

SYDENHAM TO BANKSTOWN
**ENVIRONMENTAL
IMPACT
STATEMENT**

> Volume 5 – Technical Papers

Volume 5 – Technical papers

The following technical papers informed the preparation of the Environmental Impact Statement

Volume 5

Technical Paper 6 – Business impact assessment

Technical Paper 7 – Landscape and visual impact assessment

SYDENHAM TO BANKSTOWN
**ENVIRONMENTAL
IMPACT
STATEMENT**

> Technical Paper 6 - Business
impact assessment

Technical Paper 6 – Business impact assessment

Sydney Metro City & Southwest - Sydenham to Bankstown upgrade

Prepared for Transport for NSW

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List of Abbreviations

Initials	List of Abbreviations
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BIA	Business Impact Assessment
CBD	Central Business District
DCP	Development Control Plan
DP&E	NSW Department of Planning and Environment
EIA	Economic Impact Assessment
EIS	Environmental Impact Statement
FSR	Floor Space Ratio
GFA	Gross Floor Area
GMA	Greater Metropolitan Area
Ha	Hectares
JTW	Journey to Work
LEP	Local Environmental Plan
LGA	Local Government Area
NLA	Net Lettable Area
OIT	Objective Impacts Table
PTA	Primary Trade Area
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SIA	Social Impact Assessment
SA2	Statistical Area Level 2
SLA	Statistical Local Area
Sqm	Square metre
TPA	Transport Performance and Analytics
TTMP	Temporary Transport Management Plan
TTS	Temporary Transport Strategy
TZ	Travel Zone

EXECUTIVE SUMMARY

Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*, providing 66 kilometres of metro rail line and 31 metro stations. The NSW Government is currently delivering the first two stages of Sydney Metro which consist of Sydney Metro Northwest (between Rouse Hill and Chatswood) and Sydney Metro City & Southwest (between Chatswood and Bankstown).

Sydney Metro City & Southwest comprises two core components:

- the Chatswood to Sydenham project
- the Sydenham to Bankstown upgrade ('the project' and the subject of this document).

The project, for which approval is sought, involves upgrading the 10 existing stations from Marrickville to Bankstown (inclusive), and the 13 kilometre long section of the Sydney Trains T3 Bankstown Line between west of Sydenham Station and west of Bankstown Station, to improve accessibility for customers and enable conversion of the line to metro standards. The project would enable Sydney Metro to operate beyond Sydenham to Bankstown.

The Chatswood to Sydenham component was subject to a separate environmental impact statement assessment.

This technical paper addressing local business impacts is one of a number of technical documents that forms part of the Environmental Impact Statement (EIS). The purpose of this technical paper is 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 the purpose of this local business impact assessment (hereafter referred to as the study), 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. The study area is made up of 10 local business precincts around the stations.

Specifically, the study provides a profile of the geographic localities and local businesses that are likely to be affected by the project. It has then identified and considered the likely impacts to businesses located within close proximity to the proposed construction works and ancillary sites.

In this regard, impacts have been defined as either positive or negative changes to business revenue or operation as a direct or indirect consequence of the project. These impacts have been assessed and management measures assigned.

To inform the study, business surveys were undertaken within the study area to gauge the perception of potential impacts on businesses that may occur as a result of construction activities or operation of the project. Results of the business survey indicated that construction activities were perceived to produce impacts for businesses, however considerable support was given to the project once operational. The results identified that a reduction in car parking

and amenity impacts (such as noise, vibration, dust and traffic congestion) were of the greatest concern to businesses during construction.

The perceived impacts were then considered in the context of predicted impacts as outlined in various technical reports undertaken to support the EIS addressing issues such as the noise and vibration, traffic and transport, urban design, landscape and visual impact assessment, air quality chapter and the project description chapters of the EIS.

As summarised in Table 1, the project would result in a range of positive and negative impacts to local businesses. The impacts would vary in their effect across the local business precincts and dependant on the type of business activity during the construction and operational stages of the project.

Table 1: Potential impacts on business revenue or operation

	Potential positive impacts on business revenue or operation	Potential negative impacts on business revenue or operation
Construction	<ul style="list-style-type: none"> ▪ increase in trade benefits for competing businesses in the same catchment as a result of property acquisitions and lease cessations ▪ increase in passing trade and potential sales at some locations ▪ increase in construction worker expenditure 	<ul style="list-style-type: none"> ▪ property acquisitions and lease cessations ▪ decrease in passing trade and potential sales at some locations ▪ increase in customer or employee travel time ▪ reduced workplace productivity ▪ reduced business visibility ▪ reduction in parking and loading zones ▪ reduced amenity due to noise, dust, vibrations and traffic congestion ▪ reduced efficiencies for deliveries and servicing ▪ reduced visual amenity ▪ changed consumer behaviour (long term) ▪ interruptions to power and utilities
Operation	<ul style="list-style-type: none"> ▪ stimulation of urban renewal and development opportunities ▪ enhanced business connectivity ▪ improved business revenue and viability ▪ increase in passing trade and potential sales ▪ improved employee and customer access ▪ improved visual amenity ▪ increased business exposure ▪ greater connectivity to other employment centres ▪ increased potential for new and repeat customers 	<ul style="list-style-type: none"> ▪ reduction in on-street parking ▪ reduction in passing trade to some businesses due to altered pedestrian network ▪ reduction in workplace productivity and amenity due to noise generated from the rail service

While construction of the project is likely to stimulate broader economic benefits, at the local business precinct level, businesses and property owners may experience a degree of disruption and inconvenience. This would more likely be the case for businesses located in close proximity to the construction compounds or the wider project area and those that are the subject of acquisition or lease cessation.

The assessment of potential construction impacts indicated that no large negative effects on businesses were proposed to occur during construction. Some businesses within local business precincts may however experience moderate negative impacts as a result of construction activities. Table 2 provides a summary of the local business precincts that may be affected by construction activities. To minimise the impact on identified local businesses during construction mitigation measures would be provided.

Table 2: Summary of construction impacts with potential to have a moderate negative effect on businesses

Local business precinct	Construction impacts resulting in a potential moderate negative effects on business operation or revenue
Marrickville	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ noise and vibration impacts ▪ bridge closures ▪ increased demand and competition for existing parking due to construction workers ▪ heavy vehicle movements, including buses and trucks
Dulwich Hill	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ reduction in commuter car parking ▪ heavy vehicle movements, including buses and trucks
Canterbury	<ul style="list-style-type: none"> ▪ heavy vehicle movements, including buses and trucks ▪ reduced road network performance
Campsie	<ul style="list-style-type: none"> ▪ property acquisition and lease cessation – due to number of businesses acquired ▪ reduced road network performance ▪ reduction in commuter car parking ▪ noise and vibration impacts ▪ increased demand and competition for existing parking due to construction workers ▪ heavy vehicle movements, including buses and trucks
Belmore	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ reduction in commuter car parking ▪ heavy vehicle movements, including buses and trucks
Lakemba	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ reduction in commuter car parking ▪ noise, vibration and air quality impacts ▪ bridge closures ▪ increased demand and competition for existing parking due to construction workers ▪ heavy vehicle movements, including buses and trucks
Wiley Park	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ bridge works ▪ heavy vehicle movements, including buses and trucks
Punchbowl	<ul style="list-style-type: none"> ▪ reduced road network performance ▪ heavy vehicle movements, including buses and truck ▪ reduction in commuter car parking ▪ noise and vibration impacts
Bankstown	<ul style="list-style-type: none"> ▪ reduction in commuter car parking ▪ increased demand and competition for existing parking due to construction workers ▪ heavy vehicle movements, including buses and trucks ▪ bridge closures ▪ noise and vibration impacts
All precincts	<ul style="list-style-type: none"> ▪ changes to rail service – testing and commissioning ▪ unplanned utility disruptions

Construction activities may however stimulate goods and services demand in the broader economy, creating more employment opportunities and enhancing local economies through construction worker expenditure. Table 3 overviews the potential positive impacts of the project during construction on businesses within the local business precincts and broader region.

Table 3: Summary of construction impacts with potential to have a slight or moderate positive effect on businesses

Impact	Businesses that may benefit	Significance of impact	Potential effect on businesses
Construction worker expenditure	Retail, cafes, restaurants, take-away food, convenience stores, pubs	Slight positive	<ul style="list-style-type: none"> increase in passing trade and potential sales
Goods and services demand	Broader region	Moderate positive	<ul style="list-style-type: none"> increase in employment opportunities across the broader region increase in business revenue
Passing trade from diversions	Retail, cafes, restaurants, take-away food, convenience stores	Slight positive	<ul style="list-style-type: none"> increase in passing trade and potential sales and new business
Increase in trade due to acquisition or lease cessation	Businesses that offer similar services or products to those businesses that are proposed to be acquired or have their leases ceased and are unlikely to relocate in the same area	Slight positive	<ul style="list-style-type: none"> increase in trade and potential sales and new business

Upon operation, the project is likely to positively impact businesses within the local business precincts. The enhanced capacity and frequency of the services is likely to increase rail patronage, subsequently improving passing trade opportunity and business exposure. The improved service frequency may enhance customer and employee access, making the local business precincts more desirable locations to visit and work. The increased rail service capacity may also act as a catalyst for development and urban renewal along the corridor, potentially attracting more residents and businesses to invest, operate and live in the area.

The assessment of potential operational impacts indicated that there would be no large negative or moderate negative effects on as a result of the project. Various businesses across the precincts may be experience a moderate or large benefit from the new Metro service. Table 4 provides a summary of the local business precincts that may be affected by the operation of the new Metro service.

Table 4: Operational impacts resulting in potential moderate or large positive effects on business operation or revenue

Local business precinct	Operation impacts resulting in a potential moderate positive or large positive effects on business operation or revenue
Campsie	<ul style="list-style-type: none"> ▪ changes to the pedestrian and cyclist environment ▪ visual amenity improvements
Lakemba	<ul style="list-style-type: none"> ▪ visual amenity improvements
All precincts	<ul style="list-style-type: none"> ▪ integrated transport ▪ urban renewal and development opportunity ▪ active transport corridor ▪ increased patronage ▪ rail service frequency ▪ increased retail opportunity

1 INTRODUCTION

1.1 Overview

1.1.1 Project background

The New South Wales (NSW) Government is implementing Sydney's Rail Future (Transport for NSW, 2012a), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of rail customers into the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future, providing 66 kilometres of metro rail line and 31 metro stations. The NSW Government is currently delivering the first two stages of Sydney Metro, shown in Figure 1, which consist of Sydney Metro Northwest (between Rouse Hill and Chatswood) and Sydney Metro City & Southwest (between Chatswood and Bankstown).

Sydney Metro Northwest is currently under construction. Sydney Metro Northwest services will start in the first half of 2019, with a metro train running every four minutes in the peak period. Services will operate between a new station at Cudgegong Road (beyond Rouse Hill) and Chatswood Station.

Sydney Metro City & Southwest will extend the Sydney Metro system beyond Chatswood to Bankstown, delivering about 30 kilometres of additional metro rail, a new crossing beneath Sydney Harbour, new railway stations in the lower North Shore and Sydney central business district (CBD), and the upgrade of existing stations from Marrickville to Bankstown. City & Southwest trains would run between Sydenham and Bankstown stations in each direction, at least every four minutes in peak periods, averaging around 15 trains per hour. Sydney Metro City & Southwest comprises two core components (shown in Figure 1):

- the Chatswood to Sydenham project
- the Sydenham to Bankstown upgrade ('the project' and the subject of this document).

1.1.2 The project for which approval is sought

Transport for NSW is seeking approval to construct and operate the Sydenham to Bankstown upgrade component of Sydney Metro City & Southwest (the project).

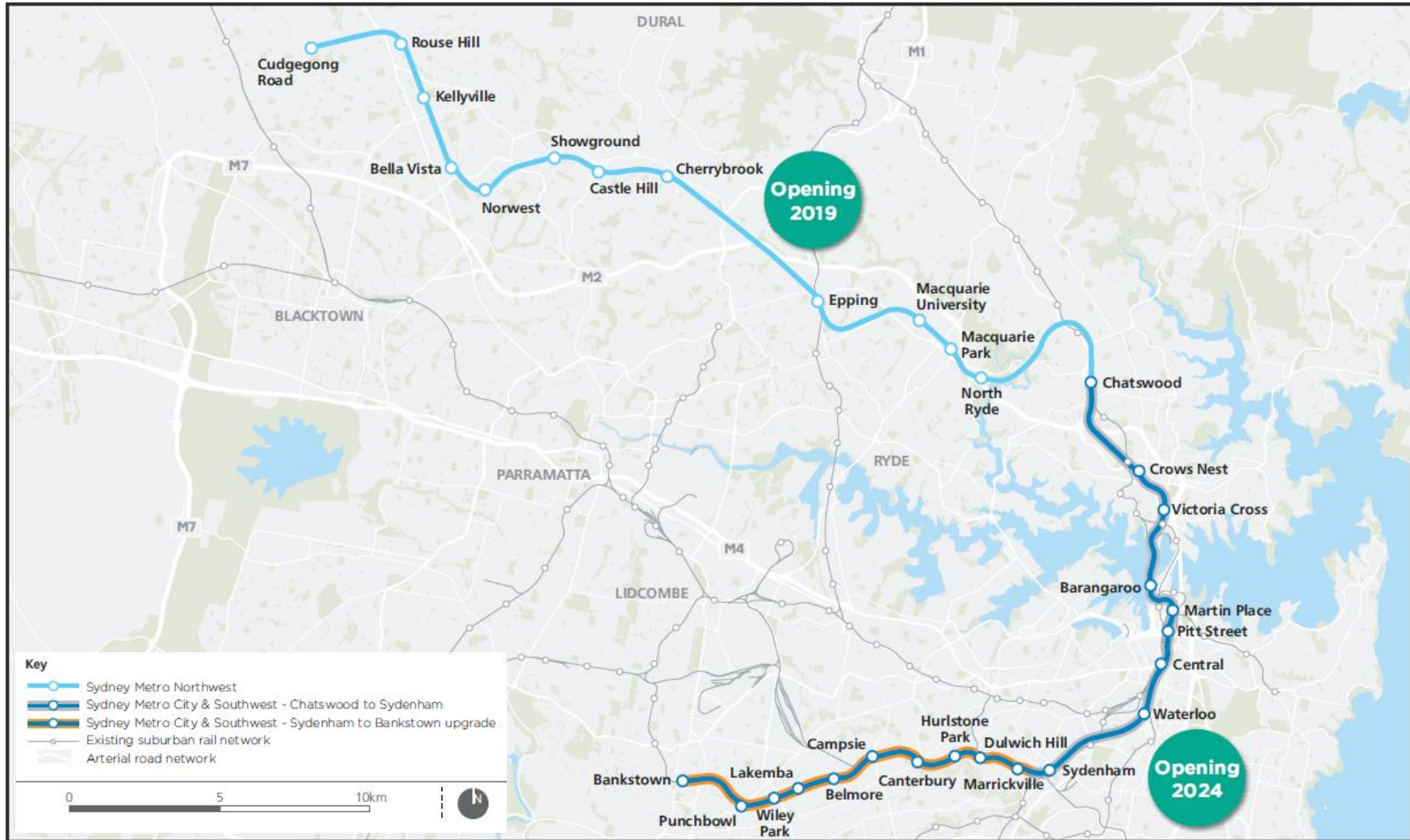
The project involves upgrading 10 existing stations west of Sydenham (Marrickville to Bankstown inclusive), and a 13 kilometre long section of the Sydney Trains T3 Bankstown Line between west of Sydenham Station and west of Bankstown Station, to improve accessibility for customers and meet the standards required for metro operations. The project would enable Sydney Metro to operate beyond Sydenham, to Bankstown.

