	High	Medium	Moderate to Severe
Temporary removal of parking spaces near Terminals 2/3 that are used by DHL employees and around 40 parking spaces located near a mail handling unit facility at Terminal 1.	Employees facility may experience inconvenience due to the reduction in available parking spaces. It is understood there are other parking spaces in the vicinity of the mail handling facility that would be available. DHL employees would have access to some parking spaces. Some employees may need to park in locations further from their workplace leading to increased commute times.	Negative Direct Temporary	Employees	Low	Small	Minor

6.6.1.1 Assessment of significance – construction

The assessment of significance has been undertaken in Table 6-3 with consideration of the people and community guidance criteria defined in the EPBC Act '*Significant impact guidelines 1.2'* and outlined in section 3.2.5.

Table 6-3 Assessment of construction significance on Commonwealth land

People and community criteria	Assessment
Substantially increase demand for, or reduce the availability of, community services or infrastructure which have direct or indirect impacts on the environment, including water supply, power supply, roads, waste disposal, and housing	The project would have direct impact on the functioning capacity of the road network that would reduce access and connectivity for local residents, businesses owners, employees and visitors to Sydney Airport. However, this is not considered a substantial reduction in the availability of road infrastructure. There are no residential areas located within Commonwealth land, therefore impacts to housing are not relevant as part of this assessment. There is potential for interruptions to utilities which could affect businesses located at Sydney Airport. Depending on duration, interruptions could result in lost productivity and business income which would affect business owners and employees. Business owners and employees would be notified about potential interruptions.
Affect the health, safety, welfare or quality of life of the members of a community through factors such as noise, odours, fumes, smoke or other pollutants	Users of accommodation facilities located on Commonwealth land and users of Coleman Reserve may experience impacts as a result of noise and vibration from construction activities. These impacts are expected to be temporary in nature and are unlikely to affect the health, safety, welfare or quality of life of these users.
Cause physical dislocation of individuals or communities	The project is not expected to cause physical dislocation of individuals or communities located on Commonwealth land as access would be maintained.
Substantially change or diminish cultural identity, social organisation or community resources	Coleman Reserve is the only community infrastructure located within Commonwealth land. Construction may result in reduced enjoyment of this open space due to amenity impacts, however this is unlikely to substantially change or diminish cultural identity, social organisation or community resources for local residents.

Based on the assessment of socio-economic impacts on Commonwealth land presented in Table 6-2 and the assessment of the significance of these impacts in Table 6-3, construction of the project is unlikely to have significant impacts on people and community.

6.6.2 Consistency with the Sydney Airport Master Plan 2039 and Environment Strategy 2019–2024

6.6.2.1 Overview

Minimising impacts on communities and the environment is essential for Sydney Airport to operate sustainably. The Airport Master Plan 2039 (Sydney Airport Corporation Ltd 2018) outlines the planning objectives for Sydney Airport and identifies Development Standards, including the requirement for Environmentally Sustainable Development, against which the performance of developments at the airport are assessed. Development proponents must demonstrate compliance with the MDP requirements and consistency with the Airport Master Plan 2039 and associated Airport Environment Strategy 2019–2024 (Sydney Airport Corporation Ltd 2018).

6.6.2.2 Interactions with the community

Managing impacts on local communities and 'being a good neighbour' are articulated in the vision for Sydney Airport in the Airport Master Plan 2039. A key objective of the Airport Master Plan is to consider the interface with the community in planning, development and operations by engaging in an open and transparent manner.

From a social perspective, Sydney Airport interacts with regional communities by providing employment, contributes to economic development and connectivity to international and domestic destinations. The Airport Master Plan includes several plans which aim to enhance these aspects, including a Commercial Development Plan and a Ground Transport Development Plan.

Interactions between Sydney Airport and local communities would likely be related to how communities may be affected by airport operations (eg noise). Sydney Airport also invests in the local and regional community through its Community Engagement Strategy which is described in the Airport Environment Strategy 2019–2024 as focusing on:

- Living Local – keeping local communities connected, healthy, vibrant and thriving
- Leading and Learning – being the best you can be in your field. Supporting the leaders of tomorrow
- Sydney's Airport – a great airport that embraces Sydney and of which Sydney can be proud.

The Airport Master Plan identifies management of noise, both ground-based and aircraft noise, as key issues for local communities. Managing aircraft noise is a shared responsibility with many organisations and the Airport Master Plan outlines the various strategies implemented by Sydney Airport, which includes participation in the Sydney Airport Community Forum. This community representative forum provides advice to Sydney Airport and aviation authorities on aircraft noise abatement, in line with the objectives of the Airport Master Plan to engage openly and transparently with communities. Through implementation of the Master Plan and corresponding Environment Strategy, Sydney Airport intends to manage potential ground-based noise impacts on neighbouring communities by implementing among other things:

- Ground-based noise assessments and monitoring for new developments and the airport
- Advocating for new residential developments in areas surrounding the airport to achieve nominated standards for noise insulation.

6.6.2.3 Project consistency

The project is consistent with the objectives of the Airport Master Plan 2039 and Environment Strategy 2019–2024 related to consultation with communities and stakeholders, and managing impacts on local communities. This SEIA has undertaken a robust assessment of the potential social impacts related to Commonwealth land to ensure they have been appropriately assessed and minimised where practicable. Detailed mitigation and management measures will be implemented to address residual social impacts (section 0).

The mitigation and management of potential social impacts relevant to Sydney Airport are related to:

- Communicating changes to road access around Sydney Airport during construction
- Providing methods to report issues related to access and amenity changes
- Targeted communication with the future Airport Hotel, ibis Budget Sydney Airport and Mantra Hotel about potential amenity and access changes as a result of construction that may affect users of these accommodation facilities.

Communication and consultation with affected communities and stakeholders is consistent with the objectives of the Airport Master Plan and Environment Strategy to engage with communities and stakeholders regarding planning, development and operations at Sydney Airport.

7. Assessment of operation impacts

This chapter documents a detailed description and assessment of potential socioeconomic impacts that may result from the operation of the project. Impact identification and description has been informed by various sources of information as described in section 3.2. Socio-economic impacts resulting from changes to local economy, business and employment, amenity and character, access and connectivity, and community infrastructure due to the proposed construction works have been assessed in accordance with the impact assessment methodology in section 3.2.5. The chapter also includes a description and assessment of the potential socio-economic impacts to Commonwealth land and a discussion about the consistency of the project with the *Sydney Airport Master Plan 2039* and *Sydney Airport Environment Strategy 2019–2024* in terms of socio-economic impacts.

7.1 Economy, businesses and employment

This section draws on the findings of Technical Working Paper 12 – Business Impacts to discuss the potential social implications of impacts on the economy, businesses and employment as a result of operation. With regards to businesses, this section discusses potential impacts on business owners, employees and customers as a result of changes to amenity, access and connectivity.

7.1.1 Economy

The project would ultimately lead to improved travel times for motorway traffic to the Sydney Airport terminals, 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 precincts 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 the many 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 north 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.

7.1.2 Businesses

The project would result in less local traffic in Mascot Town Centre and on Botany Road, leading to improved amenity for businesses in these areas. This would create a more pleasant environment for employees and customers, and may increase trade for some businesses, benefiting business owners.

There is potential for some businesses to experience an increase in passing trade resulting from increased traffic along Qantas Drive. These include takeaway food and car services along Ross Smith Avenue. This may indirectly benefit business owners by leading to increased income.

There is potential for some businesses on Botany Road to lose passing trade as a result of reduced traffic, however it is unlikely that many businesses in Mascot Town Centre rely on passing trade. The potential for reduced passing trade could lead to stress and worry for affected business owners. The magnitude of the impact to businesses along Botany Road would be low, due to the small number of businesses affected. The sensitivity of these businesses would be negligible to low as they are not likely to depend heavily on passing trade from motorists. The level of impact would therefore be negligible-low.

New elevated road infrastructure near Terminals 2/3, some loss of vegetation, overshadowing and light spill within the widened road corridor would alter views from some commercial businesses and accommodation facilities. While this would permanently change the visual environment along Qantas Drive, this is generally unlikely to affect most business owners or employees with the exception of a car dealership located on the corner of Ninth and Sir Reginald Ansett Drive. There is potential for this car dealership to have reduced exposure due to the elevated road infrastructure obstructing views from passing traffic, which could have a possible effect on their sales. The potential for reduced business income could lead to stress and worry for affected business owners and employees. The business owners and employees may have a moderate level of sensitivity with some ability to absorb or adapt to the change. The magnitude of this impact would be low for the affected business owners and employees. The level of significance would therefore be moderate-low.

Some accommodation facilities located near O'Riordan Street may be affected by airport noise as a result of the demolition of several airport buildings which were previously buffering these businesses from noise. The potential impacts on users of the accommodation facilities are discussed in section 7.2.

Reduced air quality is predicted on existing roads including Qantas Drive, Joyce Drive, General Holmes Drive and Airport Drive near Terminal 1. These existing roads generally carry freight and commuter traffic and pass through largely industrial and commercial areas. These areas would generally include workers, business owners and customers at local businesses. Technical Working Paper 4 – Air Quality found there would be some exceedances of air quality criteria that would occur for some pollutants, however these exceedances would occur with or without the project because of high background concentrations. Any increases in pollutants would overall be very small and would not cause additional exceedances above criteria. Technical Working Paper 15 – Human Health found that where there were increases in pollutant concentrations, these were low and were not considered to be of significance (ie measurable) or of concern in relation to community health.

