Transport for NSW

NSW GOVERNMENT

Technical Paper 8

Business Impact Assessment

Parramatta Light Rail Stage 2
Environmental Impact Statement

Document status

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GLOSSARY AND ABBREVIATIONS

Abbreviation	Key term
ABS	Australian Bureau of Statistics
BIA	Business impact assessment
CBD	Central business district
Cth	Commonwealth
DCP	Development control plan
EIS	Environmental impact statement
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
GPOP	Greater Parramatta and the Olympic Peninsula
LGA	Local government area
NSW	New South Wales
OOHW	Out of Hours Works
PIC	Place-based Infrastructure Compact
Population Services	Includes a combination of accommodation and food services, arts and recreation services, construction and retail trade.
Project site	Refers to the area that would be directly disturbed by construction of the project (for example, because of ground disturbance and the construction of foundations for structures). It includes the location of construction activities, compounds and work sites, and the location of permanent infrastructure.
SA	Statistical Area (refers to statistical boundaries as defined by the Australia Bureau of Statistics).
SEARs	Secretary's environmental assessment requirements
SEIFA	Socio-economic Indices for Areas
Study area	Encompasses the project site and businesses within planned urban growth precincts which provide the setting for the project (refer Figure 3-1).
The project	Construction and operation of Parramatta Light Rail Stage 2
Transport for NSW	Transport for NSW is the lead agency of the NSW transport cluster
TPA	Transport Performance and Analytics
TZ	Travel Zone

EXECUTIVE SUMMARY

Overview

Parramatta Light Rail will deliver an integrated light rail service that supports the population and employment growth expected throughout the Greater Parramatta and the Olympic Peninsula area (GPOP). This Business Impact Assessment (BIA) has been prepared on behalf of Transport for NSW for the Parramatta Light Rail Stage 2 project ('the project'), which will connect the Parramatta CBD and Parramatta Light Rail Stage 1 to Camellia, Rydalmere, Ermington, Melrose Park, Wentworth Point and Sydney Olympic Park.

This BIA has been prepared as part of the environmental impact statement (EIS) to identify and assess the local business impacts of the project during both construction and operation. In doing so it responds directly to the Secretary's Environmental Assessment Requirements (SEARs). For this assessment, a local business has been defined as a commercial operation which is within the study area that could be impacted during either the construction or operational phase.

Existing environment

The study area encompasses the project site (the area that would be directly disturbed by construction of the project) and businesses within the planned urban growth precincts as summarised below, and shown in Figure 3-1.

Parramatta CBD precinct: The proposed Macquarie Street turnback facility is in the western portion of the Parramatta CBD and extends towards James Ruse Drive. The area can be characterised as a mix of low, medium, and high density residential and commercial land uses, home to a range of businesses of various sizes and industries

Camellia precinct: The Camellia precinct is located to the east of the intersection between Grand Avenue and James Ruse Drive. The precinct is characterised by predominately mixed-use commercial / industrial land use. The precinct is home to a range of businesses, including retail and bulky goods, manufacturing, bulk materials storage and handling, waste management, warehouses, container terminals / storage and a petroleum refinery.

Rydalmere East precinct: The Rydalmere East precinct is characterised by a mix of low-density residential housing with some more intensive industrial uses to the west. The built form predominantly consists of detached housing on traditional suburban neighbourhood blocks.

Ermington precinct: The Ermington precinct is generally low density residential in nature, with some redevelopments occurring to marginally higher density residential. As a result, there are few commercial related land uses in the precinct.

Melrose Park precinct: The Melrose Park precinct is a primarily industrial area between Victoria Road, Hughes Avenue, Wharf Road, and the Parramatta River, with some adjacent residential to the east. Most of the precinct is zoned as 'IN1 General Industrial' with the area mainly consisting of low-density residential development and industrial properties along Hope Street, while Waratah Street has light industrial land use on its western side and Melrose Park Public School on its eastern side.

Wentworth Point precinct: Located on the Parramatta River, Wentworth Point is a newly developed high-density residential precinct with a range of mixed land uses. Land uses consist of newly built (or proposed) high density residential developments, commercial centres such as 'Marina Square', Wentworth Point Public School, Wentworth Point Park (under construction) and some industrial land.

Sydney Olympic Park precinct: The Sydney Olympic Park precinct is characterised by a mix of parkland, major sporting facilities, and high-density mixed-use commercial and residential development. The mixed-use development is predominantly concentrated around Dawn Fraser Avenue within the southern section of the Sydney Olympic Park precinct and is home to a range of shops and services.

Carter Street precinct: An area of current development from former industrial land to high-density mixed-use commercial and residential development, the Carter Street precinct consists of the northernmost part of Lidcombe beyond the M4 Western Motorway.

Consultation

This BIA has been informed by consultation activities, including a business survey that was conducted between 17 and 25 February 2022 with a priority placed on door knocking the 65 businesses located closest

to the proposed construction activities. A total of 24 participants commenced the survey, with 21 surveys completed in full. The businesses surveyed represented a cross section of sector types and suburbs, and respondents noted the following key impacts of concern during construction:

- road alterations, access changes and detours (90 per cent)
- increased heavy vehicle traffic (76 per cent)
- travel time delays (67 per cent)
- congestion (67 per cent)
- reduced parking (67 per cent).

During operation, impacts on services, deliveries, employee, and customer access were among the top concerns (and correspondingly business revenue).

The BIA has also been informed by other consultation activities undertaken prior to, and during, the preparation of the EIS. Key consultation data included responses from business owner/operators in a social impact and outcomes survey between November 2021 and January 2022, and a Have Your Say survey between May and July 2022.

Assessment methodology

The BIA was prepared with reference to the *Environmental Impact Assessment Practice Note – Socio-economic Assessment* (Transport for NSW, 2020). The assessment relied upon desktop research, consultation outcomes and used a grading matrix to rate the magnitude of the business impact attributable to the project and the sensitivity of the businesses in each of the nominated precincts. An overall level of significance (ranging High, Moderate, Low to Negligible) was then determined through combining the magnitude by the sensitivity.

Key impacts during construction

The key business impacts with the potential to occur during construction are summarised below:

- temporary and permanent land requirements, which would commence prior to the construction phase and may require some businesses to close or relocate. This may have the following effects:
  - disruption to business operations
  - inconvenience and loss of revenue and productivity during relocation
  - stress and anxiety relating to finding and leasing or purchasing a new site
  - difficulty finding alternative properties, particularly for those businesses with specific requirements
  - relocation and re-establishment costs
  - changes to trade catchment areas
- access and connectivity changes may result in:
  - temporary inconvenience and costs for employees, customers, distributors and servicing and delivery providers due to extended travel distances and times because of changed traffic conditions or from changes to public transport (alternate bus routes, ferry wharf closures)
  - changes to parking arrangements and loss of on-street parking in a number of areas, which can affect employees and reduce the incentive for customers to visit a business
  - increased competition for on-street parking due to additional construction workers in the area
  - changes to employee and customer access affecting business productivity and personal time
  - loss of passing trade for retail and hospitality businesses
  - heightened anxiety and stress experienced by workers, service providers and customers

- changes to amenity may result in:
  - businesses close to the project site experiencing an increase in external noise levels which could impact on customer amenity, worker productivity, employee health and wellbeing affecting business revenue
  - vibration impacts which may also cause increased stress and anxiety for employees and customers
  - dust generation could potentially reduce amenity and overall customer and employee experience (in particular retail/hospitality businesses)
  - visual changes resulting from the presence of construction equipment, hoardings etc which have the potential to reduce amenity and overall customer and employee experience (in particular retail/hospitality businesses).

Construction activity, including utility works, also directly benefits the economy by injecting economic stimulus into the local, regional, and state economies. The economic benefit of construction is multi-dimensional, including:

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

Overall, construction of the project would have positive long-term, economic impacts to the region.

Key impacts during operation

The key business impacts with the potential to occur during operation are summarised below:

- permanent land requirements would lead to a reduction in available industrial and mixed-use zoned land in the City of Parramatta local government area. However, the project is consistent with future land use objectives, and it is envisaged that separate Planning Proposals may be able to facilitate the recovery of some employment land
- access and connectivity changes would include the loss of on-street parking and alterations to road configuration, including several new ‘no right turns’, left-in left-out intersections and signalised intersections which may impact access and travel times
- amenity changes would include increased noise and vibration which has the potential to impact business revenue (in particular for retail/hospitality).

The project would provide several potential benefits including for businesses that rely on passing trade (such as cafes and restaurants) who may see improved revenue and customer patronage due to the pleasant urban streetscapes and strong sightlines to store frontages.

Overall, the project would form part of an integrated light rail network connecting the areas served by Parramatta Light Rail Stage 1 with the growing precincts in Stage 2, providing a frequent and reliable service to jobs, education, and services. It would also improve north-south connectivity through the introduction of two new river crossings, integrate with other modes of transport providing better access for business employees and customers, and create new active transport links that may increase passing trade.

Recommended mitigation measures

The mitigation measures below are proposed to mitigate impacts to businesses and have been informed from learnings and successful actions from the Parramatta Light Rail Stage 1 project (including a lessons learned workshop held with the project team in April 2022) as well as a review of other linear transport infrastructure projects:

- dedicated Place Managers would be available in the lead up to, and during, construction to listen to concerns and answer questions from the community and businesses. Place Managers would provide a single point of contact for people (including business owners/operators) wanting to find out more

about the project, including the impacts of construction, and the measures that would be implemented to minimise these impacts as far as possible

- all property acquisitions would be undertaken in accordance with the requirements of the NSW *Land Acquisition (Just Terms Compensation) Act 1991,* the land acquisition reforms announced by the NSW Government in 2016, and the recommendations of the Auditor General's 2021 review of Transport for NSW's acquisitions practices
- a Business Management and Activation Plan (such as 'Activate Parramatta' from Parramatta Light Rail Stage 1) would be prepared and implemented for businesses with the potential to be affected by the project, including those located on roads impacted by construction. The plan would identify businesses with the potential to be impacted by the project. It would detail feasible and reasonable measures, developed in consultation with affected business owners/operators
- establishment of Business Reference Groups to provide to provide information on the project and assist with the development of management measures
- a small business support program would be established to provide assistance to small business owners with the potential to be impacted by construction. The program would assist local businesses develop proactive business strategies including marketing and promotion, business diversification and business planning, and engagement of specialists to provide training.

In addition, the construction environmental management plan and a range of supporting management plans are also proposed to facilitate consultation and to manage traffic, noise, visual and utility impacts which are detailed in the EIS (see Chapter 23 (Approach to environmental management and mitigation)).

1 INTRODUCTION

1.1 Parramatta Light Rail

The NSW Government's Greater Sydney Region *Plan A Metropolis of Three Cities* (Greater Sydney Commission, 2018a) outlines a vision for a three-city metropolis. The Central River City covers the four local government areas of the City of Parramatta, Blacktown City, Cumberland City and The Hills Shire*. A Metropolis of Three Cities* highlights Greater Parramatta as the focal point for the Central River City, with employment growth and public transport being of key importance.

The Greater Parramatta and the Olympic Peninsula area (GPOP), which extends from Westmead and Parramatta in the west to Sydney Olympic Park to the east, is fast emerging as the heart of Sydney's Central River City and is set to grow and change significantly over the next 20 years. Forecasts predict that GPOP will accommodate almost 170,000 new residents by 2041. Employment opportunities will also grow, with an additional 100,000 jobs predicted by 2041 (SGS, 2017).

Parramatta Light Rail will deliver an integrated light rail service that supports the population and employment growth expected throughout GPOP. It will integrate with existing and future modes of transport, including buses, trains, ferries, and active transport (pedestrian and cycle networks), as well as Sydney Metro West services and the existing road network.

Parramatta Light Rail will be delivered in stages to keep pace with development:

- Stage 1 will connect Westmead to Carlingford via the Parramatta central business district (CBD) and Camellia. The construction and operation of Parramatta Light Rail Stage 1 was approved by the NSW Minister for Planning in May 2018. Major construction is underway, with the track installation complete and light rail stop construction in progress. Stage 1 is expected to start operating in 2024. Further information on Stage 1 is available at Parramatta Light Rail
- Transport for NSW is now proposing to construct and operate Stage 2 of Parramatta Light Rail ('the project'). The project would connect the Parramatta CBD and Stage 1 to Camellia, Rydalmere, Ermington, Melrose Park, Wentworth Point and Sydney Olympic Park.

Figure 1-1 provides an overview of the Parramatta Light Rail network showing both stages.

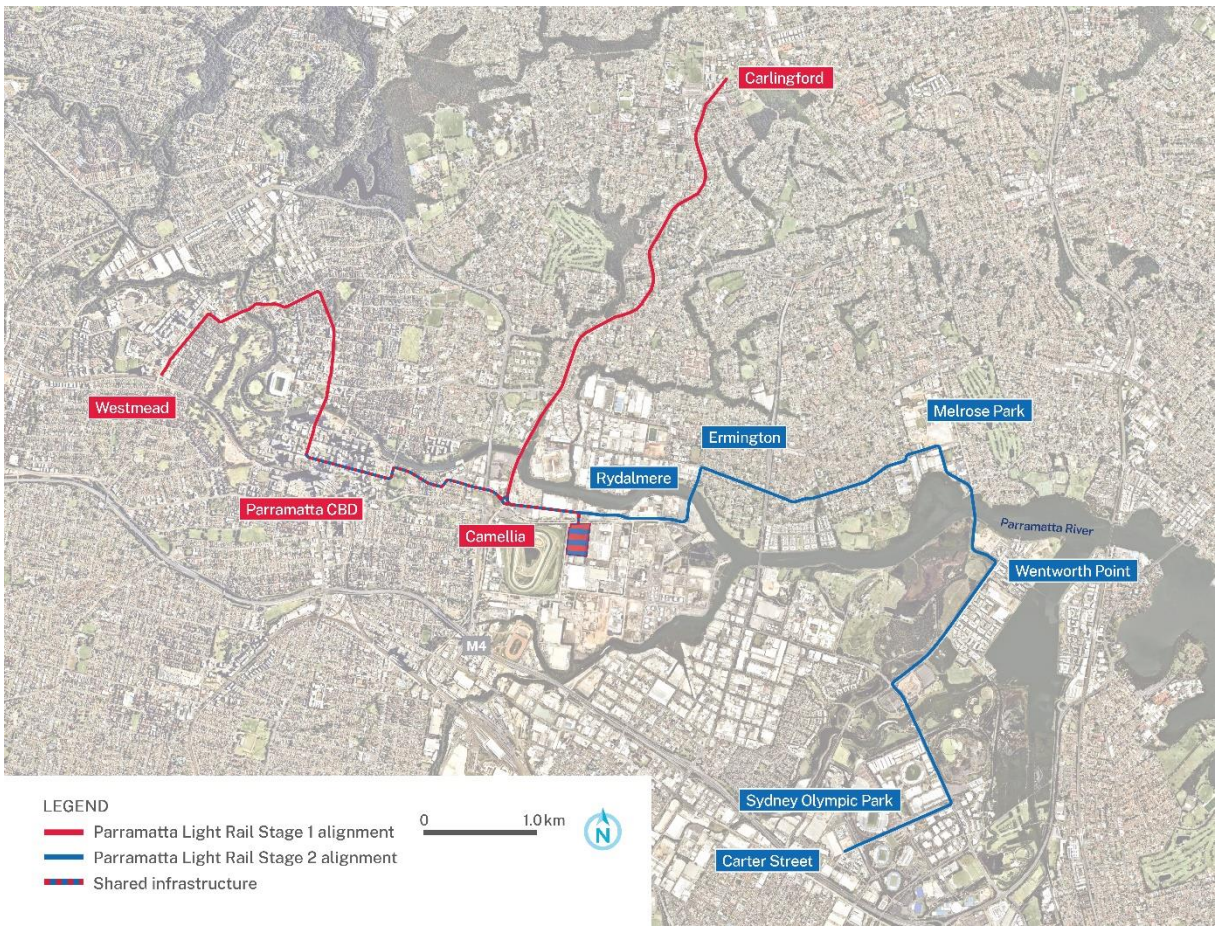


Figure 1-1 Parramatta Light Rail network

1.2 Project overview

The project comprises two main elements:

- construction of about 10 kilometres of light rail infrastructure between Camellia and the Carter Street precinct adjacent to Sydney Olympic Park
- operation of about 13 kilometres of light rail alignment between the Parramatta CBD and the Carter Street precinct, including a section of infrastructure constructed by Parramatta Light Rail Stage 1 between Camellia and the Parramatta CBD.

Further information on the location of the project, and a description of the project site for the purposes of this document, is provided in the environmental impact statement (EIS).

1.2.1 Key features

The key features of the project, which are shown on Figure 1-2 include:

Light rail track and bridges

- a new 10 kilometre long dual light rail track, with 14 stops, between the Parramatta Light Rail Stage 1 line in Camellia and the Carter Street precinct adjacent to Sydney Olympic Park
- two bridges over the Parramatta River between Camellia and Rydalmere, and between Melrose Park and Wentworth Point
- a bridge over Silverwater Road between Rydalmere and Ermington
- other bridge works in Ken Newman Park and Sydney Olympic Park.

Active and public transport integration

The project would also deliver:

- about 8.5 kilometres of new active transport links between Camellia and the Carter Street precinct, which would connect with the existing cycling and pedestrian network
- interchanges with other forms of public transport, including trains, ferries, buses, and Sydney Metro West, with the main interchanges located in the Parramatta CBD, Rydalmere and Sydney Olympic Park
- a light rail and pedestrian zone (no through vehicle access) within Sydney Olympic Park along Dawn Fraser Avenue between Australia Avenue and Olympic Boulevard
- bus access over the proposed bridge between Melrose Park and Wentworth Point.

Other works

Works proposed to support the project's operation:

- turnback facilities, including along part of Macquarie Street in the Parramatta CBD
- adjustments to the Parramatta Light Rail stabling and maintenance facility at Camellia
- five new traction power substations to convert electricity to a form suitable for use by light rail vehicles
- new and improved open spaces and recreation facilities at Ken Newman Park, the Atkins Road stop and Archer Park.

Further information on the project's features is provided in the EIS (see Chapter 6 (Project description – infrastructure and operation)).

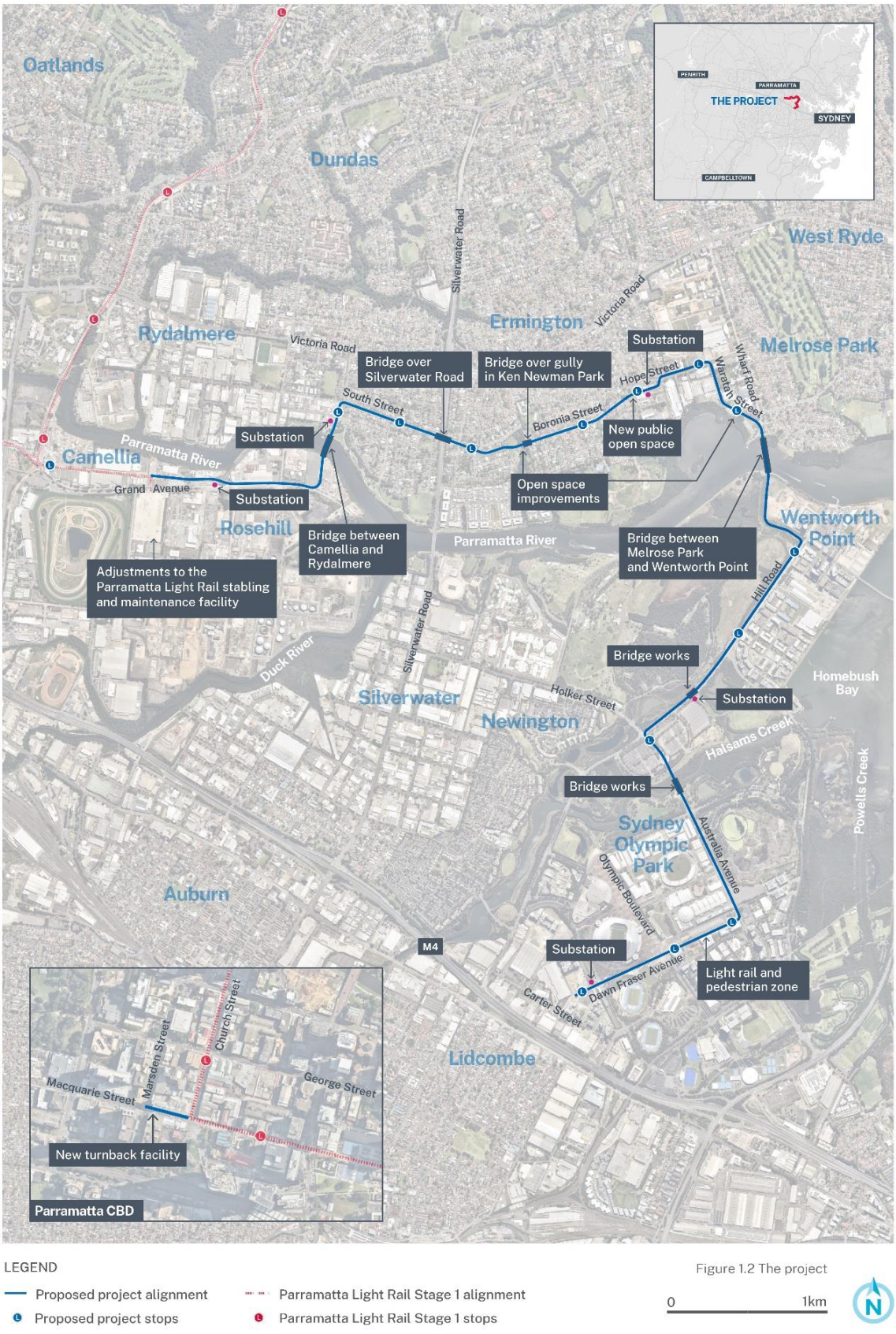


Figure 1-2 Key features of the project

1.2.2 Operation

The project would operate between the Parramatta CBD and the Carter Street precinct, using a section of the Parramatta Light Rail Stage 1 alignment and the alignment constructed as part of the project.

Between the Parramatta CBD and Camellia, the project would operate along about three kilometres of the Parramatta Light Rail Stage 1 alignment. Parramatta Light Rail Stage 2 services would terminate at the Stage 1 Parramatta Square stop to allow customers direct and convenient access to Parramatta's CBD, and interchange with Stage 1 light rail services, trains, buses, and Sydney Metro West.

From Camellia, the project would operate along the light rail infrastructure proposed as part of Stage 2, terminating at the proposed Carter Street stop.

The project would operate as a turn-up-and-go light rail service from 5am to 1am, seven days a week, in line with Parramatta Light Rail Stage 1. The project would have travel times of around 31 minutes from the Carter Street stop in Lidcombe to the proposed Sandown Boulevard stop in Camellia, and a further seven minutes t the Parramatta Square stop in the Parramatta CBD.

Further information on the project's operation is provided in the EIS (see Chapter 6 (Project description – infrastructure and operation)).

1.2.3 Timing

It is anticipated that construction would start in 2025, subject to obtaining all necessary approvals, and the first passenger services are proposed to start from 2030/2031.

An indicative construction methodology is provided in the EIS (see Chapter 7 (Project description – construction)).

1.2.4 Approval requirements

The project is State significant infrastructure and is subject to approval by the NSW Minister for Planning under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

The project is also determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and requires approval from the Australian Minister for the Environment and Water.

1.3 Purpose and scope of this report

The EIS has been prepared to support an application for approval of the project in accordance with Division 5.2 of the EP&A Act. It addresses the environmental assessment requirements of the Secretary of the Department of Planning and Environment (the SEARs).

This report has been prepared as part of the EIS to assess the potential impacts on local businesses from constructing and operating the project. The report:

- addresses the relevant SEARs listed in Table 1-1
- describes the existing environment with respect to businesses
- assesses the impacts of constructing and operating the project on local businesses
- recommends measures to mitigate and manage the impacts identified.

The methodology for the assessment is described in section 3.

Table 1-1 SEAR – Business and Property

Relevant SEARs	Where addressed in this report
9(1) Potential impacts on affected properties, businesses, utility services and infrastructure, recreational users, and land and water users (for example, recreational and commercial fishers, oyster farmers), including property acquisition, access, amenity, and relevant statutory rights. Identify management measures to minimise impacts on business, utilities, and property because of the project.	Potential impacts on businesses, including property acquisitions (as relevant to businesses), are addressed in sections 7.1 to 7.5 for construction and sections 8.1 to 8.4 for operation. Potential impacts on utility services (as relevant to businesses) are addressed in section 7.6. Cumulative impacts to businesses are considered in section 9. Mitigation measures to minimise impacts on businesses are provided in section 10. Further information regarding impacts on utilities, including mitigation measures to minimise impacts, is provided in the EIS (Chapter 19 (Hazards and risk)). Potential impacts on affected properties, infrastructure, recreational users and land and water users, including mitigation measures to minimise impacts, are provided in the EIS (Chapter 13 (Land use and property)).
9(2) Management measures must be informed by learnings and successful actions from other projects including Parramatta Light Rail Stage 1.	Section 6 outlines the learnings and successful actions from other projects including Parramatta Light Rail Stage 1. Section 10.1 summarises lessons learned from Parramatta Light Rail Stage 1 and section 10.2 lists the recommended mitigation measures which have been informed by learnings and successful actions from other projects, including Parramatta Light Rail Stage 1.

2 LEGISLATIVE AND POLICY CONTEXT

Several legislative and policy documents were reviewed where relevant to the business impact assessment (BIA). This includes planning guidelines and policies from the NSW Government and local government. Further detail regarding the legislative and policy context of the project can be found in the EIS.

2.1 NSW legislation and policies

Table 2-1 identifies the NSW Government legislation, policy and plans relevant to the BIA.

Table 2-1 Key NSW Government policy and legislation

Legislation and policy	Relevance to project
Greater Sydney Region Plan – A Metropolis of Three Cities (Greater Sydney Commission, 2018a)	The Greater Sydney Region Plan *A Metropolis of Three Cities* sets a 40-year vision (to 2056) and establishes a 20-year plan to manage Greater Sydney's growth and change. *A Metropolis of Three Cities* is built on a vision for growing Greater Sydney based on a metropolis of three cities – the Western Parkland City, Central River City and Eastern Harbour City – where most residents live within 30 minutes of jobs, education, health facilities, and other services. The Central River City is centred around Parramatta. A *Metropolis of Three Cities* includes 10 directions and 40 objectives for the future of Sydney. The project is consistent with the following objectives: • Objective 15 – The Eastern, Greater Parramatta and the Olympic Peninsula (GPOP), and Western Economic Corridors are better connected and more competitive • Objective 19 – Greater Parramatta is stronger and better connected. The project would ensure people and places in Sydney's Central River City, as defined by *A Metropolis of Three Cities*, are connected by an effective, integrated transport network, which is fundamental to supporting growth – providing access to jobs, housing, education, recreation activities and business interactions. The plan references both stages of Parramatta Light Rail, and states that Parramatta Light Rail (together with Sydney Metro West) will be a catalyst for realising the vision for the Central River City and GPOP.
Building Momentum – State Infrastructure Strategy 2018-2038 (Infrastructure NSW, 2018)	*Building Momentum: State Infrastructure Strategy 2018 – 2038* was in place during development of the project. This strategy and (and the new *State Infrastructure Strategy – Staying Ahead: State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022), which was released in May 2018) recognise the importance of the timely provision of infrastructure that is responsive to growth and development and is integrated with land use planning. *Building Momentum: State Infrastructure Strategy 2018 – 2038* sets out the NSW Government's infrastructure vision for the state, and establishes the strategic directions, projects and initiatives to meet the State's infrastructure needs. The project is consistent with the following strategic directions for transport contained in the State Infrastructure Strategy: • support the development of a three-city metropolis for Greater Sydney by investing in transport infrastructure that provides high frequency and high-volume access to, and connectivity between, each of the three cities, while enhancing local amenity • invest in transport infrastructure that is integrated with land use to create opportunities for agglomeration and enhance productivity, liveability and accessibility, in support of the policy goal of a '30-minute city' • re-allocate road space in key commuter corridors to give priority to the most productive and sustainable transport modes. The project is consistent with the following strategic directions contained in the strategy for the Central River City: • improve intercity and intracity transport connections and improve north-south transport connections • improve walking and cycling connections.
Future Transport 2056 (Transport for NSW, 2018)	*Future Transport 2056* was a suite of strategies and plans for transport, including the *Future Transport Strategy 2056* (Transport for NSW, 2018) developed in conjunction with *A Metropolis of Three Cities*, its supporting district plans and the *State Infrastructure*

Legislation and policy	Relevance to project
	Strategy 2018-2038. *Future Transport 2056* was in place during development of the project. *Future Transport 2056* provides an integrated 40-year vision, directions and outcomes for transport in NSW, with infrastructure and services underpinning the delivery of these directions across the state. The strategy focuses on the role of transport in delivering movement and place outcomes that support the character of places and communities for the future. The project is consistent with *Future Transport 2056*, as it would expand Parramatta Light Rail's role in providing for high-frequency transport connections, strengthening the linkages between Greater Parramatta and other origins and destinations in the Central River city. It would support efficient and reliable journeys for people accessing services and jobs in the Central River City and GPOP. *Future Transport 2056* notes that the development of the Central River City will require improved 30 minute public and active transport access to Greater Parramatta. To support this, the focus will be on new city-serving connections, particularly from the north and south. A new light rail network for Greater Parramatta will also support local access and urban renewal.
Central City District Plan (Greater Sydney Commission, 2018b)	The Greater Sydney Commission's five district plans are a guide for implementing *A Metropolis of Three Cities* at a district level. *A Metropolis of Three Cities* notes that Greater Sydney's three cities reach across five districts – Western City District, Central City District, Eastern City District, North District and South District. The 20-year plans for the five districts are a bridge between regional and local planning. The purpose of district plans is to inform local environmental plans, strategic planning (including preparation of housing strategies and community strategic plans) and the assessment of planning proposals. The *Central City District Plan* (Greater Sydney Commission, 2018b) applies to the area in which the project is located. The project is consistent with the following planning priorities in the Central City District Plan: • Priority C1: Planning for a city supported by infrastructure • Priority C9: Delivering integrated land use and transport planning and a 30-minute city • Priority C6: Creating and renewing great places and local centres, and respecting the District's heritage • Priority C7: Growing a stronger and more competitive Greater Parramatta • Priority C8: Delivering a more connected and competitive GPOP Economic Corridor. The project is consistent with these priorities as it would support additional dwellings within 30 minutes of strategic centres by public transport. It would support the growth of Greater Parramatta and GPOP economic corridor and enable the planning of identified growth areas to be integrated with the provision of necessary infrastructure. The project would connect the strategic centre of Sydney Olympic Park with Greater Parramatta – the Central City District's metropolitan centre. The plan recognises the project as a key transport-related initiative and includes the following relevant actions: • 10b. Deliver healthy, safe, and inclusive places for people of all ages and abilities that support active, resilient and socially connected communities by prioritising opportunities for people to walk, cycle and use public transport • 29. Prioritise public transport investment to deliver the 30-minute city objective for strategic centres along GPOP Economic Corridor • 30. Prioritise transport investments that enhance access to GPOP Economic Corridor and between centres within GPOP Economic Corridor • 48b. Strengthen Sydney Olympic Park through approaches that coordinate land use and infrastructure planning around the future for Parramatta Light Rail Stage 2 and Sydney Metro West stations at Olympic Park.
Staying Ahead: State Infrastructure Strategy 2022-2042 (Infrastructure NSW, 2022)	*Staying Ahead: State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022) (State was released in May 2022. The strategy sets out Infrastructure NSW's advice to the NSW Government on the infrastructure needs and priorities of the State for the next 20 years, and beyond. The strategy recognises the importance of prioritising and sequencing investments in priority precincts in Greater Sydney, including the delivery of outcomes for GPOP and the Central River City.

Legislation and policy	Relevance to project
	The project is consistent with the following strategic directions and recommendations contained in *Staying Ahead: State Infrastructure Strategy 2022-2042:* • deliver efficient transport networks to support thriving cities, businesses and communities • invest in public transport networks to support the growth of Greater Sydney • fund and deliver enabling infrastructure to support approved or pending housing supply • fund and deliver a prioritised active transport infrastructure program to support liveability and 15-minute neighbourhoods • coordinate infrastructure, land use and service planning to meet housing, employment, industry and community needs • optimise the use of industrial and urban services lands through integrated strategic land use planning with infrastructure investment • deliver more housing, jobs, amenities and services in locations where there is spare capacity in existing and planned infrastructure.
Future Transport Strategy (Transport for NSW, 2022)	The *Future Transport Strategy* (Transport for NSW, 2022) was released in September 2022 and replaces *Future Transport 2056*. The *Future Transport Strategy* sets the strategic direction for Transport for NSW to achieve world-leading mobility for customers, communities and businesses. The project is consistent with the following strategic directions and actions contained in the Future Transport Strategy: • C1 Connectivity is improved across NSW: – C1.1 Enhance 30-minute metropolitan cities – C1.2 Connect our regional cities, centres, towns and villages • C2 Multimodal mobility supports end-to-end journeys: – C2.1 Support car-free, active, sustainable transport options – C3 Equitable, accessible and secure transport for all: – C3.2 Develop an inclusive transport system enabling access to services and places for all • P1 Supporting growth through smarter planning: – P1.2 Support growth around public transport – P1.3 Ensure public transport is available on day one • P2 Transport infrastructure makes a tangible improvement to places – P2.1 Support thriving and healthy 15-minute neighbourhoods – P2.4 Build well-designed transport infrastructure that makes places more liveable and successful.
Land Acquisition (Just Terms Compensation) Act 1991 (NSW)	The *Land Acquisition (Just Terms Compensation) Act 1991* (Land Acquisition Act) sets out the process to be followed including how notice must be given, minimum timeframes for notice, how valuation is determined and how disputes are resolved. Where land containing businesses would be acquired for the project, it would be done so in accordance with the Land Acquisition Act. Separate leasing agreements would be arranged for land that is temporarily required for construction activities.

2.2 Local government policy

The project site is mostly contained within the City of Parramatta local government area (LGA) except for a small portion of waterfront land in Melrose Park, which is within the City of Ryde LGA – West Ward. Table 2-2 identifies the local strategies and plans relevant to the BIA.

Table 2-2 Local government strategies and plans

Strategies and plans	Relevance to project
Parramatta Local Strategic Planning Statement *City Plan 2036* (City of Parramatta, 2020a)	The City of Parramatta's Local Strategic Planning Statement *City Plan 2036* provides a 20-year land use vision for the City. The plan identifies priorities for jobs, homes and infrastructure, and looks at the role of Parramatta as part of Greater Sydney. The plan sets the vision for Parramatta: *'In 20 years Parramatta will be a bustling, cosmopolitan and vibrant metropolis, the Central City for Greater Sydney. It will be a Smart City that is well connected to the region, surrounded by high quality and diverse residential neighbourhoods with lots of parks and green spaces. It will be innovative and creative and be well supported by strong, productive and competitive employment precincts. It will be a place that people will want to be a part of.'* The project provides connectivity between the centres of Greater Parramatta and Sydney Olympic Park, and nominated growth and urban service areas in Melrose Park, Wentworth Point, Sydney Olympic Park and Carter Street. The project (together with Parramatta Light Rail Stage 1) is shown on the strategic plan, which has a key principle of 'prioritise delivery of city-serving transport links'. The project is consistent with the following local planning priorities: • Priority 1. Expand Parramatta's economic role as the Central City of Greater Sydney. • Priority 3. Advocate for improved public transport connectivity to the Parramatta CBD from the surrounding district. • Priority 4. Focus housing and employment growth in GPOP and Strategic Centres; as well as stage housing release consistent with the Parramatta Local Housing Strategy. The project will support the delivery of the strategic plan for Parramatta, providing key city-serving transport infrastructure. It is consistent with a range of policy directions and actions under the plan, including: • P6 Support the planning for the Sydney Metro West and Parramatta Light Rail Stage 1 projects; and advocate for these city-shaping transport links: Parramatta to Epping, Parramatta to Western Sydney Airport, Parramatta to Norwest, Parramatta to Kogarah via Bankstown and Parramatta Light Rail Stage 2. • P7 Encourage the design of development in Growth Precincts, Strategic Centres and Local Centres that maximises accessibility to, and safety of, existing and planned public transport services, including heavy rail, light rail, bus and ferry which includes technological innovation and improved liveability, sustainability and place management outcomes. • P10 Stage Planning Proposals in Growth Precincts at Parramatta East, Camellia, Melrose Park and Westmead based on the timing of the Sydney Metro West project, Parramatta Light Rail Stage 2 (or equivalent infrastructure) and other heavy and light rail infrastructure consistent with the *Parramatta Local Housing Strategy* (2020b). • P13 Plan for the majority of housing growth over the next 20 years to be delivered in the GPOP area, consistent with the Strategic Plan Map and as per the *City of Parramatta Local Housing Strategy* (2020b). • P35 Advocate for bringing-forward the Sydney Metro West delivery, as well as other city-shaping transport (Parramatta to Epping, Parramatta to Western Sydney Airport, Parramatta to Norwest, Parramatta to Kogarah via Bankstown and Parramatta Light Rail Stage 2) and with improved walking and cycling access and public spaces to those services. • A1 Advocate for the delivery of an integrated transport network that enables growth of employment centres, and connects the district to metropolitan Sydney, to support jobs growth. • A13 Collaborate with Government to fast track the future planning and delivery of these city-shaping transport links: Parramatta to Epping, Parramatta to Western Sydney Airport, Parramatta to Norwest, Parramatta to Kogarah via Bankstown and Parramatta Light Rail Stage 2.

Strategies and plans	Relevance to project
Employment Lands Strategy (City of Parramatta, 2016) and ***Employment Lands Strategy – Review and Update*** (City of Parramatta, 2020c)	These strategies provide direction for Parramatta's employment lands, which are the areas zoned B5 Business Development, B6 Enterprise Corridor, B7 Business Park, IN1 General Industrial, IN2 Light Industrial or IN3 Heavy Industrial in the Parramatta Local Environmental Plan 2011. The *Employment Lands Strategy – Review and Update* (2020c) reiterates the broader vision of Council's employment land precincts in the City's Local Strategic Planning Statement – *City Plan 2036*. The following employment land precincts are located in the vicinity of the project: • Camellia/Rosehill: Employment and Industrial Land (South and East) – metropolitan significant employment land (240 hectares). • Camellia/Rosehill: Town Centre (North-West) – investigation area for the growth precinct (45 hectares), with future use as mixed use – commercial, residential and entertainment. • Melrose Park: Melrose Park (South) – investigation area for the growth precinct (19 hectares), with future use as mixed use – commercial and residential. • Lidcombe: Lidcombe (Carter Street – southern side) – local urban service hub (15 hectares). The project would support access to employment precincts in the Camellia/Rosehill, Melrose Park and Carter Street.
Community Strategic Plan 2018-2038 (City of Parramatta, 2018)	The City of Parramatta *Community Strategic Plan 2018-2038* is an overarching strategic plan that outlines and guides Parramatta's growth and change in the LGA to 2038 and beyond. It outlines future infrastructure projects and developments within Parramatta, with a specific mention of the Parramatta Light Rail. This strategy aligns with the project through acknowledgment of the light rail as a key catalyst for future and current employment zones. The strategic plan acknowledges the benefit that Parramatta Light Rail will bring as a major transport corridor connecting the LGA. The strategy supports the improvement of the transport network and public transport system that services the employment lands.
Parramatta Community Infrastructure Strategy 2020 (City of Parramatta, 2020d)	The *Parramatta Community Infrastructure Strategy 2020* outlines council's long-term direction for community infrastructure provision. The Strategy focuses on community infrastructure over which council has primary responsibility, or has chosen to play a role in delivering, or seeks to advocate for on behalf of the community. The strategy details the future for the suburbs within Parramatta (Including those serviced by the project). The strategy acknowledges the benefit that Parramatta Light Rail will bring as a major transport corridor connecting the LGA. The strategy supports the improvement of the transport network and public transport system that service the employment lands.