A key element of the project is upgrading stations along the corridor from Marrickville to Bankstown, to allow better access for more people by providing new concourses, level platforms, and lifts at stations. These upgrades aim to provide a better, more convenient, and safer experience for public transport customers, by delivering:

- stations that are accessible to people with a disability or limited mobility, the elderly, people with prams, and people travelling with luggage
- upgraded station buildings and facilities for all transport modes that meet the needs of a growing population
- interchanges that support an integrated transport network and allow seamless transfers between different modes for all customers.

The project is subject to assessment and approval by the NSW Minister for Planning under Part 5.1 of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act).

Figure 1: The Sydney Metro network



1.2 The Project

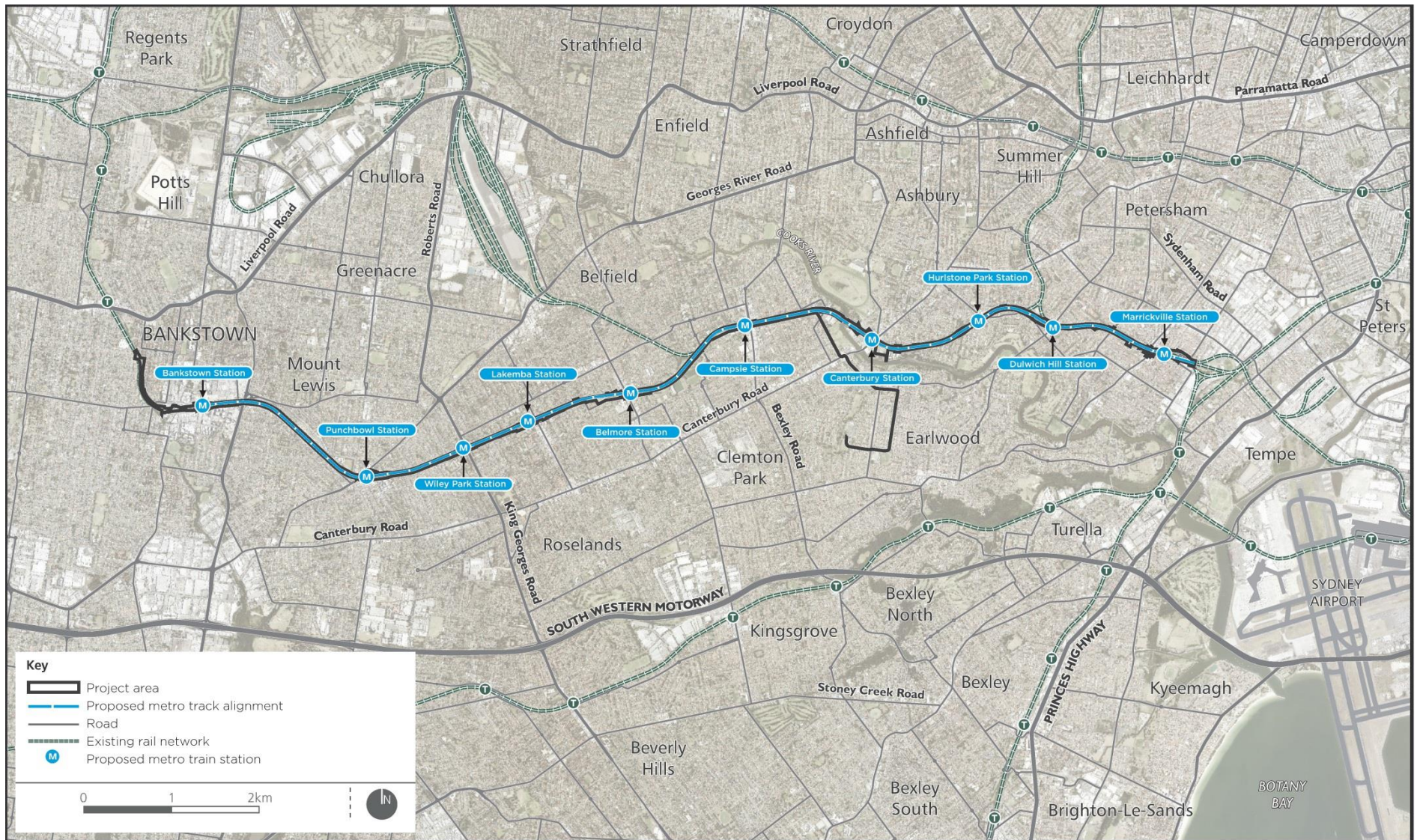
1.2.1 Location

The location of the project is shown in Figure 2.

The key elements of the project are located mainly within the existing rail corridor, from about 800 metres west of Sydenham Station in Marrickville, to about one kilometre west of Bankstown Station in Bankstown. The project is located in the Inner West and Canterbury-Bankstown local government areas.

The term 'project area' is used throughout this document to refer to the area where the physical works for the project would be undertaken. This area encompasses the existing rail corridor (as described above), the 10 existing stations within the corridor, and areas surrounding the rail corridor as shown in Figure 2.

Figure 2: Overview of the project



1.2.2 Key features

The key features of the project are summarised below and are shown in Figure 2.

Works to upgrade access at stations

The project includes upgrading the 10 stations from Marrickville to Bankstown as required, to meet legislative requirements for accessible public transport, including the requirements of the *Disability Discrimination Act 1992* and the *Disability Standard for Accessible Public Transport 2002*. The proposed works include:

- works to platforms to address accessibility issues, including levelling and straightening platforms
- new station concourse and station entrance locations, including:
 - new stairs and ramps
 - new or relocated lifts
- provision of additional station facilities as required, including signage and canopies.

Works would also be undertaken in the areas around the stations to better integrate with other modes of transport, improve travel paths, and meet statutory accessibility requirements. This would include provision of pedestrian, cyclist, and other transport interchange facilities; as well as works to the public domain, including landscaping.

Works to convert stations and the rail line to Sydney Metro standards

Station works

In addition to the station upgrades to improve accessibility, works to meet the standards required for metro services would be carried out, including:

- installation of platform screen doors
- provision of operational facilities, such as station services buildings.

Track and rail system facility works

Upgrading the track and rail systems to enable operation of metro services would include:

- track works where required along the rail corridor, including upgrading tracks and adjusting alignments, between west of Sydenham Station and west of Bankstown Station
- new turn back facilities and track crossovers
- installing Sydney Metro rail systems and adjusting existing Sydney Trains rail systems
- overhead wiring adjustments.

Other works

Other works proposed to support Sydney Metro operations or to address existing issues include:

- upgrading existing bridges and underpasses across the rail corridor
- installation of security measures, including fencing

- installation of noise barriers where required
- modifications to corridor access gates and tracks
- augmenting the existing power supply, including new traction substations and provision of new feeder cables
- utility and rail system protection and relocation works
- drainage works to reduce flooding and manage stormwater.

Active transport corridor and surrounding development

The project would also provide for:

- parts of an active transport corridor where located within the station areas or surplus rail corridor land, to facilitate walking and cycling connections to each station and between Marrickville and Bankstown
- enabling works to support future development at Campsie Station (future development would be subject to a separate approvals process).

Temporary works during construction

During construction, the project would involve:

- provision of temporary facilities to support construction, including construction compounds and work sites
- implementation of alternative transport arrangements for rail customers during possession periods and/or station closures, guided by the Temporary Transport Strategy.

1.2.3 Timing

An overview of the construction and operation timing of the project is outlined below.

Construction

Construction of the project would commence once all necessary approvals are obtained (anticipated to be in 2018), and would take about five years to complete.

The T3 Bankstown Line would remain operational for the majority of the construction period. However, to ensure the station and infrastructure upgrade works are completed as efficiently and safely as possible, and to accommodate works that cannot be undertaken when trains are operating, it would be necessary to undertake some work during rail possession periods, when trains are not operating. It is anticipated that these rail possession periods would comprise the routine weekend maintenance possessions, together with some longer possessions periods during periods of reduced patronage such as school holidays.

A final, longer possession of about three to six months would also be required. This would involve full closure of the line to enable conversion to metro operations. This would include works such as the installation of new signalling, communication systems, and platform screen doors.

During each possession period, alternative transport arrangements would be implemented to ensure that customers can continue to reach their destinations.

Operation

Sydney Metro City & Southwest would be fully operational by 2024, with the opportunity of operation commencing in two phases. Initially, Sydney Metro Northwest services would be extended by the City & Southwest project, and would operate from Chatswood Station to Sydenham Station. Some months later, metro operations would extend from Sydenham Station to Bankstown Station, with both phases planned to be completed before the end of 2024. The opportunity for phased opening of the project would enable metro trains to operate from Cudgegong Road Station to Sydenham Station prior to the final conversion of the T3 Bankstown Line to metro operations.

Once the project is operational, Sydney Trains services would no longer operate along the T3 Bankstown Line between Sydenham and Bankstown stations. Customers would be able to interchange with Sydney Trains services at Sydenham and Bankstown stations. Sydney Trains services to and from Bankstown to Liverpool and Lidcombe stations would not be affected.

1.3 Purpose and scope of this report

This report has been prepared to support the Environmental Impact Statement for the project. The Environmental Impact Statement has been prepared to accompany the application for approval of the project, and addresses the environmental assessment requirements of the Secretary of the Department of Planning and Environment ('the Secretary's environmental assessment requirements').

This technical paper, *Technical Paper 6 – Local Business Impact Assessment*, is one of a number of technical documents that forms part of the EIS. The purpose of this technical paper is 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).

A local business impact assessment is:

'A qualitative and quantitative assessment of the potential impacts on local businesses within an approximate 400m radius of the proposed stations (defined as a local business precinct).'

The scope of the report is limited to businesses within the local business precincts. Local business precincts are defined using Transport Performance and Analytics (TPA) Travel Zone data (TZ) that generally overlay the 400m radius around the stations. The report does not consider the wider regional and economic trends and benefits of the project as these have been outlined in the City & Southwest Final Business Case Summary (Sydney Metro 2016).

Owing to the linear nature of the project, the main focus of the study's assessment relates to the businesses located within close proximity to the proposed stations. This generally relates to a 400m radius around the stations as businesses within this radius are likely to be more sensitive to the effects of the project during the construction and operation phases.

The assessment of potential business impacts, within the local business precincts includes:

- impact on business from property acquisition
- impact to business from variation in property values and commercial rent
- access and connectivity
- loss of power and utilities
- demands for goods and services from construction
- increased capacity and development opportunity
- amenity impacts to business including:
 - noise and vibration
 - air quality
 - visual amenity.

Management and mitigation measures are recommended to manage the impacts of the project. Where another technical report already proposes a mitigation or management measure, this measure has been referred to. Where there are specific management measures that can be applied to businesses, these have been identified within the assessment sections (3 and 4) with details of the business impact mitigation provided in section 5.

1.4 Secretary's environmental assessment requirement

The Secretary's Environmental Assessment Requirements (SEARs) relating to local business impacts, and where these requirements are addressed in this technical report, are outlined in Table 5.

Table 5: Secretary’s environmental assessment requirements – local business impacts

Key Issue and Desired Performance Outcome	Secretary’s environmental assessment requirements	Where addressed
<p>The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.</p> <p>The project minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.</p>	<p>10. Socio-economic, Land Use and Property</p> <ol style="list-style-type: none"> 1. The Proponent must assess social and economic impacts of the project. This must be done in consultation with relevant communities and businesses. 2. The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users including property acquisitions/adjustments, access, amenity and relevant statutory rights. 	<p>An assessment of land uses and socio-economic impacts is provided in Chapters 16 and 17 of the environmental impact statement. This report covers business impacts. A sample of businesses (over 100) along the project alignment was surveyed to inform the assessment.</p> <p>This report assesses impacts of construction on potentially affected businesses in accordance with the Socio-economic impact assessment practice note EIA-N05. This includes:</p> <ul style="list-style-type: none"> ▪ direct and secondary effects of property acquisitions and lease cessations on businesses (see 3.1) ▪ construction activity impacting on access (see3.3) ▪ construction activity disrupting business operation (see Section 3) ▪ construction activity adversely affecting the surrounding amenity, disrupting businesses (see 3.4, 3.5 and 3.6) ▪ the benefits for businesses during construction (see 3.9). <p>The impacts on businesses from the operation of the project have also been considered in Section 4, This includes:</p> <ul style="list-style-type: none"> ▪ project operation impacting on access (see 4.1) ▪ project operation adversely affecting visual amenity, disrupting businesses (see 4.2) ▪ project operation noise and vibration impacts effecting surrounding businesses (see 4.3) ▪ effects of increased capacity and development opportunities upon operation (see 4.4).

1.5 Methodology

1.5.1 Project methodology

In preparing the local business impact assessment (BIA), the following methodology was applied.

- The study area and local business precincts were defined.
- A profile of the study area's businesses that may be influenced by the project (using ABS Census 2011¹ data, CoreLogic and TPA Travel Data) was developed.
- Consultation with businesses within the project area was undertaken to determine business values and concerns (refer Appendix A).
- Issues and comments raised through the business surveys were reviewed.
- The likely changes/impacts that may occur as a result of the project were scoped and example business locations that may be affected by the project were identified.
- An assessment of the significance of an impact during construction and operation using the Objective Impacts Table (OIT) options rating levels (refer Table 6) was undertaken.
- Measures and strategies for monitoring and managing the impacts during both construction and operations were identified.

1.5.2 Defining the study area boundary

The local business precincts were defined using the Transport Performance and Analytics (TPA) geographical boundary known as Travel Zones (TZ). Any travel zone that contained business uses and fell within a 400m radius of the station, defined the local business precinct for the station. It was acknowledged that the Bankstown feeder route to the existing AusGrid electrical substation extends further than the study area boundary. This short-term, minor linear construction element was considered to have negligible impact on businesses and did not contribute to defining the study area boundary.

Where the geographic area of a travel zone only contributed to a small portion of the 400m radius around a station, and contained minimal or no businesses, this travel zone was excluded and only the dominant travel zones were utilised.

The study area is the total area of the combined local business precincts along the project alignment.

During the operation of the refined baseline Temporary Transport Management Plan, some indirect impacts (i.e. increase in passing trade and business visibility), may occur at stations on rail lines that run parallel to the T3 Bankstown Line that are proposed to accommodate buses during possessions. These station locations have not been included in the study area. Changes

¹ At the time of the preparation of this report, the 2011 Census data was the most up-to-date data available.

from the existing environment at these stations and potential impacts to local businesses are anticipated to be limited.

1.5.3 Survey approach

The purpose of the business impact survey was to identify the ways in which local business may be affected by the project during construction and operation.

In order to identify the potential key impacts associated with the project, a survey of 100 businesses located within the local business precincts was undertaken. The one hundred surveys conducted across the study area enabled the gauging of business opinion regarding the perceived effects of the project on their business, during both the project construction and operation phases. The survey was undertaken with a wide variety of local retailers, commercial operators and other businesses to gain a better understanding of key issues, perceptions and concerns regarding the economic impacts of the project.

The survey encompassed a range of questions relating to the respondent's level of knowledge regarding the project, existing access and delivery requirements, and perceptions and concerns regarding the construction and operation phases of the project.

The business surveys were conducted within the identified local business precincts, with a priority placed on businesses located closer to the potential construction activities. Information collected from each business was collated into a database for analysis. Findings from this survey have been analysed and summarised in Appendix A.

1.5.4 Impact assessment framework and rating

The impact assessment involves the identification and evaluation of changes to existing business conditions due to the project's design, construction or operation. This includes the assessment of direct and indirect benefits and effects/impacts.

The impact assessment considers effects of the project on businesses such as changes to passing trade, employment and recruitment, business access and connectivity, loss of power and utilities, and business turnover.

A summary of the impacts is provided in a table at the end of each impact sub-section. The table provides an overview of the relevant local business precincts and example business locations that may be affected, along with an assessment of significance of the potential impact.