From a social impact perspective, these air quality changes are not expected to be noticeable to most business owners, employees or customers and therefore unlikely to change people's day to day activities, so the magnitude of the impact would be negligible. Some vulnerable people who may work at or visit these businesses may be more sensitive to air quality changes, such as older people and people with medical conditions such as asthma. Vulnerable people may have moderate to high levels of sensitivity, therefore the level of significance for these owners, employees or customers would be negligible. Refer to Technical Working Paper 15 – Human Health for assessment of impacts on human health.

Following construction, about 0.01 hectares of the mail handling facility located at Sydney Airport would continue to be required as part of the project's operational footprint, affecting about nine parking spaces. The remaining land (about 0.06 hectares) would be returned for use as parking areas for the facility. The loss of nine parking spaces may cause inconvenience for some employees of the facility, however it is expected that most workers would have adapted to less available parking spaces during the construction phase of the project. There would also be a permanent loss of 24 spaces in the Sydney Airport northern lands employee car park. This change would not be discernible to businesses and would unlikely affect operations. Most employees are expected to have a low sensitivity to these changes as they would have a high ability to absorb the change. The magnitude would be low, therefore the significance would be low.

7.1.3 Employment

As a result of the economic benefits described in section 7.1.1, employment opportunities are expected to be created through the expanded airport operations and development of businesses and industry to the north of Alexandra Canal. This would increase the jobs available in the transport, postal and warehousing industry to Greater Sydney communities.

Faster travel times and less congestion on the local road network would provide greater connectivity for Sydney Airport and local businesses with potential employees, while increasing the employment catchments of local and regional residents. Increased access to jobs would lead to increased income generation opportunities for residents and may also assist in reducing unemployment rates in the long term.

7.2 Amenity and character

This section discusses the potential impacts that may occur due to changes to amenity within the local study area, which may affect the quality of life of residents and users of accommodation facilities in these areas. Changes to amenity relate to changes in noise levels, visual amenity, and air quality. Amenity changes and resulting social impacts on businesses are discussed in section 7.1.2, and on users of affected community facilities in section 7.4.

7.2.1 Noise and vibration

As identified in Technical Working Paper 2 – Noise and Vibration, the project would lead to noticeably increased noise levels at:

- Some residential properties in east Tempe to the north of Tempe Recreation Reserve due to the presence of new road infrastructure to the south and removal of shipping containers at Tyne Containers
- Some residential properties in St Peters to the north of the St Peters Interchange and Sydenham to the north of Princes Highway due to the elevated road infrastructure
- Some residential properties on Baxter Road (Mascot) and accommodation facilities near Sydney Airport (identified in section 6.2) due to proximity of new road infrastructure to the south
- Some residential properties and accommodation facilities near O'Riordan Street due to the removal of buildings which previously protected based airport noise as a result of the project.

As noted in section 5.3.3, residents in east Tempe were concerned about noise generated from new road infrastructure. Subject to detailed design, noise barriers may be provided at Baxter Road and east Tempe. It is expected that noise barriers would help to mitigate operational noise for some properties. In addition, some properties may qualify for at-property noise mitigation, which would reduce operational noise within internal areas of the properties. These measures are expected to mitigate operational road noise for relevant properties, however increased noise may still be noticeable at other properties, which could cause a nuisance to these residents. This could potentially lead to some people spending less time outdoors in backyards or on balconies, or closing windows while indoors. There is potential for these social impacts to be greater on vulnerable groups, who may be more sensitive to some amenity changes, and have less capacity to adapt to changes. This may include the large proportion of couples with children in both Tempe and Mascot, and higher proportions of single parent families with children and people with a need for assistance in Tempe (section 4.3.2).

Given the concerns raised by east Tempe residents about noise, they may have a moderate level of sensitivity to the changes. As the concerns were not identified through consultation in Mascot, the residents here may have a low level of sensitivity. The magnitude of the impacts would only affect some residents in the local study area so the magnitude would be low. The level of significance would therefore be moderate-low for east Tempe residents and low for Mascot residents. Accommodation facility users would have a negligible level of sensitivity due to the temporary nature of their use of the facility. The magnitude would be low as it would only affect some accommodation facilities, therefore 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.

7.2.2 Visual and landscape

Changes to the visual environment of Tempe Lands due to the presence of new road infrastructure would permanently alter the local character of the area. This may affect the values of east Tempe residents and potentially diminish their sense of pride in their local area. As discussed in section 4.3.4, residents in the eastern part of Tempe value green and natural spaces, therefore may have low sensitivity to these visual changes. The magnitude of the change is considered low due to the existing amenity and character of the area. The significance of the impact therefore would be low.

As discussed in section 7.1.2, new elevated road infrastructure and loss of vegetation near Terminals 2/3 would alter views which would permanently change the visual environment for local residents and pedestrians using Qantas Drive, which could affect local residents' values about their local area (refer to section 4.3.4). Given that most people would only be exposed to these visual changes temporarily while travelling along the road, it is unlikely to impact people's day to day activities or local residents' values. Changes to the visibility of businesses as a result of new infrastructure is discussed in section 7.1.2. Most community members may have low sensitivity to these visual changes due to limited exposure to the changes. The magnitude may be low to moderate as they 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 Alexandra Canal would include the design of new bridges and new shared path adjacent to the canal. Some local heritage groups and general community members may value the canal for its heritage.

People who value the significance of Alexandra Canal may have moderate sensitivity to these visual changes. The magnitude of the change is considered low due to the existing amenity and character of the area. The significance of the impact therefore would be moderate-low.

7.2.3 Air quality

As identified in Technical Working Paper 4 – Air Quality, the project would result in improved air quality on a number of roads due to reduced traffic volumes. These include the M5, Southern Cross Drive, Botany Road and Canal Road. These roads traverse industrial, commercial, residential and open space areas including Mascot town centre and would be used by local residents, commuters, pedestrians, cyclists and workers at local businesses. Potential impacts on workers at local businesses are discussed in section 7.1.2. From a social impact perspective, these air quality changes are not expected to be noticeable to most people. However people may perceive an improvement to air quality, which could lead to more people choosing to walk and cycle along these roads, leading to increased active travel.

During consultation, residents in Tempe raised concern over potential air pollution as a result of new road infrastructure. As discussed in Technical Working Paper 4 – Air Quality and section 7.1.2, reduced air quality is predicted on new project roads including the Terminal 1 and St Peters Interchange connections, and some existing roads which are used by commuters and other road users. The magnitude of this impact is considered negligible as it is unlikely to change people's day to day activities. Most people's sensitivity may be low to moderate because although the change is not expected to be noticeable, some community members in east Tempe have raised concerns about air quality (section 5.3.3). Therefore, there would be a negligible impact for general community members. 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. Vulnerable residents may have moderate to high levels of sensitivity, therefore the level of significance for these residents would be negligible.

7.3 Access and connectivity

7.3.1 Traffic conditions and travel times

The project would provide a new high capacity and continuous road connection between Sydney's motorway network at St Peters Interchange and Sydney Airport terminals, Mascot and Port Botany precincts. Technical Working Paper 1 – Transport and Traffic identifies that Sydney Gateway road project would result in a large shift of traffic volume to this project. As a result, reduced traffic is forecast for years 2026 and 2036 on:

- Local roads in Mascot town centre
- Botany Road
- Gardeners Road
- Bourke Street
- O'Riordan Street
- Princes Highway
- M1
- Southern Cross Drive.

Similarly, heavy vehicle traffic is expected to reduce on the roads mentioned above. During both peak periods, the surrounding road network is predicted to perform better with the project in both 2026 and 2036, with reduced average trip times and higher average trip speeds.

Overall, the Sydney Gateway road project is expected to relieve congestion on the road network for motorists around Sydney Airport terminals, Mascot and Port Botany. This 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. Reduced traffic along many of the roads mentioned above, in particular Botany Road through Mascot town centre and Princes Highway, have the potential to reduce actual or perceived barriers for travel across these roads. This would particularly benefit pedestrians and people with mobility difficulties, potentially leading to increased opportunities for community participation and greater cohesion for communities along the project site.

From a social impact perspective, the project would deliver benefits to the regional study area and Greater Sydney communities through faster travel times and reliability along many key arterial roads to the Sydney Airport terminals, Mascot and Port Botany. Overall improved travel times could allow people to spend more time with family and undertake leisure and social activities.

7.3.2 Public transport

Improved travel times along key corridors throughout the study area will lead to faster travel times for several bus routes servicing surrounding areas. This would benefit local residents travelling through the area as well as workers and passengers travelling to Sydney Airport by bus.

7.3.3 Active transport

Following completion of construction, a new active transport link will be constructed. As noted in the *Sydney Gateway Active Transport Strategy*, the new shared path would maintain existing connectivity. Therefore no impact is expected for pedestrians and cyclists during operation.

7.4 Community infrastructure

This section assesses the potential impacts to affected community infrastructure facilities in relation to permanent land requirements, amenity and access changes during operation.

Community infrastructure facilities other than those discussed below are considered sufficiently far from the Sydney Gateway road project, and impacts to users are not expected other than improved access resulting from improved overall travel times around Sydney Airport, Mascot and Port Botany.