3 METHODOLOGY

3.1 General methodology

This assessment of business impacts was completed with reference to the *Environmental Impact Assessment Practice Note – Socio-economic Assessment* (Transport for NSW, 2020). The project has been assessed as requiring a ***'Moderate'*** level of assessment. Consistent with a moderate level of assessment the business impact assessment has involved the following key tasks:

- establishing a business-impact catchment (study area) based on the likely geographical extent of the impacts during both construction and operation
- confirming land use and planning controls (land use zones) in the study area (refer section 2.2)
- reviewing the existing conditions drawn from publicly available sources like the Australia Bureau of Statistics (ABS) and relevant NSW Government departments and agencies (refer section 4)
- undertaking a comparative analysis of four transport infrastructure projects, including Parramatta Light Rail Stage 1 to deepen insights into business impacts associated with linear transport projects, as well as the recommended mitigation and management measures (refer section 6)
- assessing the likely business and related property impacts on businesses during construction and operation, which may include but are not limited to land requirements, changes to passing trade, noise and vibration, parking availability, road network alterations, pedestrian access, employment and recruitment, business access and connectivity, loss of power and utilities, and reduced amenity (refer section 7 and section 8)
- assessing the level of significance of potential impacts by considering the sensitivity of receivers and the magnitude of the proposed work (refer section 7 and section 8)
- considering cumulative property and business impacts by considering other existing or planned proposals likely to interact with the project (refer section 9)
- identifying recommended mitigation measures to manage the extent of impacts. This included learnings from Parramatta Light Rail Stage 1 (refer section 10).

An evaluation matrix was used to evaluate the significance of potential socio-economic/business impacts associated with the construction and operation of the project (refer section 3.2.3), which is based on the framework outlined in the *Environmental Impact Assessment Practice Note – Socio-economic Assessment* (Transport for NSW, 2020).

Additionally, the BIA considered the level of sensitivity of receivers and the magnitude of the proposed changes based on professional judgement, the information available at the time, research undertaken to prepare this technical paper, other technical studies and review of consultation outcomes undertaken by Transport for NSW. The criteria used in this analysis is described further in section 3.2. Where there is known effectiveness of management measures, these have been taken into consideration when assessing the level of significance.

The following sections summarise key methodological considerations as to how impacts have been assessed within this document.

3.2 Assessment methodology

3.2.1 Sensitivity

Sensitivity refers to the qualities of the receiver that determine its vulnerability to change and capacity to adapt. Qualities that contribute to the level of sensitivity of a receiver may include:

- amenity (such as noise levels, visual quality, air quality etc)
- demographic composition and patterns (such as presence of vulnerable communities, dependence on certain modes of travel etc)

- economic activity, types of industry and businesses present (such as businesses dependent on passing trade or visibility, interactions between businesses etc)
- connectivity and access (such as dependency on active transport or public transport, property access etc)
- property and land use types and known future changes (such as rezoning)
- level of community concern.

The levels of sensitivity and examples are set out in Table 3-1.

Table 3-1 Levels of sensitivity

Sensitivity	Example
Negligible	No vulnerability and ability to absorb or adapt to change.
Low	Minimal areas of vulnerabilities and a high ability to absorb or adapt to change.
Moderate	Several 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.

3.2.2 Magnitude

Magnitude refers to the scale, duration, intensity, and scope of the project including how it would be constructed and operated. Qualities of magnitude include:

- scale and intensity (the types of works, operational uses and built form etc)
- spatial extent (e.g. the geographical area affected which may be local, suburb, regional, State, international)
- duration (short, medium, or long-term, hours of works, frequency, reversibility etc).

The levels of magnitude and examples are set out in Table 3-2.

Table 3-2 Levels 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. Tendency is that the impact is to 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 project.
Moderate	A clearly noticeable difference from baseline conditions. Tendency is that the impact is to a small to large proportion of receptors and may be over an area beyond the vicinity of the project. 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.

3.2.3 Assessing level of significance

The combination of sensitivity and magnitude, as shown in Table 3-3, is used to determine the level of significance of the impact when compared to the existing conditions. As outlined in the *Environmental Impact Assessment Practice Note – Socio-economic Assessment* (Transport for NSW, 2020), the level of significance is considered for negative construction impacts and negative operational impacts only. However, where potential benefits have been identified, these have also been noted in the impact assessments in section 7 and section 8 but do not inform the overall level of significance rating.

Table 3-3 Grading matrix to assess the level of significance (negative impacts)

		Magnitude			
		High	**Moderate**	**Low**	**Negligible**
Sensitivity	**High**	High impact	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
	Low	Moderate	Moderate-Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

3.2.4 Assumptions and limitations

The assessment has been prepared based on the following assumptions:

- outcomes of the stakeholder consultation and engagement undertaken to date generally reflect business views
- the focus of the assessment is on the most disruptive impacts faced by businesses resulting from construction and operation of the project[1]
- businesses were not provided details of precise construction plans at the time of the business survey (e.g. road closures, construction timing, detour routes, parking plans, etc.)
- potential business impacts to communities and stakeholders have been identified using the most up to date data available at the time this impact assessment was prepared.

3.3 Study area

As noted in section 1.2, the project comprises two main elements:

- construction of about 10 kilometres of light rail infrastructure between Camellia and the Carter Street precinct adjacent to Sydney Olympic Park
- operation of about 13 kilometres of light rail alignment between the Parramatta CBD and the Carter Street precinct, including a section of infrastructure constructed by Parramatta Light Rail Stage 1 between Camellia and the Parramatta CBD.

The study area for the BIA encompasses the project site (the area that would be directly disturbed by construction of the project) (also see Appendix A: Study area locations) and businesses within the following planned urban growth precincts which provide the setting for the project (shown in Figure 3-1):

- Camellia precinct
- Rydalmere East precinct
- Ermington precinct
- Melrose Park precinct

[1] Analysis and modelling concerning economic costs and benefits of the project have been assessed in the Parramatta Light Rail Stage Financial Business Case.

- Wentworth Point precinct
- Sydney Olympic Park precinct
- Carter Street precinct.

The study area also includes the area in which the Macquarie Street turnback facility would be constructed (the Paramatta CBD).

It is noted that for the section of shared running between the Parramatta CBD and Camellia, business impacts associated with construction and operation have already been assessed in the Parramatta Light Rail Stage 1 EIS.

Cumulative impacts to businesses between the Parramatta CBD and Camellia section associated with the running of additional light rail vehicles for the operation of Stage 2 are considered in section 9.

3.4 Data sources used

In preparing this report, RPS has relied primarily on technical specialist reports prepared by GHD and RPS for the EIS. Additional data in this report has been derived from:

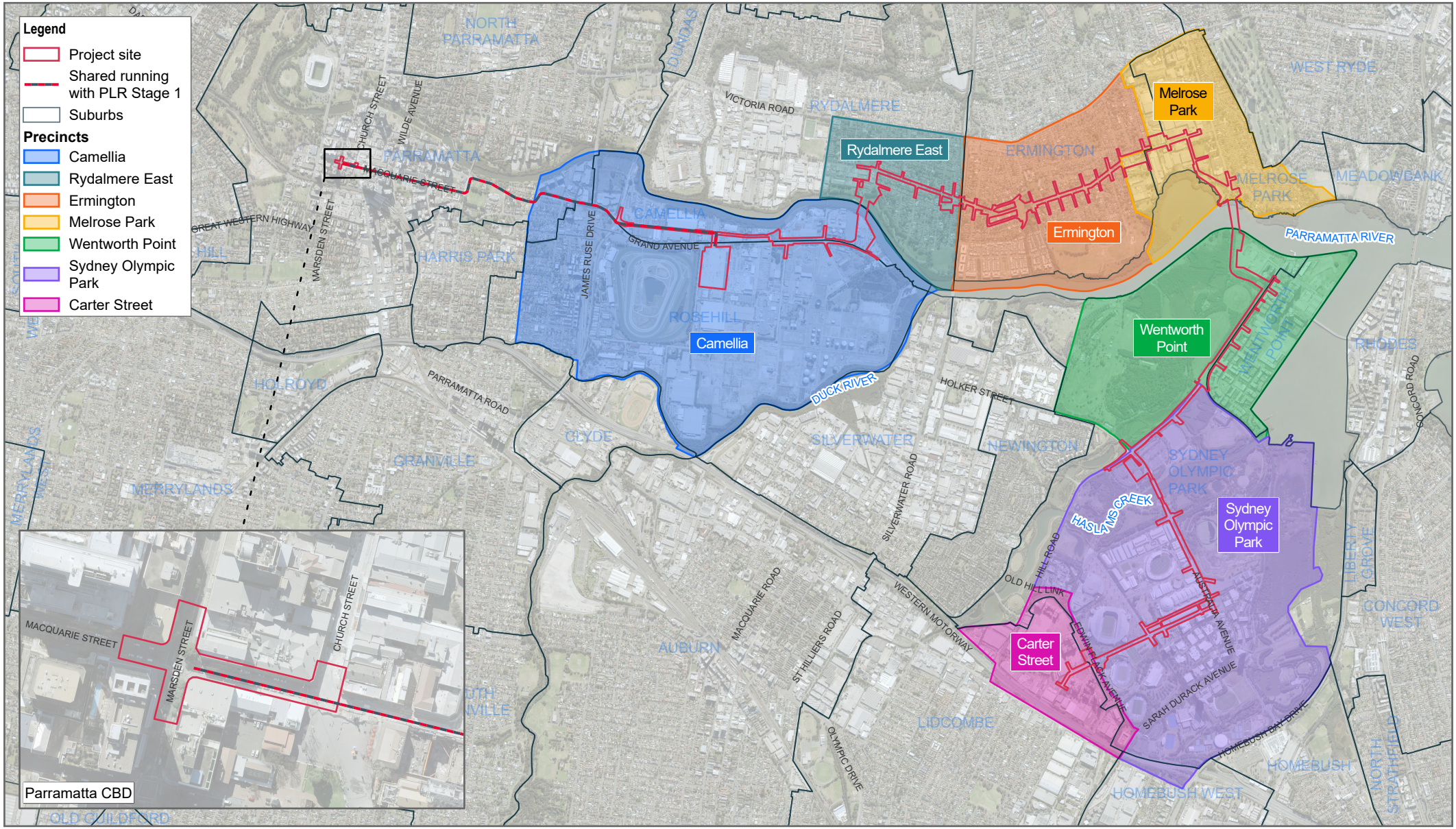
- ABS census data
- ABS (2021) 8165.0 Counts of Australian Businesses
- Transport for NSW (2019) Transport Performance and Analytics (TPA)
- outcomes of a business survey (refer section 3.6 for more information on how this was undertaken)
- outcomes of other EIS consultation and engagement activities which are detailed in Appendix F of the EIS (Community and Stakeholder Engagement Report). In particular, this BIA has utilised data from the following:
  - social impact and outcomes survey between November 2021 and January 2022
  - Have Your Say survey between May and July 2022
- geographic information system information on land use zones as informed by relevant local environmental plans
- policy and legislation.

3.5 Dataset boundaries

Due to the nature of difference datasets created by various organisations (i.e. ABS, Transport for NSW, NSW Department of Planning and Environment) dataset boundaries do not always fully align to one another or to the project site.

To determine the number of businesses across the study area, ABS business count data was used. This data is aligned to Statistical Area Level 2 (SA2) boundaries shown in Figure 3-2, but could not be disaggregated specifically to create precinct-level profiles.

To develop an industry profile of businesses across the study area Transport for NSW land use profiles and forecasts were used. This data is aligned to Transport for NSW Travel Zone (TZ) boundaries and Figure 3-3 shows how these boundaries align to the project site.



Paper Size ISO A4

0 500 1,000

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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MAKING COMPLEX EASY

Transport for NSW
Parramatta Light Rail Stage 2 EIS
Business Impact Assessment

Study area showing precincts across the project site

Project No. **12557728**
Revision No. **-**
Date **20/06/2022**

FIGURE 3.1

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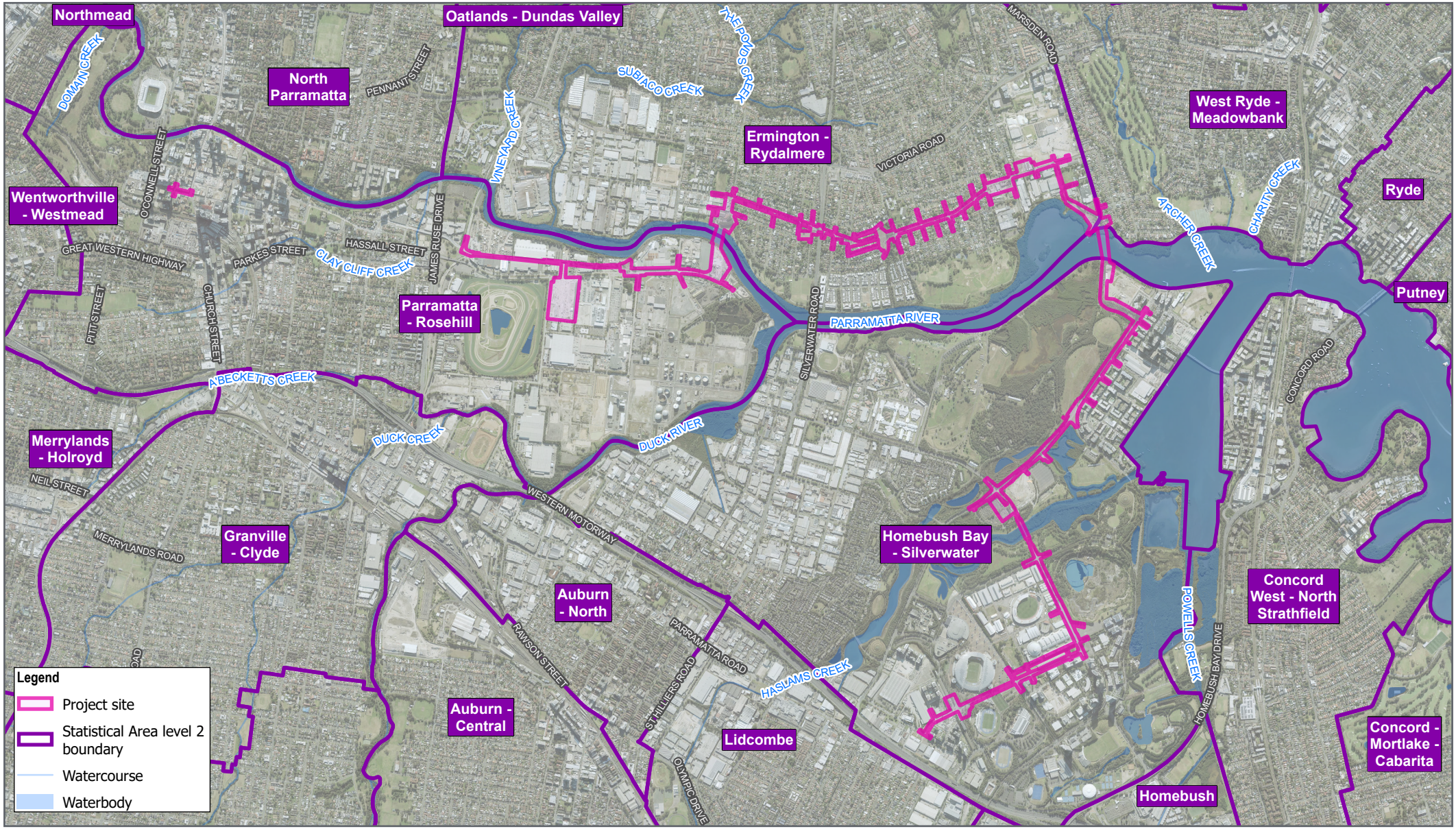
Data source: Roads - DCS, 2021; LGAs & Suburbs - DFSI, 2022; Precincts - DPIE, 2021; Imagery - Metromap Tile Service: . Created by: lmanasan



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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Transport for NSW
Parramatta Light Rail Stage 2 EIS
Business Impact Assessment

Statistical Area level 2 boundaries across the project site

Project No. **12557728**
Revision No. **B**
Date **05/10/2022**

FIGURE 3-2

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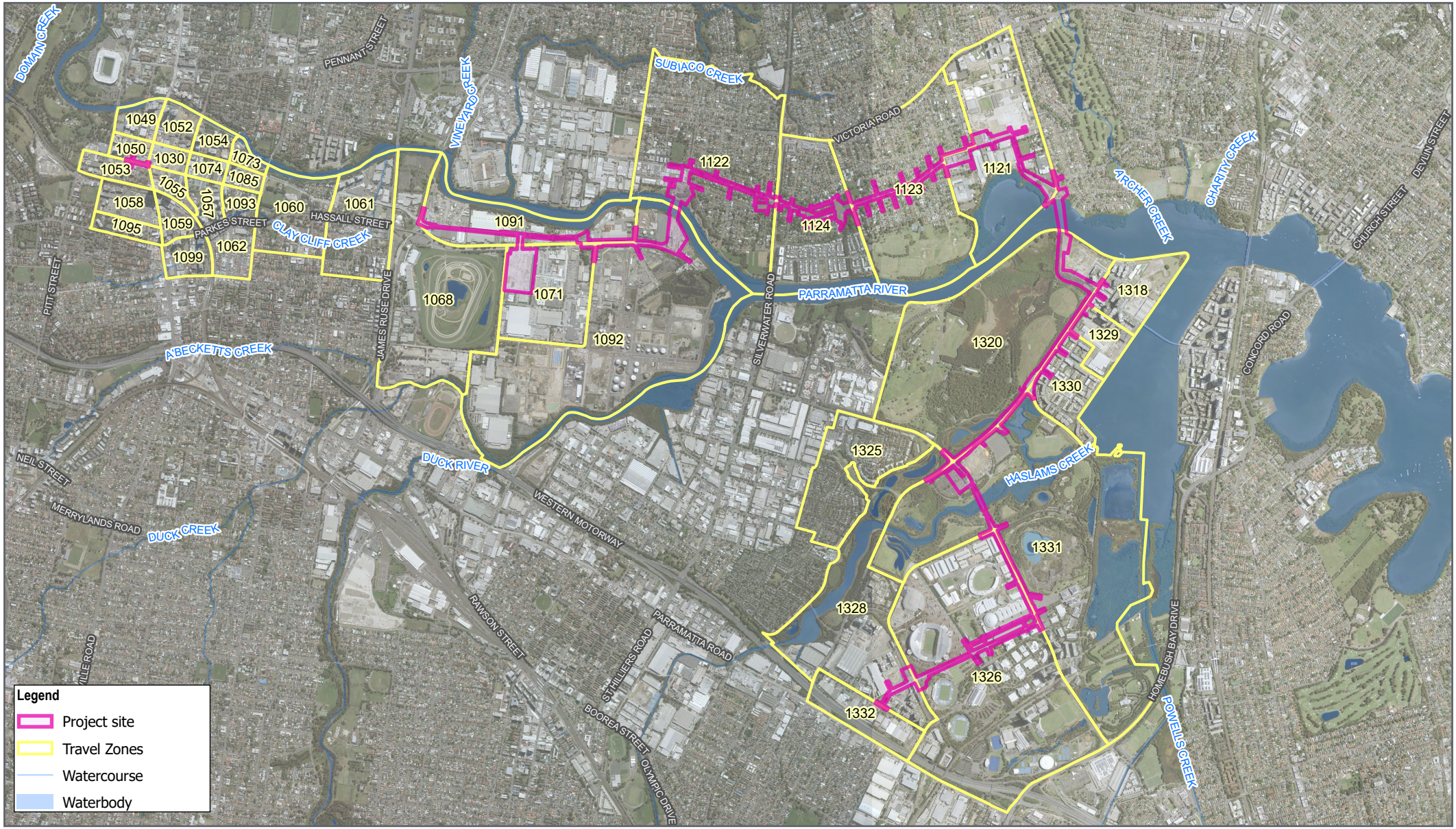
Print date: 05 Oct 2022 - 12:42

Data source: SA4 Boundaries - ABS, 2016; Roads, watercourses, cadastre - DCS, 2022; Metromap Tile Service: . Created by: dschmidt



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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Transport for NSW
Parramatta Light Rail Stage 2 EIS
Business Impact Assessment

Travel zone boundaries across the project site

Project No. **12557728**
Revision No. **B**
Date **08/06/2022**

FIGURE 3-3

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Print date: 08 Jun 2022 - 12:56

Data source: Travel Zones - TfNSW, 2016; Roads, watercourses, cadastre - DCS, 2022; Metromap Tile Service: . Created by: dschmidt

3.6 Business survey

To assist with the assessment of business impacts, a business survey was undertaken. The scope included doorknocking a representative variety of local retailers, commercial operators, and other businesses to gain a better understanding of key issues, perceptions, and concerns regarding the impacts of the project.

The survey was conducted between 17 and 25 February 2022 within the identified precincts shown in Figure 3-1, with a priority placed on door knocking the 65 businesses located closest to the proposed construction activities. A total of 24 participants commenced the survey, with 21 surveys completed in full.

The survey encompassed a range of questions relating to the existing business, access and delivery requirements, and perceptions and concerns regarding the construction and operational phases of the project. Information collected from each business/respondent was collated into a database for analysis.

The impact assessment, presented in sections 7 and 8, was based on the outcomes of the survey and involved the identification and evaluation of potential changes to existing business conditions due to the project's design, construction, or operation. Survey responses were used to help interpret the level of significance of potential impacts by considering the sensitivity of the business receiver (Negligible, Low, Moderate or High), as well as how potential impacts would be managed and mitigated.

4 EXISTING ENVIRONMENT CHARACTERISTICS

4.1 Businesses and employment overview

Table 4-1 provides an overview of the business and employment characteristics for each precinct and the Parramatta CBD. A more detailed description of the land use, business profile and transport and access characteristics within each precinct is provided in sections 4.2 to 4.9.

Table 4-1 Summary of key business and employment figures, by precinct

Precinct	Estimate of number of businesses	Estimated number of people employed	Top three employment industries in the precinct by industry code
Parramatta CBD	4,649	55,179	• public administration and safety • financial and insurance services • professional, scientific and technical services
Camellia	188	5,427	• transport, postal and warehousing • construction • wholesale trade
Rydalmere East	116	758	• construction • wholesale trade • other services
Ermington	20	827	• construction • retail trade • health care and social assistance
Melrose Park	75	2,881	• basic chemical and chemical product manufacturing • wholesale trade • financial and insurance services
Wentworth Point	159	1,726	• construction • professional, scientific and technical services • wholesale trade
Sydney Olympic Park	183	27,208	• professional, scientific and technical services • financial and insurance services • accommodation and food services
Carter Street precinct	10	1,132	• transport, postal and warehousing • food product manufacturing • retail trade

Note: Official business counts from the ABS are not available lower an SA2 granularity. Counts are counts of unique businesses IDs drawn from Google maps searches.

4.1.1 Parramatta CBD and Camellia precincts

The western part of the project includes the Parramatta CBD (to facilitate construction of the Macquarie Street turnback facility) and the Camellia precinct, and generally aligns to the Parramatta-Rosehill SA2.

This part of the study area can be characterised as containing services-based businesses including professional services, accommodation and food, administration services and retail. Table 4-2 shows the annual rate of turnover based on the top five industries present in the area with the majority of businesses in the area having an annual turnover of less than $200,000. This area has already been impacted by Parramatta Light Rail Stage 1 construction so the concerns for local businesses are likely the same.

The eastern side of Hassall Street in the Parramatta CBD includes several accommodation, food and retail businesses. Notable businesses include Woolworths, Mercure Sydney Parramatta Hotel, McDonalds, KFC, and the Camellia Hotel. As shown in Table 4-3, many of the businesses are small to medium businesses with less than 20 employees.

Heading east on Grand Avenue from the intersection with James Ruse Drive, there are construction, transport, and warehousing businesses. Some of the larger business sites within the area include the Parramatta Motor Group, Knauf Gypsum Pty Ltd, James Hardie, Australian Pharmaceutical Industries and Veolia Environmental Services.

Table 4-2 Count of businesses, Parramatta-Rosehill SA2, top five by turnover

Industry	< $50k	$50k to $100k	$100k to $200K	$200k to $500k	$500k to $2m	$2m to $5m	$5m to $10m	+$10m	Total
Professional, Scientific and Technical Services	262	141	182	240	147	43	9	11	1,035
Construction	265	113	118	122	82	53	15	24	792
Transport, Postal and Warehousing	503	142	42	46	15	3	0	3	754
Rental, Hiring and Real Estate Services	188	110	120	131	91	30	13	8	691
Administrative and Support Services	173	46	61	46	50	32	10	3	421

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Table 4-3 Count of businesses, Parramatta-Rosehill SA2, top five by number of employees

Industry	1-4	5-19	20-199	200+	Total
Professional, Scientific and Technical Services	464	132	17	0	1,045
Construction	216	28	19	0	787
Transport, Postal and Warehousing	97	6	0	0	749
Rental, Hiring and Real Estate Services	102	26	6	0	700
Administrative and Support Services	148	36	30	0	410

Note: Totals may differ due to businesses that do not hire employees (e.g. professional sole traders).

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

4.1.2 Rydalmere East, Ermington and Melrose Park

The central portion of the project site includes the Rydalmere East, Ermington, and Melrose Park precincts. These areas generally align to the Ermington-Rydalmere SA2.

These areas contain a range of different land uses and businesses. Rydalmere East, and Melrose Park, can both be characterised as light industrial in nature. These areas are home to Construction, Transport, Warehousing, Wholesale, and Manufacturing businesses. Table 4-4 highlights the annual rate of turnover for businesses based on industry profile. As shown in the table, the majority of industries do not feature any businesses earning $10 million or more, except for the Construction; Rental, Hiring and Real Estate Services; and Wholesale Trade sectors. This highlights the prominence of light industrial uses established in the area.

As shown in Table 4-5, these businesses generally consist of under 20 employees, noting however that there are several large-scale manufacturing businesses with between 20 and 200 employees.

Some of the notable sites in Rydalmere East along John Street close to the project site include Aleta Industries and C&C Plastics and Toolmaking. To the east, notable sites in Melrose Park include Sydney Rubbish Removal, Osteo Active, GlaxoSmithKline, Speedbake Work, Ryde Hyundai, McNeil Plastics, Computershare, and Eli Lilly.

There are very few businesses located in the Ermington precinct as this area is predominantly zoned residential. As a result, many of the business are home based businesses. However, notable sites include the Rydalmere East Public School, which serves as a small to medium employer in the area.

Table 4-4 Count of businesses, Rydalmere East - Ermington SA2, top five by turnover

Industry	< $50k	$50k to $100k	$100k to $200K	$200k to $500k	$500k to $2m	$2m to $5m	$5m to $10m	+$10m	Total
Construction	114	87	104	122	88	29	18	4	566
Professional, Scientific and Technical Services	103	51	57	47	29	5	3	0	295
Rental, Hiring and Real Estate Services	74	60	53	35	25	6	5	3	261
Transport, Postal and Warehousing	161	36	24	11	12	0	3	0	247
Wholesale Trade	42	19	15	20	37	15	7	27	182

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Table 4-5 Count of businesses, Rydalmere East - Ermington SA2, top five by number of employees

Industry	1-4 Employees	5-19 Employees	20-199 Employees	200+ Employees	Total
Construction	288	39	12	0	339
Professional, Scientific and Technical Services	122	12	0	0	134
Wholesale Trade	63	30	23	0	116
Manufacturing	47	30	21	0	98
Accommodation and Food Services	58	28	3	0	89

Note: Totals may differ due to businesses that do not hire employees (e.g. professional sole traders).

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

4.1.3 Wentworth Point, Sydney Olympic Park and Carter Street

The eastern portion of the project site includes Wentworth Point, Sydney Olympic Park and the Carter Street precincts. These areas generally align to the Wentworth Point-Sydney Olympic Park SA2.

To the north, Wentworth Point is predominantly high-density residential; however, there are several food, retail, and rental services businesses located at the ground level of the residential apartment complexes which are reliant on foot traffic and patronage from the local community. Many of these businesses are small, with less than five employees. Some of the businesses closest to the project site include Hong Jiao Wentworth Point, Family Mart, CokCo Chicken, Orange Grocery, Pier Point Care, Coles, and Priceline Pharmacy. While the project site does not directly encroach on these businesses, there may be concern as to impacts from any traffic diversion on-street front customer parking.

Further south towards Sydney Olympic Park there are a wide range of different businesses, including some industrial businesses along Carter Street. Businesses in Sydney Olympic Park are more large scale and include management for infrastructure such as stadiums and arenas. Businesses within this precinct employ between 20 and 200 employees and include Stadium Australia, Novotel Sydney Olympic Park, Pullman at Sydney Park, Qudos Bank Area, Sydney Showgrounds, Ibis Budget Sydney Olympic Park, Sutton Parts Distribution Centre, Go Logistics, and Scotts Refrigerated Logistics. There is also a range of mixed retail and food outlets on the ground floor of the office buildings/hotels along Dawn Fraser Avenue.

Table 4-6 shows the annual rate of turnover for businesses based on industry profile. Given the more developed nature of Wentworth Point and Sydney Olympic Park, businesses tend towards professional, retail and serviced based industries. Table 4-7 shows that most businesses within these precincts generally consist of under 20 employees, with the exception of a few large administrative and professional businesses located in Sydney Olympic Park as noted above.

Table 4-6 Count of businesses, Wentworth Point-Sydney Olympic Park SA2, top five by turnover

Industry	< $50k	$50k to $100k	$100k to $200K	$200k to $500k	$500k to $2m	$2m to $5m	$5m to $10m	+$10m	Total
Rental, Hiring and Real Estate Services	98	73	39	37	50	10	4	3	314
Professional, Scientific and Technical Services	128	56	45	45	14	5	3	3	299
Construction	63	48	43	52	24	0	5	0	235
Transport, Postal and Warehousing	114	34	25	10	12	0	0	3	198
Retail Trade	56	17	18	23	16	9	3	3	145

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Table 4-7 Count of businesses, Wentworth Point-Sydney Olympic Park SA2, top five by number of employees

Industry	1-4 Employees	5-19 Employees	20-199 Employees	200+ Employees	Total
Professional, Scientific and Technical Services	118	9	7	0	134
Construction	94	5	0	0	99
Accommodation and Food Services	62	22	5	0	89
Administrative and Support Services	56	9	3	3	71
Retail Trade	60	11	0	0	71

Note: Totals may differ due to businesses that do not hire employees (e.g. professional sole traders).

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

4.1.4 Journey to work

In terms of access to work, around 75 per cent of employees generally rely on cars as the primary mode of travel as shown in Table 4-8. Given the distance to the Parramatta CBD, there is a large reliance on rail and bus in the western portion of the study area; however, persons located in the remainder of the study area are heavily reliant on cars to access work.

Table 4-8 Modes of travel to work by statistical area (SA2)

Mode of travel	Parramatta - Rosehill	Ermington - Rydalmere	Homebush Bay - Silverwater	Total
Train	23.9%	2.1%	7.6%	15.3%
Bus	10.4%	2.9%	2.9%	6.9%
Ferry	0.1%	0.0%	0.0%	0.0%
Tram	0.0%	0.0%	0.0%	0.0%
Taxi	0.1%	0.2%	0.2%	0.2%
Car, as driver	58.2%	87.6%	82.1%	70.4%
Car, as passenger	5.3%	4.6%	4.4%	4.9%
Truck	0.4%	1.2%	0.9%	0.7%
Motorbike/scooter	0.6%	0.5%	0.8%	0.6%
Bicycle	0.6%	0.5%	0.7%	0.6%
Other	0.3%	0.5%	0.5%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

4.2 Parramatta CBD (Macquarie Street turnback facility)

4.2.1 Land use

The proposed Macquarie Street turnback facility is in the eastern portion of the Parramatta CBD, between Marsden and Church streets. The project site at this location comprises the B4 Mixed Use zone and is home to a range of businesses of various sizes and industries. The high-density, mixed use nature of the surrounding the Parramatta CBD is reinforced through the use of zoning, with the area predominantly consisting of the B4 Mixed Use, B3 Commercial Core and R4 High Density Residential zones. The land use zoning for the Parramatta CBD (surrounding the Macquarie Street turnback facility) is B4 Mixed Use as shown in Figure 4-1.

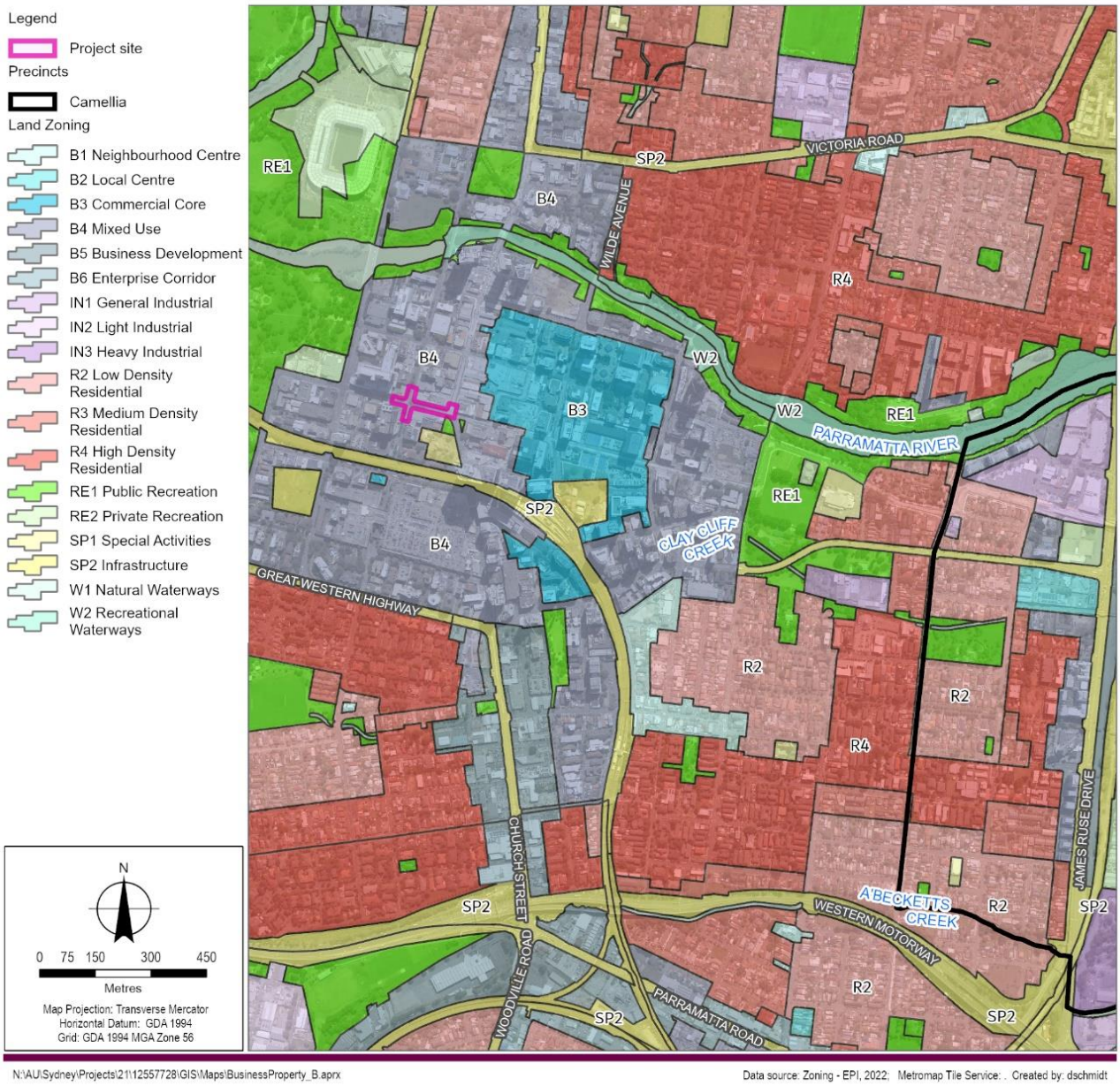

Figure 4-1 Parramatta CBD precinct land use zoning

The commercial uses within the CBD are predominantly related to information, finance-based services, and government agencies. Some major businesses in the Parramatta CBD include:

- Australian Taxation Office
- Colman and Greig; Deloitte
- NSW Department of Attorney General and Justice
- NSW Police Force
- QBE
- City of Parramatta Council
- PWC
- Servcorp
- Suncorp Bank
- Sydney Water
- Greater Sydney Commission.

To the east, close to James Ruse Drive, the land uses change to more low density residential and commercial land uses. Some of the local businesses include:

- Woolworths
- Mercure Sydney Parramatta
- Camellia Hotel
- BP service station
- McDonalds
- KFC.

4.2.2 Business profile and forecasts

The largely commercial nature of the Parramatta CBD is demonstrated in Figure 4-2 which shows that approximately 65 per cent of jobs and business are knowledge intensive. Population services, health and education, and industrial industries represent 18, 11 and six per cent of jobs, respectively. The total business composition for the Parramatta CBD is shown in Figure 4-2.

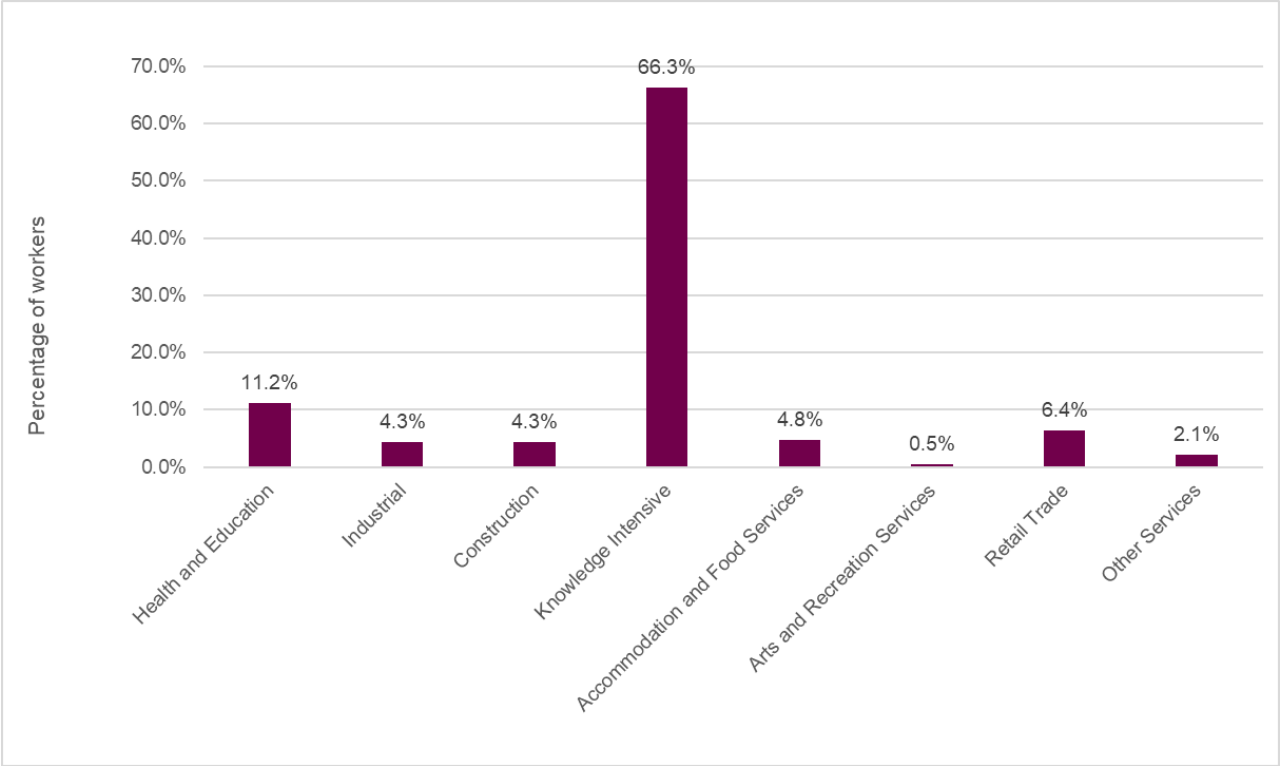

Figure 4-2 Parramatta CBD precinct employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

Reflecting the knowledge and services nature of the precinct, Table 4-9 shows that public administration, finance, and insurance services are the largest employers in the precinct with 15,137 and 11,528 workers, respectively. Other significant employers include professional services, health care, and retail.