Each overall impact or effect has been assessed against the OIT options rating scale as defined in the National Guidelines for Transport System Management in Australia (Australian Transport Council 2016). The significance of impacts has been assessed in accordance with the assessment rating levels outlined in Table 6.

Table 6: Objective impacts table - options rating scale

Rating level	Description
Large negative	Major negative impacts with serious, long-term and possibly irreversible effects leading to serious damage, degradation or deterioration of the physical, economic or social environment. Requires a major re-scope of concept, design, location and justification, or requires major commitment to extensive management strategies to mitigate the effect.
Moderate negative	Moderate negative impact on numerous businesses within the local business precincts and potentially businesses outside the local business precincts. Impacts may be short-, medium- or long-term and impacts will most likely respond to management actions.
Slight negative	Minimal negative impact, probably short-term, able to be managed or mitigated, and will not cause substantial detrimental effects. May be confined to a small area within the local business precincts or a small number of businesses.
Neutral	Neutral - no discernible or predicted positive or negative impact.
Slight positive	Minimal positive impact, possibly only lasting over the short-term. May be confined to a limited area.
Moderate positive	Moderate positive impact on numerous businesses. Impacts may possibly of short-, medium- or long-term duration. Positive outcome may be in terms of new opportunities and outcomes of enhancement or improvement.
Large positive	Major positive impacts resulting in substantial and long-term improvements or enhancements of the existing environment.

Source: Adapted by HillPDA from the Australian Transport Assessment and Planning Guideline, F3 Options generation & assessment Table 3 OIT options rating scale NGTSM06, Volume 2

The likelihood of the impact occurring was also considered during the assessment of construction impacts. The criteria for measuring the likelihood of the impact are provided in Table 7.

Table 7: Likelihood definition

Likelihood	Definition	Probability
Almost certain	Expected to occur frequently during time of activity or project (10 or more times per year)	>90%
Likely	Expected to occur occasionally during time of activity or project (1 to 10 times per year)	75% to 90%
Possible	More likely to occur than not occur during time of activity or project (once per year)	50% to 75%
Unlikely	More likely not to occur than occur during time of activity or project (once every 1 to 10 years)	25% to 50%
Rare	Not expected to occur during the time of activity or project (once every 10 to 100 years)	10% to 25%
Almost unprecedented	Not expected to ever occur during time of activity or project (less than once every 100 years)	<10%

1.5.5 Assumptions

The assessment has been prepared on the basis of the following assumptions.

- Survey respondents were provided with preliminary project information only and were not aware of the extent of works that were occurring around their business or if their leases would be cancelled or properties acquired. Business surveys were conducted in June 2016. Engagement with communities and businesses has been ongoing since surveys were undertaken.
- Early works (including property acquisition, service relocations, building demolition and site preparation for construction) would commence from mid-2018 to 2019.
- It would take around six years to complete the project, with work beginning at multiple sites from 2018 (subject to planning approval).
- The main works (including earthworks, rail infrastructure and stations) are anticipated to extend from 2018 to 2024.
- Stations would generally not be accessible during line possessions.
- Possessions would predominately occur during quiet times of operation such as at weekends and during school holiday periods. The final possession period, to facilitate testing and commissioning, would be for a continual period of three to six months.
- The project would become operational in 2024 and provide a fast, reliable service every four minutes in peak periods.
- The cost of travel would be comparable and in keeping with, existing public transport options.
- The project would follow the route alignment and station locations presented in Figure 2.

2 EXISTING STUDY AREA CHARACTERISTICS

This chapter outlines the existing local business operations along the project alignment and within the identified local business precincts. In order to gain an understanding of each of the local businesses and potential impacts to operations, site visits were undertaken in addition to desktop research to better understand the types of local businesses in the study area.

For the purpose of analysing the unique employment characteristics of each local business precinct, 'Journey to Work' data has been used and, as such, travel zone boundaries have been adopted for each local business precinct along the corridor.

The corridor comprises of ten local business precincts as identified in Figure 3, these being:

- Marrickville
- Dulwich Hill
- Hurlstone Park
- Canterbury
- Campsie
- Belmore
- Lakemba
- Wiley Park
- Punchbowl
- Bankstown.

The following section provides an overview of the corridor, highlighting the characteristics of the local business precincts, associated employment uses, employment profile and employee travel behaviour. The information provided within this section has been primarily sourced from the TPA Data.

The full profiles of the existing business characteristics can be found in Appendix B.

Figure 3: Study area local business precincts overview



Source: HillPDA 2016

2.1 Corridor characteristics

The Sydenham to Bankstown Corridor is located in the south west of Sydney and comprises 10 stations. The study area extends parallel with the M5 Motorway to the south and Parramatta Road to the north. A Plan for Growing Sydney (DPE, 2014) identifies Sydenham to Bankstown as an urban renewal corridor.

Distinct differences in industry profiles can be seen across the corridor's local business precincts. Each plays a different role and function in accommodating Sydenham to Bankstown's employment and service offering.

The AEC Group report, *Sydenham-Bankstown Corridor: Employment Lands Analysis of Opportunity Sites (2015)*, prepared for the Department of Planning and Environment, highlights that due to the significant population growth forecast along the corridor, there has been commensurate increase in industries that are directly driven by household and local business consumption (i.e. retail trade, education, training, accommodation and food services and health care and social assistance)². Subsequently, as the population growth trajectory continues, it is likely that the project alignment will see growth in employment and an increase in demand for goods, services and commercial floor space. This growth will gradually change the offering and character of centres along the project alignment from its existing state.

The following sections provide an overview the overall existing characteristics of the local business precincts along the project alignment. For more information on future land use and urban renewal proposed by NSW Department of Planning and Environment (DP&E), refer to the DP&E, *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy 2017*.

2.2 Employment land use characteristics

The study area comprises various land uses that define the characteristics of each local business precinct. The land use area of each business zone has been calculated through GIS mapping using the NSW DP&E, Standard Instrument Local Environmental Plan (LEP) - Land Use Zoning (LZN) data layer. Table 8 provides an overview of the employment land zonings across the local business precincts, as conveyed in the relevant local environmental plans.

The study area comprises approximately 1172 hectares, 14% (approximately 166ha) of which is land zoned for business or industrial land use. This 166ha is made up of the following employment zones:

- 1.8% (3ha) is B1, Neighbourhood Centre
- 51.9% (86.1ha) is B2, Local Centre
- 38.4% (63.8ha) is B4, Mixed Use
- 0.3% (0.5ha) is B5, Business Development
- 0.3% (0.5ha) is B6, Enterprise Corridor

² AECgroup (2015), *Sydenham-Bankstown Corridor Employment Lands Analysis*, NSW Department of Planning and Environment, p28

- 4.0% (6.7ha) IN1, General Industrial
- 3.3% (5.4ha) IN2, Light Industrial.

As can be seen in Table 8, the B2 Local Centre zone, comprising half (51.9 (86.1ha)) of land, is the primary employment land use characterising the majority of local business precincts in the study area. Dulwich Hill, Hurlstone Park, Canterbury and Wiley Park are smaller scale local business precincts, comprising a lower percentage of business zones. Marrickville, Lakemba, Belmore, Campsie, and Punchbowl comprise a greater proportion of B2 Local Centre zoned land and a wider offering of local convenience services. These characteristics are consistent with observations of the centres, with the majority of business uses being retail and commercial and predominantly clustered around the stations.

Conversely, Bankstown is a higher order centre providing broader regional offerings. The Bankstown local business precinct has 63.8 hectares of land zoned B4 Mixed Use, making up 90% of the total 71ha of land. Commercial uses (including retail, office, restaurants and accommodation services) occupy a majority of the Bankstown local business precinct including a large format shopping centre (Bankstown Central Shopping Centre).

Table 8: Employment zone characteristics of local business precincts

	Marrickville	Dulwich Hill	Hurlstone Park	Canterbury	Campsie	Belmore	Lakemba	Wiley Park	Punchbowl	Bankstown	Total
Size of local business precinct	131ha	111ha	109ha	97ha	155ha	80ha	55ha	117ha	246ha	71ha	1172ha
Land zoned for business or industrial use	28ha	5ha	6ha	7ha	20ha	11ha	14ha	3ha	10ha	64ha	166ha
% of land zoned for business or industrial use	21%	4%	5%	7%	13%	14%	25%	3%	4%	90%	14%
Local business precincts by individual employment zone											
B1 (Neighbourhood Centre)	0.6ha	2.2ha							0.2ha		3.0ha
B2 (Local Centre)	15.9ha	1.6ha	5.5ha	6.8ha	20.4ha	10.8ha	13.6ha	2.2ha	9.3ha		86.1ha
B4 (Mixed Use)										63.8ha	63.8ha
B5 (Business Development)								0.5ha			0.5ha
B6 (Enterprise Corridor)								0.4ha	0.1ha		0.5ha
B7 (Business Park)											0.0ha
IN1 (General Industrial)	6.7ha										6.7ha
IN2 (Light Industrial)	4.6ha	0.8ha									5.4ha

Source: HillPDA 2016, Department of Planning and Environment, 2016, Bankstown LEP 2015, Canterbury LEP 2012 and Marrickville LEP 2011 – please refer to the specific LEP’s for zoning definitions

2.3 Number of businesses

The study area contains approximately 3290 businesses. As can be seen in Table 9, the local business precinct of Bankstown contains the largest number of businesses (1090, representing almost a quarter of the number of businesses) along the project alignment followed by Marrickville (590). Together these precincts contain over half (51%) the businesses in the study area.

Table 9: Approximate number of businesses in local business precincts

Local Business Precincts	Approximate no. of businesses
Marrickville	590
Dulwich Hill	130
Hurlstone Park	85
Canterbury	160
Campsie	510
Belmore	205
Lakemba	255
Wiley Park	70
Punchbowl	195
Bankstown	1090
TOTAL	3290

Source: Core List Australia (Businesses), 2016

2.4 Study area employment statistics

Local employment refers to persons aged 15 years and over working in the local business precinct, regardless of their place of usual residence.

As of 2011, the study area provided approximately 19,705 jobs.

Forty five percent (8865 jobs) of the employment within the study area was attributed to three major industries, Health Care and Social Assistance (18% and 3479 jobs), Retail (16% and 3183 jobs), and Accommodation and Food Services (11% and 2203 jobs).

Bankstown employs 1671 people in the retail sector which is the largest retail employment area within the study area.

Marrickville and Bankstown precincts combined account for 59% of all retail employment across the study area, employing 1897 people. Marrickville, Bankstown and Campsie local business precincts combined also account for 70% (13,883 jobs) of the total wholesale trade employment within the study area.

Campsie and Bankstown contribute 73% (2566 jobs) of the total health care and social assistance employment across the study area. This demonstrates relatively high levels of employees are travelling from areas in close proximity to the study area. Table 10 below provides a breakdown of employment within the local business precinct by industry category. The largest industry group is highlighted and in italics.

Table 10: Local business precinct employment by broad industry category (2011)

Industrial category	Marrickville	Dulwich Hill	Hurlstone Park	Canterbury	Campsie	Belmore	Lakemba	Wiley Park	Punchbowl	Bankstown	Total	Total %
Health Care and Social Assistance	171	91	84	42	1293	147	210	39	129	1273	3479	17.7
Retail Trade	226	46	54	79	701	78	166	46	116	1671	3183	16.1
Accommodation and Food Services	118	82	149	25	296	423	64	86	77	883	2203	11.2
Manufacturing	157	23	22	134	57	51	20	6	31	119	620	3.1
Public Administration and Safety	82	14	9	6	456	29	92	9	32	1247	1976	10.0
Education and Training	126	61	25	214	227	58	192	134	414	378	1829	9.3
Wholesale Trade	127	11	13	24	56	15	10	7	21	58	342	1.7
Professional, Scientific and Technical Services	131	64	55	38	130	32	54	14	45	480	1043	5.3
Other Services	85	32	19	37	133	46	30	12	65	228	687	3.5
Transport, Postal and Warehousing	141	11	19	13	106	73	50	59	73	115	660	3.3
Construction	27	23	33	79	147	44	13	28	77	57	528	2.7
Administrative and Support Services	103	24	21	20	121	49	20	21	33	377	789	4.0
Financial and Insurance Services	28	23	10	9	95	13	43	9	16	517	763	3.9
Rental, Hiring and Real Estate Services	36	23	17	3	91	23	27	3	18	309	550	2.8
Arts and Recreation Services	20	17	15	49	19	34	6	0	3	123	286	1.4
Not stated	32	8	11	8	61	27	24	6	10	149	336	1.7
Inadequately described	17	9	15	10	57	16	13	6	9	75	227	1.2
Information Media and Telecommunications	15	9	9	3	30	6	3	0	3	92	170	0.9
Electricity, Gas, Water and Waste Services	3	0	0	0	0	0	3	0	3	8	17	0.1
Agriculture, Forestry and Fishing	0	4	0	3	3	0	0	0	4	0	14	0.1
Mining	0	0	0	0	0	0	0	3	0	0	3	0.0
Total	1645	575	580	796	4079	1164	1040	488	1179	8159	19705	100%

Source: TPA JTW Data Table 4

2.5 Industry value add

Industry Value Added (IVA) refers to the market value of goods and services produced by an industry minus the cost of goods and services used in the production process, which reveals the gross product of the industry. The components include compensation of workers, net taxes on production and imports and gross operating surplus. IVA may be referred to as the contribution made to the local Gross Regional Product (GRP).

IVA is a more refined measure of the productivity of an industry sector than output, as some industries have high levels of output but require large amounts of input expenditure to achieve that³. The IVA/worker for Greater Sydney was sourced from economy id⁴. The IVA/worker was then applied to the number of workers within the analysed area by industry in 2011 and indexed by CPI for the 2016 dollar equivalency.

Using the above methodology, the study area generated \$1.97 billion⁵ in IVA, which was 0.6% of Sydney's GRP in 2011. Thirteen percent (\$262 million) of the study area's IVA was generated by health care and social assistance businesses being one of the largest employment industries within the study area.

Despite financial and insurance service businesses generating four percent of employment within the study area, this industry was the second largest contributing industry to the study area's IVA (\$239.3 million or 12.1%). This is because of the significantly higher worker productivity within this industry, which was over \$310,000/worker in 2011 (in 2016 dollars), this is compared to \$75,000/worker for health care and social assistance businesses.

Public administration and safety was the third largest IVA generator within the study area, marginally behind that of financial and insurance services. Businesses within this category generated \$238.7million in IVA which was twelve percent of the total generated across the study area. As with health care and social assistance, the overall employment generated by public administration and safety businesses was the main factor for the industry being the fourth largest contributor to IVA rather than worker productivity⁶.

Table 11 provides a breakdown of the IVA generated by local business precinct and industry.

³ Economy id.