7.4.1 Impacts on users of recreational facilities

As discussed in section 6.4, the project would result in the permanent loss of around one hectare within Tempe Lands. This area includes land currently occupied by Tempe Golf Range and Academy and Tempe off-leash dog area. However, upon completion of the project up to 10 hectares of residual land could be available for use as open space or other future uses in accordance with the priorities of local and regional strategic plans and Inner West Council. This would consist of land temporarily required during construction including about four hectares occupied by recreational facilities within Tempe Lands and land occupied by Tyne Container Services (see section 6.4). Council is developing a Master Plan to identify how this land would be used which will consider Council's recreational needs analysis prepared in 2018. Roads and Maritime is continuing to consult with Inner West Council on the draft Master Plan including proving feedback from the community during the Concept Design display as to the future land use. Roads and Maritime will 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 to enable consistency with the project's final landscape plan.

As part of the consultation process, 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 will continue to work with Council and the local community on the development of the Master Plan and future options at Tempe Lands. Subject to the outcomes of Council's Master Plan, the future uses and amenities at Tempe Lands may benefit local residents and other community members by increasing the amount of public open space available in the local area, as well as access to well-designed and activated open space. Should the residual land be used as public open space in the future, it is expected the overall amenity of Tempe Lands would improve compared to the current condition of public open space, and opportunities for passive recreation for local residents would increase. This could also minimise the loss of public open space that would occur during construction.

Users of Tempe Recreation Reserve, Tempe Wetlands, the Cooks River would potentially experience increased levels of noise and reduced air quality for areas close to the new road infrastructure (as discussed in section 7.2). There would also be a change in the visual environment due to views of new road infrastructure from these facilities when facing east. Overall, these amenity impacts may reduce some people's enjoyment of these facilities and the river in proximity to the new road infrastructure. However, the overall function, capacity and accessibility of the open space areas by users is not expected to be impacted by the operation of the project. As the distance between the user and new road infrastructure increases, these amenity changes are expected to be less noticeable to users.

Overall, most users of these facilities are likely to have low to moderate levels of sensitivity given the concerns raised particularly by east Tempe residents about noise and air quality changes. Given the existing proximity to the airport and 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.

Increased noise and visual change are expected on Coleman Reserve, which would reduce the overall amenity for occasional users of the reserve including pedestrians and nearby workers who use the reserve during their 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.

7.5 Summary of key findings and assessment of operation impacts

The assessment of potential socio-economic impacts presented in Table 7-1 is based on the methodology provided in section 3.2.5 and considers the implementation of mitigation measures recommended in other technical reports as outlined in section 9.

Operation of the project would lead to socio-economic benefits including:

- There would likely be increased productivity for businesses due to increased freight efficiency and improved travel times for commuters on the local road network. This would indirectly benefit business owners and employees through increased income generation. There would be opportunities for development of airport and freight-related businesses and employment opportunities on land north of Alexandra Canal and around the airport. This would indirectly support business and tourism expenditure, which could provide increased income generation for business owners and employees. Employees may also benefit from improved connectivity to employment areas, more job choices, and options for working closer to home
- There would be reduced traffic on several key roads in the region, and some local roads in Mascot, leading to reduced travel time, improved air quality, and reduced perceived barriers for pedestrians and people with mobility difficulties. Reduced travel time and perceived barriers may enhance community participation
- Tempe residents would benefit from increased and enhanced public open space, which may enhance opportunities for public recreation.

Potential socio-economic impacts during operation would include:

- There may be increased noise for some residential properties near the project which can be a nuisance and may lead to people spending less time outdoors in backyards or on balconies, or closing windows while indoors. Subject to detailed design, there may be some noise barriers installed near east Tempe and Mascot or some properties may qualify for noise mitigation. These measures are expected to reduce noise effects
- There may be some reduced amenity for users of recreation facilities located in proximity to new road infrastructure. These changes may reduce enjoyment of these facilities by some users.

Table 7-1 Assessment of socio-economic impacts during operation

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
ECONOMY, BUSINESSES AND EMPLOYMENT						
Economy						
Increased freight efficiency in Sydney's economic supply chain	Increased productivity and increased income generation.	Positive Indirect Long term	Greater Sydney communities	N/A	N/A	N/A
Increased freight efficiency in Sydney's economic supply chain Travel time benefits to workers travelling by car or bus to and from Sydney Airport and Port Botany	Opportunities for development of businesses on land north of Alexandra Canal for postal, transport and warehousing industry, and potential for expanded airport operations	Positive Indirect Long term	Greater Sydney communities	N/A	N/A	N/A
Travel time benefits to workers travelling by car or bus to and from Sydney Airport and Port Botany	Improved connectivity to employment areas, more job choices and options for working closer to home. This could lead to greater community participation in work, education and community activities.	Positive Indirect Long term	Employees of airport and port related businesses	N/A	N/A	N/A
Businesses						
Reduced traffic on local roads in Mascot Town Centre and on Botany Road	Improved amenity leading to a more pleasant environment for employees and customers, and may increase trade for some businesses	Positive Indirect Long term	Business owners Employees Customers	N/A	N/A	N/A

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
	Potential for reduced passing trade from motorists for businesses on Botany Road and in Mascot Town Centre although these businesses are not likely to depend heavily on passing trade from motorists.	Negative Indirect Long term	Business owners	Negligible to Low	Low	Negligible to Low
Increased traffic on Qantas Drive may increase potential for passing trade for some businesses such as takeaway food and car services along Ross Smith Avenue.	Increased passing trade has the potential to increase income for business owners.	Positive Indirect Long term	Business owners	N/A	N/A	N/A
New elevated road infrastructure near Terminals 2/3, some loss of vegetation, overshadowing and light spill within the widened road corridor would alter views	Changes to the visual environment are generally unlikely to affect most business owners, customers and employees. However a car dealership that is reliant on visibility of the business could have reduced sales. This could lead to stress and worry for the business owners and employees.	Negative Indirect Long term	Business owners and employees	Moderate	Low	Moderate-low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Reduced air quality on the new project roads and nearby existing roads, including Qantas Drive, Joyce Drive, General Holmes Drive and Airport Drive	From a social impact perspective, these air quality changes are not expected to be noticeable to most people and therefore unlikely to change people's day to day activities.	Negative Direct Long term	Business owners, employees and customers	Negligible to Low	Negligible	Negligible
	Some vulnerable people who may work at or visit these businesses may be more sensitive to air quality changes. This may include older people and people with medical conditions such as asthma.	Negative Direct Long term	Business owners, employees and customers	Moderate to High	Negligible	Negligible
Permanent removal of nine parking spaces a mail handling unit facility at Terminal 1, and 24 spaces at Sydney Airport northern lands employee car park.	The loss of nine parking spaces at the mail handling unit facility, and 24 spaces at the Sydney Airport employee car park may cause inconvenience for some employees, however it is expected that most workers would have adapted to less available parking spaces during the construction phase of the project.	Negative Direct Long term	Employees	Low	Low	Low
Employment						
Increased employment opportunities through potential for expanded airport operations and development of businesses north of Alexandra Canal	Increased job and income generation opportunities to skilled workers from the region and Greater Sydney.	Positive Indirect Long term	Skilled workers across Greater Sydney	N/A	N/A	N/A

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
Greater connectivity for Sydney Airport and local businesses with potential local and regional employees	Increased job and income generation opportunities to local and regional residents, which may also assist in reducing unemployment over time.	Positive Indirect Long term	Local and regional workers	N/A	N/A	N/A
AMENITY						
Noticeable noise level increase on some residential properties in east Tempe, Sydenham, St Peters north of St Peters Interchange and in Mascot along Baxter Road, and accommodation facilities near the airport. Subject to detailed design, the properties may qualify for noise mitigation and some locations may have noise walls installed. These design treatments would be expected to reduce operational noise within external and internal areas of these properties	Subject to detailed design, increased noise could still be noticeable and could therefore be a nuisance to these residents. This could potentially lead to some people spending less time outdoors in backyards or on balconies, or closing windows while indoors.	Negative Direct Long term	East Tempe residents	Moderate	Low	Moderate -low
		Negative Direct Long term	Mascot residents	Low	Low	Low
		Negative Direct Long term	Users of accommodation facilities	Negligible	Low	Negligible
	Vulnerable groups, including single parents, couples with children and people with a need for assistance, in Tempe and Mascot may be more sensitive to an increase in noise.	Negative Direct Long term	Residents	Moderate to High	Low	Moderate-low to Moderate
Presence of new road infrastructure within Tempe Lands	This would permanently alter the local character. This may affect the values of Tempe residents potentially diminishing their sense of pride in their local area.	Negative Indirect Long term	Residents	Low	Low	Low

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
New elevated road infrastructure near Terminals 2/3 would alter views due to some loss of vegetation, overshadowing and light spill within the widened road corridor	Changes to the visual environment for local residents and pedestrians using Qantas Drive.	Negative Indirect Long term	Residents, pedestrians	Low	Low to moderate	Low – Moderate-low
Changes to the visual form of Alexandra Canal from the presence of new bridges	Local heritage groups and the wider community who value the significance of the Alexandra Canal may be more vulnerable to experiencing a diminishing sense of pride.	Negative Indirect Long term	Local heritage groups, wider community	Moderate	Low	Moderate-low
Improved air quality on a number of roads due to reduced traffic volumes, including the M5, Southern Cross Drive, Botany Road and Canal Road	From a social impact perspective, these air quality changes are not expected to be noticeable to most people. However people may perceive an improvement in air quality, which could lead to more people choosing to walk and cycle along these roads, leading to increased active travel.	Positive Direct Long term	Residents, commuters, pedestrians, cyclists	N/A	N/A	N/A
Reduced air quality on the new project roads and nearby existing roads, including Qantas Drive, Joyce Drive, General Holmes Drive and Airport Drive	From a social impact perspective, these air quality changes are not expected to be noticeable to most people and therefore unlikely to change people's day to day activities. However, some community members in east Tempe have raised concerns about air quality.	Negative Direct Long term	General community	Low to moderate	Negligible	Negligible