Table 4-9 Parramatta CBD top 10 employing industries

Industry	Employment
Public Administration and Safety	15,137
Financial and Insurance Services	11,528
Professional, Scientific and Technical Services	5,358
Health Care and Social Assistance	4,048
Retail Trade	3,561
Administrative and Support Services	2,830
Accommodation and Food Services	2,603
Construction	2,500
Education and Training	2,106
Electricity, Gas, Water and Waste Services	1,677

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Going forward, likely owing to the existing development plans and strategic land use changes to the CBD, the precinct is anticipated to grow steadily from around 56,000 workers to just over 76,000 workers by 2056. Figure 4-3 shows predicted growth over time within the precinct with knowledge intensive employment remaining prominent in the area.

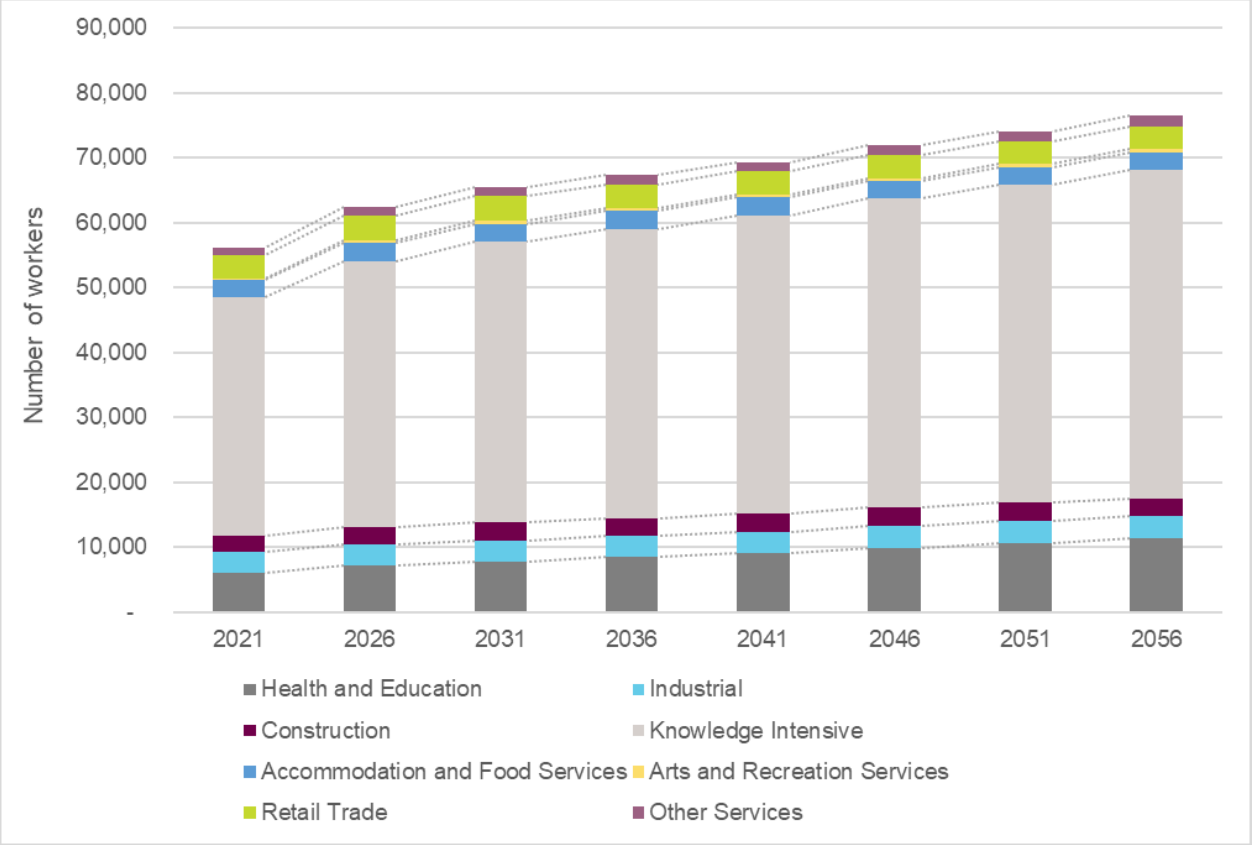

Figure 4-3 Parramatta CBD precinct employment projections

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.2.3 Access and transport

The Parramatta CBD has a high degree of accessibility, serviced by main arterial roads such as Great Western Highway, James Ruse Drive, Victoria Road and O'Connell Street. Land uses in the CBD predominately comprise a range of high-density mix use buildings, resulting in heavy residential and commercial traffic movements. Traffic volumes tend to be mixed between lighter personal vehicles and heavier construction vehicles as shown in Table 4-10.

Table 4-10 Parramatta CBD traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24-hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Macquarie Street (near Smith Street)	**476**	5	**542**	2	**15,723**	3

Parramatta CBD is serviced by various forms of public transport connections, including bus, ferry and train services. The proposed light rail service will provide greater connectivity to the area.

Train connections to Parramatta Station include:

- T1 North Shore and Western Line
- T2 Inner West and Leppington Line
- T5 Cumberland Line.

Street parking in the project site on Macquarie Street between Marsden Street and Church Street includes 17 spaces.

4.3 Camellia precinct

4.3.1 Land use

The Camellia precinct includes the suburbs of Camellia and Rosehill and is accessible via James Ruse Drive. As shown in Figure 4-4, the precinct is characterised by predominately mixed-use commercial / industrial land use with most of the project site zoned IN3 Heavy Industrial. The precinct is home to a range of businesses, including retail and bulky goods, manufacturing, bulk materials storage and handling, waste management, warehouses, container terminals / storage and a petroleum refinery. Businesses within the precinct include:

- Billbergia Group Pty Ltd
- Shell Refining (Australia) Pty Ltd
- Perpetual Trustee Company (leasing premises to Australian Pharmaceutical Industries)
- Knauf Gypsum Pty Ltd
- Parramatta Motor Group
- Australian Pharmaceutical Industries
- Rosehill Gardens Racecourse
- James Hardie
- Veolia Environmental Services.

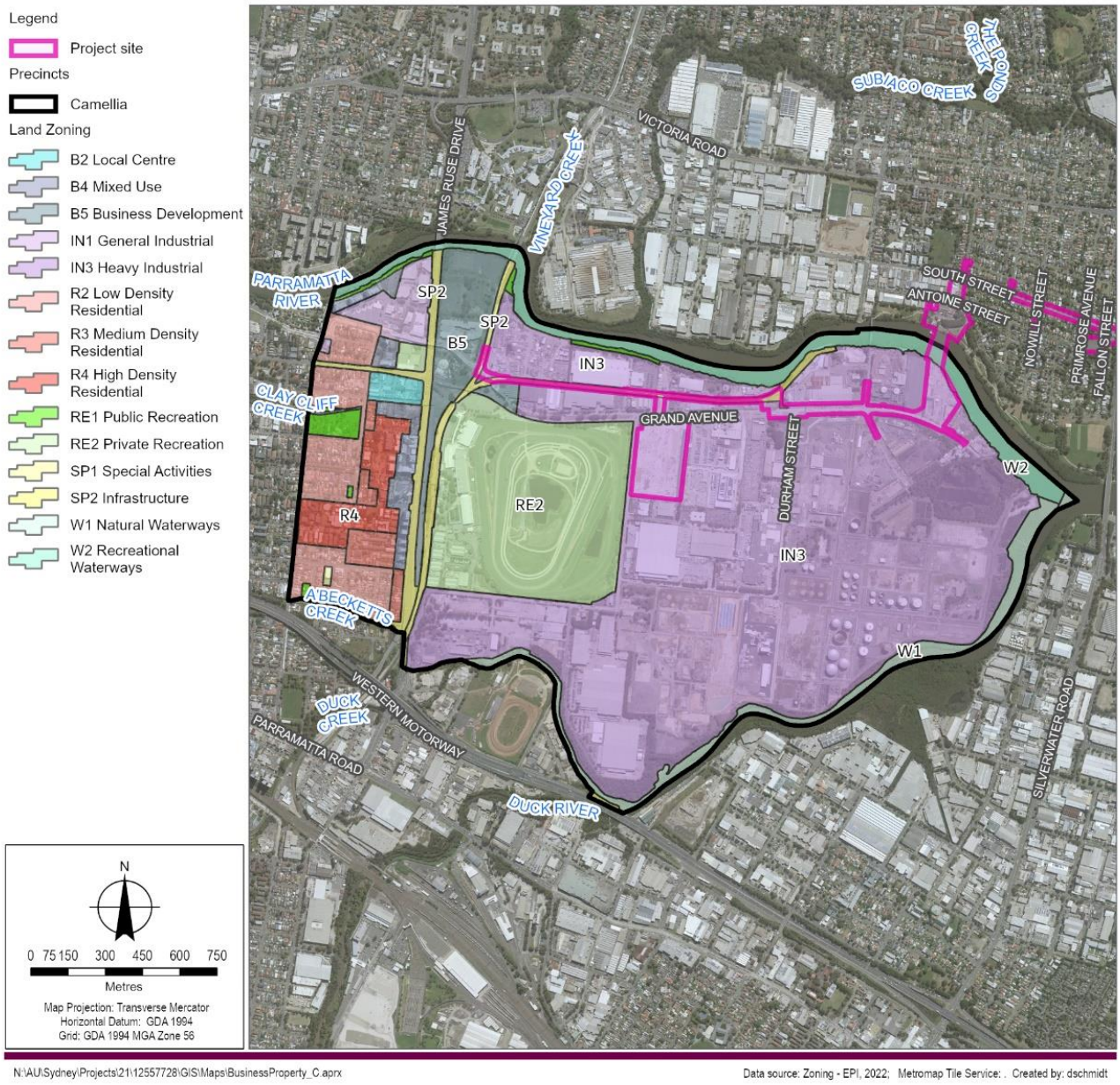

Figure 4-4 Camellia precinct land use zoning

4.3.2 Business profile and forecasts

The largely industrial nature of Camellia is reflected in Figure 4-5, which shows the job composition of the precinct with approximately 68 per cent of jobs being industrial in nature. Population services and knowledge-based industries represent 21 per cent and 11 per cent of jobs, respectively.

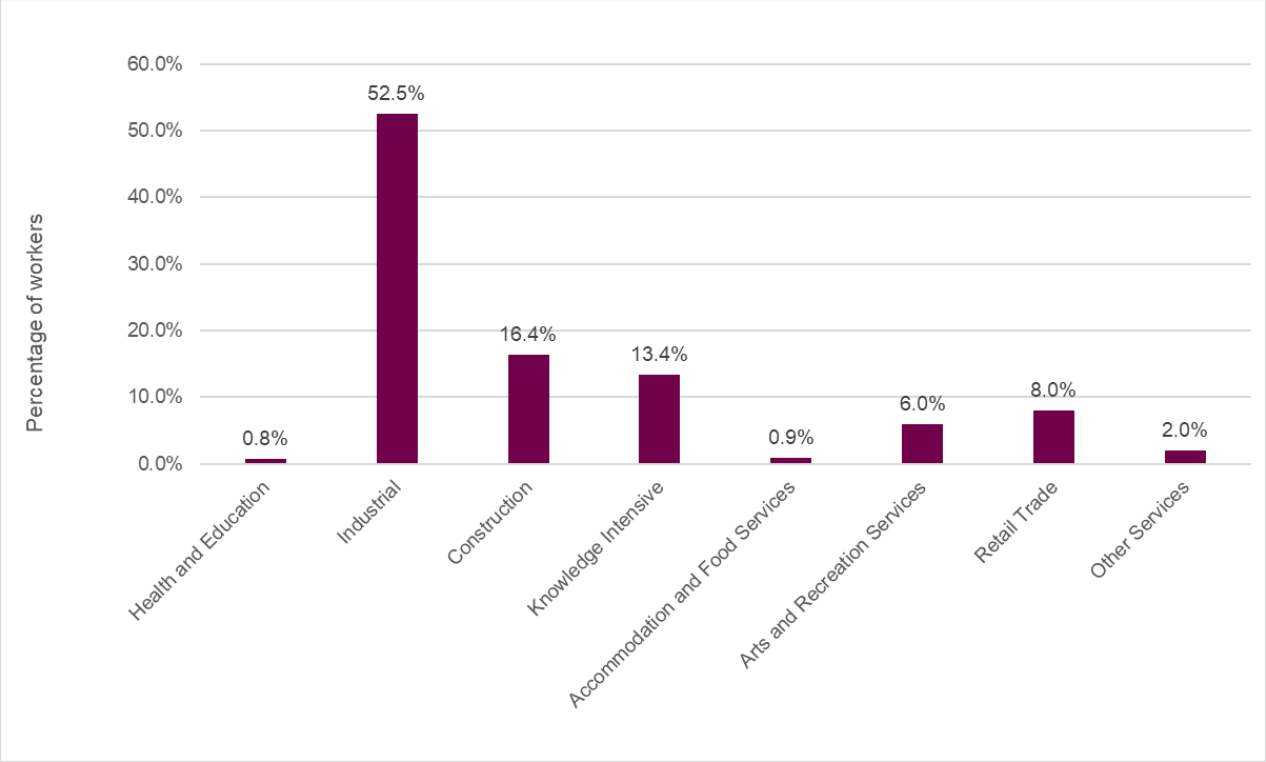

Figure 4-5 Camellia employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

Table 4-11 shows the number of employees per industry. The largest industry in Camellia is transport, postal and warehousing, which employs some 1,016 workers. This is followed by construction, wholesalers, and manufacturing with 892 workers, 760 workers, and 601 workers, respectively.

Table 4-11 Camellia top 10 employing industries

Industry	Employment
Transport, Postal and Warehousing	1,016
Construction	892
Wholesale Trade	760
Non-Metallic Mineral Product Manufacturing	601
Retail Trade	434
Public Administration and Safety	413
Arts and Recreation Services	325
Petroleum and Coal Product Manufacturing	235
Electricity, Gas, Water and Waste Services	117
Professional, Scientific and Technical Services	114

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

The Camellia-Rosehill precinct was identified in the *Draft Camellia-Rosehill Place Strategy* (Department of Planning, Industry and Environment, 2021) as anticipated to grow from just under 6,000 workers to almost 14,500 workers by 2056. This predicted growth is shown in Figure 4-6 with the predicted emergence of new industries in the area, such as from the population serving and knowledge intensive sectors. The area will also provide up to 10,000 new homes, with increased access to the Parramatta River and new public open space identified as priorities. The bulk of this growth is anticipated to be complete by 2046 as planning and land densities reach capacity.

Owing to a longer term shift in land use patterns, this growth will be driven largely by population service jobs and businesses followed by knowledge intensive industries. Health and education services are also expected to track in line with population growth, while industrial uses will remain flat and stabilising by 2036.

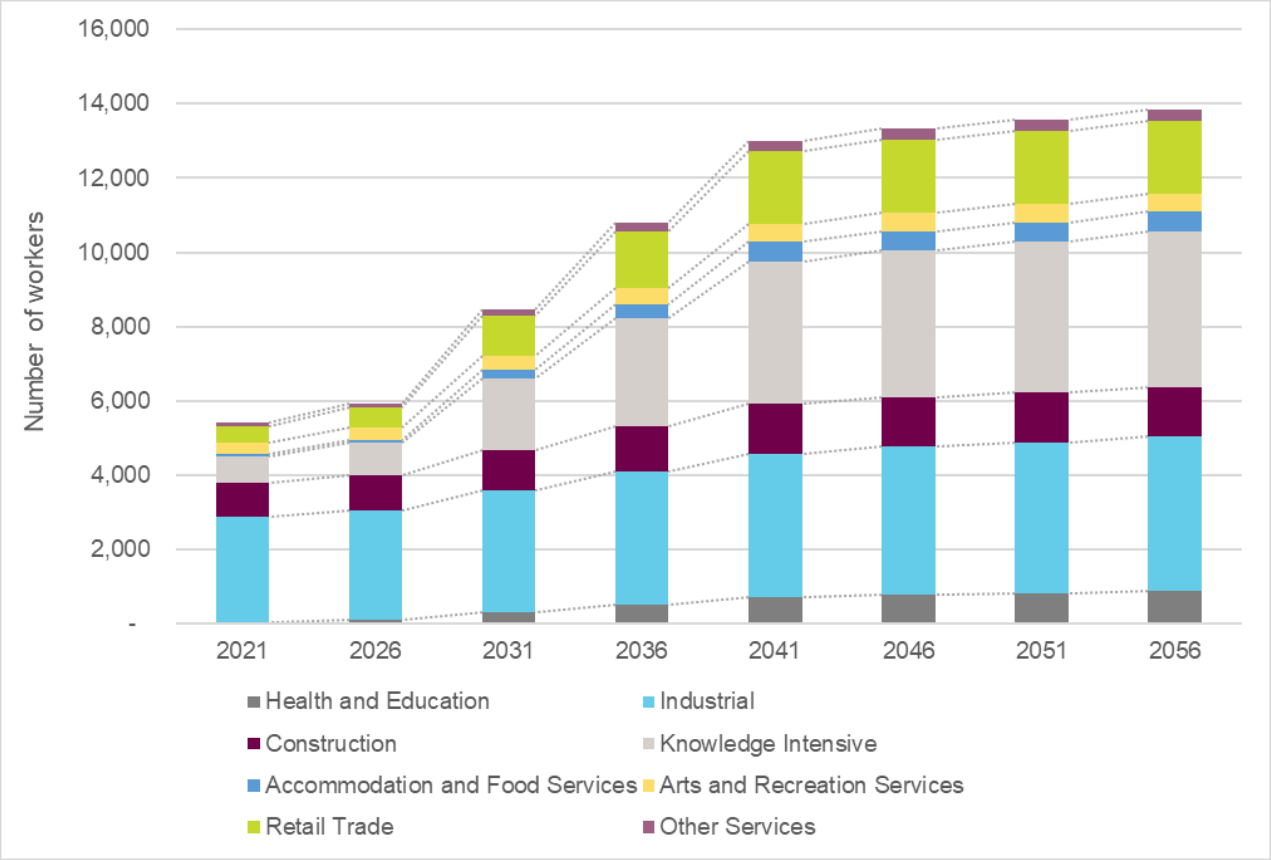

Figure 4-6 Camellia employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.3.3 Access and transport

The Camellia precinct is accessed primarily via James Ruse Drive. To the west, the land uses are mainly residential and commercial with limited heavy traffic movements, while to the east entering Grand Avenue the traffic volumes tend to be mostly heavy vehicles. These vehicle movement trends are reflected in Table 4-12 which shows that Camellia has a steady amount of traffic movement across 24 hours, as opposed to significant AM or PM peak. This is likely due to the constant yet varied arrival and departure times for delivery and service vehicles for industrial areas.

Camellia is currently reliant on one main road in and out, being Grand Avenue. Consequently, there is a high level of heavy vehicle movement across the whole precinct, with access predominantly occurring along Grand Avenue from James Ruse Drive.

Most vehicular movements within the study area are expected to be related to local industrial and employment activities which would typically occur during standard business hours. Parking is primarily on-street along the road network and the off-street facilities associated with the adjoining the Rosehill Gardens Racecourse. The area currently does not have restricted parking arrangements.

Table 4-12 Camellia traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24-hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Grand Avenue and Hassall Street (James Ruse Drive to ALDI Access/Rosehill Gardens Gate 1 Access), Camellia	**1,032**	17%	**774**	5%	**27,878**	11%

Heavy freight traffic generally interfaces with Grand Avenue, between Hassall Street and private property access (east of Thackeray Street), and Thackeray Street, between Grand Avenue and the James Ruse Drive bridge over Parramatta River.

Street parking is generally concentrated along the project alignment:

- northern side of Grand Avenue between Colquhoun Street and the endpoint of Camellia (128 spaces)
- southern side of Grand Avenue between the endpoint of Camellia and Durham Street (104 spaces).

Additionally, public transport connections are minimal and currently consist of the M92 bus route from Parramatta to Sutherland (10-minute peak service).

4.4 Rydalmere East precinct

4.4.1 Land use

Figure 4-7 shows the land use zoning in the Rydalmere East precinct which is characterised as a mix of low-density residential housing with some more intensive industrial uses around Antoine Street and John Street. To the west of the Rydalmere East precinct land is currently zoned IN1 General Industrial and IN2 Light Industrial and includes a mix of large and small-scale industrial development.

The project site extends through W2 Recreational Waterways, RE1 Public Recreation, IN1 General Industrial and R2 Low Density Residential zones. Businesses within the precinct include the following:

- Aleta Industries
- C&C Plastics and Toolmaking
- Seahorse Securities Pty Ltd
- Department of Education (Rydalmere Public School).

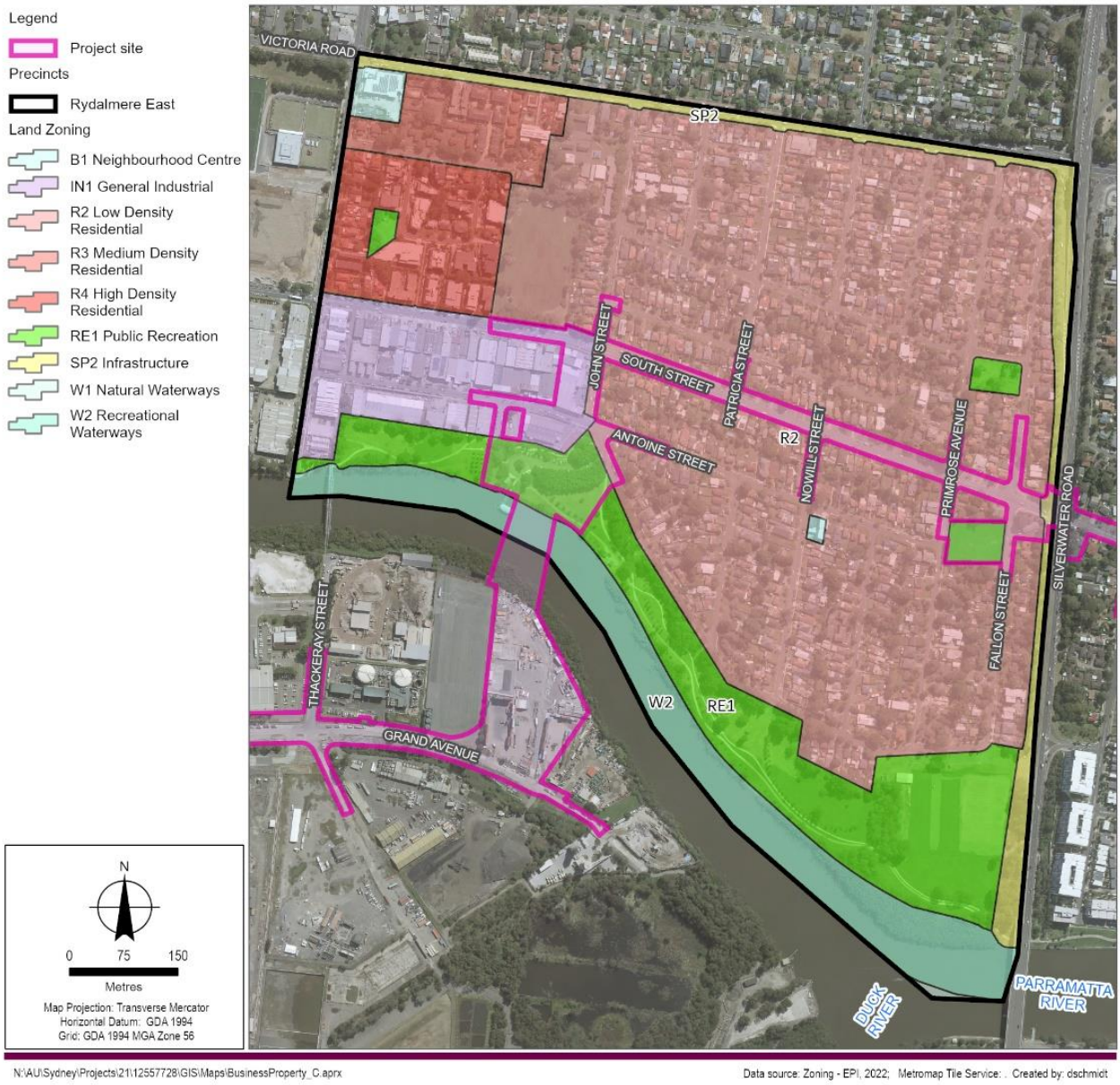

Figure 4-7 Rydalmere East precinct land use zoning

4.4.2 Business profile and forecasts

The Rydalmere East precinct is a mix of industrial and service-based employment. Figure 4-8 provides an overview of the employment sectors in Rydalmere East, with population serving as the largest employer with 41 per cent of jobs being services based and 31 per cent being industrial in nature. There are additional knowledge and health and education jobs throughout the precinct, particularly with Rydalmere Public School begin a notable local employer.

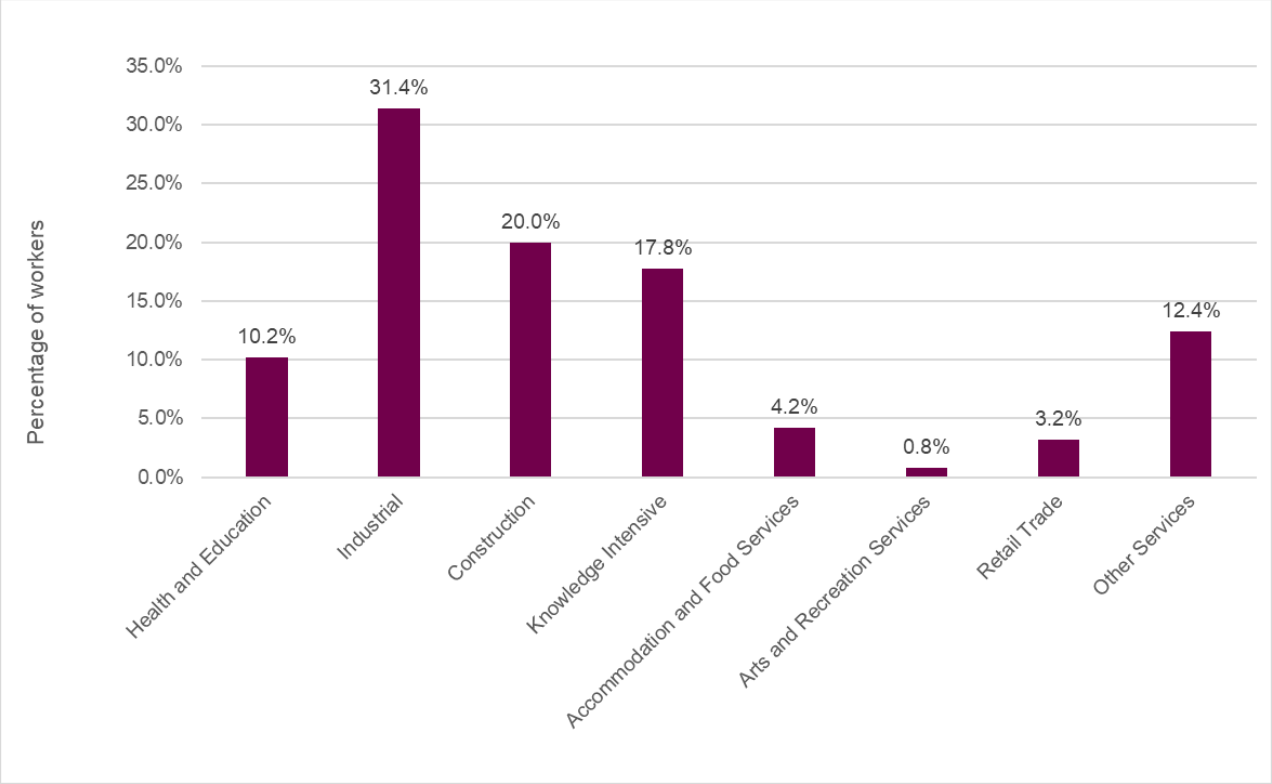

Figure 4-8 Rydalmere East employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

As outlined in Table 4-13, the mix of industrial and service jobs is reflected in the industry composition with construction, wholesale and manufacturing employing 151 worker, 94 works, and 55 workers, respectively. This is followed by education, rental services, and other services as other notable sectors.

Table 4-13 Rydalmere East top 10 employing industries

Industry	Employment
Construction	151
Other Services	94
Wholesale Trade	55
Machinery and Equipment Manufacturing	50
Education and Training	49
Rental, Hiring and Real Estate Services	45
Printing (including the Reproduction of Recorded Media)	43
Polymer Product and Rubber Product Manufacturing	42
Professional, Scientific and Technical Services	36
Accommodation and Food Services	32

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Going forward, and likely owing to existing zoning and prevailing property densities, the precinct is anticipated to grow from just under 800 workers to under 1,000 workers by 2056. This growth is anticipated to be steady as opportunities arise to redevelop existing sites. As shown in Figure 4-9, population serving jobs and business are expected to drive much of this growth, topping out around 2046.

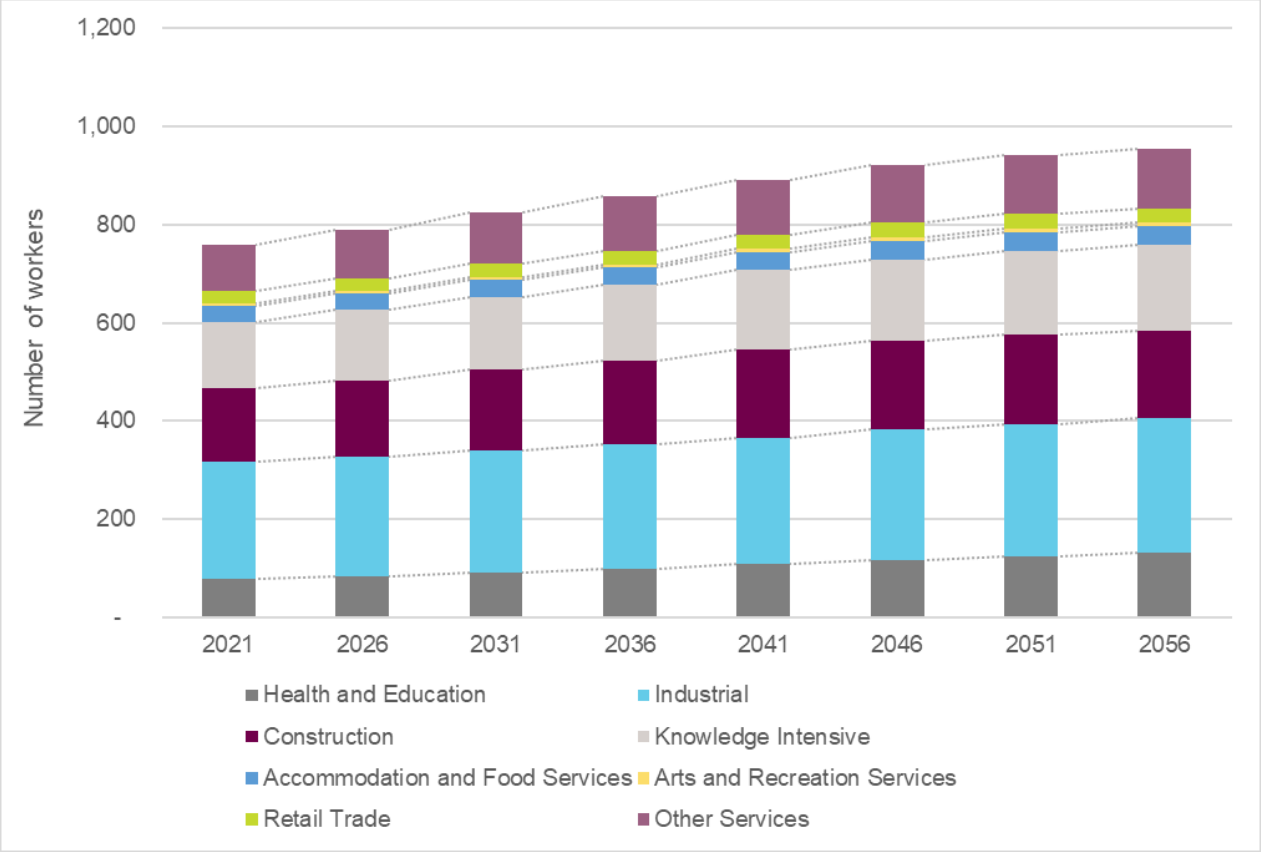

Figure 4-9 Rydalmere East employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.4.3 Access and transport

Rydalmere East is primarily accessed from the north via Victoria Road with additional access to the precinct via South Street from Silverwater Road. To the west of the precinct, the land uses are mainly industrial and commercial. However, as demonstrated in Table 4-14, heavy traffic movements only comprise five per cent of total vehicle movements. The existing traffic environment mainly consists of local traffic providing access to residential and commercial properties. Unrestricted kerbside parking is currently available on South Street in front of residential properties.

Table 4-14 Rydalmere East traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24 hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
South Street (Park Road to John Street), Rydalmere	**402**	6%	**613**	3%	**15,668**	5%

Street parking is generally concentrated in the following areas along the project alignment:

- northern side of South Street between John Street and Silverwater Road (49 spaces)
- southern side of South Street between Park Road and Primrose Avenue (47 spaces)
- eastern side of John Street, between Antoine Street and South Street (10 spaces)
- Rydalmere Ferry Wharf (70 spaces, including two accessible parking spaces).

The Rydalmere East precinct has no direct rail access. A ferry wharf (Rydalmere Wharf) is located within the project site and provides access to ferry services between Parramatta and Circular Quay. Additionally, Rydalmere East is serviced by the following bus routes:

- 525 – Burwood to Parramatta via Sydney Olympic Park
- 544 – Auburn to Macquarie Centre via Eastwood
- 524 – Parramatta to Ryde via West Ryde.

4.5 Ermington precinct

4.5.1 Land use

The Ermington precinct is generally low density residential in nature, with some newer developments providing medium density housing stock. As shown in Figure 4-10, zoning in Ermington primarily consists of R2 Low Density Housing with a pocket of R4 High Density Residential Zoning towards the south. The project site extends through land zoned as SP2 Infrastructure, R2 Low Density Residential and RE1 Public Recreation. As a result of this zoning, there are few commercial related land uses in the precinct.

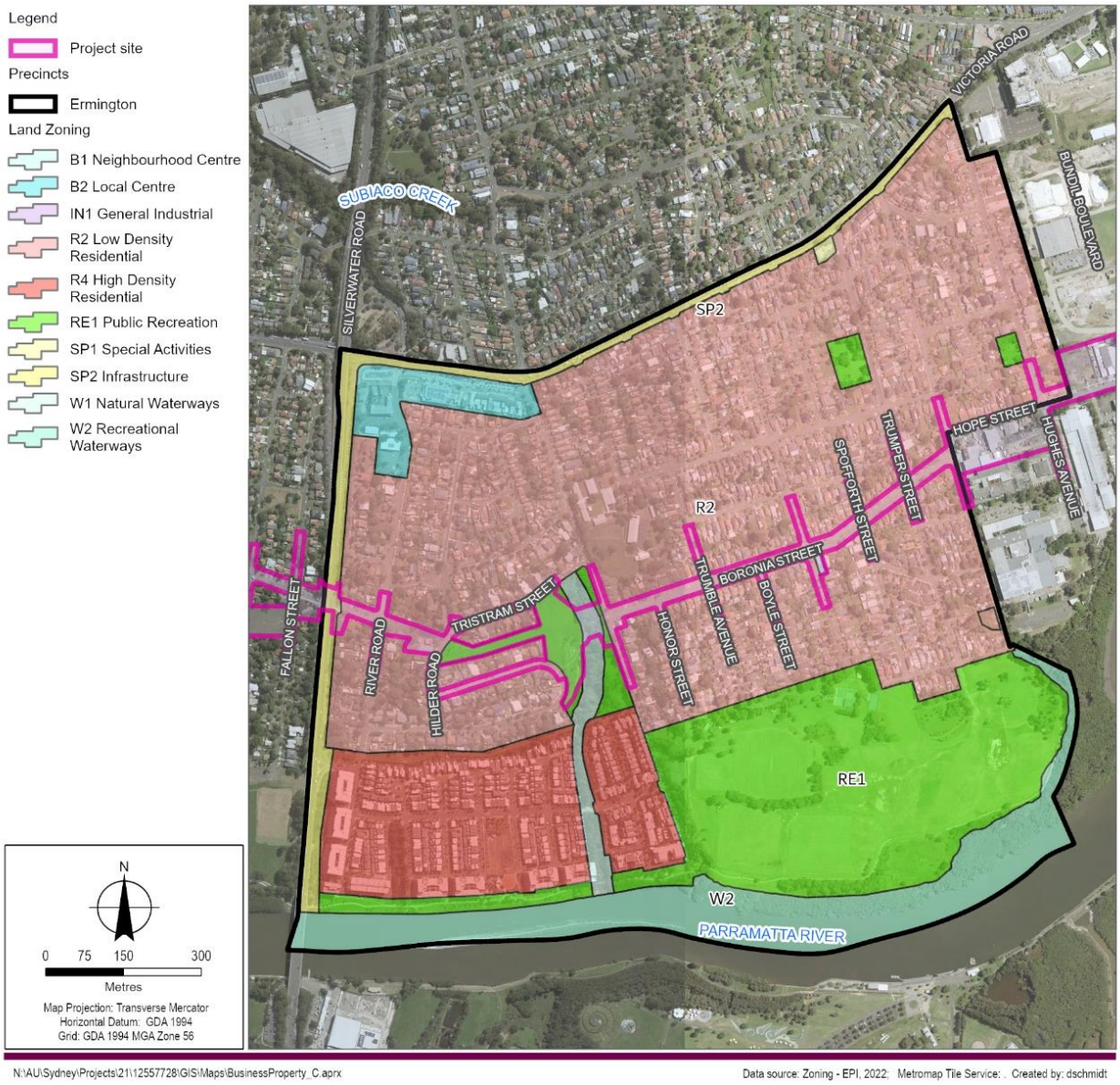

Figure 4-10 Ermington precinct land use zoning

4.5.2 Business profile and forecasts

As noted in Figure 4-11, businesses in the area are predominantly health, education, and construction. As a result, business impacts would predominately focus on a few notable commercial operations within the precinct including Rydalmere East Public School being a notable local employer. The precinct is an even mix of education, knowledge, and service-based employment with almost no industrial-related jobs.

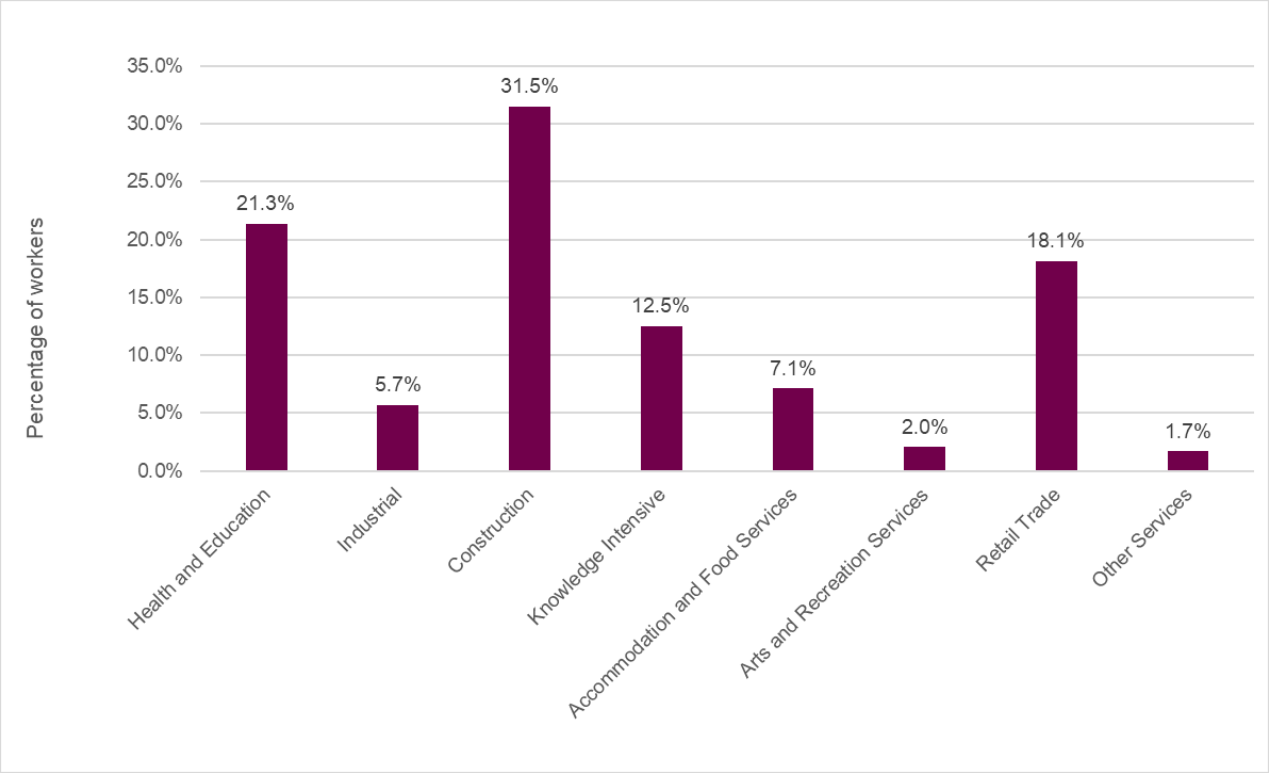

Figure 4-11 Ermington employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

The limited number of commercial land uses in the precinct is reflected in the employment profile shown in Table 4-15. Ermington has a total employment figure of under 900. Construction and housing, retail, education, health, and food services being among the top employing industries in the precinct.