⁴ Economy id provides economic analysis to various councils across Australia

⁵ Indexed to \$2016

⁶ Worker productivity by industry is calculated by dividing the industry value add by the number of persons employed in that industry

Table 11: Industry Value Add by broad industry category (\$2016)

Industrial category	Marrickville	Dulwich Hill	Hurlstone Park	Canterbury	Campsie	Belmore	Lakemba	Wiley Park	Punchbowl	Bankstown	Total	Total %
Agriculture, Forestry and Fishing	0.0	0.4	0.0	0.3	0.3	0.0	0.0	0.0	0.4	0.0	1.4	0.1%
Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0%
Manufacturing	21.5	3.1	3.0	18.3	7.8	7.0	2.7	0.8	4.2	16.3	84.8	4.3%
Electricity, Gas, Water and Waste Services	0.9	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.9	2.4	5.0	0.2%
Construction	2.2	1.9	2.7	6.5	12.1	3.6	1.1	2.3	6.3	4.7	43.4	2.2%
Wholesale Trade	18.8	1.6	1.9	3.6	8.3	2.2	1.5	1.0	3.1	8.6	50.7	2.6%
Retail Trade	14.1	2.9	3.4	4.9	43.9	4.9	10.4	2.9	7.3	104.6	199.2	10.1%
Accommodation and Food Services	7.2	5.0	9.1	1.5	18.1	25.8	3.9	5.3	4.7	54.0	134.6	6.8%
Transport, Postal and Warehousing	16.3	1.3	2.2	1.5	12.3	8.5	5.8	6.8	8.5	13.3	76.4	3.9%
Information Media and Telecommunications	3.6	2.1	2.1	0.7	7.1	1.4	0.7	0.0	0.7	21.8	40.3	2.0%
Financial and Insurance Services	8.8	7.2	3.1	2.8	29.8	4.1	13.5	2.8	5.0	162.2	239.3	12.0%
Rental, Hiring and Real Estate Services	8.3	5.3	3.9	0.7	20.9	5.3	6.2	0.7	4.1	70.9	126.2	6.4%
Professional, Scientific and Technical Services	16.1	7.9	6.8	4.7	16.0	3.9	6.6	1.7	5.5	59.0	128.3	6.5%
Administrative and Support Services	13.6	3.2	2.8	2.6	15.9	6.5	2.6	2.8	4.3	49.6	103.9	5.3%
Public Administration and Safety	9.9	1.7	1.1	0.7	55.1	3.5	11.1	1.1	3.9	150.6	238.7	12.1%
Education and Training	10.9	5.3	2.2	18.5	19.7	5.0	16.6	11.6	35.8	32.7	158.4	8.0%
Health Care and Social Assistance	12.9	6.9	6.3	3.2	97.3	11.1	15.8	2.9	9.7	95.8	261.9	13.3%
Arts and Recreation Services	2.0	1.7	1.5	4.9	1.9	3.4	0.6	0.0	0.3	12.3	28.7	1.5%
Other Services	6.7	2.5	1.5	2.9	10.5	3.6	2.4	0.9	5.1	18.0	54.3	2.7%
Total	173.8	59.9	53.6	78.4	376.9	99.8	102.4	44.1	110.0	876.8	1,975.7	100%

Source: TPA JTW Data, Economy id., ABS and HillPDA

2.6 Study area employment place of origin

The Journey to Work origin data highlights the top five local government areas (LGAs) where employees live and travel to work within the study area. These LGAs (prior to the council amalgamations in 2015) are:

1. Former Canterbury LGA – 5232 workers or 19%
2. Former Bankstown LGA – 5008 workers or 18%
3. Former Marrickville LGA – 2049 workers or 7%
4. Sutherland Shire LGA – 1412 workers or 5%
5. Former Rockdale LGA – 1265 workers or 5%.

Forty-four percent of the study area employment workforce lives within the three (former) LGAs of Canterbury, Bankstown and Marrickville that correspond with the Marrickville to Bankstown project alignment. This reveals that the study area plays an important role in generating and providing employment opportunity for surrounding residents.

Table 12 below provides a summary of the top 20 LGAs where workers live.

Table 12: Employment journey to work place of origin (2011)

Former LGA	Number #	%
Canterbury	5232	19%
Bankstown	5008	18%
Marrickville	2049	7%
Sutherland Shire	1412	5%
Rockdale	1265	5%
Liverpool	1125	4%
Hurstville	1015	4%
Fairfield	854	3%
Sydney	734	3%
Auburn	636	2%
Kogarah	618	2%
Campbelltown	601	2%
Parramatta	539	2%
Strathfield	525	2%
Canada Bay	481	2%
Ashfield	477	2%
Randwick	470	2%
Burwood	402	1%
Blacktown	397	1%
Holroyd	341	1%
Other	3239	13%
Total	27,420	100%

Source: TPA JTW Data Table 4

2.7 Employee travel method

The primary travel method used by persons travelling to the Marrickville to Bankstown study area for employment (regardless of place of residence), as of 2011, was either as a car driver or passenger, with 12,299 or 62.4% of people employed within the study area travelling this way. Eight percent (1920 employees) travelled by train.

A detailed breakdown of the travel methods to work for the overall study area employment base is provided in Table 13.

A detailed breakdown of travel method across all local business precincts can be found in Table 14.

Table 13: Employment base travel method to work for project alignment (2011)

Travel method	Persons employed	Employment %
Car as driver	12,299	62.4%
Did not go to work	1920	9.7%
Train	1530	7.8%
Car as passenger	1128	5.7%
Walked only	1079	5.5%
Bus	478	2.4%
Worked at home	451	2.3%
Mode not stated	433	2.2%
Truck	105	0.5%
Other mode	80	0.4%
Motorbike	73	0.4%
Taxi	61	0.3%
Bicycle	58	0.3%
Ferry	7	0.0%
Tram	3	0.0%
Total	19,705	100%

Source: TPA JTW Data Table 4

Table 14: Number of employees by travel method to work by local business precincts

Description	Marrickville	Dulwich Hill	Hurlstone Park	Canterbury	Campsie	Belmore	Lakemba	Wiley Park	Punchbowl	Bankstown
Train	207	44	29	61	342	97	63	26	79	582
Bus	39	12	10	20	106	6	20	3	0	262
Ferry	0	0	0	0	0	0	4	0	0	3
Tram	0	0	0	0	0	0	0	0	0	3
Taxi	11	0	5	3	3	3	3	7	12	14
Car as driver	927	300	320	526	2443	730	677	283	783	5310
Car as passenger	88	24	21	27	206	72	71	24	69	526
Truck	17	0	9	6	15	15	3	4	22	14
Motorbike	11	0	6	6	13	9	0	0	0	28
Bicycle	18	9	0	0	16	6	0	0	3	6
Other mode	9	0	6	0	13	9	5	6	9	23
Walked only	122	44	46	33	329	71	76	33	42	283
Worked at home	65	75	63	34	69	28	12	23	47	35
Did not go to work	104	59	41	68	442	90	80	67	80	889
Mode not stated	27	8	24	12	82	28	26	12	33	181
Total	1645	575	580	796	4079	1164	1040	488	1179	8159

Source: TPA JTW Data Table 4

2.8 Summary

The study area is approximately 1172 hectares in area, with around 166 hectares or 14% of this being zoned for business or industrial land use. The predominant land use within the study area is residential, with relatively small employment centres supporting these communities at a majority of the stations. Bankstown is the exceptions to this, where employment uses are more dominant. Bankstown is a larger strategic centre containing a large shopping centre and significant commercial office floor space.

The study area contained approximately 3290 businesses across a diverse range of businesses and employment industries. The largest industry by total employment generation was health care and social assistance, which employed 3479 persons or 18% of the total 19,705 jobs generated across the study area. This industry was also the largest IVA contributor accounting for 13% (\$262 million) of the total (\$1.97 billion) GRP generated within the study area. Financial and insurance services was the second largest contributor to the GRP at 12.11% (\$239.3 million) followed closely by public administration and safety 12.08% (275.1) and retail trade 10% (\$199.2million).

Forty four percent of persons employed within the study area lived within the three LGAs that contain the project alignment (former Canterbury, Bankstown and Marrickville LGAs). This reveals that the study area plays an important role in generating and providing employment opportunities for surrounding residents.

Despite the study area having good connectivity through the existing heavy rail and Sydney bus network, over 62% of workers within the study area travelled to work by car as a driver or passenger in 2011. Eight percent of the population caught the train and 5.5% walked to work. Bus transport was not a common method of transport to work.

3 ASSESSMENT OF CONSTRUCTION IMPACTS

This section describes potential construction impacts of the project followed by an assessment of their significance. Potential impacts are evaluated against:

- the existing environment analysis undertaken in the preceding sections of this report
- the results of the Business Impact Survey (see Appendix B)
- the experience of the authors on comparable projects.

3.1 Property acquisition and lease cessation

3.1.1 Acquisition and lease cessation process

Transport for NSW (TfNSW) has made every effort to avoid the need to acquire private property. However, in some cases there has been no alternative but to purchase property to allow construction of this major project.

Acquisition requirements are being investigated as part of design development and construction planning, and are likely to include a mix of private freehold, government freehold and leasehold interests. Temporary leasing and/or use of land may also be required to facilitate construction of the project.

TfNSW is bound by NSW Government legislation to act according to specific procedures when acquiring property. This legislation encourages the acquisition of land by agreement rather than by compulsory acquisition wherever possible.

Independent valuers assess the current market value for each property being acquired. In addition to the market value of the property, valuers assess any additional costs that would fairly and reasonably be incurred as a result of the acquisition; such as stamp duty, professional costs (e.g. legal fees, valuation fees, etc.), relocation costs, stamp duty, losses resulting from severance, and losses relating to disturbance.

The valuation informs the offer made to the property owner. Transport for NSW works collaboratively with property owners to ensure that the acquisition process is fair, reasonable and as easy as possible. To facilitate the project, a number of property acquisitions (including commercial leases) are required for:

- construction of new stations, including concourse areas, new entrance plazas, station platforms, station facilities etc.
- construction compounds for machinery operation and storage, construction activity coordination etc.

There is a standard process used by Government to buy land which is required for public purpose such as railway infrastructure. The *Land Acquisition (Just Terms Compensation) Act 1991* (Act) sets out the steps which must be followed including how compensation is calculated. Once a commercial property has been acquired existing tenancies transfer

immediately across to TfNSW and a transaction manager is allocated to work closely with tenants to determine any compensation for relocation.

Transport for NSW recognises that each business has specific and individual needs, including but not limited to the location of the business premises, access to the business by employees and customers and the ability to delivery and receive goods and services (refer Property Acquisition –Commercial Tenants Fact Sheet, Sydney Metro 2015). Therefore, individual tenancy agreements are established between the business owner and TfNSW. If compensation is payable, the disturbance costs that are part of the compensation for the acquisition of the leaseholder interest include reasonable payment for:

- legal costs
- valuation fees
- lease transfer fees
- outsources costs for relocation services and other costs directly associated with the move
- other financial costs incurred as a direct result of the acquisition of the leasehold interest including re-establishment costs on a like for like basis.

3.1.2 Acquisition and lease cessation assessment

The significance of property acquisition or lease cessation on business interests will vary in scale across the local business precincts, dependent on the number of businesses acquired, their associated contribution to the local economy and the ability of the remainder of the local business precinct to absorb the change. As described in Chapter 7 (of the main EIS), land requirements for the project would affect business interests, as follows:

- full acquisition of three privately owned lots near Marrickville Station (one residential and two mixed use sites – non-operational)
- partial acquisition of three publicly owned lots near Marrickville and Punchbowl stations
- cessation of one existing commercial retail lease at each of six stations (at Dulwich Hill, Belmore, Lakemba, Wiley Park, Canterbury, and Punchbowl stations)
- cessation of 31 commercial leases at Campsie Station (consisting of a mix of businesses, including retail, food services, and personal care).

The relocation of businesses due to property acquisition or lease cessation can disrupt the character of business areas 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.

There can also be circumstances where the monetary compensation is adequate, however there is limited or no available floor space in the existing area for business relocation. Furthermore, the proposed location for relocation may have different locational attributes such as reduced passing trade or business visibility. This may result in a loss of revenue for the business or may require the business to relocate to an alternative trade area.

Trade area characteristics can also be altered with the relocation of businesses out of an area. There are circumstances where a community can develop a strong tie and connection to a business, with any changes causing disruptions to routine, social networks, and in large scale acquisition scenarios, local economic productivity. In large scale acquisition cases or where there is inadequate available floor space in an existing area, businesses may be required to relocate to another location. A move of a business out of a catchment can result in a permanent loss of contribution of those businesses to the economy, employment opportunity and loss of specific services for the local area.

The scale and magnitude of impact on the local economy from a business leaving, would be dependent on the worker productivity, employment number and size of the trade catchment it serves (i.e. manufacturing may serve a larger catchment than a coffee shop) and the ability for the business to remain within the catchment.

An assessment of the impacts relevant to property acquisitions and lease cessations is provided in Table 15.

Table 15: Commercial property acquisitions or lease cessation impacts assessment

Local business precinct	No. of property acquisitions or lease cessations	Significance of impact on businesses	Potential effect on businesses	Likelihood of impact	Management measure	Significance to broader economy	Likelihood of impact	Potential effect on businesses
Campsie	31 lease cessations – predominantly retail trade, food services and personal care	Moderate negative	<ul style="list-style-type: none"> ▪ inconvenience of move and loss of productivity during the period of relocation ▪ expense of relocating or purchasing another property ▪ potential shift in trade catchment and need to re-establish customer base 	Almost certain	Standard acquisition and compensation process Business management plan	Slight negative	Possible	Considering the number of businesses ceasing operation and the nature of businesses being mainly food and retail trade it is unlikely that all businesses would be able to relocate into the same area. Surrounding businesses that offer similar services may benefit from an increase trade and customers
Dulwich Hill Belmore Lakemba Wiley Park Canterbury Punchbowl	1 lease cessations – retail/café trade business at each	Slight negative	<ul style="list-style-type: none"> ▪ inconvenience of move and loss of productivity during the period of relocation ▪ expense of relocating or purchasing another property ▪ potential shift in trade catchment and need to re-establish customer base 	Almost certain	Standard acquisition and compensation process Business management plan	Slight positive	Possible	Slight increase in trade at other businesses if business does not re-establish in the same area and customers go to another shop
Marrickville	2 mixed use site full acquisitions - non-operational business premises	Neutral	Nil	Nil	Nil	Nil	Nil	Nil

3.2 Property values and rent return

Property and lease values have a tendency to respond to various positive and negative influences. These influences are based on three elements.

1. Market perception – i.e. communities perception of construction activity impacts, property acquisition etc.
2. Locational attributes – i.e. positive or negative elements directly affecting a property such as view corridors, noise sources etc.
3. General market forces – i.e. interest rates, international investment, supply/demand, population and market growth.

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

Concerns regarding the impact of construction on property and lease values along the project alignment were raised during business surveys. Specific concerns raised included impacts upon commercial property and rent prices arising from:

- the uncertainty surrounding the businesses to be acquired
- several property acquisitions in one location and the potential effect it would have on supply and demand and local business precinct identity
- visual impacts, reduced (-ve)/increased (+ve) access to property, increased congestion, loss of on-street parking, increased competition for parking and reduced amenity.

Property value or rent return fluctuations would be based on the net present value of perceived project benefits or detriments in a particular area.

Perceived impact is based on, and a function of, uncertainty and the unknown, and is difficult to quantify. The more information people have about the risks to business, property and their immediate environment, the less of a risk an environmental impact is perceived to be. This view is consistent with the findings of a report undertaken by HillPDA in 2011 regarding infrastructure construction and the associated effect on property values. Consultation with selling agents at the time, indicated that providing project documentation and information detailing construction works, air quality and noise management etc. to purchasers, assisted in allaying fears⁷. In many cases, perceived risks associated with properties in the primary study area were noted to dissipate as a project neared and achieved completion.

The choice of a business to sell at a lesser amount is due to a longer-term view that the property values or rental amount may be detrimentally impacted as a result of the project. With respect to the impact of property value during construction, 41% of survey respondents acknowledged that land value would likely increase during construction as a reflection of future development opportunity and improved access. This statistic did not correlate with reciprocal rent return for properties, with respondents suggesting that rent should or would

⁷ HillPDA (2011), *Research study on the Impact of ECRL Tunnel on Residential Property Values*, NSW, Department of Transport

decrease during construction to compensate for reduced amenity and disruptions to business operations.

As buyers are aware of the temporary nature of construction and the longer-term strategic objectives of a project, the impact on property value would be minimal, with the market more likely to reflect the broader trends. A multi-year construction project can however affect a person’s ability to sell a property and may limit the buyer market to predominantly long term investors.

An assessment of the impact of commercial rent and property valuations is provided in Table 16.