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
	Vulnerable residents may be more sensitive to air quality changes. This may include older people, children and people with medical conditions such as asthma.	Negative Direct Long term	Vulnerable residents	Moderate to High	Negligible	Negligible
ACCESS AND CONNECTIVITY						
Reduced traffic on several key arterial roads and on local roads through Mascot town centre	Reduced travel times for motorists resulting in more time people can spend with families and leisure and social activities. Potential to reduce actual or perceived barriers for travel across these roads in particular through Mascot town centre and the Princes Highway benefitting pedestrians and people with mobility difficulties. This may lead to increased opportunities for community participation and greater cohesion for communities along the project site.	Positive Direct and indirect Long term	Motorists Pedestrians	N/A	N/A	N/A
Improved travel times along key corridors	Improved travel times for several bus routes servicing surrounding areas.	Negative Direct Long term	Bus passengers travelling through local area and to Sydney Airport	N/A	N/A	N/A
The new active transport link would maintain existing connectivity for pedestrians and cyclists	Pedestrian and cycling connectivity would be maintained. Therefore, changes to people's active lifestyles are not expected due to operation.	Neutral Direct and indirect Long term	Cyclists	Negligible	Negligible	Negligible

Change as a result of the project	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Level of significance of impact
COMMUNITY INFRASTRUCTURE						
Decreased congestion and improved travel times around Sydney Airport, Port Botany and Mascot	Users of community facilities located in these areas may benefit from overall improvements to travel times.	Positive Indirect Long term	General community facility users	N/A	N/A	N/A
Residual land located at Tempe Lands and at the Tyne Container Services site could be converted into public open space or other future uses.	Should residual land be used as public open space in the future, it is expected the amenity of Tempe Lands would improve, and there would be enhanced opportunities for passive recreation for residents of Tempe.	Positive Indirect Long term	Users of Tempe Lands, and Tempe residents	N/A	N/A	N/A
Increased noise, reduced air quality and visual changes for some users of Tempe Recreation Reserve, Tempe Lands and Tempe Wetlands and the Cooks River in some cases	Overall these amenity changes may reduce some people's enjoyment of these facilities and the Cooks River at times.	Negative Indirect Long term	Users of the facilities and Cooks River in proximity to the project area	Low to Moderate	Low	Low to Moderate-low
Increased noise and visual change for users of Coleman Reserve	Reduced overall amenity of the reserve on users who are likely to spend short durations within the reserve (eg workers on their break, passing pedestrians). This could reduce some people's enjoyment of the reserve.	Negative Direct Long term	Users of Coleman Reserve	Negligible to Low	Low	Negligible to Low

7.6 Impacts on Commonwealth land

7.6.1 Key findings and assessment of impacts

Social impacts on Commonwealth land from the operation of the project would mainly relate to improved connectivity and faster travel times to Sydney Airport, and increased noise and visual changes for Coleman Reserve, ibis Budget Sydney Airport and Mantra Hotel.

As discussed in section 7.3, general community members and travellers going to and from Sydney Airport would experience increased connectivity and faster travel times due to operation of the project. This would also benefit the many workers who commute to and from the airport. Reduced travel times could increase the time people spend with families or undertaking social activities.

As discussed in section 7.2, the future Airport Hotel, ibis Budget Sydney Airport and Mantra Hotel would experience increased noise levels, which could therefore be a nuisance to the users of these accommodation facilities.

As discussed in section 7.2, air quality may reduce on new project roads and nearby existing roads including Qantas Drive and Airport Drive. These changes are not expected to be noticeable and are therefore unlikely to change people's day to day activities.

Similarly, increased noise is expected on Coleman Reserve, which would reduce the overall amenity for occasional users of the reserve including pedestrians and nearby workers using the reserve during their breaks.

New elevated road infrastructure near Terminals 2/3, some loss of vegetation, overshadowing and light spill within the widened road corridor would alter the visual surroundings. As discussed in section 7.1 and 7.2, this is generally unlikely to affect most business owners or employees with the exception of a car dealership located on the corner of Ninth and Sir Reginald Ansett Drive. There is potential for this car dealership to have reduced exposure due to the elevated road infrastructure obstructing views from passing traffic, which could have a possible effect on their sales.

As discussed in section 7.1.2, about 0.01 hectares of the mail handling facility located at Sydney Airport would continue to be required as part of the project's operational footprint, affecting about nine parking spaces. The remaining land (about 0.06 hectares) would be returned for use as parking areas for the facility. The loss of nine parking spaces may cause inconvenience for some employees of the facility. In addition, 24 parking spaces located on Sydney Airport northern lands employee car park will be lost as a result of the project, this may cause inconvenience for some employees. It is expected that most workers would have adapted to less available parking spaces during the construction phase of the project.

Table 7-2 Assessment of operation impacts on Commonwealth land

Change as a result of the project	Summary of potential impact	Nature, type, duration and frequency of impact	Affected stakeholder	Intensity	Scale	Impact severity
Improved travel times along key corridors	Improved travel times for several bus routes servicing surrounding areas.	Positive Direct Long term	Bus passengers travelling through local area and to Sydney Airport	N/A	N/A	N/A
Noticeable noise level increase on future Airport hotel, ibis Budget Sydney Airport and Mantra Hotel	Road traffic noise could be a nuisance to users of accommodation facilities and potentially lead to some people spending less time on balconies engaging in recreational activities or relaxation, or closing windows while indoors.	Negative Direct Long term	Users of accommodation facilities	Negligible	Small	Negligible
Reduced air quality on the new project roads and nearby existing roads, including Qantas Drive and Airport Drive	From a social impact perspective, these air quality changes are not expected to be noticeable to most people and therefore unlikely to change people's day to day activities.	Negative Direct Long term	General community	Negligible to Low	Negligible	Negligible
	Vulnerable residents may be more sensitive to air quality changes. This may include older people, children and people with medical conditions such as asthma.	Negative Direct Long term	Vulnerable residents	Moderate to High	Small	Moderate
Increased noise and visual change for users of Coleman Reserve	Reduced overall amenity of the reserve on users who are likely to spend short durations within the reserve (eg workers on their break, passing pedestrians). This could reduce some people's enjoyment of the reserve.	Negative Direct Long term	Users of Coleman Reserve	Negligible to Low	Small	Minor
New elevated road infrastructure near Terminals 2/3, some loss of vegetation, overshadowing and light spill within the widened road corridor would alter views	Changes to the visual environment are generally unlikely to affect most business owners, customers and employees. However a car dealership that is reliant on visibility of the business could have reduced sales. This could lead to stress and worry for the business owners and employees.	Negative Indirect Long term	Business owners and employees	Moderate	Small	Moderate

Change as a result of the project	Summary of potential impact	Nature, type, duration and frequency of impact	Affected stakeholder	Intensity	Scale	Impact severity
Permanent removal of nine parking spaces a mail handling unit facility at Terminal 1.	The loss of nine parking spaces may cause inconvenience for some employees of the facility, however it is expected that most workers would have adapted to less available parking spaces during the construction phase of the project.	Negative Direct Long term	Employees	Small	Small	Minor

7.6.1.1 Assessment of significance – operation

The assessment of significance has been undertaken in Table 7-3 with consideration of the people and community guidance criteria defined in the EPBC Act '*Significant impact guidelines 1.2'* and outlined in section 3.2.5.

Table 7-3 Assessment of operation significance on Commonwealth land

People and community criteria	Assessment
Substantially increase demand for, or reduce the availability of, community services or infrastructure which have direct or indirect impacts on the environment, including water supply, power supply, roads, waste disposal and housing	The project would have a direct impact on the capacity of the road network that would positively affect access and connectivity for visitors to and business owners and employees located at Sydney Airport. There are no residential areas located within Commonwealth land, therefore impacts to housing are not relevant as part of this assessment. Utilities are not expected to be impacted during operation.
Affect the health, safety, welfare or quality of life of the members of a community, through factors such as noise, odours, fumes, smoke, or other pollutants	The project is unlikely to affect the health, safety, welfare or quality of life of local residents, businesses owners, employees and visitors to Sydney Airport.
Cause physical dislocation of individuals or communities	The project is not expected to cause physical dislocation of individuals or communities as access to Sydney Airport would be improved.
Substantially change or diminish cultural identity, social organisation or community resources	The project would not substantially change or diminish the identity or characteristics of the area, including at Coleman Reserve.

Based on the assessment of socio-economic impacts on Commonwealth land presented in Table 7-2 and the assessment of the significance of these impacts in Table 7-3, operation of the project is unlikely to have significant impacts on people and community.

7.6.2 Consistency with the Sydney Airport Master Plan 2039 and Environment Strategy 2019–2024

Consistent with the objectives of the Airport Master Plan and Environment Strategy, the project would improve connectivity and travel times to Sydney Airport, which contributes to the economic growth of the region. Improved access to Sydney Airport would also benefit airport workers and visitors. The project would also improve access around Sydney Airport, which would benefit community members travelling in the vicinity of the airport.

Potential noise effects on users of accommodation facilities may require noise mitigation, which would in turn require engagement with these facilities during detailed design. Engaging with affected stakeholders is consistent with the objectives of the Airport Master Plan to consider the interface with the community in planning, development and operations by engaging in an open and genuine manner.

8. Cumulative impacts

This section assesses the potential cumulative impacts associated with the construction and operation of Sydney Gateway road project with other major projects in proximity.