Table 4-15 Ermington top 10 employing industries

Industry	Employment
Construction	275
Retail Trade	158
Health Care and Social Assistance	107
Education and Training	80
Accommodation and Food Services	62
Professional, Scientific and Technical Services	34
Rental, Hiring and Real Estate Services	26
Financial and Insurance Services	26
Administrative and Support Services	24
Food Product Manufacturing	19

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Going forward, likely owing to existing zoning and prevailing property densities, the precinct is anticipated to grow from around 900 workers to under 1,200 workers by 2056. This growth is demonstrated in Figure 4-12, with population services contributing to be the largest employment industry. This growth is anticipated to be steady as opportunities arise to redevelop existing sites and/or expansion of education facilities is required to support the local population.

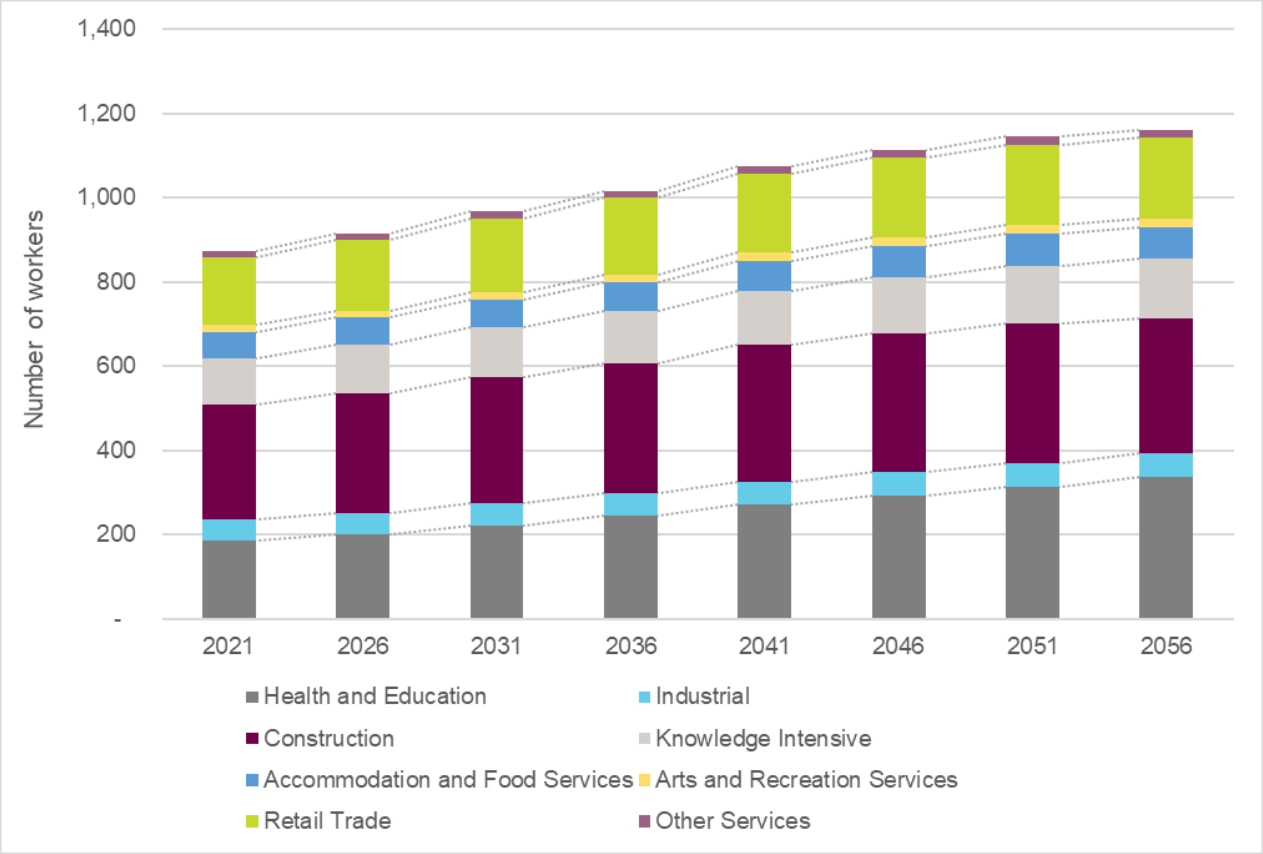

Figure 4-12 Ermington employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.5.3 Access and transport

The Ermington precinct is accessed primarily from Victoria Road to the north via Spurway Street, Hughes Avenue, or secondary residential roads like Trumble Avenue, Murdoch Street, and Atkins Road. There is additional access to the precinct via South Street / River Road from Silverwater Road. To the east of the precinct, the land uses are mainly industrial and commercial but with almost no heavy traffic movements as weight restrictions prevent large commercial vehicle movements between Silverwater Road and the industrial area in Melrose Park. Table 4-16 shows that only one per cent of traffic movement in the area is related to heavy vehicles.

Table 4-16 Ermington traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24 hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Boronia Street (Honor Street to Trumble Avenue), Ermington	**573**	1%	**616**	1%	**18,346**	1%

Street parking is generally concentrated in the following areas along the project alignment:

- northern side of Boronia Street (94 spaces)
- southern side of Boronia Street (91 spaces)
- eastern side of Hilder Road (15 spaces).

The closest train station is Meadowbank Station to the east at on the T9 Northern Line. Additionally, Ermington is serviced by the following bus routes:

- 525 – Burwood to Parramatta via Sydney Olympic Park
- 524 – Parramatta to Ryde via West Ryde.

4.6 Melrose Park precinct

4.6.1 Land use

The Melrose Park precinct is a primarily industrial area between Victoria Road, Hughes Avenue, Wharf Road, and the Parramatta River, with some adjacent residential to the east. The southern half of the precinct is relatively unconstrained and contains a few small strata lots, while in the north a large portion of the site is strata titled. Residential development has started to occur in the very north of the precinct along the Victoria Road frontage, with several residential apartment buildings completed in the past few years.

As shown in Figure 4-13, most of the project site is zoned as IN1 General Industrial along Hope and Waratah Streets. At Waratah Street the project site also passes through SP2 Infrastructure, R2 Low Density Residential, RE1 Public Recreation and W2 Recreational Waterways.

Melrose Park was identified in the *Parramatta Employment Lands Strategy* (City of Parramatta Council, 2016) as suitable for consideration for rezoning. Two planning proposals have been lodged within Melrose Park, with the Melrose Park North planning proposal and Melrose Park South planning proposal currently undergoing assessment.

The Melrose Park North Planning Proposal (Payce site in Melrose Park North) seeks to provide approximately 5,500 new dwellings and 30,000 square metres of retail and employment floorspace. The Planning Proposal for Melrose Park South (known as the Holdmark Sites), at sites 112 Wharf Road, 30 and 32 Waratah Street, Melrose Park and 82 Hughes Avenue, Ermington, seeks to provide approximately 1,925 new dwellings and 1,000 square metres of non-residential floor space to promote job creation.

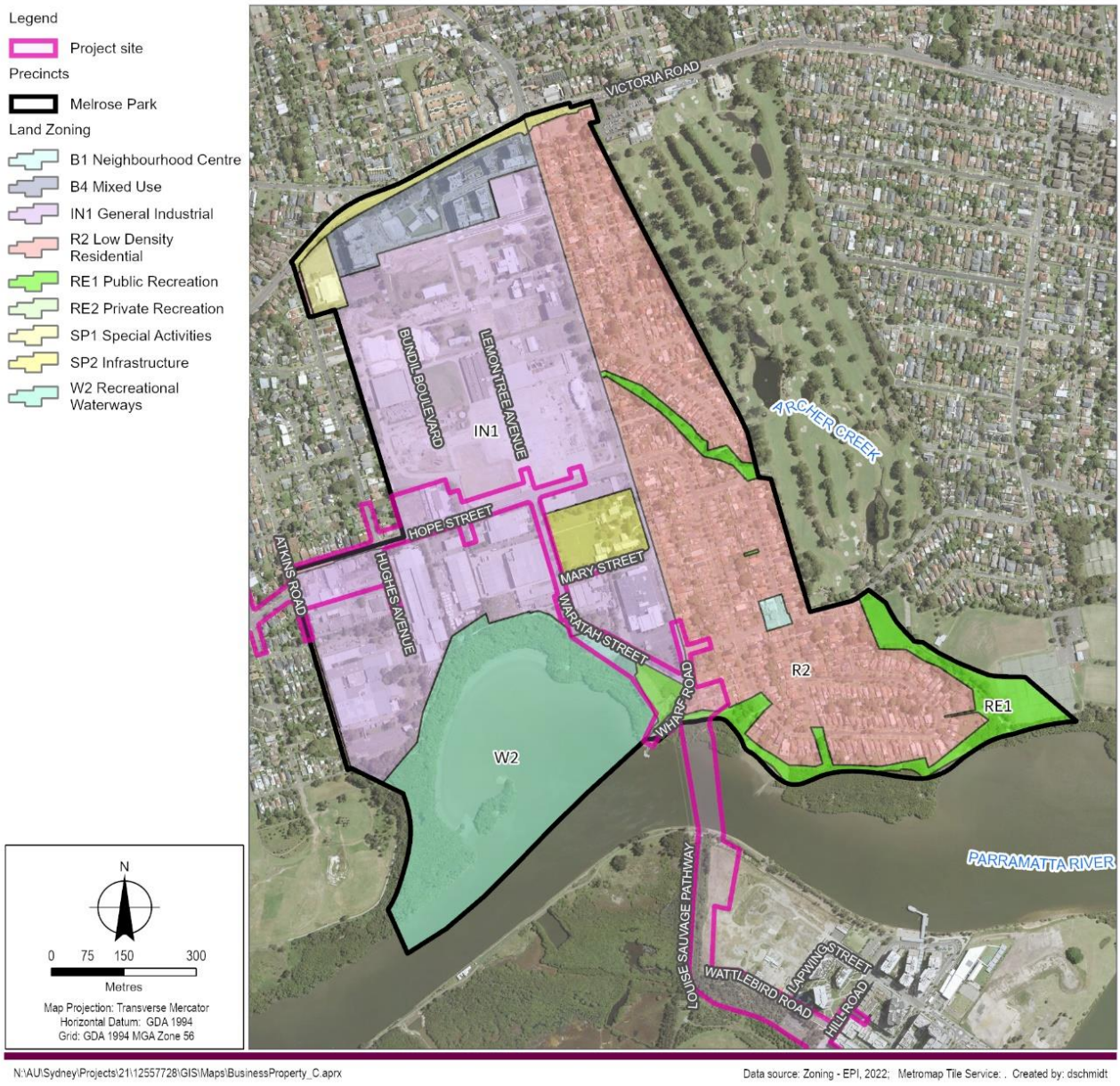

Figure 4-13 Melrose Park precinct land use zoning

4.6.2 Business profile and forecasts

As shown in Figure 4-14, businesses in the precinct are predominantly industrial in nature (73 per cent of businesses). This is followed by population services, knowledge intensive, and health and education jobs at 16 per cent, seven per cent and four per cent, respectively. Businesses within the precinct include the following:

- Payce and Holdmark
- Department of Education (Melrose Park Public School)
- Goodman (leases to Computershare and IGT)
- Sydney Rubbish Removal
- Osteo Active
- GlaxoSmithKline

- Speedbake Work
- McNeil Plastics
- Computershare
- Eli Lilly Australia.

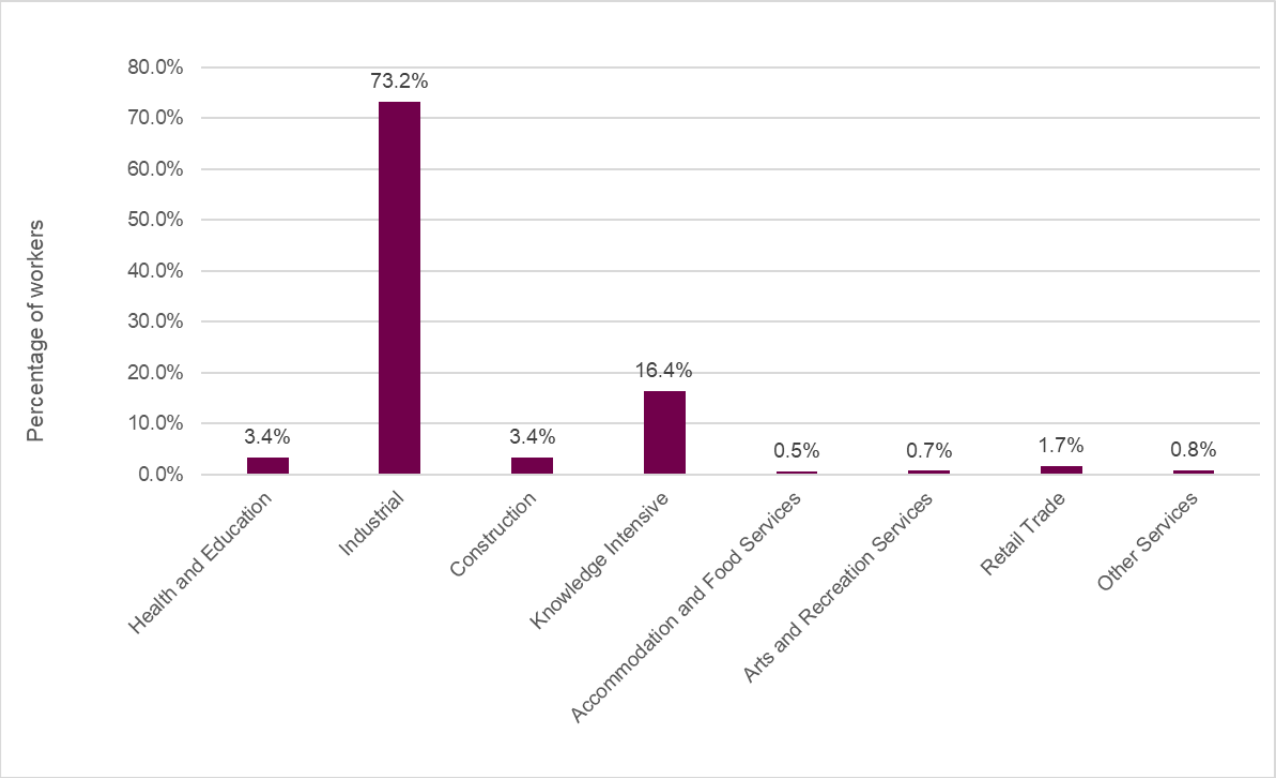

Figure 4-14 Melrose Park employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

Table 4-17 outlines the number of employees within each sector. The top industries in the precinct are chemical product manufacturing, wholesale trade and food manufacturing. In addition to the industrial businesses, financial services and professional services make up the top type of industries in the precinct

Table 4-17 Melrose Park top 10 employing industries

Industry	Employment
Basic Chemical and Chemical Product Manufacturing	1,421
Wholesale Trade	313
Financial and Insurance Services	201
Food Product Manufacturing	174
Professional, Scientific and Technical Services	129
Transport, Postal and Warehousing	123
Administrative and Support Services	106
Construction	97
Health Care and Social Assistance	56
Retail Trade	48

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Going forward, likely owing to the existing zoning and prevailing property densities, the precinct is anticipated to grow from under 3,000 workers to under 3,500 workers by 2056 (as shown in Figure 4-15). This growth is anticipated to be steady as opportunities arise to redevelop existing sites and/or expansion of businesses facilities is required to support population growth. Industrial jobs and businesses are expected to be the primary drivers of this growth with the other sectors remaining relatively flat.

As a result, businesses in the precinct may have concerns specifically related to traffic movements that could impact deliveries and shipments, and conflicts between street parking for employees and project construction workers.

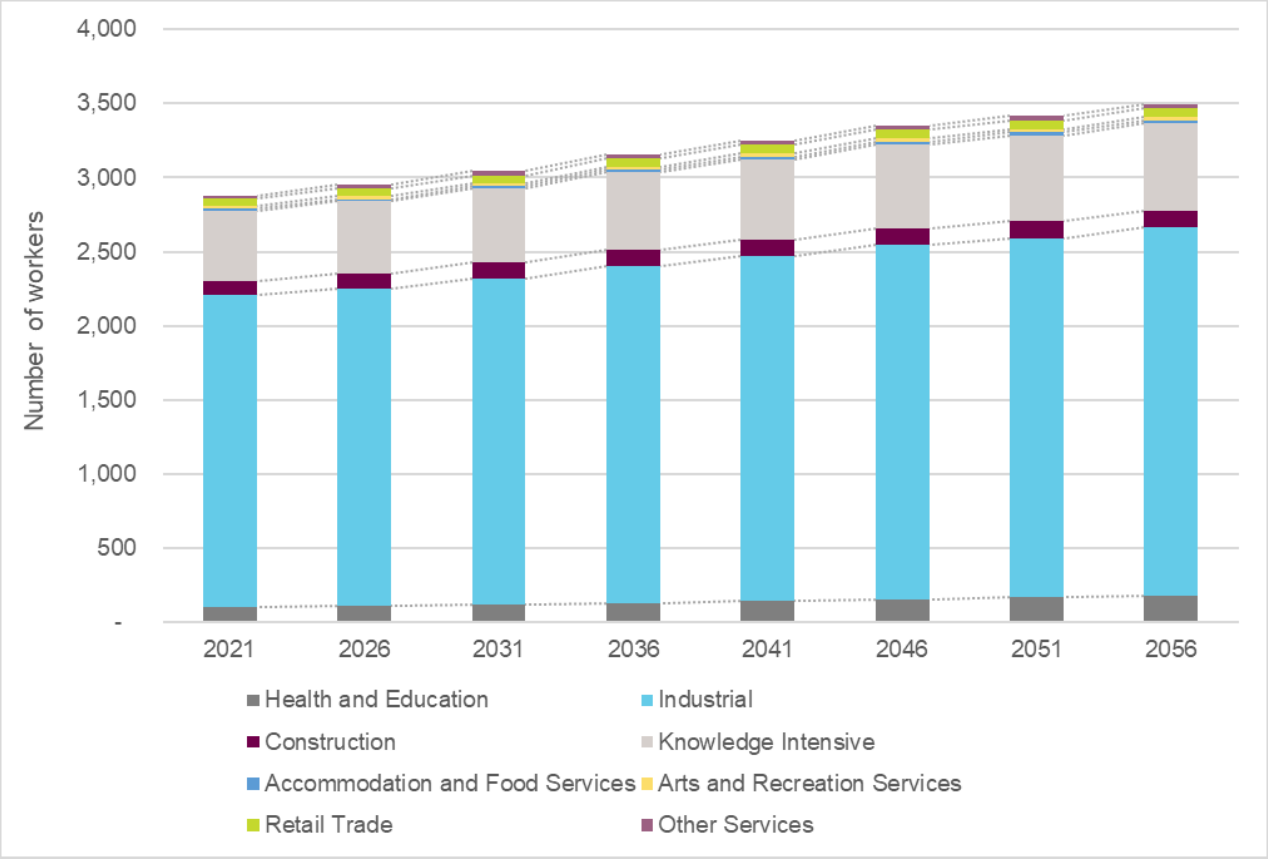

Figure 4-15 Melrose Park employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.6.3 Access and transport

The Melrose Park precinct is accessed primarily from Hope Street via Wharf Road. Additional access is provided from the west via Boronia Street. The land uses are mainly light industrial and commercial but with almost no heavy traffic movements with two per cent of traffic being heavy vehicle movements as shown in Table 4-18. However, there is freight route overlap close to the precinct at Hope Street, between Hughes Avenue and Wharf Road.

Table 4-18 Melrose Park traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24 hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Atkins Road (Boronia Street to Hope Street), Melrose Park	**596**	3%	**597**	1%	**18,408**	2%

Street parking is generally concentrated in the following areas along the project alignment:

- Hughes Avenue to Waratah Street (23, including 3 restricted 15-minute parking spaces)
- Waratah Street to Hughes Avenue (31 spaces)
- Hope Street to Mary Street (17 spaces, including nine 15-minute school parking spaces)
- Mary Street to Hope Street (19 spaces)
- Hope Street to new light rail alignment (12 spaces)
- Ermington Boat Ramp (62 spaces, including two accessible parking spaces).

The closest train station is Meadowbank on the T9 Northern Line to the east. Additionally, Melrose Park is serviced by the 524 – Parramatta to Ryde via West Ryde bus route.

4.7 Wentworth Point precinct

4.7.1 Land use

Located on the Parramatta River, Wentworth Point is a newly developed high-density residential precinct with a range of mixed land uses. Land uses consist of newly built (or proposed) high density residential developments and some industrial land. Planning within the precinct is governed by:

- State Environmental Planning Policy (Precincts – Central River City) 2021
- Auburn Local Environmental Plan 2010 and Wentworth Point Development Control Plan 2014.

As shown in Figure 4-16, the project site extends through RE1 Public Recreation, B4 Mixed Use, E3 Environmental Management and R4 High Density Residential, with the Deferred Matter area being the subject of the Sanctuary Wentworth Point development.

While many existing lots are already developed (70 per cent of the precinct's planning capacity is already used), there has been sufficient uplift and investment in the precinct generally to ensure the remaining constrained sites are likely to be renewed, particularly with ongoing transport investment. The Sanctuary Wentworth Point development by Sekisui House is underway and will include one, two and three-bedroom apartments on the above ground levels and commercial and retail uses on the ground floor.

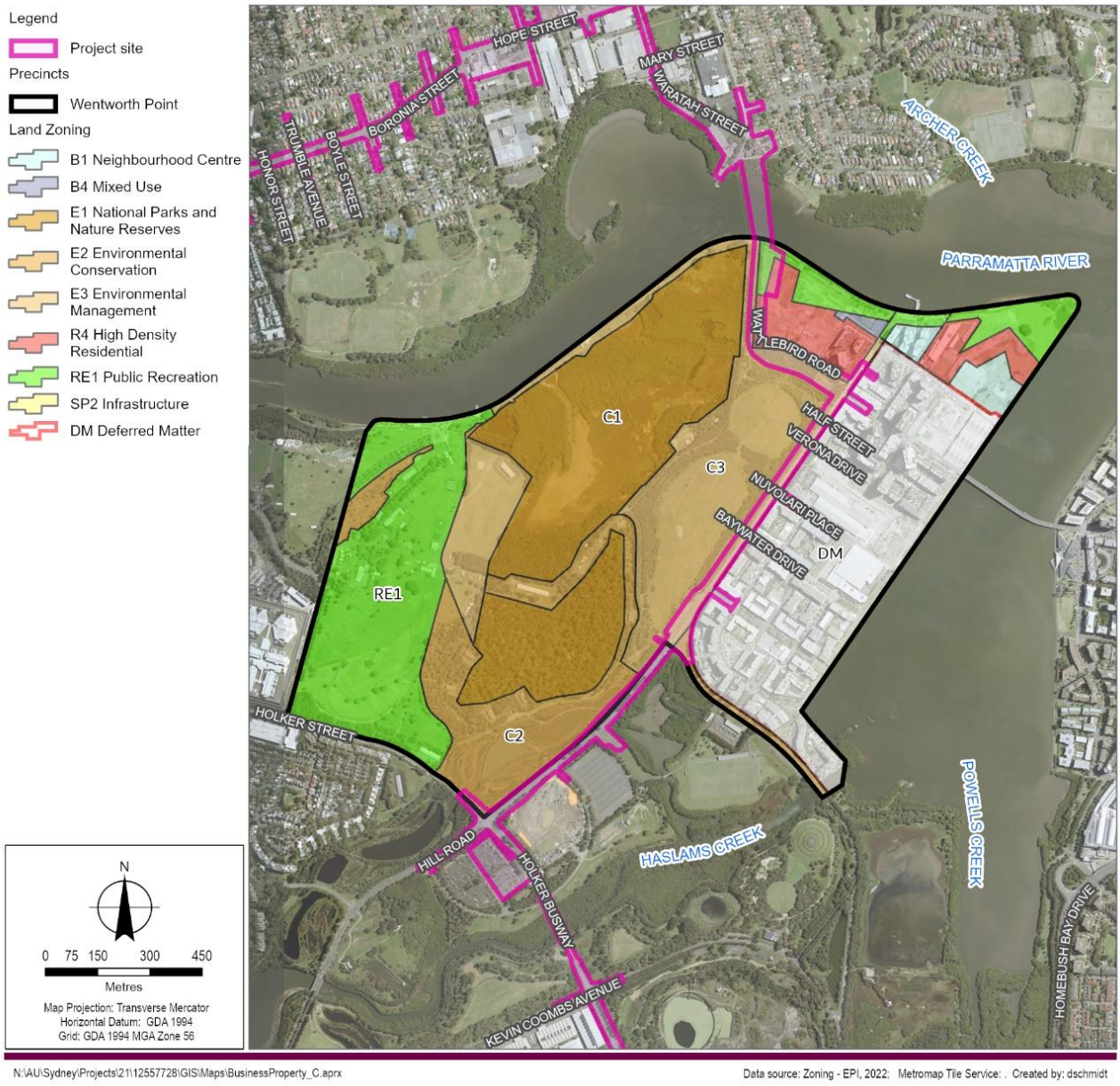

Figure 4-16 Wentworth Point precinct land use zoning

4.7.2 Business profile and forecasts

Because the precinct is both residential focused and currently under development, many of the jobs and businesses are focused on serving the local population. Figure 4-17 shows that there is a roughly even split between population services and knowledge intensive jobs and businesses, representing 44 per cent and 43 per cent of jobs, respectively.

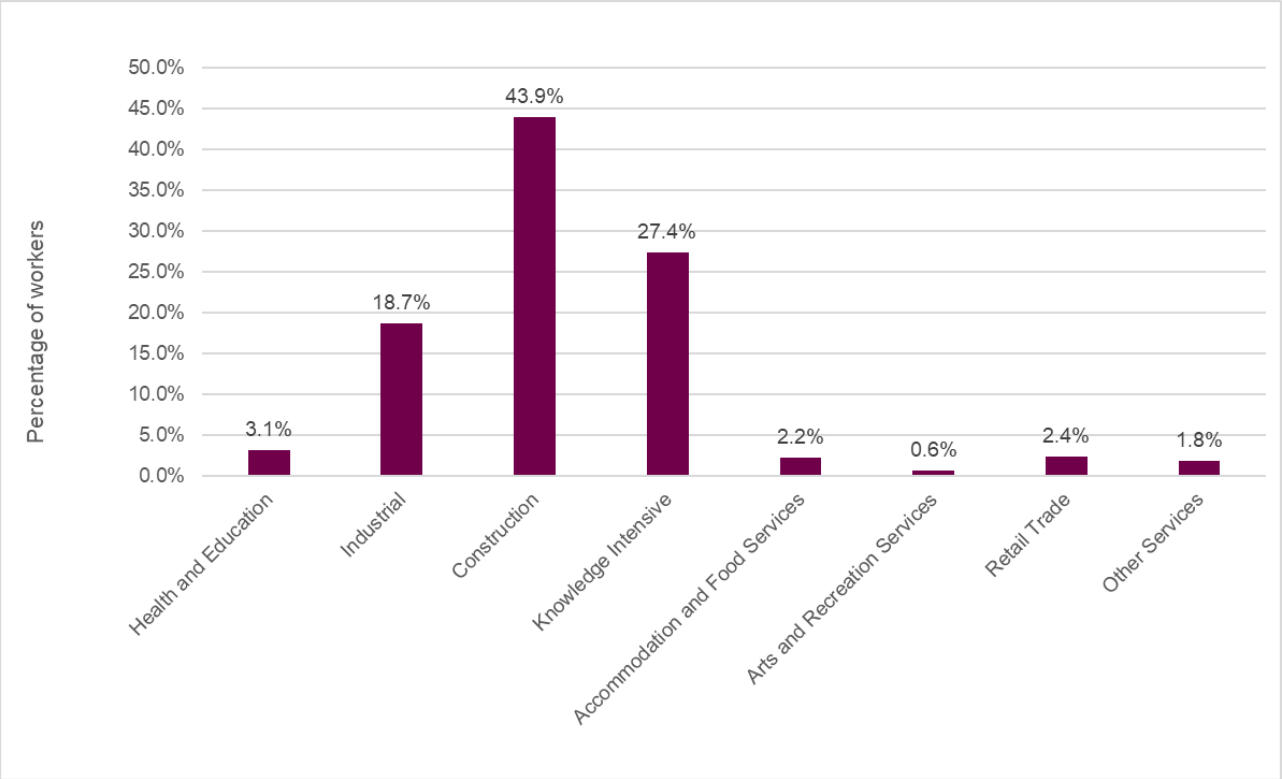

Figure 4-17 Wentworth Point employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

Specifically, construction jobs and government are the largest two employers as is shown in Table 4-19. Over the long term it is expected that these would reduce as construction on residential development would cease and businesses and jobs shift towards providing services to the local population.

Table 4-19 Wentworth Points top 10 employing industries

Industry	Employment
Construction	249
Public Administration and Safety	182
Professional, Scientific and Technical Services	59
Wholesale Trade	42
Rental, Hiring and Real Estate Services	32
Administrative and Support Services	28
Transport, Postal and Warehousing	23
Retail Trade	20
Accommodation and Food Services	16
Health Care and Social Assistance	10

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

Going forward, employment is expected to grow from around 700 jobs to just over 1,000 jobs by 2056. As illustrated in Figure 4-18, population services businesses and jobs are expected to flatten by 2031 while knowledge-based jobs are expected to keep growing. Concerns of businesses in this area would likely focus on practical issues like parking, access, traffic detours, etc.

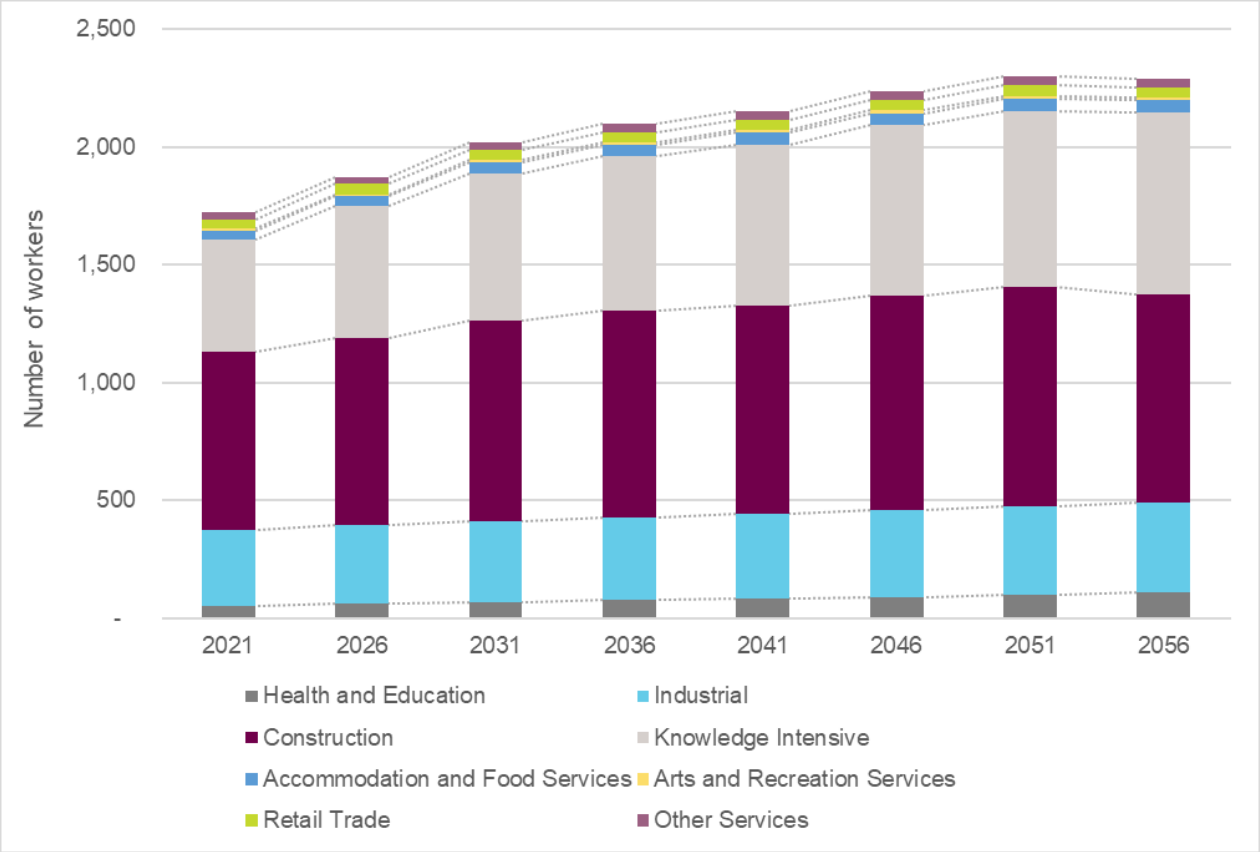

Figure 4-18 Wentworth Point employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.7.3 Access and transport

Wentworth Point is primarily accessed via Hill Road and the Bennelong Parkway. Further south, there are connections to the M4 Motorway, Silverwater Road via Holker Street, and Homebush Bay Drive via Australia Avenue. Due to its distance to Sydney Olympic Park and ongoing residential construction, the precinct receives additional heavy traffic movements because of freight interfaces at Hill Road, between Burroway Road and Holker Busway, with Table 4-20 showing five per cent of traffic is heavy vehicle movements.

Table 4-20 Wentworth Point traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24 hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Hill Road (Bennelong Parkway to Holker Street, Sydney Olympic Park), Wentworth Point	**1,346**	6%	**1,678**	4%	**46,672**	5%

The Woo-la-ra car park is located on the western side of Hill Road and comprises four-hour restricted parking and accessible parking. Street parking is generally concentrated in the following areas along the project alignment:

- Hill Road between Footbridge Boulevard to Bennelong Parkway (70 spaces).

There is currently no rail station within the precinct. The closest station is Rhodes Station on the T9 Northern Line across the Bennelong Bridge to the east. From Wentworth Point, Rhodes Station can be accessed via walking, cycling, two public bus services (routes 533 and 526), or the Baylink shuttle bus. The walking distance via Bennelong Bridge is around two kilometres (25 minutes) while the travel time by bike or bus is around 10 minutes.

Wentworth Point is serviced by ferry via Sydney Olympic Park Wharf, which is located on the northern end of Hill Road. Sydney Olympic Park Wharf is on the F3 Parramatta River route, between Circular Quay and Parramatta. The wharf is accessible by walking, cycling, public bus services (routes 526), or the Baylink shuttle bus.

4.8 Sydney Olympic Park precinct

4.8.1 Land use

The Sydney Olympic Park precinct is characterised by a mix of parkland, major sporting facilities, and high-density mixed-use commercial and residential development. The project site extends through RE1 Public Recreation, E2 Environmental Conservation and B4 Mixed Use zones as shown in Figure 4-19. The mixed-use development is predominantly concentrated around Dawn Fraser Avenue within the southern section of the Sydney Olympic Park precinct.

The draft *Sydney Olympic Park Vision and Strategy 2050* (Sydney Olympic Park Authority, 2021) plans for the revitalisation of Sydney Olympic Park through the development of a new town centre, education facilities, increased open space, additional residential dwellings, and jobs. Some key developments in the precinct include:

- a new mixed use residential, commercial, and retail building including 229 apartments which is currently under construction at the corner of Olympic Boulevarde and Sarah Durack Avenue
- a State Significant Development proposal for two residential apartment buildings at 1 and 2 Murray Rose Avenue which is currently at the assessment stage. The design incorporates 280 apartments across two sites and activates ground floor retail and public realm
- a State Significant Development proposal is at the environmental assessment stage for the development two 30 storey mixed use towers at 2 Australia Avenue including hotel, community, retail, offices, and residential space.

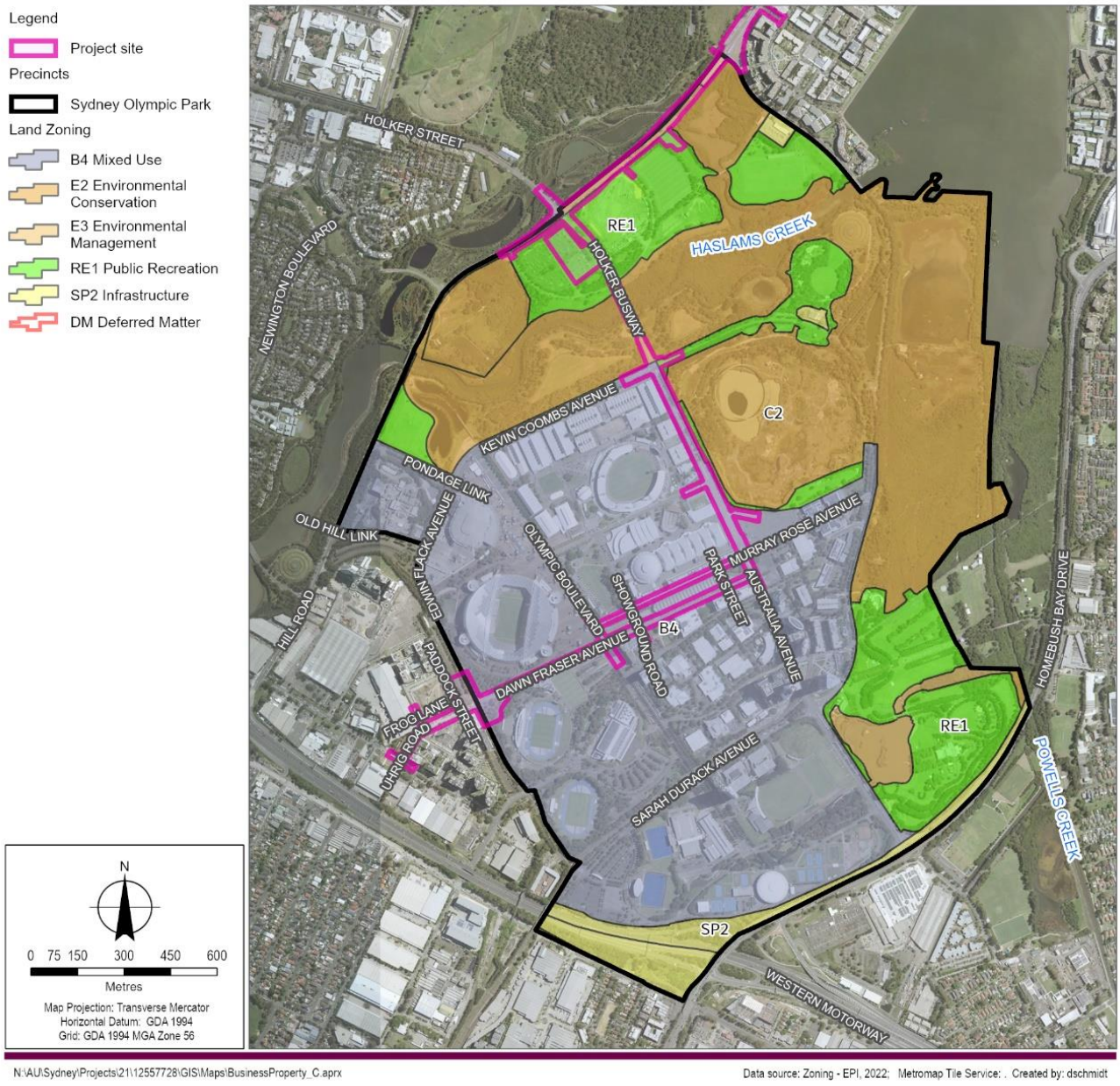

Figure 4-19 Sydney Olympic Park precinct land use zoning

4.8.2 Business profile and forecasts

Due to the unique nature of the precinct and its medium density business zoning, the precinct is home to numerous knowledge intensive businesses and jobs, particularly those in professional sports and recreation. Additionally, given its role as an entertainment destination, there are numerous services businesses and jobs as well. In total, the top employment sector in the precinct is categorised as knowledge intensive (51 per cent) as shown in Figure 4-20. In addition to the major sports and entertainment facilities, businesses in the precinct include:

- Cricket NSW
- NSW Institute of Sport
- Sydney Sports Medicine Centre
- Novotel

- Pullman
- Lion Nathan
- Toyota
- Samsung
- Thales
- PCYC state head office
- a number of restaurants and cafés along Dawn Fraser Avenue and Australia Avenue.