Table 16: Commercial rent and property value impacts assessment

Impact	Local business precincts effected	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Rent and property value fluctuations	All local business precincts	Slight impact positive or negative	Unlikely	<ul style="list-style-type: none"> ▪ increase or reduction in commercial rents ▪ increase or reduction in property value 	Business management plan	Neutral

3.3 Access and connectivity

Changes to public transport, road and/or active transport networks during construction have the potential to result in impacts on access and connectivity for business owners, employees and customers.

Impacts to access and connectivity are likely to arise from the establishment and operation of construction sites, compounds, stations and ancillary infrastructure that trigger alterations or disruptions to traffic and transport connections. Access and connectivity induced effects include:

- changes to rail services
- localised road network alterations
- pedestrian and cyclist connection alterations
- bus public transport alterations
- alterations to parking availability.

3.3.1 Changes to rail services

The project would involve the periodic closure of the rail line throughout the construction period to facilitate project works. A subsequent, longer duration of possession (between 3 to 6 months) would be required during the testing and commissioning phase.

Temporary Transport Strategy

A Temporary Transport Strategy (TTS) has been developed for the project (Appendix G of the Environmental Impact Statement). This strategy describes the process for planning and delivering an integrated, multi-modal transport network that would operate during the possession periods required to construct the project. The TTS outlines that for each possession period, a number of Temporary Transport Management Plans (TTMPs) would be developed with the TTS as the guiding document. These TTMPs would be developed post-approval and would be informed through community feedback. Refinements would be based on further understanding of construction planning, timetabling options on the rail network, customer needs and ongoing development of alternatives to deliver improved customer outcomes.

To help inform the development of this suite of TTMPs, a Baseline Temporary Transport Plan (Baseline TTMP) has been assessed in Technical paper 1 – Traffic, transport and access assessment. The Baseline TTMP is an option where full rail capacity is replaced by buses during possession periods on the T3 Bankstown Line. This temporary option currently occurs during typical weekend possession periods for Sydney Trains maintenance works.

The original assessment identified extensive impacts, with intersection capacities and the ability to provide safe and efficient boarding and alighting facilities at stations, being affected. This scenario also generated significant adverse impacts on the amenity and connectivity of local business precincts across the study area.

A refined baseline TTMP was developed and included in the TTS and assessed in Technical paper 1 – Traffic, transport and access assessment. This built on the learnings from the baseline TTMP, incorporating an option to convey passengers west of Campsie, to parallel rail lines. This option reduced the potential impact to intersections between Dulwich Hill and Marrickville. Only the refined baseline TTMP has been assessed and referred to in this paper.

All planned possessions of the T3 Bankstown Line require the closure of all stations from Marrickville to Punchbowl. Additionally, some possessions would also require the closure of Bankstown Station, Yagoona Station and Birrong Station, and changes to how stations between Liverpool and Lidcombe are serviced. During such possessions, temporary bus services would need to extend west from Bankstown Station, to Lidcombe Station and/or Sefton Station, depending on the nature of the line closure during a particular possession. The refined baseline TTMP includes temporary bus services to these locations.

Post-approval, the TTS would guide the development of TTMPs beyond the refined baseline TTMP. These would be informed through community input, with the approach then refined further based on a further understanding of customer needs and ongoing development of the plans to deliver improved customer outcomes.

Bus services to stations outside of the project alignment and the study area identified in this assessment would be confirmed as part of the ongoing development of the TTMPs post-approval. Potential impacts at these locations, and other potential temporary bus destinations would be managed as part of the Business Management Plan as discussed in Section 5.

Summary of possible business effects

Possession of the rail line or alterations to the rail service has the potential to reduce business revenue as a result of reductions in passing trade, reduced customer access and reduced business visibility. Passing trade can be defined as those motorists and pedestrians who choose to patronise a business because they see it when walking/driving past, not because they planned to go there. Visibility is important for businesses that rely on passing trade. Large percentages of the transactions at these businesses are generally impulse or convenience purchases.

Alterations in the rail service (including possession of the rail line or reduced frequency in rail service) would result in people opting for an alternative form of transport, therefore altering journey to work patterns and associated passing trade routes. This may also influence the customer experience and business revenue, with fewer consumers travelling to certain local business precincts due to the reduction in convenient transport options.

The impacts to businesses that may arise as a consequence of possessions and the implementation of Temporary Transport Management Plans are outlined in Table 17.

Table 17: Potential impacts to business as a result of rail service shutdowns

Aspect of bus service	Potential business impact
Location of temporary bus stops	<ul style="list-style-type: none"> increase in passing trade and potential sales due to location of temporary bus stop (i.e. temporary bus stop location is closer to some businesses over others) decrease in passing trade and potential sales due to closure of main station entrance resulting in changed pedestrian route
Slower travel speeds due to congestion and increased intersection delays	<ul style="list-style-type: none"> increased customer or employee travel time reduced workplace productivity as employees may be late to work or need to leave earlier
Reduced reliability of bus services due to increased traffic congestion	<ul style="list-style-type: none"> passengers on the way to work may be less inclined to stop at businesses if they are unsure of the frequency of bus services
Increases in number of buses and layover areas	<ul style="list-style-type: none"> reduced business visibility if buses are parked outside of business potential reduction in the amount of parking and loading zones impacting on servicing and delivery capability of businesses potential reduction in parking impacting on customer access and likelihood of customers stopping in local business precinct reduced amenity around bus stops due to noise generation from buses, reduced visual aesthetics and increased air pollution

Changes to the rail service would likely have the largest impact on businesses that are reliant on passing trade. Within local business precincts, trade can be generated by commuters passing businesses on route to accessing public transport. Table 18 identifies the proportion of employees and residents who use the rail service within the local business precincts. This information is detailed further in Appendix B.

Table 18: Employee and resident workforce within local business precincts rail service utilisation

Local business precinct	Number of residents within local business precinct that utilise the rail service	Proportion of residents within local business precinct that utilise the rail service	Number of employees that work within local business precinct that utilise the rail service	Proportion of employees that work within local business precinct that utilise the rail service
Marrickville	860	35%	207	13%
Dulwich Hill	962	29%	51	8%
Hurlstone Park	518	26%	29	5%
Canterbury	318	29%	61	8%
Campsie	1337	30%	342	9%
Belmore	362	26%	97	9%
Lakemba	356	31%	63	6%
Wiley Park	759	26%	26	5%
Punchbowl	666	19%	79	7%
Bankstown	290	25%	582	7%

As can be seen in Table 18, temporary closure of the rail service would likely alter commuter travel patterns with fewer residents passing businesses on their way to the rail station. This would potentially result in a reduction in passing trade, particularly if local residents opt to drive to work, rather than use the temporary rail bus service. This reduction in passing trade would be particularly felt by businesses that have a higher reliance on passing trade including food services (cafes, take-away and restaurants) and retail (particularly convenience stores) and may affect revenue.

Changes to rail service arrangements may also affect employee travel time and access to local business precincts. Employees in the local business precincts, who use the train to travel to work, would be required to utilise alternative forms of transport (including temporary bus). Although not directly affecting business revenue, there may be an indirect impact on businesses as a result of an increase in car parking demand (if people drive instead) or employee travel time.

With respect to staff travel time, 62% of respondents to the business survey did not believe that staff travel time would be impacted, with a third believing that it would. Considering the proportion of employees travelling to work by rail across majority of local business precincts is less than 10%, the impact on businesses is likely to be minimal.

During the testing and commissioning phase (between 3 and 6 months), impacts would be experienced by businesses over an extended duration. That is, over this period the potential for revenue to be captured from passing trade or regular customers utilising the rail service may be significantly reduced, particularly for businesses within close proximity to the stations.

The summary of the effect of alterations to rail services is provided in Table 19.

Overall, changes in rail services during possession periods, would affect businesses in all local business precincts that are in close proximity to stations and more reliant on passing trade. The implementation of TTMP, including a strong business engagement and management plan

(see section 5) would assist in managing some business impacts, however would unlikely completely mitigate business impacts.

Table 19: Summary of effects on businesses impacted due to changes to rail services

Impact	Local business precincts effected	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Changes to rail service – periodic shutdowns on weekends and school holidays	All local business precincts	Slight negative	Almost certain	Business activity disrupted with some businesses potentially impacted more than others. Changes to the rail services may particularly be felt by businesses that rely on passing trade or where there are other more easily accessible locations offering similar goods or services. Specific business impacts include: <ul style="list-style-type: none"> ▪ a reduction in passing trade (retail and food services) ▪ a reduction in business revenue ▪ a reduction in business connectivity (professional services) ▪ increased employee and customer travel time ▪ potential for long term changes to consumer behaviour (retail trade) due to a reduction in access. Customers may switch to a competing centres that offers similar goods and services that is more accessible ▪ potentially reduced business visibility due to buses being parked in front of businesses. 	Temporary Transport Strategy to inform and help develop Temporary Transport Management Plans Business Management Plan	Neutral
Changes to rail service - testing and commissioning phase	All local business precincts	Moderate negative	Almost certain	Business activity disrupted with some businesses potentially impacted more than others. Changes to the rail services may particularly be felt by businesses that rely on passing trade or where there are other more easily accessible locations offering similar goods or services. Specific business impacts include: <ul style="list-style-type: none"> ▪ a reduction in passing trade (retail and food services) ▪ a reduction in business revenue ▪ a reduction in business connectivity (professional services) ▪ increased employee and customer travel time ▪ potential for long term changes to consumer behaviour (retail trade) due to a reduction in access. Customers may switch to a competing centres that 	Temporary Transport Strategy to inform and help develop Temporary Transport Management Plans Business Management Plan	Slight negative

Impact	Local business precincts effected	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
				<p>offers similar goods and services that is more accessible</p> <ul style="list-style-type: none"> potentially reduced business visibility due to buses being parked in front of businesses. 		

3.3.2 Localised road network alterations

Construction works would require alterations to road traffic networks including detours, temporary traffic signals, reduced vehicle speed and delays. Business activity may be affected as:

- customers cannot access the area or because 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 time).

Some business types are likely to be more affected than others, particularly those that rely on efficient business deliveries or distribution or passing trade. If there are competing centres, in more easily accessible locations that offer similar goods or services, access difficulties may result in long term changes to consumer behaviour.

The Technical Paper 1 - Traffic, transport and access assessment identifies four construction elements which create potential adverse effects on the road transport network, including:

- additional traffic from construction vehicles carrying plant and materials to and from the project worksite and construction compounds
- construction workers travelling to and from worksites
- replacement buses and private traffic during closure of the current stations to facilitate the upgrades
- diversion resulting from the closure or restriction on existing bridges which cross the rail line and area to be upgraded as part of the works.

Alterations in local road networks may affect business deliveries and servicing. Business deliveries and servicing are standard operations that all businesses rely upon, particularly when it comes to product distribution and waste collection. These activities are often required daily or multiple times per week. It therefore follows that temporary street closures, removal or relocation of loading zones, relocation or removal of on-street car parking and the location of construction sites, could collectively restrict and/or hinder servicing and delivery opportunities within all local business precincts. Subsequently, this impacts both time and delivery related costs, as well as producing lost revenue for businesses.

Seventy-nine percent (79%) of business survey respondents stated that they received deliveries for their business, with two thirds (66%) of those businesses having no designated loading area and relying on loading zones or on-street car parking areas for deliveries and services.

Removal of loading zones or shop-front parking would directly impact the operation and productivity of businesses across the local business precincts.

Traffic congestion and traffic delays due to road configuration alterations or increased construction traffic may have both a direct and indirect impact on businesses. Businesses may be directly affected as a result of delayed or hindered access to workplaces or servicing areas or a business may be indirectly affected by increased traffic, and therefore employee travel time, delivery delays and cost or reduced amenity.

Traffic congestion can also increase noise, reduce air quality and visually impact on the amenity of an environment. This can lead to a negative customer experience and the desire for customers to travel to other locations to avoid traffic congestion or resulting amenity impacts. This change in consumer behaviour would also directly impact business viability as passing trade and customer expenditure would reduce.

Traffic congestion as a consequence of local road alterations and construction activities was raised by 64% of business survey respondents stating that it would have an adverse effect on business operations. A number of business respondents suggested that traffic congestion would act as a disincentive for visiting the local business precinct and therefore would have an impact on business turnover.

Based on the findings in the Technical Paper 1 - Traffic, transport and access assessment and the scoping of issues across major infrastructure projects, the ANZSIC 1-digit industries likely to be most sensitive to alterations in local road networks are listed below in Table 20, along with the associated impact to business. It must be noted however, that all businesses within the study area are likely to be affected by alterations to the road network, however the extent of the impact on business operations would vary.

Table 20: Industries most effected by alterations to local road network

Most sensitive industries	
Manufacturing Transport, Postal and Warehouse Wholesale trade	These industries are generally more dependent on deliveries and the distribution of goods. Alterations to local road networks may result in: <ul style="list-style-type: none"> ▪ extended travel times and vehicle operation costs ▪ delays in the receipt or distribution of goods ▪ reduced transport efficiency and reliability of deliveries to customers ▪ increased overheads for businesses.

Most sensitive industries	Potential business impact
	<ul style="list-style-type: none"> ▪ reduction in amenity due to traffic congestion and subsequent reduction in business revenue and potential repeat customers ▪ delays in receipt of goods.
Education and training Health care and social assistance Public administration and safety	These industries generally have large workforces or clients/student/visitor base. Alterations to local road networks may result in: <ul style="list-style-type: none"> ▪ increased travel time for employees/students/clients/visitors.
All industries	Majority of businesses may experience: <ul style="list-style-type: none"> ▪ increased customer and employee travel time ▪ a reduction in the efficiency of servicing and deliveries.

It is noted that the Technical Paper 1 - Traffic, transport and access assessment has assessed the potential impacts of a refined baseline TTMP as outlined in a Temporary Transport Strategy (TTS) and discussed in Section 3.3.1. This assessment has demonstrated that with the implementation of this plan, a significant increase in congestion would result on some local road networks. As also outlined in Section 3.3.1, the TTS outlines that a suite of TTMPs would be prepared that considers the impacts identified through the assessment and would seek to mitigate the congestion impacts.

The potential impact of local road alterations on businesses in specific local business precincts is provided in Table 21. This assessment takes into consideration the findings of the Technical Paper 1 - Traffic, transport and access assessment in determining the significance of impact on businesses across the local business precincts.

Overall, alteration to road networks and introduction of construction traffic (including temporary buses) as a result of construction activities is likely to impact businesses in all local business precincts and the transport efficiency of the broader region. Traffic congestion was raised as a primary concern by the majority of businesses surveyed. Local business precincts that are more heavily reliant on business deliveries and distribution and passing trade would generally be the most affected as well as businesses that rely on operating in a pleasant environment (i.e. cafes and restaurants with outdoor dining).

As identified in Table 21, businesses within the Marrickville local business precinct would potentially be most affected by road network alterations with moderate impacts expected, especially during the operation of the refined baseline TTMP and during bridge works. Overall however, only slight negative impacts are expected across the majority of local business precincts. Management measures, including the engagement of businesses and upfront notification of any diversions would assist in reducing the effect on businesses. The Technical Paper 1 - Traffic, transport and access assessment identifies a number of mitigations to be applied across the study area. Once developed, a designated Place Manager should consult with businesses regarding the proposed TTMPs for each local business precinct.