8.1 Botany Rail Duplication

This section assesses the cumulative impacts of the construction and operation of Sydney Gateway road project with the Botany Rail Duplication.

Australian Rail Track Corporation (ARTC) would be delivering the Botany Rail Duplication located along the existing freight rail corridor in Botany, Pagewood and Mascot. This project would be directly adjacent to Sydney Gateway road project to the east of Alexandra Canal. Sydney Gateway road project would be constructed concurrently with the Botany Rail Duplication, which is expected to be in operation by 2024.

8.1.1 Construction impacts

8.1.1.1 Economy

As discussed in section 6.1.1, the construction industry is a significant contributor to the Australian economy. Construction of both projects would increase the long-term economic contribution to the region. This would lead to similar social impacts as discussed in section 6.1.1 such as business and employment opportunities, which would benefit Greater Sydney communities with increased income generation opportunities.

8.1.1.2 Businesses

Construction of both projects may lead to further demand for services and increased expenditure at local and regional businesses through purchases made by the combined construction workforce and procurement of local goods and services for construction. This is expected to benefit business owners and employees of businesses which supply construction activities.

Businesses located near where Sydney Gateway road project and Botany Rail Duplication overlap may be affected by cumulative noise and access impacts. Technical Working Paper 2 – Noise and Vibration found that the likelihood of worst-case noise levels being generated by both projects at the same time is considered low. Rather than increased volume of construction noise, there may be an increased duration of noise at the nearest receivers at times. In terms of access, construction of both projects would lead to an increase in the number of construction workers travelling to work sites. This would lead to further increased travel times and competition for parking. As a result, customer and employee access to local businesses may become more difficult.

As identified in Technical Working Paper 12 – Business Impacts, these impacts are most likely to occur at businesses near the project site particularly along Baxter Street, Qantas Drive and Burrows Road South. This could potentially deter some customers from visiting some businesses in these areas. The cumulative noise and access impacts could at times disrupt activities in the workplace, such as the ability of employees to concentrate on work or delays getting to work. Business owners and employees may also experience construction fatigue as a result of cumulative and consecutive construction activities. This could lead to feelings of annoyance and inconvenience, with workers feeling they are at a greater disadvantage than before the projects. It may also affect their capacity to work. Business owners may also have greater difficulty attracting and retaining employees and customers due to cumulative access and amenity changes as a result of both projects, which could lead to stress and worry.

8.1.1.3 Employment

The construction of Sydney Gateway road project and Botany Rail Duplication concurrently would lead to further job and income generation opportunities available to residents within the regional study area and Greater Sydney in the short term.

8.1.1.4 Amenity

As discussed above, there would be increased duration of noise at receivers near where the projects overlap. This would include some accommodation facilities (eg Stamford Plaza, Quest Mascot, ibis Budget Sydney Airport) and residential receivers further to the east on Baxter Road. Technical Working Paper 2 – Noise and Vibration recommends coordination between the two projects regarding evening and night time works to provide appropriate respite to residents and users of accommodation facilities. As discussed in section 6.2, increased noise during the day can be a nuisance, disturbing day to day activities, and night time noise can disturb sleep.

8.1.1.5 Access and connectivity

Local residents, Sydney Airport workers and travellers, and the general community travelling through the Mascot area by car or bus would likely experience further increased travel times during proposed temporary road closures at Robey Street and O'Riordan Street for the Botany Rail Duplication Project. These temporary closures would occur on weekends and may coincide with Sydney Gateway road project construction activities occurring near the airport. This could increase nuisance and annoyance to these road users. For travellers to the airport, this could add delays to their journeys. People would likely need to allow for more travel time for their trips through the project area and the airport. Additional time spent travelling is likely to reduce the time people can spend with families, undertaking leisure and social activities, and cause delays in getting to work.

8.1.1.6 Construction fatigue

Cumulative impacts could create construction fatigue for affected community members. This is likely to affect residents along Baxter Road (Mascot) who may experience feelings of annoyance and inconvenience, and feel they are at a greater disadvantage than before the projects. They would likely experience a diminished sense of pride and enjoyment of their properties and surroundings, and may choose to spend less time pursuing day to day activities in and around their homes. These impacts may affect people's ways of life including their capacity to participate in work and community activities, affect personal and social relationships, and reduce social interactions. There is potential for these social impacts to be greater on vulnerable groups, who may be more sensitive to some amenity changes and have less capacity to adapt to changes. This may include the large proportion of couples with children and culturally and linguistically diverse people in Mascot.

8.1.2 Operation impacts

8.1.2.1 Economy

The concurrent operation of the Sydney Gateway road project and Botany Rail Duplication would lead to further increased freight efficiency to both Sydney Airport and Port Botany, which would likely increase the economic benefits discussed in section 7.1 for Greater Sydney communities.

8.1.2.2 Businesses

As discussed in Technical Working Paper 12 – Business Impacts, overall improvements to connectivity as a result of the operation of both projects may reduce operational expenses and provide opportunity for increased revenue for some businesses due to expanded trade networks. The increased efficiency of the freight network would provide more options for transporting goods across Greater Sydney, which would enhance the efficiency of servicing and delivery to local businesses and improve travel times for employees and customers. This would lead to increased income generation opportunities for business owners.

Local businesses in Mascot town centre may benefit from improved amenity as a result of freight movements and heavy vehicles taking an alternate route and bypassing the town centre. As discussed in section 7.1, this may benefit business owners, employees and customers by creating a more pleasant environment. A more pleasant outdoor environment may particularly benefit businesses with outdoor eating areas by encouraging more customers to visit these businesses.

8.1.2.3 Amenity

Residents and general community members are expected to benefit from the overall improved amenity of Mascot town centre resulting from the change of route for container movements. This may further encourage people to spend more time outdoors, and may lead to increased opportunities for community participation and greater cohesion for communities along the project site.

There is potential for further increased noise as a result of the operation of both projects at the intersection of Robey Street and O'Riordan Street, where the Stamford Plaza is located. Increased noise could lead to some people spending less time outdoors or on balconies, or closing windows while indoors.

8.1.2.4 Access and connectivity

Operation of the Sydney Gateway road project and Botany Rail Duplication is expected to lead to a proportional reduction in container numbers transported by road as well as change of route used by container movements to bypass local roads in the Mascot town centre. This would reduce traffic and improve travel times on local roads benefitting local residents, commuters, general community members and travellers accessing Sydney Airport and nearby community infrastructure.

8.2 Other proposed major developments

There are several major developments proposed in the vicinity of the project that may result in the concurrent construction and operation with Sydney Gateway road project. This section assesses the cumulative impacts of these. A description of these major developments is provided in Table 8-1.

Table 8-1 Other proposed major developments

Proposed major developments in the surrounding area	Description
Airport North Precinct upgrade	The project involves the widening of O'Riordan Street to three lanes in each direction between Bourke Road and Robey Street in Mascot. Enabling works for the project began in June 2018. Construction began in late 2018 and is likely to be completed in 2020.
F6 Extension	The F6 extension is a new M5 Motorway from Arncliffe to President Avenue at Kogarah. The targeted date for opening is 2024, meaning that construction periods will likely coincide with the construction timeframes for the project.
M4–M5 Link	This new underground tunnel project includes the proposed multi-lane road link between M4 East project at Haberfield and the New M5 project at St Peters. Construction is currently underway and expected to be completed in early 2023. This project forms part of the new WestConnex project, and will therefore service some motorists who are travelling to and from Sydney Airport using Sydney Gateway road project. The M5 portion of this project will be located at St Peters and therefore project construction may occur concurrently with the construction of Sydney Gateway.

Proposed major developments in the surrounding area	Description
Sydney Airport Terminals 2/3 Ground Access Solutions and Hotel	This project involves the improvements to the ground access for Terminals 2/3 at Sydney Airport. It also involves the construction of the new Sydney Airport hotel. The project aims to improve connectivity for vehicles, public transport, cyclists and pedestrians in and around the entrance to Sydney Airport's Terminals 2/3. The project will be developed in seven stages. The project is still in construction, with no confirmation of estimated completion date. It is possible that this project would be in construction phase concurrently with the Sydney Gateway project.
Sydney Metro City and South West	Sydney Metro City and South West is a 30 kilometre extension of metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations, travelling south-west to Bankstown. It is due to open in 2024 with seven new metro stations and 11 upgraded stations. The new metro line will run through the suburbs of St Peters and Sydenham, and will service the residents living in St Peters and Tempe. There is currently a stabling yard for the Sydney Metro Trains in construction which is located adjacent to the St Peters WestConnex construction. Concurrent construction of the project and Sydney Metro is expected to occur, with the Metro planning to be operational by 2024.
WestConnex New M5	The WestConnex New M5 project includes new multi-lane twin motorway tunnels between the M5 East Motorway and St Peters interchange, a new road interchange, and upgrade of local roads at St Peters to Mascot. The St Peters interchange will provide motorists with connections to Alexandria and Mascot. It also includes connections to M4–M5 Link and underground connection points for the M4–M5 Link and the proposed F6 Extension. The WestConnex project is located throughout the Inner West and Western Sydney, with parts of the project located in St Peters and Tempe. This project would directly connect to the proposed road network in Sydney Gateway road project at the St Peters Interchange. Upon completion, the St Peters Interchange would provide motorists and freight with motorway connections directly from Sydney Airport to the western suburbs of Sydney. The project is currently under construction, with an estimated completion date of early 2020. Concurrent construction may occur with Sydney Gateway road project.
Western Harbour Tunnel and Beaches Link	The project proposes a new tunnel from Rozelle interchange, connecting to Warringah at the new Warringah Freeway upgrade. This project aims to take the pressure of Sydney Harbour Bridge and Tunnel, as well as streamline traffic and improve public transport through the Inner West and Northern Suburbs of Sydney. The project is currently in the planning and reference design phase. Subject to planning approvals, construction on the tunnels is expected to begin in 2020, with the tunnels scheduled to open for traffic by 2026. Construction may occur concurrently with the Sydney Gateway road project.