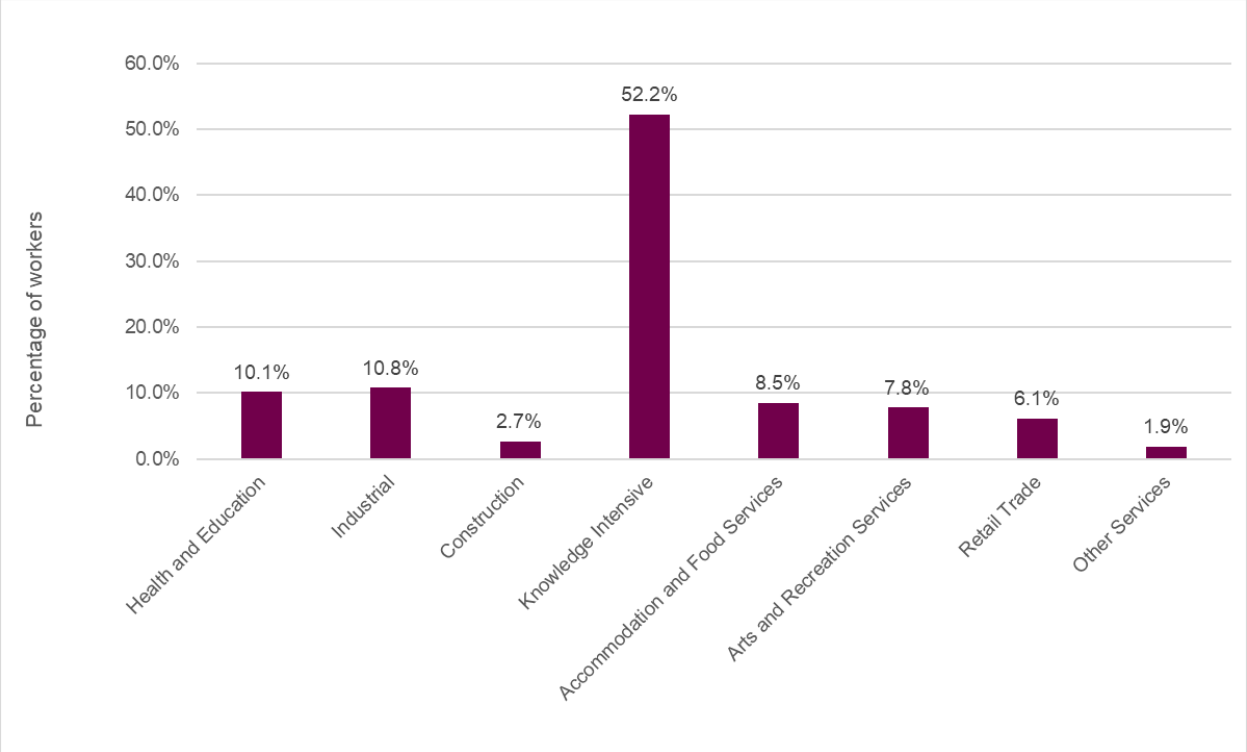

Figure 4-20 Sydney Olympic Park employment profile

Source: Transport for NSW, TPZ Employment Forecast (2019)

Major jobs and business industries within the precinct include professional services and financial services as shown in Table 4-21. This is followed by accommodation and food services, and recreation.

Table 4-21 Sydney Olympic Park top 10 employing industries

Industry	Employment
Professional, Scientific and Technical Services	4,799
Financial and Insurance Services	4,253
Accommodation and Food Services	2,307
Arts and Recreation Services	2,115
Public Administration and Safety	1,818
Retail Trade	1,653
Education and Training	1,560
Health Care and Social Assistance	1,200
Rental, Hiring and Real Estate Services	1,184
Wholesale Trade	1,142

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

The precinct is expected to grow from just over 27,000 jobs to around 48,000 jobs by 2056. This growth is demonstrated in Figure 4-21, with knowledge intensive employment being the largest employment industry. In line with the long-term strategic vision for the precinct, redevelopment, and densification of commercial space in the precinct is expected to help grow the number of knowledge intensive jobs. Additionally, it is expected that population services will increase over the same period to support the increase in local workforce; however, health, education and industrial sectors are expected to remain steady.

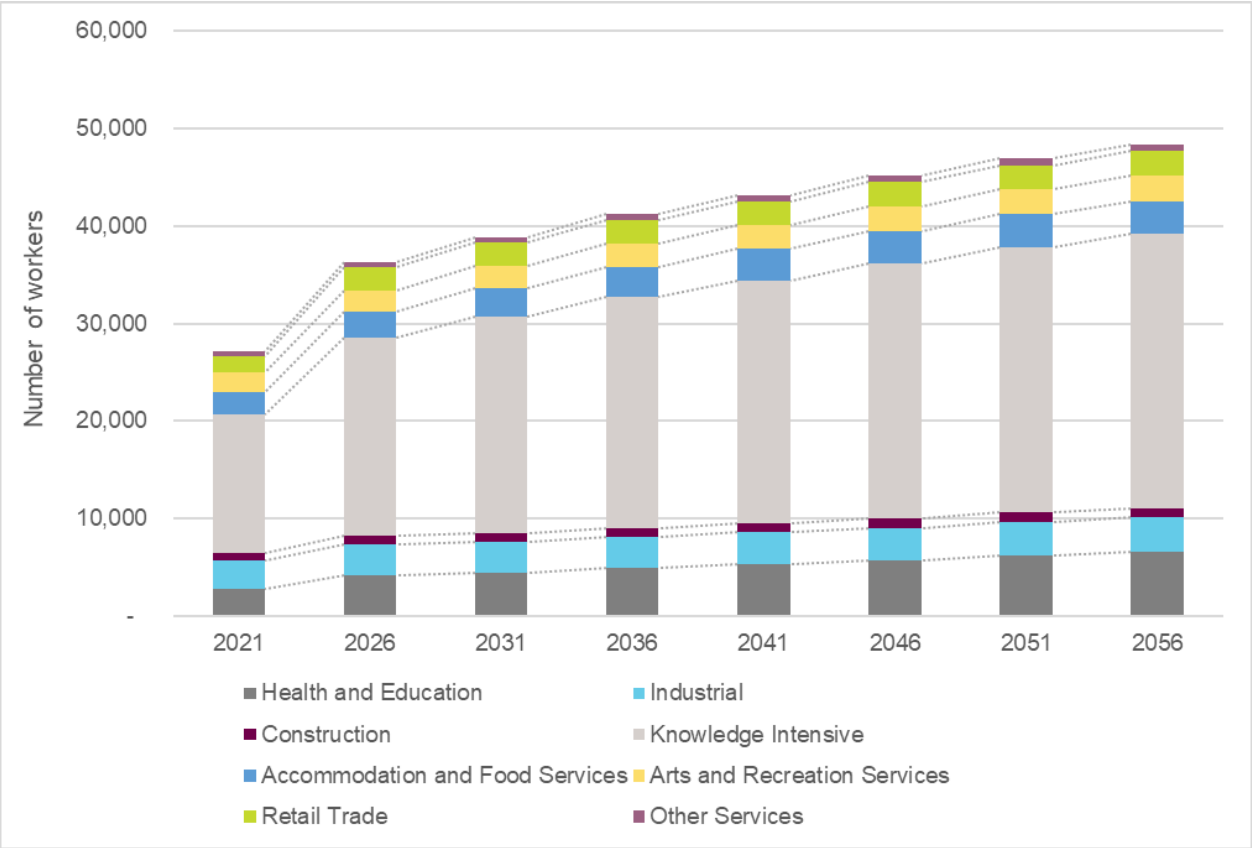

Figure 4-21 Sydney Olympic Park employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.8.3 Access and transport

Sydney Olympic Park is primarily accessed via connections from the M4 Motorway, Silverwater Road via Holker Street, and Homebush Bay Drive via Australia Avenue. As shown in Table 4-22, the unique land use composition of Sydney Olympic Park means the precinct receives additional heavy traffic movements because of the freight route at Hill Road, between Burroway Road and Holker Busway and Uhrig Road, between Dawn Fraser Avenue/Edwin Flack Avenue and Carter Street with three per cent to nine per cent of traffic being heavy vehicles.

Table 4-22 Sydney Olympic Park traffic volumes

Road section and precinct	Weekday AM peak (08:00 to 09:00)		Weekday PM peak (17:00 to 18:00)		Weekday daily (24 hour period)	
	Total volume (veh)	% HV	Total volume (veh)	% HV	Total volume (veh)	% HV
Holker Street & Holker Busway, Sydney Olympic Park	**1,018**	4%	**1,274**	3%	**35,380**	3%
Australia Avenue (Dawn Fraser Avenue to Parkview Drive/Herb Elliott Avenue), Sydney Olympic Park	**879**	6%	**949**	5%	**28,210**	5%
Dawn Fraser Avenue (Showground Road to Olympic Boulevard), Sydney Olympic Park	**273**	9%	**239**	9%	**7,888**	9%

In terms of car parking facilities, the precinct contains on-street parking and several off-street parking areas, including multi-storey car parks. Street parking contains a mix of paid parking period time restrictions on Dawn Fraser Avenue, with clearways in operation during special events, while designated off street parking, provide for longer term and secure parking requirements within the precinct.

Excluding paid car parking structures, street parking is concentrated in the following areas along the project alignment:

- Dawn Fraser Avenue between Australia Avenue to Showground Road (22 spaces, including restricted parking and three loading zone spaces)
- Dawn Fraser Avenue between Showground Road to Olympic Boulevard (six spaces)
- Dawn Fraser Avenue between Olympic Boulevard to Edwin Flack Avenue (41 spaces, including 13 truck zones and one accessible space)
- Dawn Fraser Avenue between Edwin Flack Avenue to Olympic Boulevard (44 spaces including four accessible spaces)
- Dawn Fraser Avenue between Olympic Boulevard to Showground Road (12 spaces)
- Dawn Fraser Avenue between Showground Road to Australia Avenue (22 spaces).

The T7 Olympic Park Line provides a ‘shuttle service’ to Lidcombe, with the main access point to Olympic Park Station located adjacent to Dawn Fraser Avenue. At Lidcombe Station, customers can then connect to the T1 North Shore & Western, T2 Inner West & Leppington and T3 Bankstown lines. It is noted that Sydney Olympic Park will be serviced by Sydney Metro West upon completion. Additionally, the following bus routes service Sydney Olympic Park:

- 525 – Burwood to Parramatta via Sydney Olympic Park
- 533 – Rhodes to Burwood Shopping Centre
- 526 – Chatswood to Sydney Olympic Park via Rhodes and North Ryde.

4.9 Carter Street precinct

4.9.1 Land use

The Carter Street precinct, extending along Uhrig Road, was formerly characterised by light industrial uses. In 2015, the Carter Street precinct was rezoned for mixed use/high density residential purposes, including 5,500 new dwellings, a new village centre, a site for a new primary school and new public open space. Figure 4-22 shows that the project site extends through a mix of B4 Mixed Use, B2 Local Centre and B6 Enterprise Corridor zones. The precinct is currently undergoing construction and contains very few operating businesses. Notwithstanding this, there are some businesses located along the western side of Edwin Flack Avenue including the Ibis Budget Hotel, Trackside Convenience Store, The Burger & Salad Haus and Quest Hotel.

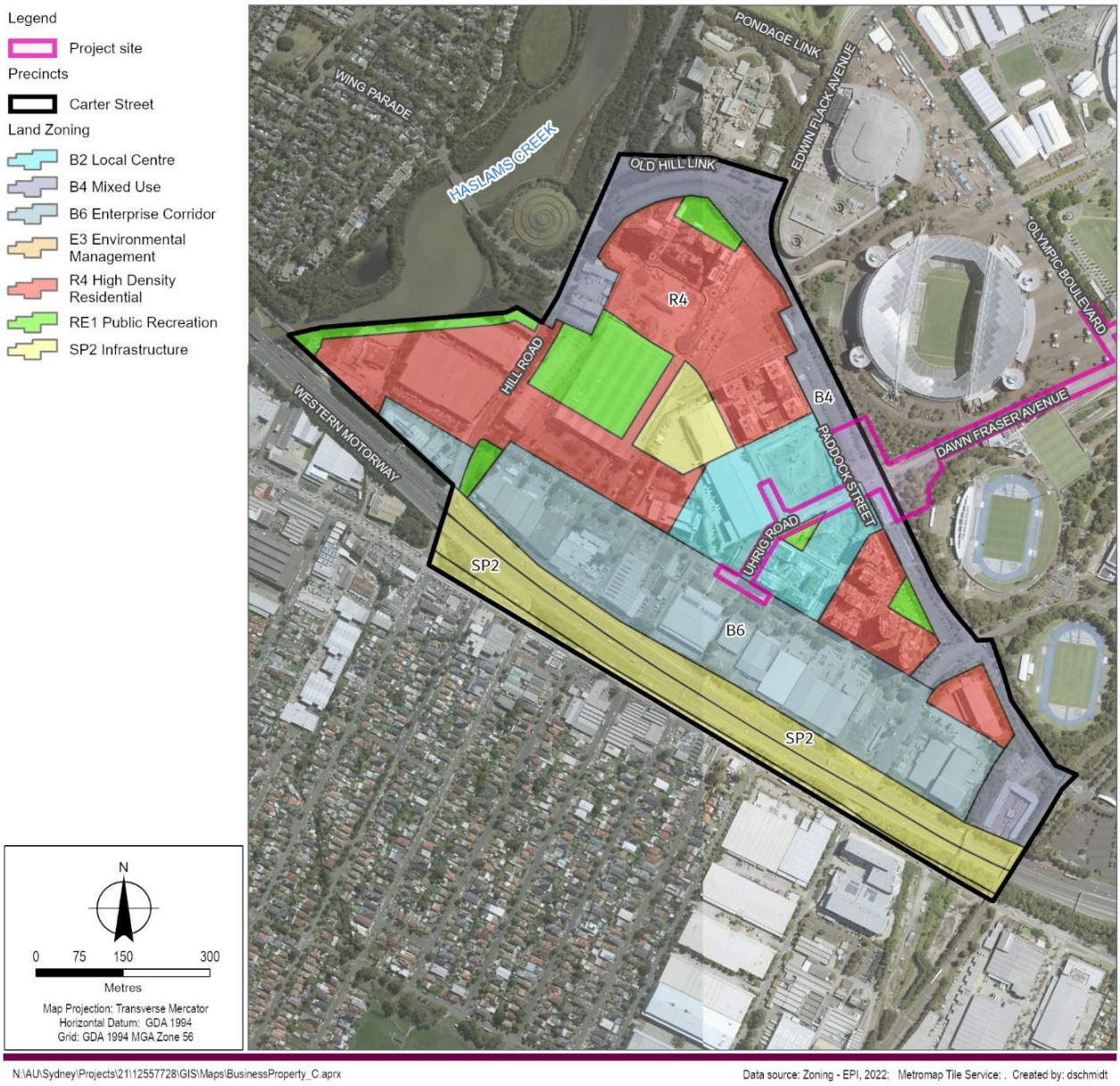

Figure 4-22 Carter Street precinct land use zoning

4.9.2 Business profile and forecasts

As noted in section 4.9.1, Carter Street has been rezoned for mixed use/high density residential purposes which are currently undergoing construction. Figure 4-22 reflects the previous industry composition of the precinct, with light industrial being the most prominent industry. Additionally, there are some population services along Carter Street and the Western side of Edwin Flack Avenue, supporting the local workforce through retail and food services.

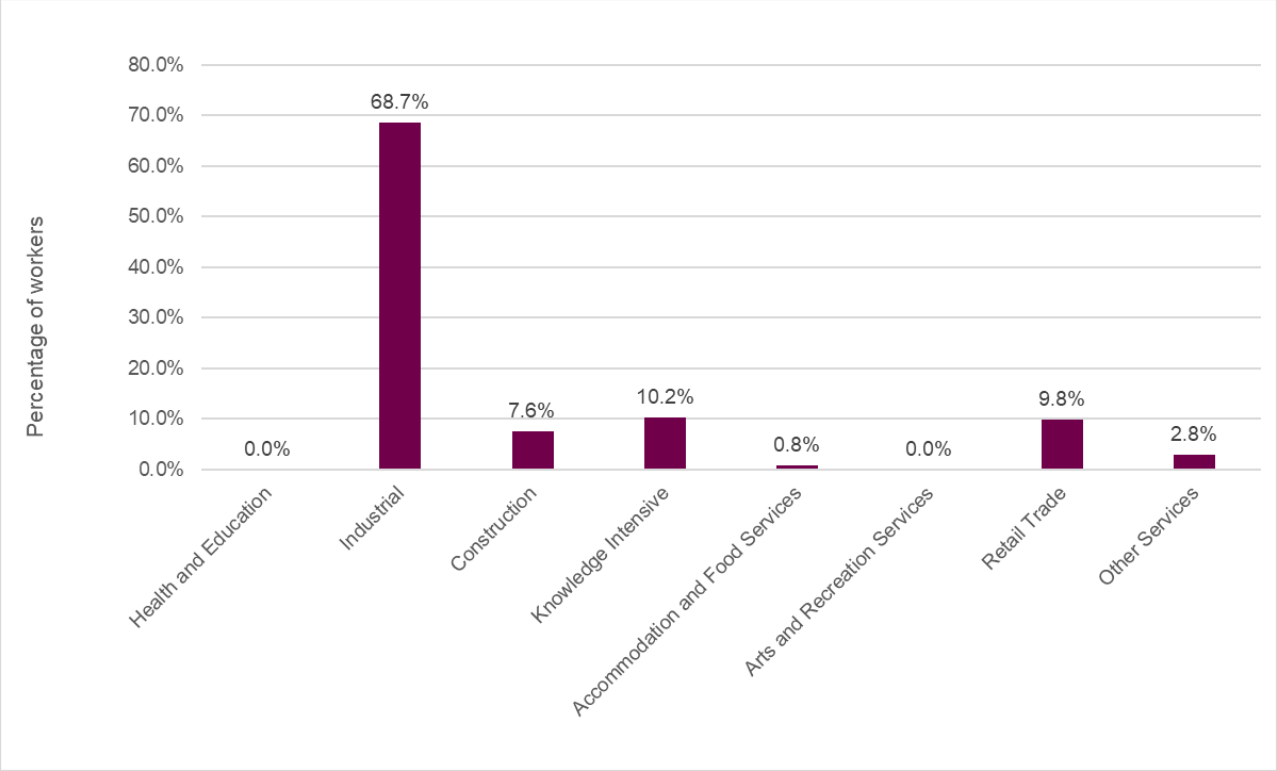

Figure 4-23 Carter Street employment profile

As the precinct was previously an industrial complex, many of the businesses were related to warehousing, transport, manufacturing, utilities, and wholesale trade with some additional retail services. This is reflected in Table 4-23 which provides employment figures for the various industries.

Table 4-23 Carter Street industry profile

Industry	Employment
Transport, Postal and Warehousing	480
Food Product Manufacturing	119
Retail Trade	111
Construction	86
Wholesale Trade	84
Administrative and Support Services	79
Electricity, Gas, Water and Waste Services	78
Other Services	32
Public Administration and Safety	18
Professional, Scientific and Technical Services	16

Source: Australian Bureau of Statistics (ABS), Counts of Australian Businesses, including Entries and Exits (2021)

The precinct is expected to grow to just under 1,400 workers by 2056 (see Figure 4-24). This is anticipated to be driven by the growth in industrial workers and knowledge workers. It is important to note that the Carter Street Master Plan has recently been released and is intended to guide the development of the area. Under the new Master Plan, Carter Street will be a green and vibrant new community with open space, a village centre and quick connections to Sydney Olympic Park, the M4 Western Motorway, and the future Sydney Metro West. As a result, the type of future workers is anticipated to change as the precinct changes use.

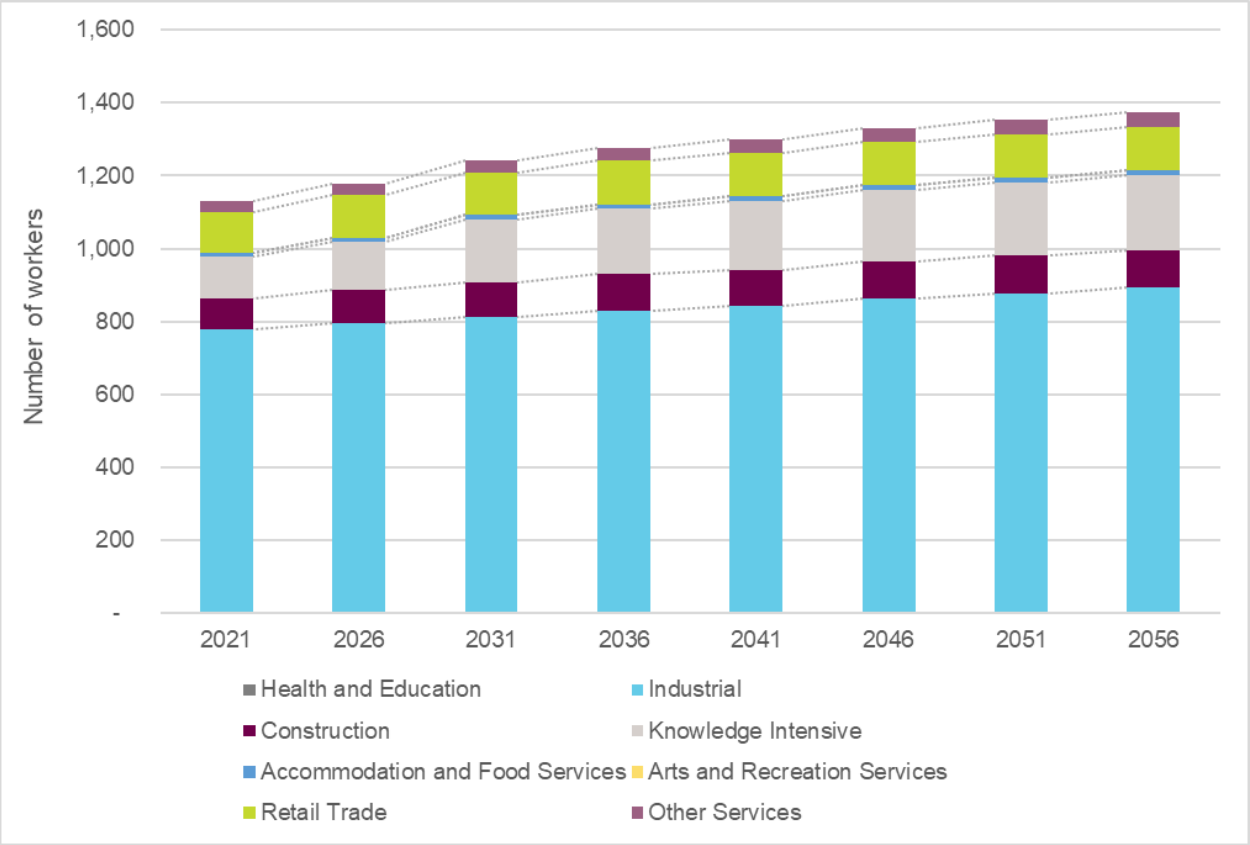

Figure 4-24 Carter Street employment forecast

Source: Transport for NSW, TPZ Employment Forecast (2019)

4.9.3 Access and transport

Carter Street is accessed from three main connection points. To the east, it can be accessed via Birnie Avenue/Edwin Flack Avenue, which provides connection to Homebush Bay Drive. From the west, the precinct can be accessed from Hill Road, which provides connection to the M4 Motorway. Additionally, there is a central access point via Uhrig Road through to Olympic Pak Station, Stadium Australia and the shops and services along Dawn Fraser Avenue.

The road network consists of on-street parking facilities with restricted period parking during special events. Hill Road in the north-western section of the Carter Street precinct has a designated shared path for pedestrians and cyclists.

In terms of car parking facilities, the precinct contains predominantly on-street parking. Street parking consists of 62 unrestricted parking spaces along the project alignment. Given much of the area is undergoing construction, with new streets being built, it is unclear what the future parking composition will be.

The nearest train service to this precinct is the T7 Olympic Park Line which provides a 'shuttle service' to Lidcombe, with the main access point to Olympic Park Station located adjacent to Dawn Fraser Avenue. At Lidcombe Station, customers can then connect to the T1 North Shore & Western, T2 Inner West & Leppington and T3 Bankstown lines. It is noted that the Carter Street precinct will be serviced by Sydney Metro West upon completion via the Sydney Olympic Park Sydney Metro West Station which would be located to the south of the existing Olympic Park Station.

5 CONSULTATION

Stakeholder and community engagement has heavily informed the Parramatta Light Rail project. This chapter provides a summary of community and stakeholder consultation undertaken for Parramatta Light Rail Stages 1 and 2, with specific reference to consultation with businesses owners and operators. Consultation activity undertaken for Stage 2, and research specific to this BIA is presented, along with key issues raised.

5.1 Parramatta Light Rail Stage 1 consultation

Transport for NSW carried out extensive stakeholder and community consultation as part of the EIS for Parramatta Light Rail Stage 1, which was placed on public exhibition from 23 August 2017 to 23 October 2017. The public exhibition was supported by a program of community and stakeholder engagement activities designed to raise awareness, provide information, and answer questions raised by both stakeholder and community members.

Consultation during public exhibition of the EIS included:

- consultation with 89 stakeholders including government agencies, businesses, industry bodies, tourism, and community groups
- seven EIS drop-in information sessions attended by over 270 community members including 35 businesses at a dedicated business EIS information session
- four community pop-up displays held at local events
- a four-page EIS brochure was developed and distributed online and in a letter box drop to 165,000 residential and commercial properties along the alignment as well as to government agencies and key stakeholders. The brochure was translated into four languages including Korean, Arabic, Mandarin, and Cantonese. 3,000 of the EIS brochures were distributed to the community and stakeholders at EIS information sessions, pop-up events and static displays
- a dedicated project website that was regularly updated. The website included an EIS Navigator – an interactive tool that provides key details on the EIS. During the EIS exhibition period there were over 17,000 visits to the website by the community
- advertisements were placed in 26 metropolitan and local newspapers announcing the EIS exhibition and where materials would be on display.

A total of 156 submissions were received during the public exhibition period (15 submissions from government and agencies and key stakeholders and 141 submissions from the community (including businesses, special interest groups and community action groups) (WSP and Jacobs, 2018). The summary of issues raised by businesses included:

- comments that the proposed route would result in many businesses closing during construction
- comments about the impacts on business owners associated with property acquisition
- comments that construction traffic impacts, such as road closures, property access restrictions and parking restrictions, would impact businesses
- concerns about cumulative impacts on access due to multiple construction projects (such as impacting Eat Street)
- concerns that business impacts would result in the loss of livelihood to owners and staff.

5.2 Parramatta Light Rail Stage 2 consultation

Following the NSW Government's announcement of the preferred route for Parramatta Light Rail Stage 2 in October 2017, early engagement commenced with NSW Government agencies, local governments, state-owned corporations and entities and major stakeholders from across the GPOP region.

The Community and Stakeholder Engagement Plan developed for the project outlines different phases of engagement, from early engagement prior to the scoping and preparation of the EIS, through to delivery and construction of the project.

A multi-phased consultation approach has been adopted for the project, including:

- **Phase 1 –** Consultation prior to preparation of the EIS
- **Phase 2 –** Consultation carried out during the preparation of the EIS and this BIA
- **Phase 3 –** Consultation to be undertaken during the exhibition of the EIS
- **Phase 4** – Ongoing consultation to be undertaken upon approval of the project during design, development and delivery.

The engagement activities and outcomes from Phases 1 and 2 are described in more detail in Appendix F (Community and Stakeholder Engagement Report) and are summarised in Chapter 8 (Community and stakeholder engagement) of the EIS, and the following sections. The outcomes of Phase 3 would inform the final project planning and approval phases, while the outcomes from Phase 4 would inform the construction delivery. The proposed approach to engagement in these phases is described in the Appendix F (Community and Stakeholder Engagement Report) and Chapter 8 (Community and stakeholder engagement) of the EIS.

5.2.1 Phase 1 – Consultation prior to preparation of the EIS

From January 2018 to September 2018 extensive community and stakeholder engagement activities were undertaken to support the early feasibility and planning stages of the project through several different forums.

Community engagement was conducted through the following activities.

- An online survey to capture community use of public transport as well as sentiment on the project was delivered between March 2018 and June 2018. The survey was placed on the Parramatta Light Rail website home page and promoted in the Parramatta Light Rail May 2018 newsletter, with 85,000 newsletters distributed. More than 150 responses were received which provided valuable insights.
- A total of 13 face-to-face formal community information sessions were held from March 2018 to June 2018 to engage with the community and provide information on the project. Over 1,600 community members attended the information sessions, which were held in areas including the Parramatta CBD, Rydalmere, Melrose Park, Ermington and Sydney Olympic Park.
- More than 20 community pop-up sessions were held between February 2018 and September 2019 at local community events, where the project team provided information on the project. Over 2,300 community members were engaged.

The above activities were supported by project communications including project newsletters, regular project website updates, email blasts and social media. A double-sided postcard to promote the community information sessions was distributed to over 15,000 homes and businesses, with an additional mail out to 6,000 homes and businesses in Newington.

Stakeholder engagement included the following activities:

- one-on-one engagement with multiple stakeholders including NSW Government departments and agencies, managers of key venues and destinations, local government and non-government organisations and business groups
- quarterly meetings with the Parramatta Light Rail Advisory Group to provide updates on progress of the project and discuss issues which would impact them (noting that some stakeholders overlapped both Parramatta Light Rail Stage 1 and 2, and in October 2018, membership was revised to include Stage 2 specific stakeholders, with the group renamed to the Greater Parramatta Group)
- formal consultation with 15 major landowners in the Rydalmere industrial precinct and Camellia.

- consultation with major landowners in the Camellia, Melrose Park and Wentworth Point precincts on the design and integration of the project with the existing environment to ensure visions for the area can still be achieved.

5.2.2 Phase 2 – Consultation during preparation of the EIS

Detailed information about the various community and stakeholder activities and tools employed during the EIS preparation is provided in Appendix F (Community and Stakeholder Engagement Report) of the EIS and summarised in Chapter 8 (Community and stakeholder engagement) of the EIS.

Engagement activities during Phase 2, particularly from June 2021 through to September 2022, sought to increase project awareness, and further understand community and stakeholder issues and concerns which helped to refine the project and inform the EIS process.

Key engagement and consultation activities relevant to the BIA (and which are discussed further in section 5.3) include:

- a business survey conducted between 17 and 25 February 2022 with a priority placed on door knocking the 65 businesses located closest to the proposed construction activities. A total of 24 participants commenced the survey, with 21 surveys completed in full
- a social impact and outcomes survey that was undertaken to inform Technical Paper 7 (Social Impact Assessment). The online survey targeted the broader community between November 2021 and January 2022. A total of 885 participants commenced the survey, with 564 surveys completed in full
- a Have Your Say survey was available for community members and businesses to provide feedback between May to July 2022. A total of 1,194 surveys were completed in full (including 41 respondents (around three per cent), who identified they were a business owner/operator).

5.3 Key issues and outcomes of consultation to inform BIA

5.3.1 Phase 1 surveys

Between 2016 and 2021, businesses were consulted as part of the Community Attitudes to Parramatta Light Rail survey (conducted each November). The survey was compiled by Newgate Research on behalf of the NSW Government and aimed to capture public sentiment towards Parramatta Light Rail by surveying residents and business owners. Surveys included a combination of research methodologies including telephone interviews, online (self-complete) surveys and in-person.

Most businesses had a positive sentiment towards the project upon operation. However, responses received from businesses indicated the following issues or areas of concern:

- impacts during construction on trade
- ensuring convenient stop locations
- construction impacts increased after construction on Stage 1 began
- increasing traffic congestion both during construction and operation.

While this BIA has utilised data from the 2019 and 2020 surveys that were undertaken prior to the preparation of the Stage 2 EIS, it is noted that consultation and sentiment surveys with businesses is ongoing for both Stage 1 and Stage 2 through the planning and construction phases.

5.3.2 Phase 2 business survey

The February 2022 business survey encompassed a range of questions relating to the existing business, access and delivery requirements, and perceptions and concerns regarding the construction and operational phases of the project. Information collected from each business/respondent was collated into a database for analysis.

The assessment involved the identification and evaluation of potential changes to existing business conditions due to the project's design, construction, or operation and included an assessment of direct and indirect effects/impacts such as, but not limited to, changes to passing trade, noise and vibration, parking availability, road network alterations, pedestrian access, employment and recruitment, business access and connectivity, loss of power and utilities, and reduced amenity.

5.3.2.1 Business characteristics and existing sensitivities

Precincts like the Parramatta CBD, Wentworth Point, and Sydney Olympic Park are home to a range of service, accommodation, food, and retail businesses. While more industrial precincts like Camellia, Rydalmere and Melrose Park are home to businesses associated with construction, transport, wholesale trade, and manufacturing.

Consistent with the above, and the industry profiles detailed in section 4, the businesses who provided a response to the survey reflected diverse industries who have a range of workers, visitors, needs and sensitives. Figure 5-1 provides a graph of the types of industries captured in the survey, with the most common sectors of respondents being wholesale and retail trade (33 per cent) and services (29 per cent).

Overall, around two thirds of participants have been in their location for over three years, whilst 42 per cent had been there for over 10 years. Most businesses leased their properties (57 per cent), whilst a third owned their property.

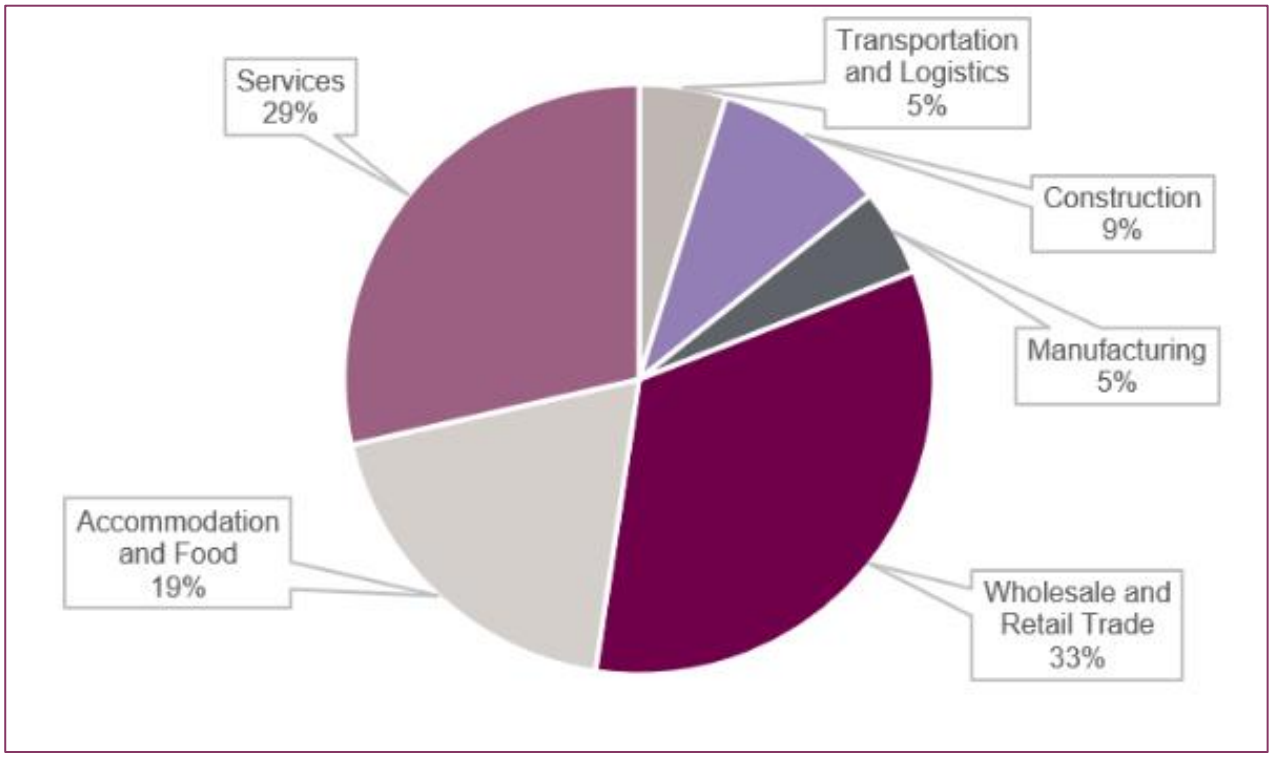

Figure 5-1 Sector breakdown of business survey respondents

As summarised in Table 5-1, all businesses surveyed trade on a standard Monday to Friday schedule. However, around 20 per cent of businesses also trade on the weekend, more likely in areas around the Parramatta CBD or Wentworth Point where there is a larger concentration of retail.

Table 5-1 Business trading days

Answer	% Respondents
Monday	100.0%
Tuesday	100.0%
Wednesday	100.0%
Thursday	100.0%
Friday	100.0%
Saturday	28.57%
Sunday	19.05%

Additionally, as summarised in Table 5-2, only 10-20 per cent of businesses operate during the standard/long trading hours.

Table 5-2 Business trading hours

Answer	% Respondents
Standard: 9am - 5pm	9.52%
Long: 7am - 5pm	23.81%
Other (please specify)	66.67%

Most businesses captured in the survey sample were small to medium businesses with less than 50 employees as shown in Table 5-3.

Table 5-3 Business employee numbers

Answer	% Respondents
Less than 10	42.86%
10 – 50	47.62%
50 – 100	4.76%
100+	4.76%

As outlined in Table 5-4, some 81 per cent of respondents identified that private vehicle (car/van) was their primary travel mode, with only 19 per cent identifying public transport. The heavy dependence on private vehicle is likely a result of the limited transport options servicing the area. The high vehicle usage also highlights the difficulties managing traffic during construction and operation of the project. No respondents identified active transport modes as a means of commuting to work.

Table 5-4 Staff and customers mode of travel to business

Answer	% Respondents
Private vehicle (car, van)	80.95%
Public transport (bus, train, ferry)	19.05%
Active transport (bike, ebike, walking)	0.0%

Similarly, as summarised in Table 5-5, very few businesses (24 per cent) rely on foot traffic for passing trade, instead it is more likely that customers drive to the business or otherwise send couriers. Those that have some reliance or total reliance on foot traffic are more concentrated in areas like the Parramatta CBD, Wentworth Point or Sydney Olympic Park where there are greater numbers of ground floor retail.

Table 5-5 Trade from passing foot traffic

Answer	% Respondents
We do not rely on foot traffic	76.19%
Some reliance	19.05%
Totally reliant	4.76%

Further, as summarised in Table 5-6, and likely reflective of the diverse range of industries and land uses, almost 50 per cent of respondents identified on-street parking as being important for their trade.

Table 5-6 Business that rely on on-street parking for trade

Answer	% Respondents
Yes	52.38%
No	47.62%

That said, virtually all respondents (95 per cent) indicated that they rely on access for service vehicles. This is captured in Table 5-7. Those businesses not requiring access would likely relate to service businesses such as professional services, particularly where a business leases a space where these matters are managed by the landlord and so access does not directly impact on their business operations.