Table 21: Impact of local road alterations on businesses in specific local business precincts

Impact	Location and cause of business impacts	Local business precinct effected	Significance of impact on businesses	Likelihood	Potential business impact	Management measures	Residual impact
Heavy Vehicle Movements	<p>Haulage routes that may impact on local amenity include those along:</p> <ul style="list-style-type: none"> ▪ Illawarra Road (north and south of station), Marrickville ▪ Wardell Road (south of station), Dulwich Hill ▪ Beamish Street (north and south of station), Campsie ▪ Burwood Road (north and south of station), Belmore ▪ Haldon Street (north and south of station), The Boulevarde (east of station), Lakemba ▪ Punchbowl Road (north of station), Punchbowl ▪ South Terrace (east of station) and East Terrace (south-east of station), Bankstown. 	<p>Marrickville Dulwich Hill Campsie Belmore Lakemba Punchbowl Bankstown</p>	Moderate negative	Likely	<ul style="list-style-type: none"> ▪ reduced amenity in local business precincts, particularly impacting cafes, restaurants and business uses reliant on pleasant environments 	Business management plan	Slight negative
Road network performance	<p>Traffic delays are predicted at the majority of assessed intersections during construction and operation with replacement bus services.</p> <p>Business impacts may be expected in:</p> <ul style="list-style-type: none"> ▪ the Marrickville Road business area (outside local business precinct) and Illawarra Road, Marrickville due to delays at the Marrickville Road / Victoria Road intersection and the Marrickville Road/Illawarra Road intersection ▪ the Dulwich Hill local business precinct due to delays at the Wardell Road / Ewart Street, Wardell Road / Dudley Street and Wardell Road / Marrickville Road intersections ▪ the Campsie local business precinct due to delays at the Beamish Street / Clissold Parade, Beamish Street / South Parade and the Beamish Street North Parade intersections 	<p>Marrickville Dulwich Hill Campsie Belmore Lakemba Wiley Park Punchbowl</p>	Moderate negative	Likely	<ul style="list-style-type: none"> ▪ extended travel times and vehicle operation costs ▪ delays in the receipt or distribution of goods ▪ reduced transport efficiency and reliability of deliveries to customers ▪ increased overheads for businesses due to delivery costs ▪ reduced customer and employee access potentially acting as a 	<p>Temporary Transport Strategy to inform and help develop Temporary Transport Management Plans</p> <p>Business Management Plan</p>	Slight negative

Impact	Location and cause of business impacts	Local business precinct effected	Significance of impact on businesses	Likelihood	Potential business impact	Management measures	Residual impact
	<ul style="list-style-type: none"> The Lakemba local business precinct due to delays at The Boulevard/Haldon Street intersection the Wiley Park local business precinct due to delays at the King Georges Road / The Boulevard intersection and King Georges Road / Lakemba Street intersection 				deterrent		
Bridge closures	<p>Business impacts due to partial or full closures of bridges may be experienced in:</p> <ul style="list-style-type: none"> The Marrickville Road business area (outside local business precinct) and Illawarra Road, Marrickville local business precinct due to the Illawarra Road overbridge, the Charlotte Avenue underbridge and the Livingstone Road overbridge diversions. Diversions may affect peak weekday traffic volumes along Illawarra Road and Marrickville Road, increasing traffic congestion, reducing delivery and servicing efficiency and in some instances, diverting vehicles away from Marrickville local business precinct. Businesses in close proximity to Marrickville Station, such those as along Illawarra Road and Station Street, would be particularly impacted by the Illawarra Road overbridge diversions Hurlstone Park local business precinct due to Duntroon Street overbridge diversion and lane closures. Diversions may have a slight impact on business visibility and potential passing trade with traffic directed away from the local business precinct or increased traffic congestion Canterbury local business precinct due to Canterbury 	<p>Marrickville</p> <p>Hurlstone Park</p> <p>Canterbury</p> <p>Campsie</p> <p>Belmore</p> <p>Lakemba</p> <p>Bankstown</p>	<p>Slight negative except at Marrickville which would be a Moderate negative.</p>	Likely	<ul style="list-style-type: none"> extended travel times and vehicle operation costs delays in the receipt or distribution of goods reduced transport efficiency and reliability of deliveries to customers increased overheads for businesses due to delivery costs reduced customer and employee access, potentially acting as a deterrent reduced business visibility if diversions are away from local business precincts 	Business Management Plan	Neutral

Impact	Location and cause of business impacts	Local business precinct effected	Significance of impact on businesses	Likelihood	Potential business impact	Management measures	Residual impact
	<p>Road overbridge partial closure. Lane closures may result in a slight increase in congestion through the local business precinct affecting business servicing and delivery efficiency.</p> <ul style="list-style-type: none"> ▪ Campsie local business precinct due to Beamish Street overbridge diversion. Lane closures may result in a slight increase in congestion through the local business precinct affecting business servicing and delivery efficiency and amenity. Businesses along Beamish Street south of Campsie Street and north of Evaline Street may also experience a minor reduction in business visibility and trade ▪ Belmore local business precinct due to Burwood Road overbridge partial closure. Lane closure may impact business servicing and delivery efficiency and business amenity due to increased traffic congestion. ▪ Lakemba local business precinct due to Haldon Street overbridge diversion. Businesses along Haldon Street, between Lakemba Street and Gillies Street, may experience a slight reduction in business visibility and passing trade due to diversions. Increased traffic congestion may impact business servicing and delivery efficiency for businesses along Haldon Street during partial closure ▪ Bankstown local business precinct due to North Terrace / South Terrace underbridge diversion. The connectivity of the precinct, business visibility, servicing and passing trade is likely to be reduced during this period. 				<ul style="list-style-type: none"> ▪ increased business visibility if diversions go through local business precincts 		

3.3.3 Pedestrian and cyclist connection alterations

Alterations to pedestrian and cyclist networks have the potential to impact on travel duration, movement patterns and accessibility. Additionally, alterations to pedestrian and cyclist flows may influence the level of passing trade on businesses and subsequent customers and sales. Some businesses may benefit as trade is redirected towards their business (i.e. through pedestrian diversions), while others might experience reduced trade as pedestrian traffic is diverted away from the stations (i.e. if the temporary rail bus service location differs from where the current station entrance is located) or the street they are located on.

This mixed outcome was reflected by the results of the business survey, whereby 33% of respondents anticipated that the project would have an adverse impact on walking customers during construction, whereas 59% identified no impact to walking customers.

Pedestrian or cyclists detours or alterations are proposed to occur as a result of construction. In the majority of cases the pedestrian alterations are proposed to be to a footpath on the opposite side of the road or alternatively managed through active transport management. Slight detours away from the original pedestrian path for construction purposes are unlikely to impact businesses, if accesses to the businesses are retained.

There are some circumstances where construction activities (mainly bridge closures) require cyclist to divert off their usual paths and potentially away from a local business precinct. In these circumstances businesses may experience a slight reduction in business exposure however, changes in passing trade is likely to be negligible. Recreational cyclists however, are more likely to stop in centres for a coffee or food. Any diversions away from the local business precinct may see these cyclists stopping in a competing centre, potentially reducing business revenue in the diverted local business precinct. The extent of impact on businesses, as a result of changed cyclist behaviour, is likely to be minimal.

An assessment of the pedestrian and cyclist alterations are provided in **Table 22**.

To reduce any potential impact on businesses, locational signage should be provided that identifies that the businesses are still operating and, where relevant, identify alternate access routes for accessing the businesses. Any detour that directs pedestrians away from businesses should be minimised, wherever possible, to a maximum of fifty metres with appropriate signage provided.

Table 22: Assessment of pedestrian and cyclist alterations

Impact	Industry types potentially effected	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Changes to pedestrian route:	Retail trade, including food retailing Accommodation and food services	Slight negative	Likely	<ul style="list-style-type: none"> changes in passing trade and business visibility 	Business Management Plan	Neutral
Changes to cyclist route:	Retail trade, including food retailing Food services, particularly cafes	Slight negative	Likely	<ul style="list-style-type: none"> changes in passing trade and business visibility changed consumer behaviour (particularly for recreational cyclists who may stop for food and coffee) 	Business Management Plan	Neutral

3.3.4 Bus public transport alterations

The existing bus services that operate in the local areas are proposed to continue operation. Construction activities may however, require certain bus routes to be diverted and bus stops to be relocated due to the increased number of buses required as a result of the TTS replacement bus scheme.

Table 23 identifies potential alterations to the existing bus services and potential impacts to business as a result of these changes.

Table 23: Potential impacts to business as a result of bus service alterations

Impact	Potential business impact
The temporary or permanent relocation of bus stops	<ul style="list-style-type: none"> increase in employee or customer walking distance changes in passing trade (potential increase or decrease) dependent on the location of the business
Slower travel speeds due to congestion, TTS replacement bus and increased intersection delays	<ul style="list-style-type: none"> increased customer or employee travel time reduced workplace productivity as employees may be late to work or need to leave earlier
Reduced reliability of bus services due to increased traffic congestion and patronage	<ul style="list-style-type: none"> passengers on the way to work may be less inclined to stop at businesses if they are unsure of the frequency of buses an increased demand for the service due to rail possession may mean buses fill up faster resulting in employees having difficulty accessing the service
Reduced space at bus stops due to sharing spaces with temporary rail	<ul style="list-style-type: none"> reduced business visibility if buses are parked outside of business potential reduction in the amount of parking and loading zones impacting on servicing and delivery capability

Impact	Potential business impact
	<ul style="list-style-type: none"> ▪ reduced business amenity particularly impacting food service industries such as cafes and restaurants with outdoor dining
Diversions due to bridge closures	<ul style="list-style-type: none"> ▪ reduced business visibility as service is diverted to areas outside of the local business precinct ▪ increased distance for customers and employees to walk to bus stops if diversions result in changes ▪ reduction in passing trade for businesses due to diversions

An assessment of the alterations to existing bus services has been undertaken in Table 24.

To reduce the impact on businesses, a designated place manager should be allocated to engage with businesses and notify them of any alterations to bus services. A designated project hotline should also be provided to businesses to enable owners and managers to stay informed about the project and lodge any concerns if and when they arise. Where bus stops are proposed to be relocated, every attempt should be made to reduce the impact on loading zones or prevent the removal of car parking in front of businesses.

Overall, the impact to businesses as a result of alterations to the bus services may be slightly negative. There is also a possibility that some businesses would benefit from the relocation of bus stops due to an increase in passing trade, business exposure and potentially customer sales.

Table 24: Summary of effects on businesses impacted by bus public transport alterations

Impact	Business locations impacted by bus service alterations	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Existing bus stop is shared with temporary replacement bus services	<p>Business fronting:</p> <ul style="list-style-type: none"> Illawarra Road on the eastern side in Marrickville local business precinct Dudley Street on the southern side in the Dulwich Hill local business precinct Burwood Road near Wortley Avenue on the eastern side in the Belmore local business precinct The Boulevard near Oneata Lane on the southern side in the Lakemba local business precinct The Boulevard near Arthur Street in the Punchbowl local business precinct. 	Slight negative	Likely	<p>Businesses that require greater exposure and visibility of store front to attract customers may be impacted by changes (i.e. retail stores, fast food businesses etc.). A reduction in business visibility/exposure may reduce customers and sales.</p> <p>Reduced amenity including increased noise and air pollution and a reduction in natural light and visual aesthetics. Businesses more dependent on a pleasant environment i.e. cafes and restaurants may be impacted.</p>	Business management plan	Neutral
Diversions and bus stop impacts due to construction sites and bridge closures	<p>Impacts to bus services and stops are required at numerous locations due to construction works including:</p> <ul style="list-style-type: none"> Illawarra Road bus services at Marrickville and associated bus stops during bridge works as routes would be redirected to Charlotte Avenue underbridge via Warren Road, Carrington Road and Victoria Road (negative) Livingstone Road overbridge and Charlotte Avenue underbridge bus services at Marrickville as routes would be redirected to Illawarra Road overbridge via Warren Road and Marrickville Road (positive) Garnett Street overbridge bus route diverted over Duntroon street overbridge (positive) Beamish Street overbridge at Campsie bus routes 	Slight negative or Slight positive	Likely	<p>Businesses that are more reliant on drop-in customers or clients (such as beauticians, retail trade, take-away food, cafes, convenience stores etc.) may be more affected by changes in the bus service.</p> <p>Alterations would effect:</p> <ul style="list-style-type: none"> business visibility/exposure passing trade sales and revenue employee and customer access and travel times. 	Business management plan	Neutral

Impact	Business locations impacted by bus service alterations	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
	<p>would be redirected via Loch Street overbridge and would require temporary relocation of bus stops (negative)</p> <ul style="list-style-type: none"> ▪ Burwood Road overbridge bus routes at Belmore would be redirected across Moreton Street overbridge, and would require temporary relocation of bus stops (negative) ▪ Haldon Street overbridge bus route at Lakemba would be redirected across Moreton Street overbridge and would require temporary relocation of bus stops (negative). <p>Diversions to bus routes due to full bridge closures would be temporary 24-78 hours and would have a minimal impact on businesses.</p>					

3.3.5 Alterations to parking availability

Construction activity along the project alignment would require the removal of some on and off-street parking (including dedicated commuter spaces) to facilitate temporary bus zones and construction sites. Although the project has committed to a no net-loss in dedicated commuter parking along the alignment upon operation, during construction there may be increased competition for on and off street parking throughout the study area. Dependent on the nature of construction, some parking would only be removed for a short duration of time, whereas some area would experience a loss of parking for the whole construction duration.

Results from community consultation identified parking as a major perceived issue for the project area. Sixty-eight percent (68%) of respondents raised concerns in relation to a reduction in the supply of parking due to:

- the increased number of construction workers in the area
- the potential for parking to be removed due to construction sites.

The above points were identified as having the potential to impact on opportunities for deliveries and parking convenience for workers, clients and customers in proximity to stations. Survey respondents suggested that this could potentially lead to decisions by customers/clients to use alternative services or visit a different competing business.

The Technical Paper 1 - Traffic, transport and access assessment reviewed the existing parking environment of the local business precincts and concludes that at majority of stations there remained capacity, within a 400m walking catchment of the stations, in on and off-street parking.

Parking effects due to project design

To upgrade the local business precincts, some on and off-street parking around the stations would be required for construction compounds. As outlined in detail in Table 25, the location of the construction compounds would result in the ongoing impact of 316 on and off-street car parking spaces across the whole corridor for the duration of the construction period and 207 car parking spaces that would only be impacted for a short duration (i.e. during possessions).

Table 25: Parking impact due to project design and construction activities

Location	On and off-street car parking spaces unavailable during construction period	On and off-street car parking spaces unavailable intermittently (such as possessions)
Marrickville Station	3	7
Dulwich Hill Station	9	27
Hurlstone Park Station	23 (time-restricted)	0
Canterbury Station	0	32 (dedicated commuter)
Campsie Station	14 (dedicated commuter)	45 (dedicated commuter)
Belmore Station	29 (dedicated commuter) 46 (time-restricted spaces)	21 (time-restricted spaces)
Lakemba Station	47 (dedicated commuter)	25 (dedicated commuter)
Wiley Park Station ¹	25 ¹	0
Punchbowl Station	30 (dedicated commuter)	50

Location	On and off-street car parking spaces unavailable during construction period	On and off-street car parking spaces unavailable intermittently (such as possessions)
Bankstown Station	90 (dedicated commuter)	0
Total	316	207

¹Note: The 25 spaces temporarily removed at Wiley Park Station refer to the spaces which Roads and Maritime propose to install as part of the clearways project.

Although there is generally capacity in the surrounding on and off-street unrestricted parking to absorb flow over, commuter parkers are likely to take the parks closer to the station. This may reduce the parking available in close proximity to business centres for customers. However given that many centres have linear layouts with street radiating out from the station, parking would still be available for employees and customers in surrounding streets closer to businesses on these streets.

Parking effects during operation of TTMP

The Technical Paper 1 - Traffic, transport and access assessment assesses, a potential temporary loss in on-street and off-street parking to accommodate bus zones, layover areas for operating the TTMP. Parking reduction is summarised in Table 26, including known parking impacts beyond the project alignment (refer to Section 1.5.2):

Table 26: Parking impacts during TTMP operation

Station ¹	Indicative number of spaces unavailable	
	Dedicated commuter parking	On-street parking
Sydenham	0	19
Marrickville	0	3
Dulwich Hill	0	4
Hurlstone Park	0	8
Canterbury	0	0
Campsie	40	3 (time-restricted)
Belmore	0	7
Lakemba	0	12
Wiley Park	0	16
Punchbowl	0	6 (time-restricted)
Bankstown	0	18
Yagoona	0	0
Birrong	0	6
Regents Park	0	0
Sefton	0	8
Berala	0	0
Lidcombe	0	20

Note: Includes stations located outside the project alignment where the refined baseline TTMP would be implemented and therefore spaces required for the operation of replacement buses.