8.2.1 Construction impacts

Should the construction of Sydney Gateway road project occur concurrently with other proposed major developments, there is potential for the following cumulative impacts:

8.2.1.1 Economy

The concurrent construction of Sydney Gateway road project with other proposed major developments would lead to further increased economic contribution to the region. This would likely increase the economic benefits discussed in section 8.1.1 for Greater Sydney communities.

8.2.1.2 Businesses

Further demand for services and increased expenditure at local and regional businesses through purchases made by the combined construction workforce, and procurement of local goods and services for construction, would benefit business owners and employees.

Construction of WestConnex New M5 and M4–M5 Link would require use of the St Peters interchange as a construction site, which is located in the Airport industrial precinct. As a result, businesses in the Airport industrial precinct and along the Princes Highway would be susceptible to construction fatigue from the ongoing exposure to amenity and access impacts. These impacts include cumulative noise, vibration, dust, visual changes and increased travel times due to construction traffic. These impacts could amplify feelings of annoyance and inconvenience, with workers feeling they are at a greater disadvantage than before the projects. It may also affect their capacity to work. Increased cleaning and reduced business exposure can also affect revenue of these businesses. This could also reduce the appeal for employment and business investment. Business owners may also have greater difficulty attracting and retaining employees and customers due to cumulative access and amenity changes, which could lead to stress and worry.

Businesses located near where Sydney Gateway road project and Sydney Airport Terminals 2/3 Ground Access Solutions and Hotel MDP Project overlap include commercial businesses and accommodation facilities near the Joyce Drive and O'Riordan Street intersection. Impacts on users of accommodation facilities are discussed below (see Amenity section below). As discussed in section 8.1.1, the likelihood of worst-case noise levels being generated by multiple projects at the same time is low, but there may be an increase in the duration of noise at times. This may reduce the amenity for business owners, employees and customers. Some customers may be deterred from visiting some businesses and activities in the workplace may at times be disrupted. Business owners and employees may also experience construction fatigue which could lead to feelings of annoyance and inconvenience, with workers feeling they are at a greater disadvantage than before the projects. It may also affect their capacity to work.

8.2.1.3 Employment

There may be increased demand for construction workforce due to resourcing across projects. This would lead to more job and income generation opportunities available to residents within the regional study area and Greater Sydney.

8.2.1.4 Amenity

As identified in Technical Working Paper 2 – Noise and Vibration, increased noise is expected on residential properties and accommodation facilities near O'Riordan Street, Baxter Road and Joyce Drive from the concurrent construction with Sydney Airport developments. There may also be infrequent minor night time noise exceedances for residences on Campbell Road resulting from Sydney Gateway road project and Westconnex M4–M5 Link, although the contribution from Sydney Gateway road project would be negligible. There is also potential for infrequent minor night time noise exceedances for residential properties to the east on Campbell Street near the St Peters Interchange. Increased noise could lead to further nuisance and annoyance felt by these residents.

8.2.1.5 Construction fatigue

Residents on Baxter Street in Mascot and on Campbell Street in St Peters are also likely to experience construction fatigue. As discussed in section 8.1.1, construction fatigue can lead to feelings of annoyance, inconvenience and being at a greater disadvantage than before the projects. Residents may experience a diminished sense of pride and enjoyment of their properties and surroundings, choosing to spend less time pursuing day to day activities in and around their homes. These impacts may affect people's way of life including their capacity to participate in work and community activities, affect personal and social relationships, and reduce social interactions. There is potential for these social impacts to be greater on vulnerable groups, who may be more sensitive to some amenity changes, and have less capacity to adapt to changes. This may include the large proportion of couples with children and culturally and linguistically diverse people in Mascot.

8.2.1.6 Access and connectivity

Increased traffic demand generated by WestConnex may exacerbate the traffic conditions from construction of Sydney Gateway road project (refer to Technical Working Paper 1 – Transport and Traffic for more detail). This would likely further increase people's travel time for daily commutes or usual trips they make using these roads, as well as travellers going to or from Sydney Airport. This could cause further nuisance to these road users.

8.2.2 Operation impacts

8.2.2.1 Economy

Improved local and regional connectivity would also result in improved freight efficiency to Sydney Airport and the port, which would likely increase the employment and economic benefits discussed in section 7.1 for Greater Sydney communities, including residents, business owners and employees.

8.2.2.2 Businesses

Similar to the operation impacts discussed in section 8.1.2, overall improvements to connectivity as a result of the operation of the transport projects may reduce operational expenses and provide opportunity for increased revenue for some businesses due to expanded trade networks. This would lead to increased income generation opportunities for business owners.

8.2.2.3 Employment

Improved connectivity to key employment areas across the city would support long-term employment growth in Greater Sydney. This would increase the income generation opportunities available to local and regional residents.

8.2.2.4 Amenity

Technical Working Paper 4 – Air Quality reports that further reductions in air emissions concentrations are predicted along Southern Cross Drive and the M5 East, while a reduction is expected along The Grand Parade. This is not likely to be noticeable to most people and would therefore be a negligible social impact.

An increase in air emissions concentrations however would occur along President Avenue. As discussed in section 7.2, from a social impact perspective, air quality changes are not expected to be noticeable to most people and therefore unlikely to change people's day to day activities, so there would be a negligible impact for general community members.

8.2.2.5 Access and connectivity

Together, the operation of Sydney Gateway road project and other developments would result in improved local and regional connectivity due to the new road connections and extensions.

As identified in Technical Working Paper 1 – Transport and Traffic, the inclusion of the F6 Extension and Western Harbour Tunnel and Beaches Link would result in reduced daily traffic volumes, including heavy vehicle traffic, on the A1, M1, Southern Cross Drive, O'Riordan Street, Princes Highway and Botany Road. This would further

improve the road and public transport connectivity for communities living along these corridors. In addition, reduced traffic along the Princes Highway and Botany Road (through Mascot town centre) has the potential to further reduce actual or perceived barriers for travel across these roads benefitting pedestrians and people with mobility difficulties.

8.3 Summary of key findings

Cumulative impacts have been assessed as a result of the concurrent construction and operation of Sydney Gateway road project with:

- Botany Rail Duplication
- Other proposed major developments described in section 8.2 and including:
  - Airport North Precinct upgrade
  - F6 Extension
  - M4–M5 Link
  - Sydney Airport Ground Access Terminals 2/3 and Hotel
  - Sydney Metro City and South West
  - WestConnex New M5
  - Western Harbour Tunnel and Beaches Link.

The assessment has been based on the methodology provided in section 3. The level of socio-economic impact identified in this assessment has considered the implementation of recommended mitigation measures recommended in other technical reports as outlined in section 0 and in addition to general environmental management measures that are anticipated as part of other proposed major developments (eg Construction Environmental Management Plan, Construction Traffic and Access Management Plan).

Cumulative socio-economic benefits may include:

- Further job and income generation opportunities available to residents across Sydney, and increased income generation for local businesses during construction
- 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 due to reduced container movements and less heavy vehicle traffic on local roads
- Improved local and regional connectivity for commuter and recreational cyclists due to active transport network improvements.

Potential cumulative socio-economic impacts would include:

- The potential for further reduced amenity resulting from additional construction noise, causing annoyance for some residents, business owners, employees, some customers, and guests of accommodation facilities close to project areas where they overlap
- During construction of several projects in the area at the same time, there would be increased travel time for commuters and other travellers going to and from Sydney Airport as a result of traffic demand from WestConnex. This would cause annoyance and reduce time people can spend on leisure or other important activities
- Residents and some business owners and employees in areas close to where multiple projects are being constructed would likely experience construction fatigue. 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. Business owners may also have greater difficulty attracting and retaining employees and customers, which could lead to stress and worry.

Table 8-2 Assessment of cumulative impacts during construction and operation

Change as a result of the project	Overlap with other proposed major developments	Summary of potential impact
CONSTRUCTION IMPACTS		
EMPLOYMENT AND ECONOMY		
Economy		
Economic activity generated by concurrent construction for the region.	Botany Rail Duplication Other major developments	Direct and indirect benefit to the regional economy, which would lead to social implications such as the development of businesses and employment opportunities. This could increase income generation opportunities for Greater Sydney communities.
Businesses		
Further demand for services and increased expenditure at local and regional businesses through construction.	Botany Rail Duplication Other major developments	Increased demand for services would lead to more income generation opportunities available to local business owners and employees.
Cumulative noise and access impacts on businesses near the project site, particularly along Baxter Street, Qantas Drive and Burrows Road South, and on businesses in the Airport Industrial precinct.		Reduced amenity could deter some customers from visiting some businesses near the works. This could lead to reduced business income, and cause stress and worry for affected business owners and employees.
		Sporadic noise disruption to workplaces of commercial businesses near the works. Reduced access due to cumulative construction traffic could result in delays to employees getting to work.
		Delays in arrival of airline passengers and crew could cause them to miss flights, which would affect the efficiency of airlines.
		Construction fatigue leading to annoyance, inconvenience and reduced capacity to work. Business owners may also have greater difficulty attracting and retaining employees and customers, which could lead to stress and worry.