Table 5-7 Deliveries or services that require vehicle access (e.g. waste pick up)

Answer	% Respondents
Yes	95.24%
No	4.76%

5.3.2.2 Perceptions of construction related effects

Respondents were asked to rate how sensitive their business may be to a range of potential construction-specific effects, from very significant, significant, neutral, or insignificant, and the results are shown in Table 5-8. Some of the key areas identified were traffic and parking changes including increases in heavy vehicle traffic, road alterations, access changes and detours, travel time delays and congestion and reduced parking.

Table 5-8 Business' perceived susceptibility to potential construction-specific effects

Answer	Insignificant	Neutral	Significant	Very Significant
Increased heavy vehicle traffic	29%	10%	14%	48%
Increases in light vehicle traffic	14%	19%	33%	33%
Road alterations, access changes and detours	24%	5%	5%	67%
Travel time delays	29%	10%	24%	38%
Congestion	29%	10%	24%	38%
Vibration	10%	48%	24%	19%
Increases in dust	24%	33%	29%	14%
Increased noise	10%	48%	24%	19%
Unpleasant odours	14%	33%	33%	19%
Reduced parking	38%	24%	10%	29%
Reduced visibility/passing trade	19%	33%	0%	14%
Can provide good/services for project construction	14%	14%	48%	24%

5.3.2.3 Perceptions of operational related effects

Respondents were asked what effects the operation of the project could have on a range of aspects (yes or no response) and the results are shown in Figure 5-2. Potential changes to services, deliveries, employee, and customer access were among the top concerns and correspondingly how this would impact business revenue. The prominence of concerns relating to servicing and deliveries highlight the sensitivities businesses may have during construction of the project.

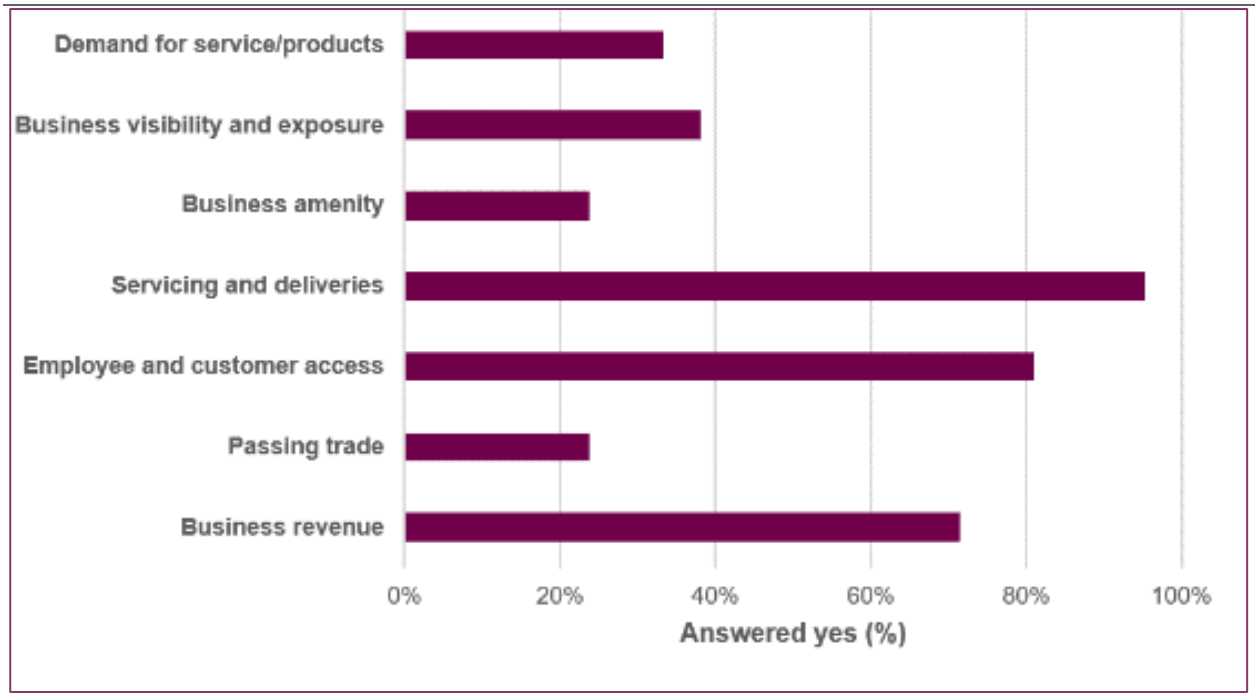

Figure 5-2 Potential effects of operation to businesses

5.3.3 Phase 2 social impacts and outcomes survey

Transport for NSW conducted the social impacts and outcomes online survey between November 2021 and January 2022 to inform the social impact assessment for the EIS (refer Technical Paper 7 (Social Impact Assessment) for more detailed survey analysis). Table 5-9 provides an overview of the key issues raised by respondents who identified as a business owner/operator and where these issues are addressed in this BIA.

Table 5-9 Overview of issues raised by businesses in social impacts and outcomes survey

Key issue	Overview of key issues raised	Where addressed in BIA
Transport and traffic	• Concerns regarding the increase in traffic during construction negatively impacting business productivity and delivery scheduling • Concerns regarding loss of on-street parking	Section 7.3.1 Road network impacts during construction Section 7.3.4 and section 8.1.1 for construction and operation parking impacts respectively
Proximity to alignment	• Both positive and negative comments provided. Businesses closer to the project alignment were generally in favour of the proposed route. Businesses who were not directly along the project alignment were less satisfied.	Section 8.1 discussed the positive and negative impacts to businesses during operation
Local amenity	• Impacts to local amenity impacts during construction were raised as a potential negative for businesses that rely on certain levels of amenity to be maintained (such as cafes and hotels). However, respondents also generally viewed the street upgrades and pedestrianisation provided by the project as a positive.	Section 7.4 and section 7.5 assess noise and visual amenity impacts during construction Section 8.3 provides information on operational visual amenity benefits
Pedestrian safety	• Impacts to pedestrian safety was raised by a few respondents as potential issue in deterring customers. Respondents were optimistic about the overall streetscape improvements	Section 7.3.3 considers pedestrian safety Section 8.1.2 discusses the positive active transport (cycling and pedestrian network) benefits

As part of this survey, a comment box was provided for respondents to include additional detail on how they may be impacted by the project. Specific themes that were identified by local businesses in this section of the survey included:

- property acquisition and associated relocation costs and time
- compensation for lost revenue because of reduced property access
- construction hours
- removal of parking (particularly during night construction hours as some industrial businesses noted that night shift workers already struggle to find parking)
- improved connectivity between the Parramatta CBD and Sydney Olympic Park viewed as a positive as it may encourage more small businesses along the alignment.

5.3.4 Phase 2 Have Your Say survey

The Have your say survey was available on the project's Virtual Engagement Room between 2 May and 29 July 2022. A total of 17 pop up sessions were also held to direct people to the survey. The survey's target audience was within the City of Parramatta Council, including both residents and businesses. The survey objectives were to:

- seek feedback in relation to the suitability of the preferred alignment and proposed stop locations
- seek feedback on perceived impacts such as noise and vibration, traffic and parking, property, and business impacts
- seek feedback on how best to communicate with the broader community moving forward, including hard to reach community groups such as non-English speakers and accessibility groups
- identify and increase understanding of the communities that live in the area or may be impacted – or potentially impacted – by the project
- increase awareness of the project in general.

Overall, the Have Your Say survey found an overwhelming general support for the project (80 per cent), with only 14 per cent being outright opposed to it. Of the potential impacts surveyed, the highest number of respondents were concerned with traffic, parking or impacts to local roads (45 per cent), followed by loss of, or restricted public access (41 per cent) and impacts on flora and fauna (41 per cent). A total of 29 per cent of respondents indicated local business impacts as a concern.

Of the total 1,194 respondents, 41 were business owners or operators (representing around three per cent of respondents). The survey data generally supported the findings in the business survey with similar trends highlighting the major issues for businesses include increased traffic, reduced parking and noise and vibration concerns. Table 5-10 provide an overview of the key issues raised by respondents who identified as a business owner/operator and where these issues are addressed in this BIA.

Table 5-10 Overview of issues raised by businesses in the Have Your Say survey

Key issue	Overview of key issues raised	Where addressed in BIA
Transport and traffic	A total of nine business owner/operator respondents identified traffic, parking or impacts on local roads as a concern. Almost all other responses were 'neutral', except for one participant who answered 'not concerned'. All respondents noted that private vehicle (car/van) was a means of transport for both staff and customers. It was interesting to note that nine participants said they would use the light rail to commute to work.	Section 7.3 Access and connectivity (construction) Section 8.1 Access and connectivity (operation)
Noise and vibration	A total of eight business owner/operator respondents were 'concerned' about the impacts of noise, vibration or air quality. Only three were not concerned by it and the remaining participants felt 'neutral' about this impact. It is noted that two of the three respondents who were not concerned by noise, vibration and air quality also operate manufacturing businesses which may make them less sensitive to this type of impact.	Section 7.4 Noise, vibration and air quality (construction) Section 8.2 Noise, vibration and air quality (operation)

Key issue	Overview of key issues raised	Where addressed in BIA
Cumulative impacts	One respondent, who operates a retail business in Sydney Olympic Park, noted that the ongoing impacts of the Covid-19 pandemic combined with construction of the project would be 'detrimental' to their business.	Section 9 Cumulative impacts
Stop locations	Almost all business respondents, except for one, felt the stop locations were appropriate. The stop locations that were viewed as most relevant include Wentworth Point and Footbridge Boulevard. The stops viewed by businesses as least relevant included those in Rydalmere and Ermington. However, it is noted that these stops are in predominately residential areas. It was noted by some respondents that the gap between Sandown Boulevard and John Street stops was too large (about two kilometres).	Section 8.1 Access and connectivity (operation)

6 FINDINGS FROM COMPARATIVE ANALYSIS OF TRANSPORT PROJECTS

This section sets out the findings of a review of secondary evidence from comparable local and regional light rail projects, to inform the magnitude and likelihood of impacts set out in this BIA.

Specifically, the perceived or experienced business impacts from comparable projects have been considered along with responses and mitigation measures, to develop insights relevant to the delivery of the project.

Business impact assessments undertaken for the following projects have been reviewed:

Parramatta Light Rail Stage 1

- Business Impact Assessment
- Submissions Report incorporating Preferred Infrastructure Report

Capital Metro Light Rail Stage 1 (Canberra)

- Capital Metro Light Rail Stage 1 — Gungahlin to Civic Social and Economic Impact Assessment
- Capital Metro Light Rail Stage 1 — Gungahlin to Civic Environmental Impact Statement

CBD and Southeast Light Rail

- CBD and Southeast Light Rail – Environmental Impact Assessment
- Environmental Impact Statement Technical Paper 3: Social Impact Assessment

Newcastle Light Rail

- Newcastle Light Rail Review of Environmental Factors.

A summary of the findings from the desktop review of business impacts from four comparative transport infrastructure projects is summarised in Table 6-1 to Table 6-4. Details provided include a general overview of the projects, relevance to Parramatta Light Rail Stage 2, business concerns identified, potential business impacts and the mitigation measures.

It is noted that as this discussion of impacts is based on a concise desktop review, it is possible that some projects generated additional business impacts that have not been reported, and therefore identified in this report.

Table 6-1 Project overviews

Parramatta Light Rail Stage 1	Newcastle Light Rail	CBD and South East Sydney Light Rail	Capital Metro Light Rail Stage 1 (Canberra)
• 12 kilometres of new light rail track between Westmead and Carlingford • 16 light rail stops • Three interchanges at Westmead, Parramatta CBD and Carlingford • Two new light rail and pedestrian only zones at the Parramatta CBD • 5.7-kilometre Active Transport Link, (walking and bike-riding path).	• 2.7 kilometres of new track through Newcastle CBD • Six new light rail stops • Supporting facilities • Streetscape upgrades • Landscaping.	• 12 kilometres of new light rail track from Circular Quay to Kingsford and Randwick • 20 new light rail stops • Four interchanges.	• 12 kilometres of new light rail track, from Gungahlin to Canberra CBD • 13 stops • Three major interchanges • Construction of a new bridge • A light rail vehicle only/pedestrian friendly zone • Public domain improvements including paving, street trees, lighting and street furniture.

Table 6-2 Relevance to Parramatta Light Rail Stage 2

Parramatta Light Rail Stage 1	Newcastle Light Rail	CBD and South East Sydney Light Rail	Capital Metro Light Rail Stage 1
• High relevance • Forms the first part of the Parramatta Light Rail network, to which this project connects • Similar community demographics • Shared community perceptions	• High to medium relevance • Recent project • Extensive community consultation as part of program • Similar CBD location • Different demographics	• High to medium relevance • High profile project, potential influence on the project • Same city, although may have slightly different demographics in directly impacted area	• High to medium relevance • Recent light rail project • Fast timeframes • High density and CBD location • Construction of a new bridge • Different demography

Table 6-3 Business concerns/impacts identified in impact assessment

Parramatta Light Rail Stage 1	Newcastle Light Rail	CBD and South East Sydney Light Rail	Capital Metro Light Rail Stage 1
• Traffic, access and parking • Property acquisition • Access and connectivity	• Traffic, access and parking • Loss of pedestrians, resulting in a loss of business • High congestion discouraging customers	• Traffic, access and parking (particularly access to businesses along George Street) • Noise and vibration potentially deterring customers and impacting buildings • Urban design impact • Tree removal reducing visual amenity	• Traffic, access and parking • Noise, dust and visual impacts • Visual amenity

Table 6-4 Mitigation measures

Parramatta Light Rail Stage 1	Newcastle Light Rail	CBD and South East Sydney Light Rail	Capital Metro Light Rail Stage 1
• All acquisitions managed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* • Place Managers and Personal Relationship Managers (Acquisition) • Prioritisation and advertisement of 'Eat Street' • Direct engagement with business owners, and managers of social infrastructure. • Construction Environmental Management Plan • Community Communication Strategy • Business Activation Plan • Traffic Management Plan	• Business Organisation and Management Plan • Ongoing consultation with businesses • Integrated design with existing streetscape • Partnership opportunities with local employment agencies • Construction Environmental Management Plan	• Business landowner and engagement management plan • Ongoing consultation with businesses • Business Activation Plan • Traffic Management Plan • Construction Noise Management Plan • Noise and vibration mitigation through track design • Construction Environmental Management Plan	• Business landowner and engagement management plan • Streetscape improvements and footpath enhancements • Enhanced tree planting and landscape strategy

7 ASSESSMENT OF CONSTRUCTION IMPACTS

7.1 Land requirements

Transport for NSW has made every effort to avoid the need to acquire private property, however in some cases there would be no alternative but to acquire the property to allow for construction and operation of the project.

The final amount of land that needs to be acquired to meet the project's land requirements would be determined once the project is approved and subject to acquisition negotiations.

The main property impacts would be associated with the project's land requirements, which have the potential to:

- partially affect a property where part of a site is required, requiring adjustments to, or relocation of, facilities to other parts of the site – for most of these properties, the land requirements would require acquisition of a strip of property to allow for widening of the road reserve, construction of light rail stops and/or intersection upgrades or they may be temporarily leased to facilitate construction activities
- fully affect a property if the entire site is required.

These potential impacts would commence prior to, or during construction, as properties are acquired. Table 7-1 provides an estimate of the number of properties, where there is a current industrial, commercial, or mixed-use, that would be affected by the project's land requirements, such that leasing, or acquisition of a property is required.

The acquisition and relocation of businesses can potentially disrupt the character of a precinct and affect the viability of local economies. In some instances, construction activity may be temporary with the opportunity for businesses to re-establish in the same area post construction. Although the impact on individual businesses, subject to acquisitions, may be significant, the compensation process has been designed to neutralise this impact.

Another important consideration is the impacts on third parties. This could include other businesses who rely on the product or service that the acquired business provides (which may be the case for industrial business in Camellia, Rydalmere East or Melrose Park).

Table 7-1 Businesses with the potential to be affected by the project's land requirements

Location (precinct)	Type of affected uses/businesses	Level of acquisition	Number of properties affected
Camellia	Industrial and manufacturing (concrete manufacturing)	Whole	1
	Hospitality and retail (cafe)	Whole	1
	Industrial and manufacturing (bitumen production, cement manufacturing, resource recovery)	Partial	7
Rydalmere East	Industrial and manufacturing (plastics manufacturing, cement manufacturing, sign production, chemical production)	Whole	6
Melrose Park	Industrial and manufacturing (carpet and flooring, production of scaffolding, tools,)	Whole	4
	Industrial and manufacturing (warehouses for the manufacture of medicines, building materials, air conditioners, plastics, cabinetry, scaffolding and tools)	Partial	5
	Professional and technical services (geotechnical laboratory)	Partial	1
	Mixed-use (cafe and car mechanic)	Partial	1
Sydney Olympic Park	Professional and technical services (office space including sport management) Hospitality (multi storey hotel)	Partial	2
Lidcombe (Carter Street)	Industrial and manufacturing (refrigeration logistics)	Partial	1
	Future residential development (Vivacity and Broader Meriton Land' (Phase 3 and 4))	Partial	2
Total			**31**

The significance of property acquisition or lease cessation on business interests would vary in scale across the precincts, depending on:

- the number of businesses acquired
- their contribution to the local economy
- their ability to re-establish in the local area
- the ability of the remaining businesses and local business precinct to absorb the changes.

For example, at one property in Camellia, partial acquisition of a large percentage of their site (greater than 50 per cent) which would potentially impact the businesses' ability to absorb the change. A second property in Camellia potentially requires a temporary lease of over 50 per cent of the property to accommodate a temporary construction compound and work area which may also impact business operations.

The properties in Sydney Olympic Park and Lidcombe (Carter Street precinct) listed in Table 7-1 accommodate multi-storey buildings with multiple businesses. These properties would be impacted by the project's land requirements, and are anticipated to require partial strip acquisition to allow for widening of the

road reserve, construction of light rail stops and/or intersection upgrades. The main buildings on the properties are not expected to be affected, and the businesses occupying these buildings are likely to be able to continue to operate in their existing location. This would also be the case for the three properties/industrial warehouses that are anticipated to be subject to partial acquisition on Waratah Street in Melrose Park.

The remainder of properties in Camellia, Rydalmere East and Melrose Park, listed in Table 7-1**,** have a single or small number of businesses per property that may be impacted. Some (mainly those subject to lease arrangements that would need to be terminated as a result of the project's land requirements) would not be able to continue to operate in their existing location. The termination of leases and/or relocation of businesses may have the following effects:

- disruption to business operations
- inconvenience and loss of revenue and productivity during relocation
- stress and anxiety relating to finding and leasing or purchasing a new site
- difficulty finding alternative properties, particularly for those businesses with specific requirements
- expense of relocating or purchasing another property
- changes to trade catchment areas.

The property acquisition process is described in the EIS (Chapter 13 (Land use and property)).

7.2 Economic effects

7.2.1 Expenditure and employment related to construction of the project

Construction activity, including utility works, directly benefits the economy by injecting economic stimulus into the local, regional, and state economies. The economic benefit of construction is multi-dimensional, including:

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

It is important to note, however, when reviewing these estimates that multiplier effects have a national impact and not necessarily a local impact. Care is required in interpreting multiplier effects, which have been applied on a theoretical basis to produce estimates of the potential flow-on effects of construction activity to the rest of the economy.

7.2.2 Property values, rent return and business revenue

Extended periods of construction, whether direct or cumulative can place downward pressure on prices and rents in the short term. However, general market forces remain the key influence on the market's direction in the long term.

Concerns regarding the impact of construction on property and lease values are often raised during consultation with businesses. These concerns can arise from:

- the uncertainty surrounding which businesses may be acquired
- the effect that several property acquisitions in one location may have on supply and demand in the local area or the local business precinct identity
- access, connectivity and amenity impacts (as discussed further in section 7.3, section 7.4 and section 7.5) may reduce passing trade and parking availability, create longer journey times or congestion and overall deter customers or create inefficiencies which may have a negative impact on business revenue and ability to pay rent.

If access, connectivity and amenity impacts extend along a wide area, or time period, businesses may be forced to relocate, creating vacancies in the local area. Business owners might reduce their face rents in an attempt to attract new tenants or maintain existing ones. Some businesses may be impacted positively if they are positioned on a detoured pedestrian route, temporary bus stop or in an area where the amenity is not impacted by construction. If this is extended over a period of time and the area becomes attractive for additional business, rents may increase to reflect the new attractiveness of the area.

Property values or rent return fluctuations would be based on the net present value of perceived project benefits or detriments in a particular area. Increased risk in property investment results from uncertainty which then adversely impacts property values. Certainty can be improved with increased knowledge and information regarding a project and its impacts.

As buyers are or become aware of the temporary nature of construction and the longer-term strategic objectives of a project, the impact on property values would be minimal, with the market more likely to reflect the broader trends. A long term multi-staged construction project can however affect marketability to predominantly long-term investors.

7.3 Access and connectivity

Access and connectivity impacts are detailed in Technical Paper 2 (Transport and Traffic). During construction, business access arrangements for employees, customers and service vehicles in some locations may change due to road alterations, changes in public transport stop locations or increased competition for parking.

As indicated in section 5.3.2 and section 5.3.4, the business survey results and external input from organisations and representative bodies indicated that traffic accessibility is a core concern for businesses. This is particularly an issue for industrial businesses that rely on the steady flow of deliveries and service vehicles for day-to-day operation. Access to these industrial businesses may be further impacted during construction due to removal of on-street parking, changed road conditions and additional vehicles on the road. Table 7-2 provides a construction access and connectivity impact assessment on local businesses within each precinct.

7.3.1 Road network

Construction works require alterations to road traffic networks, including closures and detours, lane reconfiguration, intersection reconfiguration, temporary traffic signals, and reduced vehicle speed. Business activity may be affected because:

- customers cannot access the area
- customers avoid the area due to real (or perceived) decrease in access
- changes in access impacts on business operation (e.g. servicing and delivery, employee access and travel times).

Impacts on the road network are a high sensitivity issue for local businesses. As outlined in the business survey, approximately 67 per cent of respondents indicated that travel times and traffic delays were a concern during the construction period. It was also noted that 76 per cent of these businesses do not rely on foot traffic, with approximately 80 per cent of respondents stating their business relies on vehicle access for operation.

Given the high dependency on the road network, any impacts to the movement of traffic may have flow on effects for local businesses in terms of decreased revenue or increased costs. However, the precise nature of this impact depends on how close a respondent is to proposed works.

Alterations to local road networks may impact business deliveries and servicing, particularly for industrial businesses that may require regular deliveries and pickups multiple times from heavy vehicles. Temporary street closures, detours and removal of on-street car parking could collectively restrict or hinder servicing and delivery operations within some precincts.

Technical Paper 2 (Transport and Traffic) found that during construction, the increases in daily and peak traffic volumes on key local roads are anticipated to be relatively low. For minor roads, while there is

anticipated to be a greater relative increase in traffic volumes, the ultimate traffic volume would remain well within the two-way capacity of the road during the construction peak.

The project is anticipated to require several full and partial road closures throughout the construction. Where road closures are required, detour routes are available with sufficient capacity to accommodate the additional traffic volumes. The duration and extent of road closures would be confirmed by the construction contractor as part of construction traffic management planning, having regard to site-specific conditions and other projects and land uses in the area.

Based on the existing and proposed traffic volumes as outlined in Technical Paper 2 (Transport and Traffic), all roads are expected to perform satisfactorily when considering the increased construction traffic expected to be generated by the project. The proportional increase in traffic on roads carrying high peak hour traffic volumes is very low at around three per cent or less except for Hill Road during the workforce commuting period.

Table 7-2 Access and connectivity impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Localised traffic network alterations and business access or delay	• A portion of Macquarie Street, between Marsden Street and Horwood Place, would be closed for night works.	Negligible	Negligible	**Negligible:** • Most businesses would likely be closed during night works when the road would be closed.
Camellia	Localised traffic network alterations and business access	• Indicative road closures may include: – Partial, short-term closures of Durham Street for night works with alternative access available via Colquhoun Street as required – Partial, short-term closures of Thackeray Street with controlled access via 14A Grand Avenue – Thackeray Street (north) to operate two-way with a single lane under traffic control.	Low	Negligible	**Low-Negligible:** • The indicative road closures would impact local roads only, which carry generally low traffic volumes • Detour route for Durham Street via Colquhoun Street and Devon Street have sufficient capacity with only a minor impact on journey total times.
Rydalmere East	Localised traffic network alterations and business access	• The indicative road closures would impact local access roads only, which generally carry low traffic volumes. • This would likely include temporary full road closures of John Street, South Street, part of Patricia Street and part of Nowill Street. • South Street would remain open to two-way traffic for the duration of the construction period. • Detour routes include Primrose Avenue, Nowill Street, Antoine Street, John Street, Dorothy Street, and Patricia Street.	Low	Negligible	**Low-Negligible:** • Alternate routes including John Street, Patricia Street, Dorothy Street, Antoine Street and Nowill Street have sufficient capacity to accommodate the additional traffic volumes. • Impacts on travel time for detoured vehicles would be low.
Ermington	Localised traffic network alterations impacting access to businesses	• Boronia Street works involves a series of partial and full road closures. • Two-way traffic would be maintained most of the time (under management) with detours along Macartney Street and Murdoch Street proposed when required.	Low	Low	**Low:** • Temporary speed limit reductions may be required on Silverwater Road, which may have a minor impact on the performance of the corridor. • Few businesses noted in the precinct.
Melrose Park	Localised traffic network alterations and business access	• Two-way traffic would be maintained along Hope Street during construction. • Using Hughes Avenue to access areas of Atkins Road may cause an increase in trip times due to localised congestion.	Low	Low	**Low:** • Road closures at Waratah Street would have a low impact due to the local access function of this street, and the low traffic volumes generally carried.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
					• An alternate route via Wharf Road and Mary Street has sufficient capacity to accommodate the additional traffic flows, and the additional journey time due to the detour is likely to be low.
Wentworth Point	Localised traffic network alterations and business access	• Two-way access would be maintained along Hill Road for the duration of the works. • Partial closures would cause reduced capacity at the following intersections: Sill Road/Footbridge Boulevard, Hill Road/Verona Drive, Hill Road/Stromboli Strait and Hill Road/Bennelong Parkway.	Negligible	Negligible	**Negligible:** • Alternative access is available via parallel streets (for example Nuvolari Place and Stromboli Straight) to ensure sufficient capacity is available for the network. • There would be a negligible impact on journey times for road users due to the detours.
Sydney Olympic Park	Localised traffic network alterations and business access	• Partial closure of the Hill Road/Holker Street/Holker Busway intersection for major track and intersection works. It is anticipated that two-way traffic flow would be maintained, and any full closures (or disallowed movements) would be short-term and during night-works only. • Closure of Grand Parade would be generally low impact given the low traffic volumes within the Sydney Olympic Park during normal conditions. • One way traffic along Murray Rose Avenue would be maintained with alternative route available via Dawn Fraser Avenue. • Two-way traffic flow would be maintained along Olympic Boulevard. • Additional traffic management may be required at Murray Rose Avenue or Herb Elliot Avenue to provide separation between vehicular traffic and large volumes of pedestrians travelling to and from the station under event conditions.	Low	Moderate	**Low-Moderate** • Alternative access to and from Grand Parade is available via parallel roads including Orana Parade and Showground Road. • Construction along Dawn Fraser Avenue would be staged to limit access impacts as far as practicable. • The timing and conditions associated with road closures would need to have regard to special events, and in particular, access to Olympic Park Station would be maintained. Detours and changed conditions may increase travel times during construction and visitors may need to plan for additional travel time. • Businesses surveyed noted a concern for further disruptions to access along Dawn Fraser Avenue given lingering effects of COVID-19 on passing trade which has increased the sensitivity rating in this precinct.
Carter Street	Localised traffic network alterations and business access	• Construction within Uhrig Road would likely require the partial closure of Stockyard Boulevard at Uhrig Road for a short duration.	Negligible	Negligible	**Negligible:** • Access would be maintained under traffic control.

7.3.2 Public transport services

During construction, public transport services would be impacted due to service alterations, changes to stop locations, detours, and physical access constraints. Any proposed changes to bus stops and services are indicative only and are subject to the construction staging proposed by the construction contractor and approval by Transport for NSW. The bus services listed in Table 7-3 would be impacted by construction works.

Table 7-3 Bus services impacted by construction works

Route No.	Service	Key Roads
524	Parramatta to Ryde via West Ryde	South Street, Silverwater Road/Primrose Avenue, Victoria Road, Spurway Street, Boronia Street, Atkins Road, Hope Street
525	Parramatta to Strathfield via Sydney Olympic Park	Edwin Flack Avenue, Dawn Fraser Avenue, Murray Rose Avenue, Australia Avenue
526	Rhodes Shopping Centre to Burwood	Edwin Flack Avenue, Dawn Fraser Avenue, Murray Rose Avenue, Australia Avenue
533	Sydney Olympic Park to Chatswood via Rhodes and North Ryde	Murray Rose Avenue, Australia Avenue
N81	Parramatta to City Town Hall via Sydney Olympic Park (Night Service)	Dawn Fraser Avenue, Murray Rose Avenue, Australia Avenue
5A, 5B, 6, 7, 8	Special event buses servicing Sydney Olympic Park (Hills Showground, Tallawong, Woronora, Cronulla, Dural)	Holker Busway

As a result, local route diversions may need to take place and bus stops would be moved as required in consultation with Transport for NSW and bus operators as close as possible to their existing position:

Bus

- **524:** full and partial road closures on South Street, Boronia Street, Atkins Road and Hope Street.
- **525, 526, 533 and N81:** bus stops located on Park Street, adjacent to Olympic Park Station, would be relocated to Murray Rose Avenue (northbound)
- **Special events:** the partial closure of the bridge would allow two-way traffic in a single lane under traffic control so there are no requirements for re-routing of special event bus services. However, the bridge would experience reduced capacity and there may be delays for some services.

Ferry and jetties

- The business survey results did not indicate ferry services as an area of concern and so the impacts associated with temporary closures (and alternative transport arrangements such as buses) of the wharves to businesses located within the precincts, are considered to be negligible and have not been included in Table 7-4.
- The Ermington Boat Ramp and car park would be closed for approximately three years during the construction works associated with the bridge between Melrose Park and Wentworth Point. Any businesses who use this boat ramp would be required to access the Parramatta River from other nearby boat ramps.
- Other public and private maritime facilities are also present in the section of the river which would be affected by waterway closures include the Armory Wharf and private jetties owned by Lubrizol International Inc and Viva Energy Australia Pty Ltd.

Train

- The T7 Olympic Park Line provides a ‘shuttle service’ between Lidcombe and Sydney Olympic Park. This is the only train station located within the project’s construction scope.
- During construction, partial and full road closures of Grand Parade and Dawn Fraser Avenue would have a minor impact on pedestrian access to the station.

While there would be an impact to public transport services during construction, for businesses, this impact is expected to be minor as 81 per cent of business survey respondents identified that car was their primary mode with only 20 per cent nominating public transport. Further, such impacts to public transport are expected to be mitigated through the preparation of detailed, site-specific construction Traffic Management Plans (TMPs). Where a route would be impacted, alternative arrangements would be put in place to minimise inconvenience to customers thereby minimising the impacts to businesses.

Table 7-4 provides a construction public transport impact assessment on local businesses within each precinct.

Table 7-4 Public transport impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback facility)	Removal of existing bus stop(s) and temporary relocation	• No impacts to public transport access during construction.	Negligible	Negligible	**Negligible**
Camellia	Removal of existing bus stop(s) and temporary relocation	• No impacts to public transport access during construction.	Negligible	Negligible	**Negligible**
Rydalmere East	Removal of existing bus stop(s) and temporary relocation	• Disruption of John Street and South Street intersection would impact bus route 524, however relocation distance of stop is small. Few businesses to the east along South Street where stops might be relocated.	Low	Negligible	**Negligible:** • Businesses located further to the west of the proposed works and bus stop relocations.
Ermington	Removal of existing bus stop(s) and temporary relocation	• Disruption of John Street and South Street intersection would impact bus route 524, however proposed relocation distance of stop would be small. • Few businesses to the east of Ken Newman Park along Boronia Street where stops might be relocated.	Low	Negligible	**Negligible:** • Stops in proximity to retail businesses to be relocated in proximity to current stop location
Melrose Park	Removal of existing bus stop(s) and temporary relocation	• No impacts to public transport access during construction.	Negligible	Negligible	**Negligible**
Wentworth Point	Removal of existing bus stop(s) and temporary relocation	• No impacts to public transport access during construction.	Negligible	Negligible	**Negligible**
Sydney Olympic Park	Removal of existing bus stop(s) and temporary relocation	• Bus stops at Olympic Park Station (on Park Road) serviced by routes 526 and 533 would be impacted by the closure of Murray Rose Avenue southbound. However, alternative bus stops would be provided.	Low	Low	**Low:** • Relocated bus stops near existing stops. • Business activity generally minimal during non-event times. • Businesses surveyed noted a concern for further disruptions to access along Dawn Fraser Avenue given lingering effects of COVID-19 on passing trade.
Carter Street	Removal of existing bus stop(s) and temporary relocation	• No impacts to public transport access during construction impacting businesses identified within this part of the project site.	Negligible	Negligible	**Negligible**

7.3.3 Pedestrian and cyclist network

Based on the business survey results, about 81 per cent of employees travel to work via private car or van, and the remaining 19 per cent travel to work via bus, train, or ferry. None of the businesses reported that their employees rely on active transport to travel to work. Additionally, the business survey results suggest 76.2 per cent do not rely on foot traffic for trade, 19.1 per cent reported some reliance and 4.8 per cent reported total reliance on foot traffic.

Alterations to pedestrian and cyclist networks during construction have the potential to impact on travel duration, movement patterns and accessibility. Changes in pedestrian and cyclist flows may influence the level of passing trade on businesses and subsequent customers and sales. This is likely to be an issue for businesses on key roads in the Sydney Olympic Park precinct who are more likely to benefit from passing foot traffic (e.g. cafes and restaurants). There is also the potential that paths of travel may be impacted for visitors to special events as a result of temporary footpath detours or closures.

Businesses in other precincts are likely to be less affected, for example, the Camellia and Rydalmere East precincts are characterised as commercial/industrial with a low reliance on active transport, which means that pedestrian and cyclist impacts during construction would be negligible. Ermington is predominantly a residential area with few businesses operating. Accordingly, impacts to businesses in this area are expected to be negligible.

Wentworth Point is a residential/mixed use precinct with construction to be undertaken on Hill Road where there are residential apartments, which is generally away from businesses located further east. As a result, it is expected that construction impacts would be relatively minor to cycling and pedestrian routes for both employees and customers.

Table 7-5 provides a construction pedestrian and cyclist impact assessment on local businesses within each precinct.

Table 7-5 Pedestrian and cyclist impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Changes to pedestrian route	• Pedestrian access to the portion of Macquarie Street, between Marsden Street and Horwood Place, may be restricted during construction.	Negligible	Low	**Negligible:** • Most businesses would likely be closed during night works when footpaths would be closed.
Camellia	Changes to pedestrian route	• Works along Grand Avenue would impact existing pedestrian infrastructure.	Negligible	Negligible	**Negligible:** • As Camellia is a heavy industrial area, major pedestrian and cyclist use is unlikely. Therefore, there are likely to be negligible impacts to businesses.
Rydalmere East	Changes to pedestrian route/cycling route	• Pedestrian access to western parts of John Street would be temporarily impacted by due to temporary closures.	Negligible	Negligible	**Negligible:** • Businesses generally located further west from the proposed works. • Few businesses noted in the survey as being reliant on active transport.
Ermington	Changes to pedestrian route	• The proposed temporary and permanent street closures (especially along Boronia Street) may result in changes in passing foot traffic.	Low	Negligible	**Negligible:** • Ermington has few businesses along South Street/Boronia Street, so impacts are expected to be negligible.
Melrose Park	Changes to pedestrian/ cycling route	• Construction works on Boronia Street and Hope Street would impact on pedestrian routes.	Low	Low	**Low:** • Few businesses noted in the survey as being reliant on active transport. The exception to this is access to Melrose Park Public School which is located adjacent to the project site on Waratah Street, however it is expected that access would be maintained however there may be some detours/longer journey times.
Wentworth Point	Changes to pedestrian route	• Access for bicycles and pedestrians would be maintained through the work zone using traffic control and detours.	Negligible	Low	**Negligible**: • Businesses generally located further east from the proposed works.
Sydney Olympic Park	Changes to pedestrian access	• The partial closure of Grand Parade during construction may disrupt pedestrian activity, especially during special events. • Other temporary footpath closures in this precinct also likely.	Moderate	Low	**Moderate-Low:** • Changes to active transport can adversely affect passing trade and business visibility. • Changes may also impact visitors to recreational facilities and special events.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		• Detours during construction would not be significantly different to operational impacts of the project.			• Businesses surveyed noted a concern for further disruptions to access along Dawn Fraser Avenue given lingering effects of COVID-19 on passing trade.
Carter Street	Changes to pedestrian route	• Given that the Carter Street area is undergoing construction, pedestrian activity is likely to be very low.	Negligible	Moderate	**Negligible:** • Few businesses noted in the survey as being reliant on active transport.

7.3.4 Parking

The project would have impacts on local street parking that may impact businesses, particularly those in the Camellia, Rydalmere East, Melrose Park, and Sydney Olympic Park precincts due to:

- permanent removal of on-street parking spaces to accommodate light rail infrastructure
- temporary unavailability of on-street parking spaces due to full or partial road closures
- occupation of existing off-street car parks for establishment of site compounds at John Street, Wharf Road and locations within Sydney Olympic Park
- parking overflow from construction workforce.

Precincts like Rydalmere East and Melrose Park rely on on-street parking to accommodate workers, customers, and visitors. Precincts like Ermington and Wentworth Point are more residential in nature and rely on on-street parking for personal use. As noted in the business survey, parking is a significant concern for businesses, with more than 81 per cent of respondents rating parking as either 'significant' or 'very significant' (see Table 5-4).

Technical Paper 2 (Transport and Traffic*)* notes the total parking impact of the project during construction is expected to be in the order of about 1,266 parking spaces. This includes about:

- 688 parking spaces permanently removed due to the project
- 262 off-street parking spaces temporarily occupied by site compounds including:
  - full occupation of John Street commuter car park (Rydalmere Wharf) and Ermington Boat Ramp car park (Wharf Road)
  - full occupation of Australia Avenue car parking
  - partial occupation of Sydney Olympic Park P6 car park (Australia Avenue).
- 316 on-street parking spaces temporarily removed due to road closures and reinstated upon completion of the works in each area.

Camellia, Rydalmere, Ermington, and Melrose Park have sufficient parking on side-streets within the vicinity of the project alignment to accommodate displaced car parking due to road and car park closures. Other precincts, including Wentworth Point, Sydney Olympic Park, and Carter Street, may experience strain where the parking demand may exceed the available supply.

Street parking in proximity to the project site may be able to accommodate additional parking which would limit the sensitivity and magnitude of this impact, noting that it may result in a further walk (e.g. in Rydalmere East where there is additional capacity to the east towards Tristram Street and Hilder Road). The largest impacts would be experienced in the Wentworth Point and Sydney Olympic Park precincts as existing peak parking demand would exceed the available parking supply during construction.

Strategies would be in place to manage the impact to parking availability. These would be documented in a detailed Parking Management Strategy which would be prepared as part of the Traffic and Access Management Plan for the project, including identification of specific changes to parking across the project site.

Table 7-6 provides a parking impact assessment for local businesses based on the temporary parking loss during construction (i.e. those spaces in addition to the permanent parking to be removed). The impacts associated with permanent parking loss is assessed in section 8.1.1.