This loss would only be experienced during a rail possession. During rail possession, the majority of commuters who currently utilise parking at or around stations are expected to access alternative stations to get to work. Furthermore, there is expected to be less demand for spaces during the standard possession period, which would coincide with school holidays or on the weekend.

Rail possession during the commissioning stage would not reflect this reduced demand. As demonstrated in Table 26, there is however capacity within a 400 metre walking catchment

surrounding the stations to accommodate the anticipated loss in parking spaces during these periods.

Construction workforce parking demand

During construction there would be more construction workers travelling to the local business precinct. Although it is encouraged that construction workers utilise public transport, there is potential that some construction workers would drive to site, increasing competition for parking.

This increased demand would mainly be felt in the period of construction when the rail is still operating. At this time commuters, local business employees and customers, local residents and construction workers would all be competing for car parking. Table 27 highlights the capacity of street parking to absorb an increase in parking demand.

Table 27: Parking impacts with construction workers

Local business precinct	Workers (non-possession)	On-street utilisation	Off-street utilisation	Capacity (off-street exceeds 80% +constrained, 7-79% marginal, <70% adequate)
Marrickville	40-60	81%	N/A	Constrained
Dulwich Hill	40-60	74%	100%	Marginal
Hurlstone Park	40-60	54%	100%	Adequate
Canterbury	50-70	59%	84%	Adequate
Campsie	50-75	85%	100%	Constrained
Belmore	90-135	76%	92%	Marginal
Lakemba	90-135	85%	86%	Constrained
Wiley Park	90-135	63%	60%	Adequate
Punchbowl	90-135	79%	100%	Marginal
Bankstown	90-135	93%	100%	Constrained

Effect on businesses

As parking is considered of high importance for business uses, the removal or increased competition for parking (whether on or off-street) would affect access convenience for customers, clients and workers. This may lead to a decision by customers/clients to use an alternative service or business in another area, resulting in a decline in business revenue.

To reduce the impact on the supply of car parking in the various local business precincts, construction compounds have been designed to provide some parking for workers at major construction sites. This however, is still not likely to accommodate all construction workers' parking requirements. Alternative transport arrangements, other than driving, would be encouraged for construction workers.

Convenient and accessible parking is particularly important for retail and service based businesses that require quick and efficient access for customers and patients. Such businesses include doctors, dentists, convenience stores, pharmacies and liquor stores where customers are generally in the local business precinct for under an hour. Cafes and restaurants are

generally more dependent on the availability of longer term (2 hours) or unrestricted parking for patrons.

A reduction in parking can also affect employees who drive to work. Increased competition for parking in the local business precinct can reduce the productivity of workers and may make it more difficult to retain staff if getting to work becomes too difficult.

The Technical Paper 1 - Traffic, transport and access assessment outlines a number of mitigation measures to reduce the impact on parking.

A summary of parking impacts is provided in Table 28.

Table 28: Assessment of parking impacts

Impact	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
Reduction in on and off-street parking spaces at stations	<p>To facilitate project design and construction works, parking is required to be removed (see Table 25). Business centres most effected would include:</p> <ul style="list-style-type: none"> ▪ Campsie (during possession) ▪ Belmore (construction period and possession) ▪ Lakemba (construction period and possession) ▪ Punchbowl (construction period and possession) ▪ Bankstown (construction period). <p>Convenient and accessible parking plays a critical function for businesses. A reduction in parking availability in close proximity to businesses, potentially deters customers from going to a centre, affecting business revenue and potentially the productivity of the local economy.</p>	Slight negative	Likely	<ul style="list-style-type: none"> ▪ reduced customer access potentially acting as a deterrent ▪ potential changed consumer behaviour with trade leaking to other centres ▪ slight reduction in customers and business revenue 	Business Management Plan	Neutral
Reduction in parking for refined baseline TTMP	<p>The refined baseline TTMP requires the temporary use of on-street parking to accommodate the bus zones and layover areas. Business impacts as a result of this reduction may be experienced at:</p> <ul style="list-style-type: none"> ▪ Campsie where 40 dedicated commuter parking spaces and three on-street parking spaces are required for removal. 	Slight negative	Likely	<ul style="list-style-type: none"> ▪ reduced customer access potentially acting as a deterrent ▪ potential changed consumer behaviour with trade leaking to other centres ▪ reduction in passing trade and business revenue 	<p>Temporary Transport Strategy to inform and help develop Temporary Transport Management Plans</p> <p>Business Management Plan</p>	Neutral
Increased demand for existing parking due to construction workers	<p>Increased competition for parking in local business precincts due to competition from the construction workforce. These impacts would mainly be felt at Marrickville, Campsie and Bankstown where car-parking capacity is already constrained.</p>	Moderate negative	Likely	<ul style="list-style-type: none"> ▪ reduced customer and employee access potentially acting as a deterrent ▪ potential changed consumer behaviour with trade leaking to other centres ▪ reduction in business revenue 	Business Management Plan	Slight negative

3.4 Noise and vibration

The existing noise environment varies along the project alignment. According to the Technical Paper 2 - Noise and vibration assessment prepared by SLR, the existing sources of noise are being generated from the road traffic, public transport uses, freight transport activities, aircraft noise, industrial activities (in certain local business precincts), commercial activities and the occasional sporting event or use of facilities.

Noise and vibration as a result of construction activities have the capacity to alter the amenity of the existing urban environment and impact on business revenue. This alteration may impact businesses, potentially adversely affecting:

- employee health and wellbeing
- employee productivity and concentration capacity
- the ability to communicate and interact with employees, clients and customers
- work place ambiance
- amenity and customer experience.

Noise and vibration may be generated during construction of the project along the project alignment, within the local business precincts and around construction compounds. The degree of construction noise and vibration impact on individual businesses will vary dependent on the distance from the construction activities, the nature of works and the time of day or night that works take place.

Construction activities with the greatest potential to result in noise and vibration impacts include:

- track works including slewing, communications, signalling, relocation of subterranean services, and overhead wiring works
- modifications and upgrade works to stations, including demolition of existing structures, construction of new structures and buildings
- construction of operational ancillary infrastructure such as traction substations and train
- temporary changes in traffic volumes along some routes during possession periods and due to construction vehicle movements.

Concerns regarding noise, vibration and dust were raised by 65% of business survey respondents. Businesses including cafes and restaurants, doctor surgeries and beauticians raised potential construction noise as a main concern.

The Technical Paper 2 - Noise and vibration assessment determines the sensitivity of uses around the construction areas. Sensitive receivers relevant to this assessment included:

- Commercial
- Industrial
- Place of worship

- Child care
- Hospital
- Special sensitive (e.g. precision laboratories, recording studios).

Commercial and industrial uses were considered less sensitive in comparison to the others listed. It was noted that there would be instances where the nature and function of a business may heighten its sensitivity to the impact (i.e. cinema, café, beauty salon).

Based on the findings of the Technical Paper 2 - Noise and vibration assessment and the scoping of issues across major infrastructure projects, the ANZSIC 1-digit industries likely to be more sensitive to noise and vibration are listed below in Table 29, along with the associated impact to business.

Table 29: Effect on business as a result of noise and vibration impacts

Industry	Sensitive businesses	Potential business impact
Health care and social assistance	Aged care, child care, doctors, dentists, hospitals	<ul style="list-style-type: none"> ▪ precision work (including injections and x-rays etc.) ▪ need for relaxing and restful environments for health and wellbeing ▪ need to communicate and interact with patients
Retail trade	Store based retailing i.e. clothing, electrical etc.	<ul style="list-style-type: none"> ▪ difficulty communicating with customers to assist sales
Accommodation and food service	Cafes, restaurants, hotels, motels	<ul style="list-style-type: none"> ▪ disruptions or reduction in amenity and customer experience ▪ difficulty communicating and interacting with employees and customers for daily operations
Other services	Religious services, personal care services	<ul style="list-style-type: none"> ▪ disruption to work place or facility ambience ▪ amenity and customer experience
Manufacturing	Precision laboratories, printing, microelectronics manufacturing equipment	<ul style="list-style-type: none"> ▪ work place ambience and stability to be able to carry out precision work
Information media and telecommunications	Broadcasting, sound recording, library, cinema	<ul style="list-style-type: none"> ▪ dependent on work place or facility ambience to function ▪ amenity and customer experience

The noise and vibration assessment is representative of the worst case impacts where works are at their closest to the sensitive receivers. The assessment determines that impacts were typically higher for front row receivers which have a direct line of sight to the construction works. For receivers further back from the construction works, the construction noise predictions were anticipated to drop off at a quicker rate.

A summary of the effect of noise and vibration impacts is provided in Table 30.

Overall, the Noise and Vibration assessment predicts relatively high noise levels along the alignment. Noise levels are expected to be exceeded in all local business precincts during construction, however the majority of exceedances at sensitive receivers are predicted to be low or negligible. There are predicted to be limited impacts to businesses from vibration effects along the project alignment. Noise impacts should be minimised through standard

mitigation and management mechanisms as outlined in the Technical Paper 2 - Noise and vibration assessment. On days when noise impacts are expected to be at an extreme, businesses should be notified in advance regarding the duration of the noise intensive activity. Businesses should also be given contact details of a designated place manager or 24 hour project phone hotline to register any complaints if noise impacts start to significantly affect business operation and revenue.

Table 30: Summary of the effect of noise and vibration impacts

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
Marrickville	<p>General worksites, bridge worksites and station works are required in close proximity to businesses in the local business precinct. Noise exceedance is predicted with some businesses likely to be more susceptible, including:</p> <ul style="list-style-type: none"> professional, scientific and technical services on Station Street, Illawarra Road and Arthur Street – including Lawyers and Solicitors other services – personal health and beauty (massage parlour) on Station Street health care and social assistance including dentist and doctor on Illawarra Road accommodation and food services, particularly cafes and restaurants on Illawarra Road and Warburton Street. 	Moderate negative	Almost certain	<ul style="list-style-type: none"> reduction in customers, sales and repeat customers impact on amenity and customer experience difficulty communicating and interacting with employees and customers for daily operation dependent on work place ambience to operate business potential vibration impact for operating dentistry practice 	Construction Noise Vibration Strategy Business Management Plan	Slight negative
Dulwich Hill	<p>Front row business receivers along Wardell Road, Bedford Crescent and Dudley Street. Specifically:</p> <ul style="list-style-type: none"> accommodation and food services (cafes) on the corners of Bedford Crescent and Wardell Road and Dudley Street and Wardell Road. 	Slight negative	Likely	<ul style="list-style-type: none"> reduction in customers, sales and repeat customers impact on amenity and customer experience difficulty communicating and interacting with employees and customers for daily operation 	Construction Noise Vibration Strategy Business Management Plan	Neutral
Hurlstone Park	<p>Front row business receivers along Duntroon Street, Crinan Street and Floss Street. Specifically:</p> <ul style="list-style-type: none"> information Media and Telecommunication (Sound Studio) on Duntroon Street accommodation and food services on the corner of Floss Street and Crinan Street. 	Slight negative	Likely	<ul style="list-style-type: none"> reduction in customers, sales and repeat customers impact on amenity and customer experience difficulty communicating and interacting 	Construction Noise Vibration Strategy Business Management Plan	Neutral

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
				<p>with employees and customers for daily operation</p> <ul style="list-style-type: none"> dependent on work place ambience to operate business 		
Canterbury	<p>Corridor works and station works are required at Canterbury Station with front row receivers more susceptible to high noise levels. Specifically:</p> <ul style="list-style-type: none"> information media and telecommunications (Theatre Guild Hall on Close Street) accommodation and food services on Tincombe Street, Broughton Street and Canterbury Road. 	Neutral	Likely	There are minimal business uses with high sensitivity to noise or vibrations in close proximity to the construction areas.	Construction Noise Vibration Strategy Business Management Plan	Neutral
Campsie	<p>The local business precinct has a number of Bridge worksites, Corridor works, station works and substation works proposed in which all activities are predicted to exceed NML levels. Front row receivers along North Parade, South Parade and Lillian Lane are expected to be more susceptible to high noise levels: Specifically:</p> <ul style="list-style-type: none"> accommodation and food services fronting North and South Parade, Lillian Lane and Beamish Street retail trade fronting North and South Parade, Lillian Lane and Beamish Street health care and social assistance – doctor and dental practices on South Parade public Administration and Safety on South Parade other services (beauty and massage salons along Beamish Street). 	Moderate negative	Almost certain	<p>Numerous businesses with high sensitivity to noise and vibrations in close proximity to worksites, this may result in:</p> <ul style="list-style-type: none"> reduction in customers, sales and repeat customers reduced employee productivity and ability to concentrate reduced amenity and customer experience difficulty communicating and interacting with employees and customers for daily operation disturbance to work place ambience required for primary business function potential vibration impact for operating 	Construction Noise Vibration Strategy Business Management Plan	Slight negative

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
				dentistry practice.		
Belmore	<p>Station and bridge works are required at Belmore Station with front row sensitive receivers along Redman Parade, Burwood Road and Bridge Road predicted to experience greater exceedances in noise levels. Specifically:</p> <ul style="list-style-type: none"> health care and social assistance (aged care and child care along Redman Parade) other services (massage and beauty salon on Burwood Road). 	Slight negative	Likely	<ul style="list-style-type: none"> disturbance to work place ambience of which is required for primary business function reduced amenity and customer experience 	Construction Noise Vibration Strategy Business Management Plan	Neutral
Lakemba	<p>There are a number of station and corridor worksites at Lakemba Station with front row receivers along The Boulevard and Railway Parade likely to be the most sensitive to the predicted exceedances in noise levels. Specifically:</p> <ul style="list-style-type: none"> accommodation and food services including cafes and restaurants fronting Railway Parade and The Boulevard retail trade along Railway Parade and The Boulevard health care and social assistance (medical centre, dentist and child care on Railway Parade). 	Moderate negative	Likely	<p>Numerous businesses with high sensitivity to noise and vibrations in close proximity to worksites, this may result in:</p> <ul style="list-style-type: none"> reduction in customers, sales and repeat customers impact on amenity and customer experience difficulty communicating and interacting with employees, patients and customers for daily operation dependent on work place ambience to operate business potential vibration impact for operating dentist practice. 	Construction Noise Vibration Strategy Business Management Plan	Slight negative
Wiley Park	<p>Station, bridge and corridor works are required at Wiley Park local business precinct with front row receivers along The Boulevard and King Georges Road likely to be most sensitive to the predicted exceedance in noise levels. Specifically:</p>	Slight negative	Likely	<ul style="list-style-type: none"> reduced night time amenity and loss of clientele as a result of night time construction 	Construction Noise Vibration Strategy Business	Neutral

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
	<ul style="list-style-type: none"> accommodation and food services (Wiley Park Hotel). 			<ul style="list-style-type: none"> reduction in clientele, business revenue and repeat customers 	Management Plan	
Punchbowl	<p>Station and corridor works are required at the Punchbowl local business precinct with front row receivers along The Boulevard and Urunga Parade likely to be most sensitive to the predicted exceedance in noise levels. Specifically:</p> <ul style="list-style-type: none"> accommodation and food services (cafes and restaurants along The Boulevard) retail trade (along The Boulevard) health care and social assistance (child care off Urunga Parade, dentist and doctor practices, Punchbowl Road and The Boulevard). 	Moderate negative	Likely	<ul style="list-style-type: none"> reduction in customers, sales and repeat customers impact on amenity and customer experience difficulty communicating and interacting with employees, patients and customers for daily operation dependent on work place ambience to operate business potential vibration impact for operating dentist practice 	Construction Noise Vibration Strategy Business Management Plan	Slight negative
Bankstown	<p>Station and corridor works are required in the Bankstown local business precinct with front row receivers along North Terrace, South Terrace and Bankstown City Plaza likely to be most sensitive to the predicted exceedance in noise levels. Specifically:</p> <ul style="list-style-type: none"> accommodation and food service including cafes, restaurants, takeaway food and function centres health care and social assistance including dentist and doctors along Bankstown City Plaza retail trade fronting South Terrace and North Terrace. 	Moderate negative	Likely	<ul style="list-style-type: none"> reduction in customers, sales and repeat customers reduced amenity and customer experience potential vibration impact for operating dentistry practice 	Construction Noise Vibration Strategy Business Management Plan	Slight negative

3.5 Air quality

The existing air quality within the study area is typical of a predominantly residential orientated urban environment with local business centres. The air quality levels are primarily affected by the local road network and the operation of the diesel freight trains along the rail corridor between Marrickville and west of Campsie (see EIS Chapter 23 Air Quality).