Change as a result of the project	Overlap with other proposed major developments	Summary of potential impact
Employment		
Further increased construction job opportunities available to residents within the regional study area and Greater Sydney.	Botany Rail Duplication Other major developments	Further job and income generation opportunities available to residents within the regional study area and Greater Sydney.
AMENITY		
Increased duration of noise near the Joyce Drive and O'Riordan Street intersection.	Botany Rail Duplication Other major projects	Nuisance and disturbed day time and night time activities.
ACCESS AND CONNECTIVITY		
Temporary road closures at Robey Street and O'Riordan Street on the weekend would coincide with road construction activities near the airport. Increased traffic demand generated by WestConnex would also exacerbate traffic conditions. These changes would lead to further increases in travel times.	Botany Rail Duplication Other major projects	Local residents and the general community travelling through the Mascot area by car or bus would likely experience further increased travel times and traffic changes at times. This could cause delays for people getting to work, travelling to the airport, and reduce time people can spend with families and undertaking leisure activities.
CONSTRUCTION FATIGUE		
Cumulative and consecutive construction activities occurring infrequently where Sydney Gateway road project overlaps with Botany Rail Duplication affecting residents along Baxter Road in Mascot, and for residents on Campbell Street in St Peters where residents are affected by WestConnex M4–M5 Link.	Botany Rail Duplication Other major developments	Construction fatigue leading to annoyance, inconvenience, diminished sense of pride, reduced capacity to participate in work and community activities, affecting personal relationships and reducing social interactions.

Change as a result of the project	Overlap with other proposed major developments	Summary of potential impact
OPERATION IMPACTS		
EMPLOYMENT AND ECONOMY		
Economy		
Further increased freight efficiency to both Sydney Airport and Port Botany.	Botany Rail Duplication Other major developments	This could amplify benefits to business owners and employees through increased productivity, which could increase income generation. This could also support the development of businesses and employment opportunities along motorway corridors to the airport terminals. Improved connectivity to employment areas, more job choices, options for working closer to home and boost income levels. This could lead to greater community participation in work, education and community activities.
Businesses		
Change of route for container movements and heavy vehicles to bypass Mascot town centre.	Botany Rail Duplication	Improved amenity leading to a more pleasant environment for employees and customers that may also increase trade for some businesses.
Overall improvements to connectivity as a result of the operation of the transport projects.	Other major projects	Reduced operational expenses and opportunities for increased revenue for some businesses due to expanded trade networks.
Employment		
Improved connectivity to key employment areas across the city would support long-term employment growth in Greater Sydney.	Botany Rail Duplication Other major projects	This would increase the income generation opportunities available to local and regional residents.
AMENITY		
Change of route for container movements and heavy vehicles to bypass Mascot town centre.	Botany Rail Duplication	Improved overall amenity of Mascot town centre, further encouraging people to spend more time outdoors. This may lead to increased opportunities for community participation and greater cohesion for Mascot communities.

Change as a result of the project	Overlap with other proposed major developments	Summary of potential impact
Potential for further increased noise at the Robey Street and O'Riordan Street intersection where the Stamford Plaza is located (Mascot). Subject to detailed design of Sydney Gateway road project, noise walls may be installed or some properties may qualify for noise mitigation, which is expected to reduce operational noise.	Botany Rail Duplication	Subject to detailed design, increased noise could still be noticeable, and could therefore be a nuisance to accommodation facility users. This could potentially lead to some people spending less time on balconies or closing windows while indoors.
Further reductions in air emissions concentrations are predicted along Southern Cross Drive and the M5 East, while a reduction is expected along The Grand Parade.	Other major developments	From a social impact perspective, these air quality changes are not expected to be noticeable to most people and therefore unlikely to change people's day to day activities.
Increase in air emission concentration on President Avenue as a result of F6 Extension Project.		
ACCESS AND CONNECTIVITY		
Proportional reduction in container movements by road. Reduced daily traffic volumes, including heavy vehicle traffic, on the A1, M1, Southern Cross Drive, O'Riordan Street, Princes Highway and Botany Road. Together these changes would lead to improved travel times.	Botany Rail Duplication Other major developments	Reduced traffic on local roads in Mascot leading to improved travel times.
		Further improved road and public transport connectivity for communities living along these corridors. Potential to reduce actual or perceived barriers for travel across these roads in particular through Mascot town centre and the Princes Highway benefitting pedestrians and people with mobility difficulties.

9. Recommended mitigation and management measures

To avoid, minimise and manage the socio-economic impacts arising from the construction and operation of the project as assessed in section 6, 7 and 8, a number of mitigation and management measures have been developed as part of this technical working paper in addition to those in other technical working papers prepared for the EIS/preliminary draft MDP. These are presented in Table 9-1 below, and where relevant references to other technical working papers are provided.

Table 9-1 Recommended mitigation measures

Impact	Recommendation	Refer to Technical Working Papers for additional recommended mitigation measures
Overall socio-economic impacts	Develop a Community Social Management Plan which identifies: ■ Opportunities to enhance positive and mitigate negative socio-economic impacts ■ Detailed strategies to enhance the project and address/mitigate project impacts ■ Roles and responsibilities of relevant stakeholders ■ Appropriate monitoring, reporting and review mechanisms.	
Changes to businesses and employment and how business owners, employees and customers may be affected particularly due to amenity and connectivity changes, and acquisition of businesses	The construction contractor should prepare a Business Management Plan to minimise impacts to affected business owners and customers during construction. This could include protocols for identifying, in consultation with each affected business, specific feasible and reasonable measures to maintain pedestrian access, visibility, parking and address other potential impacts on owners and customers. An ongoing business support program should be implemented with a personal manager to support affected businesses through the property acquisition process to ensure business owners and employees are given ample notice of relocation, and allow them to plan for the changes.	■ Technical Working Paper 12 – Business Impacts

Impact	Recommendation	Refer to Technical Working Papers for additional recommended mitigation measures
Amenity change (noise, vibration, dust, visual) due to construction affecting way of life for local residents, and business owners, employees and customers. Amenity changes may also affect users of community and recreation facilities	The construction contractor should develop a stakeholder engagement and community consultation strategy to include: ■ Communication with Tempe and Mascot residents to provide an overview of the project, the likely nature, extent and duration of amenity and access changes as a result of construction. Particular attention will be given to ensuring any vulnerable groups are appropriately targeted. These may include 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 in both Tempe and Mascot. ■ Communication with general community members about road and pedestrian access changes and bus stop closure, such as roadside signage and web based information. ■ Communication with Sydney Airport employees and passengers about any road closures or predicted delays to the road network to allow additional travel time. Similarly, communication with businesses that are sensitive to construction activities would enable them to inform employees about these changes. ■ Protocols for responding to construction fatigue experienced by residents, businesses and general community members. Provide methods through which community members can contact the project to raise any concerns regarding amenity and access changes.	■ Technical Working Paper 1 – Transport and Traffic ■ Technical Working Paper 2 – Noise and Vibration ■ Technical Working Paper 4 – Air Quality ■ Technical Working Paper 13 – Urban Design and Visual Impacts
Access changes to the road network due to construction which may result in increased travel times, disrupting activities for businesses, employees, airline passengers and staff		■ Technical Working Paper 1 – Transport and Traffic ■ Technical Working Paper 12 – Business Impacts
Changes to active transport during construction which may increase travel distance and time for pedestrians and cyclists	Temporary and operational active transport links should be designed to ensure the safety of the users in accordance with Crime Prevention Through Environmental Design principles (CPTED).	■ Technical Working Paper 1 – Transport and Traffic

Impact	Recommendation	Refer to Technical Working Papers for additional recommended mitigation measures
Amenity and access changes to community infrastructure facilities and users due to construction, which may reduce use and enjoyment of some facilities, disrupt some activities, and affect social interaction and cohesion for some users	Targeted communication is recommended with the following stakeholders: ■ Inner West, Bayside and City of Sydney councils about timing of the most noise intensive works and changed traffic conditions that may affect public open space areas and active transport routes within the LGAs, namely Tempe Recreation Reserve, Tempe Lands, and Coleman Reserve. ■ Community infrastructure facilities within and surrounding Tempe Recreation Reserve about potential impacts to their activities and users. Targeted facilities and groups should include Tempe Birdos, Guardian Early Learning Centre, Betty Spears Child Care Centre, Aero Kids Early Learning Centre, St Peters Anglican Church and St Peter and St Paul Catholic Church. Child care centres in particular cater to a vulnerable user group being young infants and children, who may be more sensitive to some amenity changes. The likely nature, extent and duration of impacts should be communicated with facilities to allow users to understand how changes may affect them. ■ Cycling groups that operate within the Inner West, Bayside and City of Sydney LGAs about changes to the active transport network. ■ Accommodation facilities near the airport, including Stamford Plaza Hotel, the Future Airport Hotel, Mantra Hotel, Ibis Budget Sydney, Quest Mascot and Citadines Connect Sydney Airport Hotel, about potential amenity and access changes as a result of construction that may affect users of these facilities.	■ Technical Working Paper 1 – Transport and Traffic ■ Technical Working Paper 2 – Noise and Vibration ■ Technical Working Paper 4 – Air Quality ■ Technical Working Paper 13 – Urban Design and Visual Impacts
Temporary land requirements at Tempe Lands resulting in loss of some passive open space and provision of an alternative temporary off-leash dog area	Provision of temporary off-leash dog area including maintenance of access and provision of parking spaces. The location of the off-leash dog area and final number of parking spaces would be confirmed during detailed design and in consultation with Inner West Council.	
Permanent land requirements at Tempe Lands leading to relocation of Tempe Golf Driving Range and Academy, which may reduce active recreation and disrupt social networks	Roads and Maritime would continue to consult with Inner West Council to ensure that impacts to current open space and recreational facilities would be compensated as part of the property negotiations. This includes working with Council in the development of their proposed Master Plan for the site to ensure consistency with the project's final landscape plan and identify future uses.	■ Technical Working Paper 12 – Business Impacts
Amenity changes due to operation resulting from increased noise and visual changes, which could affect way of life for some resident's	Development of a community engagement and communication strategy during detailed design identifying consultation requirements for residents and businesses that may require additional noise mitigation subject to detailed design.	■ Technical Working Paper 2 – Noise and Vibration

10. Conclusion

This report has assessed the potential social benefits and impacts resulting from the construction and operation of the Sydney Gateway road project, as well as cumulative impacts from other major developments in the surrounding area.