Table 7-6 Parking impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Reduction in on-street parking	• No additional parking to be removed for construction activities.	Negligible	Negligible	**Negligible**
Camellia	Reduction in on-street parking	• Grand Avenue, 120 spaces would be unavailable for the duration. • The surrounding network is proposed to absorb the displaced spaces, which would likely impact parking availability for customers and employees.	Low	Low	**Low**: • The temporary parking loss (which is in addition to permanent parking removed) is expected to affect around 32 per cent of the remaining supply.
Rydalmere East	Reduction in on-street/off-street parking	• The wharf commuter car park near John Street would be temporarily closed, with 40 off-street spaces unavailable. • Around 16 on-street spaces on South Street, west of John Street would also be temporarily unavailable.	Negligible	Negligible	**Negligible**: • The temporary parking loss (which is in addition to permanent parking removed) is expected to affect around 17 per cent of the remaining supply. Businesses and workers generally located further to the west of the alignment and would not be expected to rely on parking in this area.
Ermington	Reduction in on-street parking	• River Road north and south of South Street, 20 spaces would be unavailable. • Tristram Street and Hilder Road, 35 spaces would be unavailable. • Boronia Street, both sides, 65 spaces would be unavailable. • Broadoaks Street, both sides, 10 spaces would be unavailable.	Negligible	Negligible	**Negligible**: • The temporary parking loss (which is in addition to permanent parking removed) is expected to affect around 15 per cent of the remaining supply. • Few businesses identified in the precinct.
Melrose Park	Reduction in on-street/off-street parking	• Ermington Boat Ramp (Wharf Road) car park, 62 spaces would be unavailable	Negligible	Negligible	**Negligible**: • The temporary parking loss (in addition to permanent parking removed) is expected to affect around 19 per cent of the remaining supply. • The area is characterised by larger industrial businesses that are likely to have off-street parking.
Wentworth Point	Reduction in on-street/off-street parking	• Hill Road between Footbridge Boulevard and Bennelong Parkway, 50 spaces would be unavailable.	Low	Low	**Low**: • The temporary parking loss (in addition to permanent parking removed) is expected to affect around 27 per cent of the remaining supply.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Sydney Olympic Park	Reduction in off-street parking	• The loss of parking in Sydney Olympic Park would be the following off-street parking: – eastern side of Australia Avenue, 60 spaces would be unavailable – 100 spaces would be unavailable from the Sydney Olympic Park P6 car park.	Low	Low	**Low**: • Businesses surveyed noted concern with any potential disruptions to customer access given lingering impacts of COVID-19, but retail businesses do not front Australia Avenue which is where most parking would be impacted. • There is likely to be a minimal impact on businesses given the large amount of off-street parking available in the precinct.
Carter Street	Reduction in on-street parking	• No additional parking to be removed for construction activities.	Negligible	Negligible	**Negligible**

7.4 Noise, vibration and air quality

As noted in the business survey results, only 29 per cent of respondents thought that construction noise could be either a 'significant' or 'very significant issue'. This relatively low number of respondents likely owes to the nature of business in industrial areas like Camellia, Rydalmere and Melrose Park where elevated noise levels are part of everyday business.

As identified in Technical Paper 3 (Noise and Vibration), most of the noise and vibration construction impacts to businesses would be as a result of track and road works. Out-of-hours-work (including night works) would be required for various construction activities but would be less likely to impact businesses, as most would be closed.

In determining the sensitivity of each precinct, consideration was given to the business types and their proximity to the project site. For example, precincts with hotels, cafes and restaurants or schools were rated with a higher sensitivity compared with precincts where the majority of business were industrial in nature. When rating the magnitude of the noise impacts, the number of receivers with predicted exceedances, and the level of that exceedance from the prescribed noise management level, was considered.

The assessment found that businesses in the Sydney Olympic Park precinct are expected to experience higher noise amenity impacts due to the proximity of track and road works, the number of businesses that may be impacted, and their sensitivity.

Other precincts that are expected to experience moderate noise amenity impacts include the Parramatta CBD, Rydalmere East, Ermington, Melrose Park and Carter Street precincts however, there would be a lesser number of businesses affected. The Camellia and Wentworth Point precincts are likely to experience less noise amenity impacts due to the distance of businesses from construction works and/or the industrial nature of existing businesses.

The findings of Technical Paper 3 (Noise and Vibration) found that a total 475 buildings across the noise study area fall within an area identified as exceeding the vibration screening level for damage to unreinforced structures with a majority of these within the Ermington noise catchment area. Buildings were assessed based on the assumption that they are lightweight (unreinforced) structures, however, based on similar building styles in the area, it is likely that most of the identified buildings in Camellia, Wentworth Point, Sydney Olympic Park and the Carter Street precinct would be reinforced structures. Dilapidation surveys would be undertaken prior to construction works to confirm the structural integrity of the identified buildings and refine the vibration management levels based on the investigation.

Buildings within 100 metres of works have the potential to experience human comfort vibration impacts during construction which would potentially impact businesses along the project alignment and within 100 metres of where vibratory equipment is used.

Where appropriate, vibration management levels would be refined, and vibration monitoring would be undertaken where vibratory intensive work would be expected to exceed vibration management levels to determine site-specific minimum working distances. Table 7-7 provides a construction noise and vibration impact assessment on businesses within each precinct.

Dust generated from unsealed exposed earth is a common air quality issue during construction. Some businesses that rely on undisturbed air quality in order to trade, such as retailers and restaurants, may be particularly sensitive to dust impacts.

An air quality assessment (Chapter 20 (Air Quality) and Appendix H (Air quality background data) of the EIS) was prepared for the project. Table H.8 of Appendix H identifies the dust risk assessment for each precinct. Industrial and commercial land uses in all precincts were identified as having between a low and medium risk of dust impacts. Given the proposed mitigation measures outlined including the preparation of an air quality management plan, there are unlikely to be major impacts to businesses.

Table 7-7 Noise and vibration impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Evening works (between 6pm-10pm) and nightworks (between 10pm-6am) for the light rail track and road works at the Macquarie Street turnback facility is also proposed when traffic volumes are lower, minimising the potential for disruption and providing safety benefits for workers and the general public.	Moderate	Moderate	**Moderate:** • The worst noise impacts would occur during night works when most businesses would be closed. However, commercial receivers and the SKYE Suites (hotel receiver) fronting Macquarie Street are likely to experience a greater than 20 decibel exceedance of the noise management level. • Reduction in workplace ambience and customer experience, especially at hotels. • Reduction in customers/visitors, sales and repeat customers/visitors. • Difficulty communicating and interacting with employees and customers. Reduced employee productivity.
	Vibration	• There are buildings/receivers where businesses operate that are within the safe working distance for cosmetic damage to reinforced buildings. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • Due to the reduced setbacks of businesses along Macquarie Street, vibration may cause some discomfort to customers and employees. However, the worst impacts would occur during night works when most businesses would be closed. • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.
Camellia	Noise levels	• It is proposed that construction be undertaken 24 hours a day, seven days a week for track works and the stabling and maintenance facility in Camellia. • Utility and bridge works may also be undertaken outside the primary project working hours.	Negligible	Low	**Negligible:** • Given the industrial nature of Camellia, and the level of existing noise from their operations, businesses are considered to be less sensitive to construction noise impacts. They are also unlikely to be affected by works outside the primary project working hours, as most businesses would likely be closed.
	Vibration	• There are buildings/receivers where businesses operate that are within the safe working distance for cosmetic damage to reinforced buildings. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Low	**Low:** • Given the industrial nature of businesses in the area it is anticipated there is a higher tolerance for vibration.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Rydalmere East	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Utility and bridge works may also be undertaken outside the primary project working hours. • Certain works, such as the John Street intersection works and the removal of the existing bridge over Silverwater Road, are also proposed to take place between 6pm-10pm and 10pm-7am.	Moderate	Moderate	**Moderate:** • Given the industrial nature of the businesses in Rydalmere East, and the level of existing noise from their operations, these businesses are considered to be less sensitive to construction noise impacts. They are also unlikely to be affected by works outside the primary project working hours, as most businesses would likely be closed. However, Rydalmere Public School is a key employer and also a sensitive receiver. • For a worst case scenario during demolition and road works, Rydalmere Public School is likely to experience a 10-20 decibel exceedance of the noise management level. This may have a negative amenity impact on school operations and productivity for employees and students.
	Vibration	• There are buildings/receivers where businesses operate that are within the safe working distance for cosmetic damage to reinforced buildings. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • It is anticipated there is a higher tolerance for vibration for industrial businesses. • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.
Ermington	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Utility works may also be undertaken outside the primary project working hours. • Certain works, such as the removal of the existing bridge over Silverwater Road, are also proposed between 6pm-10pm and 10pm-7am.	Moderate	Moderate	**Moderate:** • Given the predominant land use within the area is residential, there would be limited impacts on businesses. However, Rydalmere East Public School is a key employer and also a sensitive receiver. • For a worst case scenario during road works, Rydalmere East Public School is likely to experience a greater than 20 decibel exceedance of the noise management level. This may have a negative amenity impact on school operations and productivity for employees and students. • For a worst case scenario during road works and light rail works, commercial receivers (namely Cafe 4TY7) are likely to experience a greater than 20 decibel exceedance of the noise management level. • Reduction in workplace ambience and customer experience at cafes. • Reduction in customers, sales and repeat customers.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
					• Difficulty communicating and interacting with employees and customers for daily operation. Reduced employee productivity.
	Vibration	• Structural and cosmetic damage is not expected to be caused by the works • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.
Melrose Park	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Utility and bridge works may also be undertaken outside the primary project working hours.	Moderate	Moderate	**Moderate:** • Industrial businesses in Melrose Park are considered to be less sensitive to construction noise impacts. They are also unlikely to be affected by works outside the primary project working hours, as most businesses would likely be closed. However, Melrose Park Public School is a key employer and also a sensitive receiver. • For a worst case scenario during road works Melrose Park Public School is likely to experience a greater than 20 decibel exceedance of the noise management level. This may have a negative amenity impact on school operations and productivity for employees and students. • Reduction in workplace ambience and customer experience, especially at cafes and restaurants. • Impact on amenity and customer experience. • Difficulty communicating and interacting with employees and customers for daily operation. Reduced employee productivity.
	Vibration	• Structural and cosmetic damage is not expected to be caused by the works. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Wentworth Point	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Utility and bridge works may also be undertaken outside the primary project working hours. • Certain works, such as for the Hill Road and Holker Street intersection, are also proposed between 6pm-10pm and 10pm-7am.	Low	Low	**Low:** • Given the distance of businesses, noise impacts are expected to be low. They are also unlikely to be affected by works outside the primary project working hours, as most businesses would likely be closed. • Reduction in customers/visitors, sales and repeat customers/visitors. • Difficulty communicating and interacting with employees and customers. Reduced employee productivity.
	Vibration	• Human comfort close to the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items. • No specific businesses within Wentworth Point are expected to be impacted by construction vibration.	Low	Low	**Low:** • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.
Sydney Olympic Park	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday. • Utility and bridge works may also be undertaken outside the primary project working hours. • Certain works, such as kerb adjustments on Australia Avenue, are also proposed between 6pm-10pm and 10pm-7am. • It is assumed that during large events, construction may halt.	High	Moderate	**Moderate-High:** • For a worst case scenario during road works and track works, the Novotel Hotel, NSW Rugby League Centre and commercial receivers on Australia Avenue and Dawn Fraser Avenue are likely to experience a greater than 20 decibel exceedance of the noise management level. • The Ibis Hotel, Exhibition Hall and Stadium Australia are likely to experience a 10-20 decibel exceedance of the noise management level. • Reduction in workplace ambience and customer experience, especially at hotels, cafes and restaurants. • Reduction in customers/visitors, sales and repeat customers/visitors. • Difficulty communicating and interacting with employees and customers. Reduced employee productivity.
	Vibration	• Structural and cosmetic damage is not expected to be caused by the works. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.
Carter Street	Noise levels	• Construction works would be undertaken during the proposed primary project working hours of 7am to 7pm Monday to Sunday.	Moderate	Moderate	**Moderate:** • For a worst case scenario during road works and track works commercial receivers (Ibis Budget Hotel) is likely to

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		• Utility works may also be undertaken outside the primary project working hours.			experience a greater than 20 decibel exceedance of the noise management level. • Reduction in workplace ambience and customer experience, especially at hotels. • Reduction in customers/visitors, sales and repeat customers/visitors. • Difficulty communicating and interacting with employees and customers. Reduced employee productivity.
	Vibration	• Structural and cosmetic damage is not expected to be caused by the works. • Human comfort near the construction works could be affected if surface works use large rock breakers or other vibration intensive plant items.	Low	Moderate	**Moderate-Low:** • Reduced employee, customer and visitor comfortability. • Reduction in customers/visitors, sales and repeat customers/visitors.

7.5 Visual amenity

Construction would change the visual amenity of the project site by removing established vegetation, structures, advertising signs and installing construction hoardings, construction buildings and infrastructure, fencing and construction equipment. Additionally, precincts that adjoin the project site would experience variance in visual character.

According to the business survey, only 19 per cent of respondents identified impacts on visibility and passing trade as a 'very significant' concerning meaning the sensitivity is low.

In this context, the Camellia, Rydalmere East and Melrose Park precincts would be least affected by changes in the visual environment. These precincts are characterised by industrial, commercial and transport uses and these uses generally have a low dependency on the visual environment and low sensitivity to visual change. Businesses such as retail and hospitality can be more sensitive to negative changes in the visual environment resulting from construction (e.g. Wentworth Point and Sydney Olympic Park).

Table 7-8 provides a construction visual amenity impact assessment on local businesses within each precinct.

Table 7-8 Visual amenity impacts on existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Visual impact and visibility	• Businesses along the impacted section of Macquarie Street would experience a decline in visual amenity and business visibility. • Construction machinery and fencing associated with the works may affect businesses reliant on the character of the area for attracting trade (such as hotels, cafés and restaurants).	Low	Moderate	**Moderate-Low:** • Reduction in customers, sales and repeat customers. • Reduction of overall visual amenity. • Impact on amenity and customer experience. • Potential reduction of business visibility.
Camellia	Visual impact and visibility	• Camellia largely comprises an existing industrial area, with large warehouses. • The visual amenity of the area is relatively low with construction work unlikely to significantly detract from the visual amenity of businesses. There are currently little to no available views and vistas.	Low	Low	**Low:** • Potential reduction of overall visual amenity.
Rydalmere East	Visual impact and visibility	• Rydalmere East comprises a mix of commercial and residential areas. The commercial business centre, along John Street, has a relatively low level of existing visual amenity which is unlikely to be impacted by construction works. • Some businesses may be negatively impacted by construction fencing and hoardings which may block business visibility.	Low	Moderate	**Moderate-Low:** • Potential reduction of business visibility.
Ermington	Visual impact and visibility	• Ermington is predominantly a residential area with scattered businesses along Boronia Street. The visual amenity is generally consistent with that of a suburban area. The construction impact to visual amenity may affect businesses reliant on the quiet local character (such as cafes). • There would be an additional visual impact to Ken Newman Park, with construction work likely to impact park users. This may impact personal training businesses that use the park and reduce overall amenity for nearby businesses. • There is also a potential amenity impact to Rydalmere East Public School with construction equipment located near the school.	Low	Moderate	**Moderate-Low:** • Impact on amenity and customer experience. • Potential reduction of business visibility. • Slight reduction in school amenity. • Impact on visual amenity of parklands.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Melrose Park	Visual impact and visibility	• Melrose Park largely comprises an existing industrial area, with large warehouses. • The visual amenity of the area is relatively low with construction work unlikely to significantly detract from the visual amenity of businesses. There are currently little to no available views and vistas. • Construction adjacent to Melrose Park Public School may have a minor impact upon the visual amenity of the school grounds but it is not expected that this would adversely impact operations.	Low	Low	**Low:** • Potential reduction of overall visual amenity. • Slight reduction in school amenity.
Wentworth Point	Visual impact and visibility	• Wentworth Point is an existing high rise residential area with a moderate to high level of existing visual amenity. Construction impacts are likely to affect the existing visual amenity of the area, especially the first-floor commercial levels of the surrounding buildings. • Some businesses may be negatively impacted by construction fencing and hoardings which may block business visibility.	Moderate	Moderate	**Moderate:** • Reduction in customers, sales and repeat customers. • Reduction of overall visual amenity. • Impact on amenity and customer experience. • Potential reduction of business visibility.
Sydney Olympic Park	Visual impact and visibility	• Sydney Olympic Park is characterised by a mix of parkland, sporting facilities and higher density mixed use commercial and residential development. • The area has a relatively high level of visual amenity, characterised by parkland. • Construction is likely to impact on the general visual amenity of the area, which may negatively impact particularly sensitive receivers such as hotels. It may also detract from the visual amenity of special events.	Moderate	Moderate	**Moderate:** • Reduction of overall visual amenity. • Impact on amenity and customer experience. • Potential reduction of business visibility. • Potential impact on viability of special events.
Carter Street	Visual impact and visibility	• Carter Street is currently undergoing construction to become a residential precinct. Hotels along Edwin Flack Avenue are also located in this precinct. • Construction is likely to impact on the general visual amenity of the area, which may negatively impact particularly on sensitive receivers such as hotels	Low	Moderate	**Moderate-Low:** • Reduction of overall visual amenity. • Impact on amenity and customer experience.

7.6 Utilities

Businesses are dependent on utilities, particularly the supply of electricity and water. Any disruption of these services, even for short periods, may inconvenience employees, interrupt business operations, and reduce business revenue. Disruptions would also affect the utility providers, who would be required to handle customer complaints and redirect employees to assist with service alterations or required repairs. Impacts on utilities are likely to be temporary and would be managed in consultation with the relevant utility service providers.

While the project would require various works to utilities and services and the works listed below are of note, they would be undertaken and staged in a way to minimise any service disruptions. Major utility works would also contribute to traffic, noise and visual amenity impacts which are discussed in the sections above.

- Two Sydney Water trunk mains would need be relocated out of Ken Newman Park and a third water main would need to be protected:
  - work on these three utilities would need to be conducted during separate winter periods
  - all works in Ken Newman Park would need to wait until the Sydney Water trunk mains works have been completed.
- Underground Endeavour Energy high voltage aerial feeders are proposed on South Street between Fallon Street and River Road (both sides). Additional utility easements are proposed through Ken Newman Park, and along Boronia Street (primarily north side, with multiple road crossings).

While businesses would be sensitive to disruptions to the electricity and water supply, they are considered to have ability to adapt to the change particularly if advance warning can be provided or outages are scheduled for off peak periods (i.e. low sensitivity). The magnitude of impact would generally be short term and limited to a small area (i.e. low).

Other utility impacts to the community (including businesses) are outlined in the EIS (Chapter 19 (Hazards and risks)). Table 7-9 provides a construction utility impact assessment on local businesses within each precinct.

Table 7-9 Utilities impacts to existing businesses (construction)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Utilities relocation	• New drain installation and overhead wiring for new tracks would impact businesses along Macquarie Street particularly due to the reduced setbacks (as little as five metres) from the works. • Access to water and electricity may be limited for certain periods.	Low	Low	**Low:** • While businesses would be reliant on power and water services it is expected they could accommodate short term outages (i.e. few hours) with notice provided and/or scheduled for outside peak operational hours.
Camellia	Utilities relocation	• It is proposed to relocate an existing Sydney Water main. This may impact business access to local water supply for a minimal period. • High and low voltage transmission lines to be relocated underground. • High pressure gas mains relocation. • During the utility relocation, vehicle access to the Shell Petrol Station would be redirected to Durham Street. • Access to water and electricity may be limited for certain periods.	Low	Moderate	**Moderate-Low:** • Businesses would be reliant on power and water services and temporary outages may have a moderate impact on industrial-type businesses, depending on duration and timing of outages.
Rydalmere East	Utilities relocation	• The project would require the relocation of a services crossing between Antoine Street and South Street. • It is proposed to relocate an existing Sydney Water main. This may impact business access to local water supply for a minimal period. • Relocation of high and low voltage transmission lines underground. • High pressure gas mains relocation.	Low	Moderate	**Moderate-Low:** • Businesses would be reliant on power and water services and temporary outages may have a moderate impact on industrial-type businesses, depending on duration and timing of outages.
Ermington	Utilities relocation	• It is proposed to relocate multiple existing Sydney Water trunk mains. However, due to the lack of businesses identified in the area there would be negligible impacts. • High pressure gas mains relocation.	Low	Negligible	**Negligible:** • Few businesses identified in the precinct.
Melrose Park	Utilities relocation	• The project would require construction of a new fuel line between Atkins Road and Andrew Street (via new road, Hope Street, Waratah Street, Mary Street, and Wharf Road), and cutover in one stage. • The project would require construction of a new gas main from Atkins Road to Hope Street via the new road and cut back into the existing gas main at the	Low	Moderate	**Moderate-Low:** • Businesses would be reliant on power and water services and temporary outages may have a moderate impact on industrial-type businesses, depending on duration and timing of outages.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		intersections at Hope Street/Atkins Road and Hope Street/Hughes Road. • It is proposed to relocate an existing Sydney Water main. This may impact business access to local water supply for a minimal period.			
Wentworth Point	Utilities relocation	• The project would require relocation of the existing recycled water pipeline. • Additionally, a gas main would need to be realigned locally along Hill Road. • It is proposed to relocate an existing Sydney Water main. This may impact business access to local water supply for a minimal period.	Low	Moderate	**Moderate-Low:** • While businesses would be reliant on power and water services it is expected they could accommodate short term outages (i.e. few hours) with notice provided and/or scheduled for outside peak operational hours. • Potential impacts to residential development occurring in the area
Sydney Olympic Park	Utilities relocation	• The project would require relocation of Ausgrid feeders, relocation of a Sydney Water main, and relocation of a medium pressure gas main at Australia Avenue and Dawn Fraser Avenue. • Relocation of high and low voltage transmission lines including 11 kV lines both above and below ground • Potable and recycled water relocation	Low	Moderate	**Moderate-Low:** • While businesses would be reliant on power and water services it is expected they could accommodate short term outages (i.e. few hours) with notice provided and/or scheduled for outside peak operational hours. • Retail and office businesses
Carter Street	Utilities relocation	• The project would require relocation of an existing Sydney Water crossing at Carter Street stop. • High pressure gas mains relocation.	Low	Moderate	**Moderate-Low:** • While businesses would be reliant on power and water services it is expected they could accommodate short term outages (i.e. few hours) with notice provided and/or scheduled for outside peak operational hours. • Potential impacts to residential development occurring in the area

8 ASSESSMENT OF OPERATIONAL IMPACTS

8.1 Access and connectivity

Access and connectivity impacts during operation are detailed in Technical Paper 2 (Transport and Traffic). During operation of the project, it is envisaged that access and connectivity would be generally improved across all precincts and negative impacts particularly for active and public transport would be low.

While most access and connectivity impacts experienced during construction would cease during the operation phase, some impacts may be ongoing including business access arrangements for employees, customer, and service vehicles due to road and signal alterations, permanent reduction in on-street parking and the removal of other transport routes. These impacts are discussed further in the following sections.

8.1.1 Traffic and parking

Operational impacts on traffic and parking are detailed in Technical Paper 2 (Transport and Traffic). Changes to the road network would include the impacts associated with the permanent realigning or closing of some roads, changes to intersection movements, operation of new pedestrian crossings and traffic signals, changes to lane configuration and directional flow, and/or removal of on-street car parking to accommodate displaced traffic lanes.

The most significant operational impacts would be loss of on-street parking and alterations to the road configuration, including several new ‘no right turns’, left-in left-out intersections and signalised intersections (refer Table 8-1). Alterations to traffic signals and operation would impact business access for customers and deliveries, with the potential for detours to access some businesses. Convenient and accessible parking plays an important function for many businesses. Changes to the availability of on-street parking can affect customer access to businesses that are reliant on passing trade and/or ready access to nearby parking.

The operation of the Parramatta Light Rail network is expected to result in a shift of customer behaviours, with an increase in light rail patronage and a reduction in private motor vehicle usage. However, several precincts contain a mix of residential and industrial uses which predominately rely on private vehicle usage.

Table 8-1 provides an operational parking and traffic impact assessment on local businesses within each precinct.

Table 8-1 Traffic and parking impacts on existing businesses (operation)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Road configuration changes and loss of on-street parking	• Existing single lane retained and relocated and converted to shared zone. Reconfiguration of Macquarie Street and Marsden Street intersection to accommodate terminus. Construction of two light rail tracks south of roadway. • Around 17 on-street parking spaces on Macquarie Street between Marsden Street and Church Street, would be removed. • The turnback facility would add an increased movement of light rail vehicles causing potential conflict with traffic and pedestrian movements.	Low	Moderate	**Moderate-Low:** • Changed road configuration during operation may require operational changes for some businesses. • Reductions in on-street parking and corresponding foot traffic would potentially be offset by light rail patronage foot traffic. • Loading and unloading for local businesses in the immediate vicinity of the light rail would be permitted outside of peak activity periods.
Camellia	Intersection and road changes	• The light rail alignment would run largely within the Sandown Line and would require existing vehicle accesses across the corridor to industrial properties to be maintained and controlled by signals • Similarly, the Grand Avenue/Thackeray Street intersection would be signalised to allow for turning movements. East of Durham Street, where the light rail alignment would merge with the northern edge of Grand Avenue, the carriageway would be duplicated for about 150 metres.	Low	Low	**Low:** • Potential delays in the receipt or distribution of goods from changed traffic conditions. • However, existing vehicle access across the corridor to industrial properties would be maintained and controlled by signals potentially reducing the impact. • Traffic modelling indicates that all on-corridor intersections within Camellia would operate at acceptable levels of service during operation.
	Loss of on-street parking	• Parking is primarily on-street along the road network, with off-street facilities associated with the adjoining Rosehill Gardens Racecourse. • Very few parking spaces along Grand Avenue or side-streets would be impacted permanently by the project (around two or ~one per cent).	Negligible	Low	**Negligible:** • Majority of on-street parking retained. • Industrial businesses may utilise on-site parking.
Rydalmere East	Intersection and road changes	• For most of Rydalmere East, one general traffic lane would be provided in each direction either side of centre-running light rail. • This configuration would restrict movements into and out of local streets along both sides of South Street to left-in/left-out. • New signals are proposed at John Street and Primrose Avenue, where vehicle access across the tracks would be required to maintain traffic circulation.	Low	Low	**Low:** • Potential extended travel times and vehicle operation costs. • Potential delays in the receipt or distribution of goods. • Changed traffic conditions expected to have a marginal impact as the existing level of service to Victoria Road is currently quite low.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
					• Most businesses are located to the west of the alignment and so would be able to use alternate access routes to Victoria Road.
	Loss of on-street parking	• Rydalmere East would lose around 150 on-street parking spaces reflecting 32 per cent of the existing supply. • Parking availability may be further affected by demand for informal kiss-and-ride and park-and-ride generated by the project.	Low	Low	**Low:** • Potentially some minor impacts to employees relying on these spaces for commuting to work. • Most businesses are located to the west of the alignment. Many of these business properties appear to have off-street parking so likely not directly impacted by the project.
Ermington	Intersection and road changes	• One general traffic lane would be provided in each direction along South Street and Boronia Street, either side of the centre-running light rail. This configuration would restrict movements into and out of local streets and properties along both sides of Boronia Street to left-in/ left-out only. • New signals are proposed at River Road, Spurway Street/Broadoaks Street, Murdoch Street and Trumper Street, where vehicle access across the tracks would be required to maintain precinct circulation. • The permanent closure of South Street, east of Silverwater Road, would also require the redirection of traffic via alternative routes.	Negligible	Low	**Negligible:** • Very few businesses located in this precinct so impact on businesses anticipated to be negligible. • Café 4TY7 may have some sensitivity to traffic changes, but negligible overall. • Potentially some minor impacts on pass-through business traffic who would not have left turn access onto Silverwater Road from South Street.
	Loss of on-street parking	• Ermington would lose around 156 on-street parking spaces reflecting 16 per cent of the existing supply. • While Ermington does not have a great deal of businesses in the area, the loss of a substantial amount of on-street parking may increase competition for parking spots in nearby precincts.	Low	Low	**Low:** • Limited impact given very few businesses located in this precinct. • Loss of sizeable amount of on-street parking may impact customer access to nearby Café 4TY7.
Melrose Park	Intersection and road changes	• The alignment would run in an off-road corridor between Atkins Road and Hughes Avenue and then run along the northern side of Hope Street before centre running along Waratah Street adjacent to Melrose Park Public School. • New signalised intersections at Boronia Street and Atkins Road; Hope Street and Hughes Avenue; Hope Street and development road (pedestrians only); Hope Street and Waratah Street; Waratah Street and Mary	Moderate	Moderate	**Moderate:** • The intersection of Hope Street and Hughes Avenue is forecast to experience increased delays due to the proposed signalisation. Similarly, the intersection of Waratah Street and Mary Street would also experience increased delays due to signalisation.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		Street. This may increase congestion around the Melrose Park business precinct and near Melrose Park Public School.			
	Loss of on-street parking	• Melrose Park would lose around 110 parking spaces reflecting 26 per cent of the existing supply. • Most impacted parking spaces are existing 'unrestricted'. • It is noted that the removal of parking from Waratah Street may increase pick up/drop off activity associated with Melrose Park Public School, which conflict with business access in peak times.	Low	Moderate	**Moderate-Low:** • Traffic modelling indicates there is capacity in the remaining parking network to accommodate the displaced vehicles. • May result in some additional parking inconvenience to access alternative parking spaces. • Businesses in the precinct appear to rely on customer access via private vehicle so loss of parking may have greater impact on passing trade.
Wentworth Point	Intersection and road changes	• The project would operate with only minor impacts to the existing road configuration. • Existing traffic arrangements would be maintained on Hill Road, with new signals provided at Footbridge Boulevard, Verona Drive, Stromboli Strait and Bennelong Parkway, to facilitate access across Hill Road as well as to and from stops.	Low	Low	**Low:** • Most intersections are expected to perform at a satisfactory level.
	Loss of on-street parking	• Potential loss of on-street parking along Hill Road and within the Woo-la-ra car park. Likely that around 45 parking spaces would be permanently lost, reflecting 20 per cent of the existing supply. • Existing parking in the area is highly utilised and the existing peak parking occupancy would exceed the remaining capacity.	Moderate	Low	**Moderate-Low:** • Reduced customer and employee access potentially acting as a deterrent, but this might be offset by changes to passing trade resulting from light rail for more impacted businesses. • Existing parking availability is already limited in the area, with the operation of the light rail removing all the parking on the northern part of Hill Road and Burroway Road.
Sydney Olympic Park	Intersection and road changes	• New traffic signals are proposed at intersections including: – Holker Busway / Kevin Coombs Avenue / Marjorie Jackson Parkway / Australia Avenue – Australia Avenue / Grand Parade – Australia Avenue / Murray Rose Avenue / Dawn Fraser Avenue – Dawn Fraser Avenue / Park Street – Dawn Fraser Avenue / Olympic Boulevard. • Access to/from Murray Rose Avenue would require some recirculation throughout various roads within the precinct due to the potential turn restrictions at	Low	Low	**Low:** • Traffic modelling indicates that most intersections are generally expected to perform at a satisfactory level of service. • Park Street and Dawn Fraser Avenue would see reduced intersection performance consistent with its role as a shared light rail/pedestrian zone. • As loading/unloading for businesses on Australia Avenue is generally via Herb Elliott Avenue it is unlikely this would be affected by the project.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		Australia Avenue. This would increase vehicle travel times and hinder access to businesses. • Eastbound vehicles on Dawn Fraser Avenue would need to use Olympic Boulevard and adjacent roads instead of Dawn Fraser Avenue east of Olympic Boulevard. • Signals at Hill Road and Holker Street would be adjusted to accommodate light rail services..			
	Loss of on-street parking	• Around 154 parking spaces would be permanently impacted by the project, reflecting 52 per cent of the existing supply. • This includes the removal of all parking along Dawn Fraser Avenue for the proposed shared pedestrian and light rail zone, resulting in the displacement of approximately 94 parked vehicles creating an overflow of 78 vehicles.	Moderate	Low	**Moderate-Low:** • Parking generically characterised as convenience parking, which may impact some retail outlets but potentially be offset by increased patronage from the light rail. • Alternate parking may potentially be accommodated at paid parking facilities on Australia Avenue or Herb Elliott Avenue.
Carter Street	Intersection and road changes	• Light rail alignment would terminate at the Stockyard Boulevard intersection. • Access to the western part of Uhrig Road would require some recirculation due to the new no-right turn from Uhrig Road south of the Carter Street stop. • Access from the eastern part of Uhrig Road to Dawn Fraser Avenue would require some recirculation due to the left-in/left-out arrangements at Uhrig Road. • Southbound vehicles on Dawn Fraser Avenue would need to use an alternative route to access Edwin Flack Avenue and the broader precinct to the east due to the banned right turn at Edwin Flack Avenue.	Low	Low	**Low:** • Intersections are expected to perform adequately with the project in operation. • Access to existing light industrial and residential construction projects maintained via Carter Street.
	Loss of on-street parking	• Around 54 parking spaces would be permanently removed by the project, reflecting 33 per cent of existing supply. • Approximately 56 vehicles displaced from parking on Uhrig Road and there would be an overflow onto surrounding areas in the order of 48 vehicles.	Low	Low	**Low:** • Limited impact given low number of businesses in the area. • Alternate parking potentially provided by paid off-street parking along Edwin Flack Avenue.

8.1.2 Recreation and active transport

During the operation phase of the project there would be numerous changes to recreational areas (including the Sydney Olympic Park special event precinct) and active transport within the precincts. Active transport connections can potentially improve connectivity for customers and employees who rely more on public transport than other modes, particularly if transferring to/from routes with walking and cycling infrastructure (e.g. accessing work via cycling, transfer to ferry, cycle the remainder of the journey).

As described in section 3.2, a 'negligible' sensitivity rating means the business can adapt/absorb the change. Operation of the project would have the potential to benefit passing trade and visibility for some businesses. There would also be improved safety and accessibility of businesses via new footpaths, signalisations and cross-river connections which could also facilitate improved access to local businesses, encouraging people to visit more often, and increasing the likelihood of additional expenditure. Given these are positive impacts consistent with a 'negligible' sensitivity rating applying to all businesses, this has not been assessed further.

8.1.3 Public transport

As outlined in the Technical Paper 2 (Transport and Traffic), the project would connect with other existing and proposed transport modes as follows:

- Sydney Trains:
  - Parramatta Station (T1, T2 and T5 lines) accessed from Parramatta Square stop
  - Olympic Park Station (T7 line) accessed from Olympic Boulevard stop.
- Sydney Metro West:
  - at Parramatta (accessed from Parramatta Square stop)
  - at Sydney Olympic Park (accessed from Olympic Boulevard stop)
- Sydney Ferries at Rydalmere and Sydney Olympic Park (F3 service) (accessed from the John Street and Olympic Boulevard stops, respectively)
- some bus services, such as the 524 and 525, would likely be replaced as their route runs along the project alignment. The new light rail stops would integrate with existing bus routes, with services likely to be altered to include stops near the light rail stops.

Integration with other public transport services would increase the range of travel options available for journeys for employees, customers and visitors within Parramatta and the surrounding areas, reducing reliance on private car, and the need for parking. This is supported by the findings in the 'Have Your Say Survey', where nine business owner/operator respondents indicated their interest in utilising the light rail.

There are several new and proposed residential and multi-use developments, most notably within the Wentworth Point precinct. The project would provide a relatively direct, alternative route for transport from these developments to the Parramatta CBD and connecting to regional public transport services like heavy rail.

In addition, the project would run directly through Sydney Olympic Park providing greater access to the Sydney Olympic Park CBD and event spaces. Community members utilising Sydney Olympic Park for its open space or events throughout the year would benefit from an additional public transport option that provides high capacity and reliable trips to a traditionally busy area, improving accessibility to businesses and improving business exposure.

As described in section 3.2, a 'negligible' sensitivity rating means the business can adapt/absorb the change. As there would be improved travel times and increased transport efficiency for employees and customers, this is a positive impact consistent with a "negligible" sensitivity. Therefore, the sensitivity rating for all businesses is negligible and has not been assessed further.

8.2 Noise, vibration and air quality

During operation businesses can continue to be sensitive to noise if it exceeds comfort levels or continues for prolonged periods of time. The continual exceedance of comfortable noise levels can affect employee health and wellbeing, productivity and may deter customers. Given the light rail service would operate within existing urban environments with previously high levels of motor vehicle and heavy traffic operation a certain level of noise is expected to be present, particularly within industrial business areas.

Increased noise and vibration may particularly impact businesses that rely on certain levels of amenity to be maintained (such as cafes and hotels). Despite not being identified as sensitive receivers, there is the potential that any of these additional noise sensitive businesses many experience a slight decline in amenity which could result in a loss of customers and reduced revenue.

Technical Paper 3 (Noise and Vibration) assessed the predicted rail noise levels of the project during operation. The findings of the assessment predicted that noise levels may increase in some areas. However, in most areas, the impacts are expected to be minimal during operation of the project. Table 8-2 provides an operational noise and vibration impact assessment on local businesses within each precinct.

As outlined in Chapter 20 (Air quality) of the EIS, there would be no dust or other air quality impacts contributing to poor amenity during operation.

Table 8-2 Noise and vibration impacts to businesses (operation)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Rail operation noise	• For the restaurants and retail shop buildings fronting the Macquarie Street turnback facility (some as close as five metres from the track) airborne noise levels are anticipated to be a dominant noise source. • The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013).	Low	Low	**Low:** • Given the location of businesses within a busy CBD area comprising urban noise and road traffic, they may be less sensitive to the operational noise impacts of light rail. • Potential for minor reduction in workplace ambiance. • During high frequency periods constant noise may impact productivity.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Business types present are not expected to be sensitive to vibration.
Camellia	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013).	Low	Negligible	**Negligible:** • Precinct is currently an active heavy industrial area so noise from light rail movements would not be expected to impact businesses.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is currently an active heavy industrial area so minor vibration would not be expected to impact businesses.
Rydalmere East	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013).	Low	Negligible	**Negligible:** • Precinct is currently an active light industrial area so minor noise would not be expected to impact businesses.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is currently an active light industrial area so minor vibration would not be expected to impact businesses.
Ermington	Rail operation noise	• Noise management levels during operation are predicted to be below the noise level triggers. It is unlikely that business would be impacted.	Low	Negligible	**Negligible:** • Precinct is predominantly residential with few businesses.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is predominantly residential with few businesses.
Melrose Park	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are	Low	Negligible	**Negligible:**

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013).			• Precinct is currently an active light industrial area so minor noise would not be expected to impact businesses.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is currently an active light industrial area so minor vibration would not be expected to impact businesses.
Wentworth Point	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013). • Noise management levels during operation are predicted to be below the noise level triggers. It is unlikely that business would be impacted.	Low	Negligible	**Negligible:** • Precinct is predominantly residential with several ground floor retail businesses. • Project alignment extends along Hill Road at a distance from businesses so impacts would be minimal.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Project alignment extends along Hill Road at a distance from businesses so impacts would be minimal.
Sydney Olympic Park	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013). • Noise management levels during operation are predicted to be below the noise level triggers. It is unlikely that business would be impacted.	Low	Moderate	**Moderate-Low:** • Sydney Olympic Park is an active urban and special events precinct so operational noise impacts would be in keeping with the general noise environment. • Small number of commercial buildings would potentially exceed noise thresholds. However commercial grade windows in the precinct are likely sufficient to mitigate any additional noise resulting from the project.
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is mixed use with several ground floor retail businesses and hotels. • Non-event days visitor and population is smaller lessening overall impacts.
Carter Street	Rail operation noise	• The noise and vibration assessment does not consider airborne noise impacts to commercial or industrial receivers as they are not considered noise-sensitive under the *Rail Infrastructure Noise Guideline* (EPA, 2013). • Noise management levels during operation are predicted to be below the noise level triggers. It is unlikely that business would be impacted.	Low	Negligible	**Negligible:** • Potential for minor reduction in workplace ambiance.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
	Rail operation vibration	• Human comfort or structural ground-borne vibration impacts from the project are not anticipated for businesses.	Low	Negligible	**Negligible:** • Precinct is currently undergoing construction to become a mixed use precinct.

8.3 Visual amenity

The operation of the project is generally expected to have a positive impact on businesses, with new and amended infrastructure, landscaping and urban design concepts improving amenity. All precincts are expected to experience changes in visual amenity due to the new bridge infrastructure, stops and ancillary facilities such as traction power substations.

While the project site is characterised by a range of different land uses, many of which are industrial, certain businesses that benefit from passing trade (such as cafes and restaurants) may see improved revenue and customer patronage due to the pleasant urban streetscapes and strong sightlines to store frontages. It is also noted that amenity dependant businesses (such as hotels) may receive increased business because of improved streetscape design.