During construction, social benefits of the project mainly relate to increased construction jobs and income generation opportunities available to Greater Sydney residents in the short term. Construction may lead to increased expenditure at local and regional businesses, which would benefit business owners and employees. In the long term, the economic activity generated by construction would provide direct and indirect benefit to the regional economy. This would lead to social implications such as the development of businesses and employment opportunities, which could increase income generation for business owners and employees.

Project construction activities however are expected to result in temporary to short term social impacts to local residents, local business owners, employees and customers, and the general community passing through or near the project site. These are outlined below:

- Amenity changes (eg increased noise, vibration or dust) may occur for some residential properties in east Tempe and along Baxter Road (Mascot), local businesses and accommodation facilities near Sydney Airport and users of community infrastructure in proximity to the project site. This may cause nuisance, interrupt daily activities and affect people's enjoyment and pride of their local area
- Increased travel times on the local road network may result from increased construction vehicles and changed traffic conditions affecting motorists, cyclists and bus passengers. This could cause delays to people's commutes to work or other activities they consider important to them. Delays in arrival of airline passengers and crew could cause them to miss flights, which could potentially affect the efficiency of airlines
- The relocation of three businesses due to project land requirements may result in displacement of around 75 jobs. The relocation process could cause stress and worry for affected business owners and employees
- Potential impacts to social networks and active recreation users of Tempe Golf Driving Range and Academy, Tempe Lands and Tempe Recreation Reserve may occur as a result of perceived and actual changes to access and amenity due to construction activities.

These social changes may cause nuisance, reduce some people's ability to enjoy their usual social activities and likely affect the values of local residents, such as their sense of pride and enjoyment of their local area. The above changes to community infrastructure could lead to impacts on the established social networks or sense of community for some local users. Generally, these impacts would be greater on vulnerable groups in Tempe and Mascot, who may have less capacity to adapt to changes (eg children, people with need for assistance, older people, people with disability, people with mobility difficulties or medical conditions, culturally and linguistically diverse people).

In addition to the general environmental management measures recommended in other Technical Working Papers (identified in section 3.2.6), it is recommended that a community social management plan and a stakeholder engagement and community consultation strategy are implemented. These strategies will assist with management and monitoring of socio-economic impacts. In particular, communication with residents and the general community prior to and during construction about the project and expected changes as well as targeted consultation with affected stakeholders (eg Tempe and Mascot residents with particular attention given to vulnerable groups mentioned above, Inner West, Bayside and City of Sydney councils, affected community infrastructure facilities, and cycling groups) is expected to help groups understand and adapt to potential impacts.

Subject to detailed design, operation of Sydney Gateway road project may lead to some amenity impacts on residences in Mascot and east Tempe. There may also be some reduced amenity for users of Tempe Recreation Reserve, Tempe Wetlands, Tempe Lands and Coleman Reserve as a result of new road infrastructure.

Overall, Sydney Gateway road project is expected to result in long term benefits to local and Greater Sydney communities. These mainly relate to:

- Increased freight efficiency in Sydney's economic supply chain. This could indirectly benefit business owners and employees through increased productivity leading to increased income generation. It would also provide the opportunity for expanded airport operations and development of businesses and industry on land north of Alexandra Canal, which would create additional employment and income generation for business owners and employees
- Improved connectivity to employment areas, more job choices and options for working closer to home, which could lead to greater community participation in work, education and community activities. This would also benefit Sydney Airport and local businesses with greater connectivity to potential local and regional employees. This would lead to income generation opportunities for residents and may also assist in reducing unemployment rates in the long term
- Reduced traffic including heavy vehicles on local roads in Mascot town centre and several key arterial roads improving traffic flow and travel times for motorists, cyclists and bus passengers. This would benefit many workers associated with the airport and port industries
- Increased access to public open space at Tempe Lands for Tempe residents, which may enhance opportunities for public recreation and improve local amenity. Subject to the project's final landscape plan, the conversion of residual lands in Tempe Lands and the previous Tyne Container Services site presents opportunities for enhanced passive recreation for residents, which could improve the overall amenity of the area.

Consecutive and cumulative construction of Sydney Gateway road project and other major projects may lead to further reduced amenity, increased travel times, and construction fatigue for some residents and business owners and employees. A construction fatigue protocol which provides methods for community members to raise issues with projects is expected to help manage this.

Together with other major projects, Sydney Gateway road project is expected to improve overall road and active transport connectivity and travel times, and enhance economic productivity following operation.

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Appendix A
Demographic profile of the region

Table A.1 Demographic profile of the region

Demographic indicator	Tempe suburb	St Peters suburb	Mascot suburb	Inner West LGA	Bayside LGA	Greater Sydney
Total population	3,556	3,145	14,772	184,043	156,058	4,823,991
Population density (person per hectare)	18.52	26.13	14.19	55.29	34.07	4.15
Age profile						
Median age	38	34	32	36	35	36
Under 18 years	21.4%	13.4%	15.7%	17.5%	19.1%	22.2%
85 years and older	1.4%	1.1%	0.9%	1.7%	2.3%	2%
Cultural diversity						
Aboriginal and Torres Strait Islander	2.1%	1.5%	1.2%	1.1%	1%	1.5%
People born in non-main English speaking countries	28.6%	18.5%	46.3%	30.8%	41.1%	29.3%
People that spoke another language, and English not well or not at all	16.4%	10.7%	7.5%	15.7%	8.5%	6.5%
Education and employment						
No tertiary qualification	40%	27.6%	35.9%	29%	39.1%	37.7%
Completed Year 12 or equivalent	62.5%	70.5%	69.3%	69.4%	61.7%	60%
Unemployment	4.6%	3.9%	5.2%	4.8%	6%	6%
Top industries of employment	Health care and social assistance (10.3%) Education and training (10.0%) Professional, scientific and technical services (9.6%) Public administration and safety (8.2%)	Professional, scientific and technical services (12.9%) Health care and social assistance (9.3%) Education and training (9.0%) Retail trade (8.0%)	Professional, scientific and technical services (10.6%) Accommodation and food services (10.3%) Transport, postal and warehousing (9.3%) Health care and social assistance (8.9%)	Professional, scientific and technical services (14.1%) Health care and social assistance (11.1%) Education and training (10.5%) Financial and insurance services (7.4%)	Health care and social assistance (10.9%) Retail trade (9.9%) Accommodation and food services (9.1%) Transport, postal and warehousing (8.6%)	Health care and social assistance (11.6%) Professional, scientific and technical services (9.8%) Retail trade (9.3%) Construction (8.2%)

Demographic indicator	Tempe suburb	St Peters suburb	Mascot suburb	Inner West LGA	Bayside LGA	Greater Sydney
Top occupations of employment	Professionals (27.6%) Clerical and administrative (15.6%) Managers (14.7%) Technicians and trades (10.3%)	Professionals (35.9%) Managers (16.3%) Clerical and administrative (14.6%) Technicians and trades (9.5%)	Professionals (25.6%) Clerical and administrative (14.8%) Managers (14%) Technicians and trades workers (12.7%)	Professionals (37.6%) Managers (16.4%) Clerical and administrative (12.8%) Technicians and trades/Community and personal services (8.5%)	Professionals (22.5%) Clerical and administrative workers (15.1%) Managers (12%) Technicians and trades workers (12%)	Professionals (26.3%) Clerical and administrative workers (14.6%) Managers (13.7%) Technicians and trades workers (11.7%)
Households						
Average household size	2.7	2.4	2.7	2.4	2.7	2.72
Couples with children	48.6%	32.9%	41.7%	42.6%	46.2%	49.5%
One parent families	17%	12.1%	12.4%	13.7%	15.3%	15.2%
Lone person households	21%	23.6%	20%	27.5%	23%	20.4%
Social housing	4.1%	1.5%	1.2%	6.9%	10%	4.6%
Low income households (earning less than $650 per week)	13%	8.3%	9.9%	13%	17.1%	15.1%
Households without motor vehicles	15.7%	14.2%	16.3%	17.9%	14.6%	10.7%
Need for assistance						
Need for assistance	5.5%	2.9%	3.4%	4.5%	5.3%	4.9%
Journey to work						
Train	33.6%	40.5%	32.7%	26.8%	27.1%	16.3%
Bus	4.9%	4.9%	7.7%	11.7%	5.8%	6.1%
Car as driver	42.9%	35.6%	41.1%	38.9%	52.1%	52.8%
Car as passenger	3.4%	2.6%	4.5%	3.3%	5.0%	3.9%
Cycling	2.8%	3.5%	1.1%	2.8%	0.7%	0.7%
Walked only	4.3%	5.9%	7.4%	5.6%	3.7%	4%

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