Enhancements to the visual amenity of an environment may improve a person's experience and impression of the place, generally resulting in patrons making more return visits. This improved pedestrian experience may potentially have a positive impact on businesses with customers more likely to return to visit the centre and increase expenditure in the locality. Table 8-3 provides an operational visual impact assessment on local businesses within each precinct.

Table 8-3 Visual impacts to businesses (operation)

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Parramatta CBD (Macquarie Street turnback)	Improved amenity	• Minor vertical structures are proposed as part of the turnback facility – the main changes comprise laying track for light rail vehicles to terminate and then travel back.	Negligible	Moderate	**Negligible:** • While the sensitivity of business in the Parramatta CBD is moderate, the visual changes are expected to be negligible and so would not adversely impact business operations.
Camellia	Improved amenity	• Introduction of the new bridge and abutments would introduce a new major feature into the visual landscape at Camellia. • Other visual changes would include new light rail stop at Sandown Boulevard, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • There would be some tree removal, but replacement landscaping proposed.	Low	Low	**Low:** • The visual changes are not expected to greatly affect business operations, as the Camellia precinct mostly comprises industrial receivers who are less susceptible to visual changes.
Rydalmere East	Improved amenity	• Introduction of the new bridge and abutments would introduce a new major feature into the visual landscape at Rydalmere East, at the foreshores and Eric Primrose Reserve. • A bridge over Silverwater Road between Rydalmere to Ermington is also proposed. • Other visual changes would include new light rail stops at John Street and Nowill Street, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • There would be some tree removal, but replacement landscaping proposed.	Low	Low	**Low:** • The visual changes are not expected to greatly affect business operations, as the businesses in the Rydalmere East precinct are mostly industrial receivers who are less susceptible to visual changes. • The project may benefit the local business amenity through the addition of landscaping or other amenity features that would make the precinct more enjoyable for employees and customers.
Ermington	Improved amenity	• A bridge over Silverwater Road and light rail through Ken Newman Park represent the major visual changes in this precinct. • Other visual changes would include new light rail stops at River Road, Murdoch Street and Atkins Road, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • There would be some tree removal, but replacement landscaping proposed.	Negligible	Negligible	**Negligible:** • There are few businesses located in this part of the alignment, as a result the anticipated impact is expected to be negligible.

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
Melrose Park	Improved amenity	• Introduction of the new bridge and abutments would introduce a new major feature into the visual landscape at Melrose Park, at the foreshore. • Other visual changes would include new light rail stops at Melrose Park and Waratah Street, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • There would be some tree removal, but replacement landscaping proposed. A section of green track is proposed around the Bulla Cream Dairy (Willowmere)/Atkins Road stop location.	Low	Low	**Low:** • The visual changes are not expected to greatly affect business operations, as the Melrose Park precinct mostly comprises industrial receivers who are less susceptible to visual changes. • Both the northern and southern precincts of Melrose Park are forecast to undergo significant redevelopment and renewal. Therefore in the long term, integrating the light rail into the town centre's streetscape could create an alignment of continuous public domain, making it a more attractive urban environment which is more enjoyable for employees and customers.
Wentworth Point	Improved amenity	• Introduction of the new bridge and abutments would introduce a new major feature into the visual landscape at Wentworth Point, at the foreshore/River Walk, which may be visible from commercial business in this precinct. • Other visual changes would include new light rail stops at Footbridge Boulevard, Hill Road and Holker Street, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • There would be some tree removal, but replacement landscaping proposed.	Low	Low	**Low:** • While the Wentworth Point precinct has cafes and shops that are more susceptible to visual changes, overall, the scale and nature of the project is not expected to have a significant impact as the proposed infrastructure is generally in keeping with the urban environment. • Some business may have views of the new bridge, depending on sight lines and vegetation but are sufficiently set back that they would not experience shadowing.
Sydney Olympic Park	Improved amenity	• Visual changes would include new light rail stops at Jacaranda Square and Olympic Boulevard, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths. • The light rail alignment on Dawn Fraser Avenue between the two light rail stops aims to enhance the character of the street, and a new pedestrianised zone would help improve visual amenity by removing vehicular traffic. • There would be some tree removal, but replacement landscaping proposed. Where possible, Jacaranda trees would be retained.	Low	Low	**Low:** • While the Sydney Olympic Park precinct has businesses/events that are more susceptible to visual changes, public transport is already substantially part of the precinct, and the light rail alignment aims to replicate the existing character of the street with a light rail along the existing central median. • The proposed section of wire free in this precinct would improve overall amenity.
Carter Street	Improved amenity	• Visual changes would include new light rail stop at Carter Street, overhead wiring, lighting poles, traffic signals as well as the light rail track, walking and cycling paths.	Low	Low	**Low:** • At present, given the industrial character, the construction of the project would have minimal impacts for businesses. Over the long term, integrating the light rail into the town centre's streetscape could create an

Precinct	Impact	Proposed change with potential to affect business	Magnitude	Sensitivity	Level of significance
		• There would be some tree removal, but replacement landscaping proposed.			alignment of continuous public domain, making it a more attractive urban environment which is more enjoyable for employees and customers.

8.4 Increased urban renewal and development capacity

8.4.1 Economic trends and projections

The project is anticipated to help stimulate a range of residential dwellings, jobs, and other economic activity within the precincts. Current planning controls provide capacity for around 40,000 additional dwellings and 60,000 additional jobs above existing numbers. This is due to the significant growth catered for in existing controls, or planned rezoning, at Camellia, Melrose Park, Sydney Olympic Park, and Carter Street. This development is not dependent on the project; however, the project would enable further changes to planning controls in precincts like Ermington and Rydalmere East, which is forecast to result in capacity for around 18,000 additional dwellings and 5,000 jobs. The extent and timing of this additional capacity being realised would be dependent on the relative market-take up with and without the project.

8.4.2 Parramatta CBD (Macquarie Street turnback)

The project would provide additional connections over the Parramatta River, particularly the bridge connecting between Camellia and Rydalmere East which would significantly improve connectivity and access to the Parramatta CBD.

Parramatta CBD is the heart of Sydney's Central City. The importance of the Parramatta CBD will only increase as Western Sydney's population grows. Over the next 40 years, an additional 46,000 jobs and 15,000 dwellings are expected in the Parramatta CBD.

The Parramatta office market is the fifth largest suburban office market in Australia with around 700,000 square metres of office floorspace. It is the fourth largest office market in the Sydney metropolitan area, second only to the Sydney CBD having around 4,900,000 square metres of office floor space and Macquarie Park/North Ryde and North Sydney having around 850,000 square metres of floorspace each.

8.4.3 Camellia precinct

In December 2021, the (former) Department of Planning, Industry and Environment released the *Draft Camellia-Rosehill Place Strategy,* which is a 20-year plan to breathe new life into Camellia-Rosehill by converting it from an industrial area into a residential and mixed use precinct. The draft place strategy builds on previous planning work and would allow for a range of new development in the area:

- a thriving town centre with an 18-hour entertainment precinct
- up to 14,500 jobs
- 10,000 new homes supported by infrastructure and new public open spaces
- improved transport connections including light rail, road upgrades and cycling and pedestrian paths
- the Parramatta River foreshore opened as a centre of community activity
- a new urban services precinct and retention of heavy industrial land that would ensure Camellia-Rosehill continues to be an industrial powerhouse for Sydney and NSW (DPIE, 2021).

The Camellia precinct is proposed to contain four main components:

- a mixed-use entertainment precinct along the James Ruse Drive interface
- a residential area with town centre in the north-west corner
- urban services in the centre
- heavy industrial in the eastern end of the precinct.

The strategy was developed with the future light rail corridor in mind as a core part of supporting the shift to a mixed use precinct and to allow for integrated development.

8.4.4 Rydalmere East precinct

The Greater Sydney Commission also identified Rydalmere as an opportunity for growth associated with the introduction of Parramatta Light Rail Stage 2 under their *GPOP Place-based Infrastructure Compact* (Greater Sydney Commission, 2019). However, at present there is no substantially progressed planning proposals underway.

The project could potentially support an additional medium to high density residential precinct, providing a range of dwelling types. Residential uses would be supported by several smaller commercial and mixed-use precincts which can provide for a range of job types and act as a barrier to Victoria Road.

The precinct is likely to see the continued pattern of redevelopment on land located within the north-west corner of the precinct which is zoned as R4 High Density Residential. In addition, within land zoned as R2 Low Density Residential, the precinct may see continued redevelopment of single detached dwellings to dual occupancies on lots which meet the minimum required lot size. The rate and timing of these redevelopments would be dependent upon the strength of the property market at the time and are subject to a separate approvals process.

8.4.5 Ermington precinct

Ermington is a newly identified precinct, which like Rydalmere East, is envisaged largely as a medium-high density residential precinct with some small local centres There is no substantially progressed planning in this area to achieve the types of land uses currently identified. However, the project would increase the viability of a new mixed use or residential precinct to be developed in the future.

8.4.6 Melrose Park precinct

The City of Parramatta Council's *Parramatta Employment Lands Strategy* (City of Parramatta Council, 2016) has identified Melrose Park as being suitable for rezoning to support residential development. The suitability of Melrose Park for development is supported by the project's alignment with the Parramatta CBD. Planning proposals have since been lodged for Melrose Park North and South.

In response to the planning proposal for rezoning of land in Melrose Park North, the City of Parramatta Council resolved that, with delivery of a bridge to Wentworth Point (with light rail or equivalent bus service) and Sydney Metro West, the development capacity of the north and south precincts could increase from 6,700 to 11,000 dwellings (City of Parramatta, 2019).

Similarly, the Planning Proposal for Melrose Park South (known as the Holdmark Site) at 112 Wharf Road, 30 and 32 Waratah Street, Melrose Park and 82 Hughes Avenue, Ermington seeks to provide approximately 1,925 new dwellings and 1,000 square metres non-residential floor space to promote job creation.

Public exhibition of the northern planning proposal has been undertaken, with post exhibition outcomes being considered by the City of Parramatta Council. The planning proposal for the south is less progressed and yet to be exhibited, however it is reasonable to assume some level of development will eventually progress in this southern portion as well.

8.4.7 Wentworth Point precinct

Although the Wentworth Point precinct has largely been developed, the provision of the light rail service connecting to the Parramatta CBD has reinforced the viability of the area with new developments, such as the Sanctuary Wentworth Point development, adding to the mixed-use nature of the precinct.

The northern peninsula of Wentworth Point was rezoned in June 2014 as an urban activation, which includes open space, shops, services, and new homes and jobs. Further, the rezoning allowed for a 3.9-hectare peninsula park, three pocket parks, two residential neighbourhoods, a new primary school, and continuation of the Homebush Bay promenade. The Wentworth Point Development Control Plan (DCP) 2013 provides a framework to guide development in the Wentworth Point Urban Activation Precinct.

8.4.8 Sydney Olympic Park precinct

The project supports the vision included within the *Sydney Olympic Park Master Plan,* with the goal of supporting business viability within the Sydney Olympic Park precinct. The light rail would assist in increasing patronage to the area and improve overall connectivity to Sydney Olympic Park with the rest of the GPOP area. The project would help support the vision for:

- 10,700 additional residential dwellings to support 23,500 residents
- 100,000 square metres of additional retail
- new educational establishments
- new entertainment facilities.

Sydney Olympic Park precinct has several notable developments currently under way:

- a new mixed use residential, commercial, and retail building including 229 apartments is currently under construction at the corner of Olympic Boulevarde and Sarah Durack Avenue
- a State Significant Development proposal for two residential apartment buildings at 1 and 2 Murray Rose Avenue is currently at the assessment stage. The design incorporates 280 apartments across two sites and activates ground floor retail and public realm
- a State Significant Development proposal is at the environmental assessment stage for the development two 30 storey mixed use towers at 2 Australia Avenue including hotel, community, retail, offices, and residential space.

8.4.9 Carter Street precinct

The *Carter Street Master Plan* was developed in 2020. The vision is to redevelop the precinct from an industrial precinct into a residential precinct. It will help support the delivery of 700 dwellings and improve the relationship to the Sydney Olympic Park precinct.

The amendment of the planning controls will relocate the primary school within the site, provide land for road widening, reduce car parking rates, increase the height, and floor space ratio on certain land and introduce design excellence provisions.

Development is currently occurring in the Carter Street precinct including ‘The Ovation Quarter’, a major development over three 20-storey towers at 29 Carter Street, Lidcombe. The Retreat by Meriton is another development occurring at 7 Carter Street which is aiming to deliver 190 apartments. In total, over 1,000 apartments are currently in construction in the precinct and due for delivery by 2030.

9 CUMULATIVE IMPACTS

9.1 Nature of cumulative impacts

Cumulative impacts result from the successive, incremental, or combined effects of a project when added to other existing, planned or reasonably anticipated future projects. The cumulative effect of multiple projects may decrease or intensify the benefits or negative impacts on a business or business centre. Cumulative impacts associated with the above transport and infrastructure projects include:

- extended periods of construction impacting local amenity and altering the character and identity of a local centre, potentially resulting in construction fatigue
- extended periods of traffic disruptions affecting customers, employees, visitors, suppliers, and commercial vehicle movements
- economic effects including changes to business operation and revenues
- construction traffic from multiple projects placing additional pressure on road networks and parking capacity, resulting in potential customers avoiding the area during construction
- consultation and construction fatigue for local communities and businesses due to the concurrent or sequential planning and construction nature of the project
- cumulative benefits associated with improved connections across a network of infrastructure enhancing accessibility for business and industry, including freight.

One cumulative impact that is unique to businesses is the ongoing effects of the COVID-19 pandemic on business revenue. The logistical impacts of COVID-19, coupled with the construction and operational impacts of the project may create additional stress for businesses. This was noted by one of the respondents, who noted in the Have Your Say survey that the cumulative impact of construction and ongoing COVID-19 pandemic would be ‘detrimental’ to their business. This information has been captured in the impact assessment for businesses and informed the impact ratings.

Table 9-1 Project interfaces with other nearby developments

Project	Location & description	Interaction with project
Private hospital and hotel	• 41-43 Hunter Street, Parramatta - the site is located on the corner of Hunter Street and Marsden Street.	• This hospital and hotel site is approximately 200 metres south of the project site along Macquarie Street.
Sydney Metro West	• Sydney Metro West is a new 24-kilometre metro line with stations confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD.	• The Clyde stabling and maintenance facility site is located approximately 800 metres south of the project site at Camellia on Colquhoun Street. • The Parramatta Sydney Metro West Station construction site would be located north-east of the project site bounded by George, Macquarie, Church, and Smith Streets. • The Sydney Olympic Park Sydney Metro West Station would be near the project site.
Parramatta Light Rail Stage 1	• Stage 1 of Parramatta Light Rail will connect Westmead to Carlingford via the Parramatta CBD and Camellia with a two-way track spanning 12 kilometres and is expected to open in 2024. The route will link Parramatta's CBD and train station to the Westmead Health Precinct, Cumberland Hospital Precinct, CommBank Stadium, the Camellia Town Centre, the new science, technology and innovation museum Powerhouse Parramatta, the private and social housing redevelopment at Telopea, Rosehill Gardens Racecourse and three Western Sydney University campuses.	• Parramatta Light Rail Stage 2 overlaps with Stage 1 within the Parramatta CBD, along Macquarie Street where a turnback facility would be constructed for Stage 2 services to terminate. • Both Paramatta Light Rail Stage 1 and Stage 2 would utilise the stabling and maintenance facility located in Camellia. • Light rail vehicles for Stage 1 and Stage 2 would have a shared running section of operation between the Parramatta CBD and Camellia.
Powerhouse Parramatta	• 34-54 & 30B Phillip Street and 338 Church Street, Parramatta.	• The project site is located approximately 550 metres north from the project site at Macquarie Street.
Draft Camellia-Rosehill Precinct (Place Strategy)	• The master plan includes three sub precincts and covers approximately 320 hectares across Camellia, Rosehill, and a portion of Clyde. • Development within the immediate vicinity of this proposal site includes a proposed town centre, a foreshore linear park along Parramatta River, a new urban plaza at James Ruse Drive and a new primary school and central local park.	• The master plan area incorporates with the Parramatta Light Rail alignment along Grand Avenue and the proposed Sandown Boulevard stop.
Viva Energy Clyde Western Area	• The fuel supplier complex is part of the large Clyde Terminal and is in the south-western part of the site. The site is located at Durham Street on the Camellia peninsula.	• The northern boundary of the site interacts with the project site along Grand Avenue (including a section of Durham Street) as it extends across the Parramatta River to John Street.
Camellia Waste Facility	• 37 Grand Avenue, Camellia • The site is a waste processing facility approx. 2.3 ha in area and is zoned IN3 Heavy Industrial.	• The site interacts with the project site on the southern boundary along Grand Avenue and the eastern boundary as it runs across Parramatta River to the project site adjacent to South Street.
Melrose Park North Precinct Planning Proposal	• The Melrose Park North Planning Proposal applies to the northern precinct of the Melrose Park Urban Renewal Precinct, which is bounded by Victoria Road to the north, Wharf Road to the east, Hope Street to the south and Hughes Avenue to the west.	• The southern boundary of the site is located along the project site on Hope Street. The site would interact with the project site along Hope Street, Hughes Avenue and Wharf Road.

Project	Location & description	Interaction with project
	• The development will include approximately 1,925 new dwellings and 1,000 square metres non-residential floor space to promote job creation. Residential apartments and the buildings will range from 14-18 storeys. • The development will also include a future school, commercial premises, retail premises and open spaces	
Melrose Park South Precinct Planning Proposal	• The Melrose Park southern precinct comprises of lands bound by Hope Street to the north, Wharf Road to the east, Parramatta River to the south and Atkins Road to the west. The eastern boundary is shared with the City of Ryde Council.	• The site would interact with the project site along Hope Street, Hughes Avenue, Wharf Road, Waratah Street and Mary Street.
Sanctuary Wentworth Point	• 14-16 Hill Road, Wentworth Point. • Sanctuary Wentworth Point is private residential development by Sekisui House. • The development will include one, two and three-bedroom apartments on the above ground levels and commercial and retail uses on the ground floor.	• The light rail alignment would pass through the Sanctuary Wentworth Point site, with a light rail stop (Wentworth Point) located adjacent the site on Hill Road.
URBNSURF	• Pod 5B, Sydney Olympic Park • Scheduled to open in 2023, URBNSURF is an outdoor artificial body of water that is used for surfing/bodyboarding.	• The site would interact with the project site near the Holker Busway and on Australia Avenue.
Meriton and Ovation	• Residential developments planned, and recently completed, along Carter Street • Ongoing residential construction and the project may add pressure on local road network and parking. • Additional residential density will likely add demand for retail shops and services to support new residents.	• The sites would interact with the project in proximity to Carter Street and Uhrig Road.

9.2 Construction

The project would involve construction activity at several work sites along the project site. There are potential interfaces with this project and other projects (unrelated to Parramatta Light Rail Stage 2) being constructed over a similar timeframe to the estimated five to six-year construction period commencing in 2025 (subject to receiving approvals). These include:

- Parramatta Light Rail Stage 1
- Sydney Metro West
- development sites (e.g. Melrose Park North and South)
- other potential road and transport improvements.

Among the most significant cumulative impacts are those interfacing with major infrastructure and redevelopment projects. This is due predominately to concurrent construction works, with impacts on traffic movements, parking disruption, heavy and light vehicle interfaces, and congestion. This is particularly the case in areas like the Parramatta CBD that will experience extended construction works.

Most of the works associated with Parramatta Light Rail Stage 1 would be complete prior to commencement of Parramatta Light Rail Stage 2 construction works. However, there is some overlap associated with works for the Macquarie Street turnback in the Parramatta CBD and Camellia. Given these precincts would have undergone intensive construction during Stage 1 works there is a risk of construction fatigue, however, there is also an opportunity to continue management measures from Stage 1.

Site-specific Construction Traffic Management Plans for the above precincts would include consideration of potential interaction with Parramatta Light Rail Stage 1 construction works (including testing and commissioning) as well as operation of the light rail.

The full extent of additional impacts generated by other projects (such as development sites and road and transport improvements) is unknown at this stage. The proposed construction methodology for Parramatta Light Rail Stage 2 maintains road network accessibility by ensuring that key transport corridors are maintained with two-way traffic for the duration of the works, and significant closures (such as full intersections or closure of major road corridors) are generally limited to night works.

Most truck activity during the project's construction would take place outside the peak periods. Analysis of those locations where construction routes are combined between multiple precincts indicates that even the peak construction activity truck volumes associated with the project would represent only a small proportional increase in the total traffic volumes, which can be accommodated.

It is therefore considered that, there would be a low proportional traffic impact generated by construction of the project. However, given the issues noted with respect to parking, there may be moderate additional cumulative impact related to parking as project works and workers at the Payce site compete for many on-street parking and staging locations.

Consultation activities and research has indicated traffic impacts associated with construction to be important for businesses, and an aspect where there may be potential cumulative impacts as discussed above. Other cumulative impacts may occur with respect to noise, vibration, air quality and visual amenity. These are expected to impact businesses differently dependent on their proximity to other developments and the nature of their operations, with those in retail, accommodation and hospitality most sensitive. Potential cumulative impacts would be managed through the construction environmental management plan and various supporting management plans.

9.3 Operation

Integration with other public transport will increase the range of travel options available for journeys within Parramatta and the surrounding areas thereby providing better access for workers and customers:

- Sydney Trains:
  - Parramatta Station (T1, T2 and T5 lines) accessed from Parramatta Square stop
  - Olympic Park Station (T7 line) accessed from Olympic Boulevard stop.

- Sydney Metro West:
  - at Parramatta (accessed from Parramatta Square stop)
  - at Sydney Olympic Park (accessed from Olympic Boulevard stop)
- Sydney ferries at Rydalmere and Sydney Olympic Park (F3 service) (accessed from John Street and Wentworth Point stops respectively)
- Some bus services, such as the 524 and 525, would likely be replaced as their route runs along the project alignment. The new light rail stops would integrate with existing bus routes with services likely altered to include stops near light rail stops.

As discussed in section 7.4, there are several new and proposed residential and multi-use developments along the alignment, most notably within the Wentworth Point precinct. The proposed alignment would provide a relatively direct, alternative route for transport from these developments to the Parramatta CBD and connecting to regional public transport services. Notably, the precinct has limited access and egress, which makes it difficult for potential customers and worker to access the area without travel delay during peak hours.

The cumulative impacts of the project operating in conjunction with large and major events at Sydney Olympic Park would need to be managed strategically to ensure to minimise potential interactions between rail service and pedestrians during events. Key impact mitigation measures may include:

- temporary termination of light rail services at Jacaranda Square stop (outside Olympic Park Station) rather than the Carter Street precinct
- special event traffic management to control pedestrian access across the light rail alignment
- additional queuing space to be provided at light rail stops under event conditions.

10 MITIGATION MEASURES

10.1 Learnings and successful actions from Parramatta Light Rail Stage 1

Construction of Parramatta Light Rail Stage 1 had the potential to impact a range of different type of businesses across five precincts, including the Parramatta CBD. Transport for NSW recognises the importance of supporting and managing impacts on businesses during construction and have worked directly with the local business community and key stakeholders including City of Parramatta Council and the Parramatta Chamber of Commerce to develop a number of initiatives to support businesses both before and during construction of the light rail.

While Stage 2 would be undertaken in different precincts with different business types, the potential impacts to businesses during construction would be similar (i.e. access and connectivity, amenity, economic effects) and therefore presents an opportunity to analyse what aspects of the business mitigation measures on Stage 1 worked well or could be developed further for Stage 2.

The BIA team collaborated with the Stage 1 team undertaking lessons learned sessions in April and June 2022 as well as a review of documents like the Business Impact Assessment prepared for the EIS, Submissions Report and latest version of 'Activate Parramatta' business activation plan.

10.1.1 Business activation plan

A key lesson learned from earlier light rail projects (such as the CBD and South East Light Rail) which was integrated into the Stage 1 project, was the need to ensure flexible and tailored responses to managing and mitigating business impacts, which consider the nature of the impact relative to the character of the precinct and businesses in question. A 'one size fits all' approach has proven to be too inflexible and often not met the expectations of local businesses. For example, the needs of businesses in Parramatta's Eat Street were different to those of health service providers in Westmead and industrial operations in Camellia. For this reason, one business support objective for Eat Street businesses was to encourage ongoing foot traffic through business promotions, activation of public space and tailored wayfinding whereas maintaining vehicular access was a focus for Camellia.

Business support measures/mitigation measures for Stage 1 were captured in the 'Activate Parramatta' business activation plan (https://www.parramattalightrail.nsw.gov.au/business-activation-plan) that was developed as a living document and updated on a regular basis. Table 10-1 highlights key business support measures from this plan which have worked well in mitigating a particular type of business impact. Similar measures would be considered for Stage 2 precincts where similar impacts have the potential to occur.

Table 10-1 Business support measures from Parramatta Light Rail Stage 1

Impact/issue	Mitigation measure/business support measure
Poor communication and engagement	• **PLR Project Hotline:** Businesses were provided the project's 24-hour phone number to raise complaints or make enquiries. Complaints were acknowledged within around two hours of the call so the relevant team could assess and address the matter. • **Monitoring and reporting program:** Continually monitor, assess, and report on the effectiveness of business activation measures through quantitative analysis. These metrics include: – sentiment surveys – customer views and behaviour regarding events and activation – business surveys – generated media traffic – pedestrian footfall counts and dwell time surveys – retail and commercial vacancy rates – public domain assessment.
Reduced passing trade and foot traffic	• **'Shop Local' and social media campaigns:** Develop campaigns focused on promoting shopping at local businesses that front the project alignment. Support is provided through stimulating activity and providing a catalyst for generating pedestrian journeys into each precinct.

Impact/issue	Mitigation measure/business support measure
	– For example, Parramatta Light Rail Stage 1 implemented a 'Spend $20 at participating businesses and receive free parking' program to incentivise local trade. – Also, Parramatta Light Rail Stage 1 implemented limitations on outside food and beverage provision to encourage local trade (e.g., limit food trucks, mobile coffee vendors, etc.) • **Voucher program:** Vouchers provided to construction workers to purchase food and beverage of impacted businesses.
Parking and traffic access	• **Freight and servicing:** Work with businesses and their suppliers to prepare for a changing operating environment, ensuring continuity of service and problem solving to minimise disruption to freight and servicing requirements. – Alternatives may include re-timing some deliveries or maintenance work, consolidating some deliveries and investigating the use of loading docks and other off-street loading options. • **Parking and access alternatives:** Provide parking alternatives when driveway access or on-street parking is to be disrupted. – For example at Westmead Parramatta Light Rail Stage 1 needed to remove driveway access temporarily for a couple of months. Paid parking was provided for residents at an undercover car park as part of the Westmead Children's Hospital, with a 24hr concierge so residents could continue to receive deliveries etc.
Noise, pollution, and amenity	• **Temporary art and public domain installations:** Temporary art, public domain installations and live entertainment to bring life to underutilised spaces and create opportunities for conversation and visitation. • **Frontages and greenery:** Protect and promote existing green frontages along the alignment during construction. – If greenery is to be removed, temporary pop-up-style green solutions can be provided. These provisions increase the dwell time of pedestrians near businesses. • **Cleaning and remediation vouchers:** Vouchers provided to businesses to hire external cleaners or undertaken minor repair works where construction has caused unexpected (or greater than anticipated) dirt, dust, or pollution.
Signage and business visibility	• **Advertising and wayfinding:** Develop engaging hoardings and business specific wayfinding signage for pedestrians and customers to create visually engaging sightlines and to communicate about changed access arrangements to businesses that may be visually obstructed because of construction. – For example, updated bespoke shade cloth installed using imagery to reinforce the different types of businesses that are specific to the locations. New shade cloth was installed in Eat Street in February 2021 highlighting Church Street 'We're Open' and linking to activateparramatta.com.au.

Figure 10-1, Figure 10-2, and Figure 10-3 provide examples of how some of the business support measures were implemented as part of Parramatta Light Rail Stage 1.

Figure 10-1 'Pop-up' green spaces and public seating

Figure 10-2 Wayfinding and hoarding measures

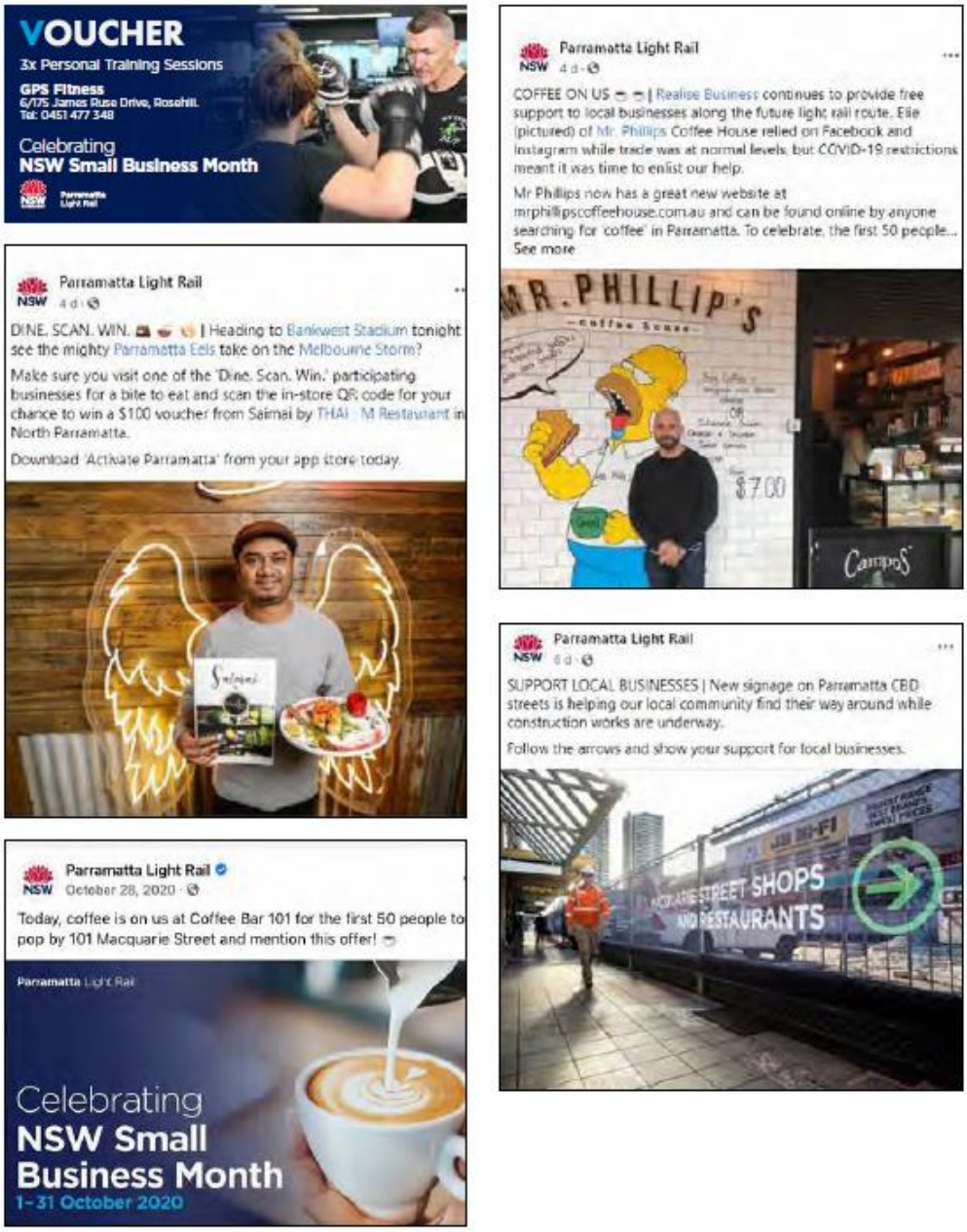

Figure 10-3 Voucher and social media campaign

10.1.2 Business reference group

Another key initiative that worked well on Parramatta Light Rail Stage 1 was the formation of a business reference group. Business reference groups members had the opportunity to influence the project in the provision of local knowledge, advice and recommendations on initiatives to support businesses across the alignment during construction and through to operation. The group has representation from local businesses across the alignment and key stakeholders including the City of Parramatta Council and the Parramatta Chamber of Commerce.

It is proposed to extend this to Stage 2, however given the diversity of businesses (i.e. Camellia industrial businesses who would have different insights and needs than the commercial business within Sydney Olympic Park), a number of business reference groups may be formed.

10.1.3 Business advisory support services

Transport for NSW has provided a business advisory support service delivered by Realise Business, which was set up to provide one-on-one free support to local businesses affected by Stage 1 construction. This service ensured businesses maximised their potential, navigated the challenges of a changing environment and made the most out of the opportunities ahead as well as leveraging the business activation and marketing initiatives delivered by Transport for NSW. This included measures like assistance with strategies for attracting customers and rebranding, social media and website design and creating customer databases and referral management strategies. Positive testimonials have been received from many business recipients, leading to Transport for NSW committing to extend this program into Stage 2.

10.2 Recommended mitigation measures

The recommended mitigation measures in Table 10-2 been informed by learnings and successful actions from the Parramatta Light Rail Stage 1 project (refer section 10.1), a review of other transport infrastructure projects (see Table 6-4) and from key findings from engagement surveys. For example, business respondents in the Have Your Say survey identified that regular updates and good communication would be an effective mitigation measure during construction. All but one respondent noted that installing local signage to identify business locations would also be an effective mitigation measure.

In addition, the construction environmental management plan and a range of supporting management plans are also proposed to manage traffic, noise, visual and utility impacts which are detailed in the EIS (Chapter 23 (Approach to environmental management and mitigation).

Table 10-2 Recommended mitigation measures

Issue/Impact	Mitigation	Timing
Place Managers	Dedicated Place Managers will be available in the lead up to, and during, construction to listen to concerns and answer questions from the community and businesses. Place Managers will provide a single point of contact for people (including business owners/operators) wanting to find out more about the project, including the impacts of construction, and the measures that will be implemented to minimise these impacts as far as possible.	Pre-construction, construction
Property Acquisition	All property acquisitions will be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991*, the land acquisition reforms announced by the NSW Government in 2016, and the recommendations of the Auditor General's 2021 review of Transport for NSW's acquisition practices.	Pre-construction
Business Management and Activation Plan	A Business Management and Activation Plan will be prepared and implemented for businesses with the potential to be affected by the project, including those located on roads impacted by construction. The plan will identify businesses with the potential to be impacted by the project. It will detail feasible and reasonable measures, developed in consultation with affected business owners/operators to: • minimise disruption for customers and deliveries as far as possible • maintain vehicular and pedestrian access during business hours, including alternative arrangements for times when access cannot be maintained • maintain visibility of the business to potential customers during construction, including alternative arrangements for times when visibility cannot be maintained • respond to other identified impacts as far as possible, including specific measures to assist small businesses with the potential to be adversely affected during construction. The plan will also include: • measures identified as an outcome of the small business support program (see below) • maintaining a phone hotline that enables businesses to find out about the project or register any issues	Pre-construction, construction

Issue/Impact	Mitigation	Timing
	• establishment of business reference groups to provide information on the project and assist with the development of management measures • a feedback and monitoring mechanism to assess the effectiveness of measures.	
Impacts on access to businesses	Alternative arrangements, including for pedestrian and vehicular access will be developed in consultation with affected businesses and implemented before any changes are made to existing access. Adequate wayfinding to businesses will be provided before, and for the duration of, any disruption. Wayfinding will be provided in consultation with the City of Parramatta Council, City of Ryde Council, the Sydney Olympic Park Authority and/or relevant road authority, and as outlined in the Business Management and Activation Plan.	Pre-construction, construction
Supporting small business during construction	A small business support program will be established to provide assistance to small business owners with the potential to be impacted by construction. The program will assist local businesses develop proactive business strategies, including: • marketing and promotion • business diversification and business planning • engagement of specialists to provide training.	Pre-construction, construction

11 CONCLUSION

This BIA has provided an assessment of the business impacts of the construction and operation of the project and recommended mitigation measures to manage these impacts.

The key business impacts with the potential to occur during construction are summarised below:

- temporary and permanent land requirements, which would commence prior to the construction phase, and may require some businesses to close or relocate. This may have the following effects:
  - disruption to business operations
  - inconvenience and loss of revenue and productivity during relocation
  - stress and anxiety relating to finding and leasing or purchasing a new site
  - difficulty finding alternative properties, particularly for those businesses with specific requirements
  - relocation and re-establishment costs
  - changes to trade catchment areas.
- access and connectivity changes may result in:
  - temporary inconvenience and costs for employees, customers, distributors and servicing and delivery providers due to extended travel distances and times because of changed traffic conditions or from changes to public transport (alternate bus routes, ferry wharf closures)
  - changes to parking arrangements and loss of on-street parking in a number of areas, which can affect employees and reduce the incentive for customers to visit a business
  - increased competition for on-street parking due to additional construction workers in the area
  - changes to employee and customer access affecting business productivity and personal time
  - loss of passing trade for retail and hospitality businesses
  - heightened anxiety and stress experienced by workers, service providers and customers.
- changes to amenity may result in:
  - businesses close to the project site experiencing an increase in external noise levels which could impact on customer amenity, worker productivity, employee health and wellbeing affecting business revenue
  - vibration impacts which may also cause increased stress and anxiety for employees and customers
  - dust generation could potentially reduce amenity and overall customer and employee experience (in particular retail/hospitality businesses)
  - visual changes resulting from the presence of construction equipment, hoardings etc which have the potential to reduce amenity and overall customer and employee experience (in particular retail/hospitality businesses).

Construction activity, including utility works, also directly benefits the economy by injecting economic stimulus into the local, regional, and state economies. The economic benefit of construction is multi-dimensional, including:

- increased expenditure at local and regional businesses through purchases by construction workers
- direct employment associated with on-site construction activities
- direct expenditure associated with on-site construction activities

- indirect employment and expenditure through the provision of goods and services required for construction.

Overall, construction of the project would have positive long-term, economic impacts to the region.

The key business impacts with the potential to occur during operation are summarised below:

- permanent land requirements would lead to a reduction in available industrial and mixed-use zoned land in the City of Parramatta local government area. However the project is consistent with future land use objectives and it is envisaged that separate Planning Proposals may be able to facilitate the recovery of some employment land
- access and connectivity changes would include the loss of on-street parking and alterations to road configuration, including several new 'no right turns', left-in left-out intersections and signalised intersections which may impact access and travel times
- amenity changes would include increased noise and vibration which has the potential to impact business revenue (in particular for retail/hospitality).

The project would provide several potential benefits including for businesses that rely on passing trade (such as cafes and restaurants) who may see improved revenue and customer patronage due to the pleasant urban streetscapes and strong sightlines to store frontages.

Overall, the project would form part of an integrated light rail network connecting the areas served by Parramatta Light Rail Stage 1 with the growing precincts in Stage 2, providing a frequent and reliable service to jobs, education, and services. It would also improve north-south connectivity through the introduction of two new river crossings, integrate with other modes of transport providing better access for business employees and customers, and create new active transport links that may increase passing trade.

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Appendix A: Study area locations

The social locality for the assessment comprises of the following Statistical Area Level 1 locations (as SA1 7-digit codes) based on indicative stop locations for the project:

- **Camellia Precinct** – SA1#1149210, SA1#1149212, SA1#1149213, SA1#1149214, SA1#1149215, SA1#1149256, SA1#1149258, SA1#1147723
- **Carter Street Precinct** – SA1#1147312
- **Ermington Precinct** – SA1#1147711, SA1#1147723, SA1#1147734, SA1#1147710, SA1#1147717, SA1#1147718, SA1#1147719, SA1#1147725, SA1#1147726, SA1#1147744, SA1#1147751, SA1#1147730
- **Melrose Park Precinct** – SA1#1147725, SA1#1147726, SA1#1147744, SA1#1147751, SA1#1147730, SA1#1150320, SA1#1150322, SA1#1150333, SA1#1147730, SA1#1150320, SA1#1150321, SA1#1150322, SA1#1150333
- **Rydalmere East Precinct** – SA1#1149210, SA1#1147711, SA1#1147722, SA1#1147723, SA1#1147724, SA1#1147734, SA1#1147735, SA1#1147717, SA1#1147718
- **Sydney Olympic Park Precinct** – SA1#1147312
- **Wentworth Point Precinct** – SA1#1147312, SA1#1147312, SA1#1147316, SA1#1147325, SA1#1147326, SA1#1147327, SA1#1147328, SA1#1147329, SA1#1147330