Dust generation as a result of construction activities can have an impact on local businesses resulting in potential increased operation costs (including cleaning and maintenance costs), reduced hygiene or sterilisation of food preparation or medical environments or increased instances of respiratory issues for employees, students or customers.

Dust emissions may result from the following construction activities:

- excavation, handling, stockpiling, loading/unloading and transport of spoil
- demolition of buildings and other structures, and the handling, stockpiling and transport of demolition material
- transport, loading/unloading, stockpiling and handling of imported construction materials such as imported fill
- creation of exposed surfaces through the clearing of vegetation, stripping of topsoil and other overlying structures (such as road and footpath pavements), which would increase the potential for dust emissions to be generated by wind erosion
- movement of construction plant, vehicles and equipment along unsealed haulage routes and surfaces.

Air quality, specifically relating to dust, was raised by numerous food preparation companies and hospitality services. Dust was perceived as an issue by some survey respondents as it has the potential to increase cleaning and maintenance costs and could impact on food hygiene. Traffic related air pollution was also raised by a number of businesses who voiced concerns around the amenity of the environment and ability for patrons to enjoy footpath dining. These factors have the capacity to increase business expenditure and reduce customer interest and product sales, therefore impacting on business revenue.

Based on the findings in the EIS Chapter 23 and the scoping of issues across major infrastructure projects, the ANZSIC 1-digit industries likely to be more sensitive to air quality emissions are listed below in Table 31, along with the associated impact to business.

Table 31: Impacts to businesses as a result of air quality reduction

Industry	Potential business impact
Manufacturing and wholesale trade (food and medical products)	More dependent on clean and sterile environments. Uncontrolled dust would potentially result in increased business overheads and operational costs of cleaning and sterilising
Retail trade	Businesses require stock to be undamaged and clean. Reduced stock quality as a result of uncontrolled dust could result in a reduction in sales
Accommodation and food service	The industry is generally more dependent on providing clean and pleasant environments to attract and retain patrons. A reduction in amenity (i.e. for outdoor dining) could impact on the ability to attract and retain customers, potentially impacting business sales, revenue and repeat customers
Education and training Health care and social assistance	Ongoing exposure to uncontrolled dust and emissions may result in an increased number of respiratory issues for customers or students with allergens or asthma
Arts and recreation	Heightened exposure of persons to dust during fitness and recreational activities may increase the chance of respiratory issues for participants and may deter persons from attending in the future

The summary of the effect of air quality impacts is provided in Table 32.

Overall, EIS Chapter 23 Air Quality, determines that dust and exhaust emissions generated during construction would not significantly contribute to emissions in the project area and can be managed through standard air quality mitigation measures as detailed in the Chapter 23.

Table 32: Summary of the effect of air quality impacts

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
Marrickville	Any uncontrolled construction dust emissions have the potential to impact on receivers. Specifically: <ul style="list-style-type: none"> retail trade along Illawarra Road south of the rail line food services along Illawarra Road, particularly the cafes and restaurants south of the rail line. 	Slight negative	Likely	<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers 	Chapter 23 EIS Business management plan	Neutral
Dulwich Hill	Any uncontrolled construction dust emissions have the potential to impact on receivers. Specifically: <ul style="list-style-type: none"> retail trade along Wardell Road accommodation and food services along Wardell Road, particularly the cafes and restaurants. 	Slight negative	Likely	<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers 	Chapter 23 EIS Business management plan	Neutral
Hurlstone Park	Any uncontrolled construction dust emissions have the potential to impact on these receivers. Specifically: <ul style="list-style-type: none"> retail trade along Crinan Street food services along Crinan Street and Floss Street, particularly the cafes and butchers. 	Slight negative	Likely	<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers 	Chapter 23 EIS Business management plan	Neutral
Canterbury	Any uncontrolled construction dust emissions have the potential to impact on these receivers. Specifically: <ul style="list-style-type: none"> retail trade and food services along Canterbury Road, Jeffrey Street, Tincombe Street and Charles Street. 	Neutral	Possible	<ul style="list-style-type: none"> there are limited businesses with sensitivity to dust in close proximity to the construction area 	Chapter 23 EIS	Neutral
Campsie	Commercial receivers surround Campsie Station that may be impacted by any uncontrolled dust impacts. Specifically: <ul style="list-style-type: none"> retail trade along Beamish Street and Lillian Lane accommodation and food services along Beamish Street and Lillian Lane, particularly businesses with food preparation or retailing arts and recreation services including the Vibe Health and Fitness Centre on North Parade. 	Slight negative	Likely	<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers respiratory health impacts to patrons or students 	Chapter 23 EIS Business management plan	Neutral

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
Belmore	<p>Burwood Road runs almost perpendicular to the project alignment in a north-west to south-east direction. Receivers along Burwood Road are mostly commercial and may be impacted by any uncontrolled dust impacts. Specifically:</p> <ul style="list-style-type: none"> retail trade along Burwood Road accommodation and food services along Burwood Road, particularly businesses with food preparation or retailing education and training including the Youth and Resource Centre and pre-school on Redman Parade health care and social assistance including the aged care facility on Redman Parade arts and recreation services including the PCYC on Burwood Road and the Belmore Sports Ground and facilities off Myall Street. 	Slight negative	Likely	<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers respiratory health impacts to patrons or students 	<p>Chapter 23 EIS</p> <p>Business management plan</p>	Neutral
Lakemba	<p>Commercial receivers to the north of the Lakemba Station may be impacted by dust during afternoon southerly winds. Specifically:</p> <ul style="list-style-type: none"> accommodation and food services along Railway Parade and Haldon Street including grocery stores and restaurants health care services on Railway Parade retail trade along Railway Parade accommodation and food services including take-away, grocery and butcher on the northern side of The Boulevard adjoining the construction worksite. 	Moderate negative		<ul style="list-style-type: none"> increased operation costs for cleaning reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers respiratory health impacts to patrons or students 	<p>Chapter 23 EIS</p> <p>Business management plan</p>	Slight negative
Wiley Park	<p>Receivers located directly to the north and north-west of Wiley Park Station will be susceptible to uncontrolled dust emissions during construction. North-westerly winds most common in the morning period may cause potential impacts</p>	Slight negative	Possible	<ul style="list-style-type: none"> reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers 	<p>Chapter 23 EIS</p> <p>Business management plan</p>	Neutral

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Potential business impact	Management measure	Residual impact
	<p>on receivers to the south-east along King Georges Road. Wiley Park Girls High School would be susceptible to dust impacts in the afternoon when north-easterly winds are more common.</p> <p>Specifically:</p> <ul style="list-style-type: none"> education and training businesses including Wiley Park Girls School and Wiley Park Public School. food and accommodation services along King Georges Road, including Wiley Park Hotel. 			<ul style="list-style-type: none"> student respiratory health impacts 		
Punchbowl	<p>Commercial receivers which surround Punchbowl Station including to the north west and south, would be most susceptible to potential dust impacts during construction.</p> <p>Specifically:</p> <ul style="list-style-type: none"> accommodation and food services on The Boulevard and Punchbowl Road health care and social assistance along The Boulevard education and training including the children's centres on Uranga Parade and Dudley Street and Punchbowl Boys High School. 	Slight negative	Likely	<ul style="list-style-type: none"> reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers student or patron respiratory health impacts 	<p>Chapter 23 EIS</p> <p>Business management plan</p>	Neutral
Bankstown	<p>Commercial receivers surrounding Bankstown Station may be impacted by any uncontrolled dust impacts.</p> <p>Specifically:</p> <ul style="list-style-type: none"> accommodation and food services on South Terrace food services on North Terrace adjacent existing rail station, including Seafood Market and Café health and dental facilities fronting Bankstown City Plaza in existing station facility. 	Slight negative	Likely	<ul style="list-style-type: none"> reduced sales and revenue reduce amenity impacting on the ability to attract and retain customers reduction in repeat customers operational costs for maintaining clean and sterile environment 	<p>Chapter 23</p> <p>Business management plan</p>	Neutral

3.6 Visual amenity

Visual amenity can be described as the pleasantness of the view or outlook of an identified receptor or group of receptors (e.g. residences, recreational users). Visual amenity is an important part of an area's identity and offers a wide variety of benefits to the community in terms of quality of life, well-being and economic activity.

The visual attractiveness of an environment can be important to businesses that rely on customers being attracted to the pleasantness and quality of an environment, such as cafes and restaurants. Conversely, businesses that rely on storefront visibility to attract customers may be impacted by the presence of construction hoardings or reduced business advertising exposure as a result of construction activities. This has the potential to have a direct impact on business revenue and turnover.

During construction, visual amenity throughout the project area has the potential to be affected by factors such as the removal of established vegetation, the installation of construction hoardings, cranes and other machinery, and/or the visual appearance of construction sites. Further factors may include the alteration of view corridors to heritage, open space, water bodies or the city skyline.

The Technical Paper 7 – Landscape and visual impact assessment provides an assessment of the visual impacts associated with the construction of the project.

Visual impacts to businesses in the vicinity of the project, during the construction phase, relate primarily to the:

- disturbances in sight lines from business to street
- reduction in natural light
- reduced business visibility due to construction hoardings
- reduction of streetscape appearance due to construction activity.

Removal of vegetation, temporary bus zones and the presence of construction hoardings are expected to occur within the study area. In most instances across the study area these changes would have a very limited impact on businesses, unlikely to impact business operation or revenue.

Businesses directly adjacent to temporary bus zones or construction compounds may experience a reduction in the visual quality of the environment. Where a business is more dependent on passing trade to supplement business revenue, visual obstructions of the store frontage may impact on sales. Passing trade is defined as a person who enters into a business premise because they see it when walking or driving past and not because they planned to go there.

Businesses that are reliant on quality urban environments, such as cafes and restaurants, to attract and retain repeat clients, may also be impacted by visual obstructions. These businesses are more dependent on access to natural light and clear sight lines of the street to enhance the attraction of their business. This is particularly the case if the business has

outdoor dining. These businesses may experience a reduction in customer sales and repeat clients, impacting on business revenue in the short and longer term.

To reduce the impacts on businesses, the location of temporary bus stops should be positioned so not to be in front of businesses that are highly dependent on passing trade or visual aesthetics. Locational signage, such as the example shown in Figure 4, should be used to inform the public that businesses are still open and direct patrons to businesses. Designated Place Managers should be nominated as key liaisons, available to field any concerns regarding visual impacts.

Figure 4: City to South East Light Rail locational signage



Source: HillPDA 2016

The Technical Paper 7 – Landscape and visual impact assessment also identifies a number of mitigations to be applied.

A summary of potential visual impacts is provided in Table 33.

Table 33: Visual impacts summary table

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Likelihood	Management measure
Marrickville	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Dulwich Hill	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Hurlstone Park	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Canterbury	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Campsie	Businesses along South Parade, adjoining or opposite a construction site, may experience a slight decline in visual amenity but no changes in business visibility.	Slight negative	Possible	Business management plan
Belmore	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Lakemba	Businesses along Railway Parade and The Boulevard adjoining or opposite a construction site may experience a slight decline in visual amenity but limited changes in business visibility.	Slight negative	Possible	Business management plan
Wiley Park	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil
Punchbowl	Businesses along The Boulevard adjoining or opposite the construction site may experience a slight decline in visual amenity but limited changes in business visibility.	Slight negative	Possible	Business management plan
Bankstown	Minor adverse impacts identified. Limited impact on businesses.	Neutral	Possible	Nil

3.7 Loss of power and utilities

Businesses are dependent on public utilities, particularly the supply of electricity and water, for the operation of electronics, business communication, industrial production and drinking water and cooking. The disruption of these services, even for short periods of time, may cause some inconvenience to business operation, consequently affecting economic productivity and business operation. Disruption to utility services, arising from accidental or planned shutdowns to enable construction, was a concern raised during the consultation process.

Disruptions to utilities that may occur during construction include:

- communication infrastructure outages (i.e. internet, phone line use etc.)
- water or sewer outages
- disruptions to electricity and gas supply.

During construction, public utilities and services may be disrupted while they are relocated or for safety reasons. Disruptions for safety reasons could arise when construction activities involve relocating power lines or operating machinery in close proximity to power lines.

The consequence of long or short term disruption to public utility services may affect businesses and the economic viability of a local business precinct. Examples of disruptions because of utility outages may involve:

- business operations that are reliant on the purchasing of goods and services electronically and through the internet (i.e. Eftpos machine) would be required to limit purchases to a cash only system
- business operations that are reliant on electricity and communication networks to run computers, machinery or communication systems would likely have to cease operation
- business operations such as restaurants and cafes that are reliant on clean potable water, refrigeration, electricity and gas for the preparation and operation of food and beverage services would be required to alter service offering during offline periods or temporarily close.

The potential impacts on utilities are being investigated in consultation with the Transport for NSW utility project team. This team will include members from the various utility asset owners and will be confirmed during the design development.

To some extent, all businesses would be impacted from power and utility disruptions through loss of workplace productivity and reduced amenity (including services such as air conditioning, lights and running water). Some businesses may however be particularly sensitive to disruptions. The ANZSIC 1-digit industries likely to be more sensitive to power and utility disruptions are listed below in Table 34, along with the associated impact to business.

Table 34: Impacts to businesses as a result of power and utility disruptions

Industry	Utility disruption	Potential business impact
Health care and social assistance	<ul style="list-style-type: none"> ▪ power disruption ▪ water and waste utility disruption 	<ul style="list-style-type: none"> ▪ reliance on electricity to power medical and dental equipment – extended disruptions would require cancellations of appointments ▪ interruptions to water supply may increase the opportunity for infections and reduce the hygiene level of an environment ▪ interruption of emergency service communication systems
Accommodation and food services	<ul style="list-style-type: none"> ▪ power and gas disruption ▪ water disruption ▪ communication service disruption 	<ul style="list-style-type: none"> ▪ any perishable goods requiring refrigeration may be spoilt increasing business expense ▪ unable to operate equipment for preparing food resulting in loss of trade and sales ▪ require cash only sales reducing potential number of customers ▪ reduced accommodation amenity resulting
Retail trade and wholesale trade	<ul style="list-style-type: none"> ▪ communication service disruption ▪ power disruption 	<ul style="list-style-type: none"> ▪ require cash only sales reducing potential number of customers and sales ▪ perishable goods may be spoilt increasing business expense
Manufacturing	<ul style="list-style-type: none"> ▪ power and water disruptions 	<ul style="list-style-type: none"> ▪ unable to operate machinery required for manufacturing products resulting in reduced productivity
All industries	<ul style="list-style-type: none"> ▪ power and gas disruption ▪ water disruption ▪ communication service disruption 	<ul style="list-style-type: none"> ▪ unable to operate electrical equipment including computers and machinery resulting in a loss of productivity ▪ unable to use internet or phone lines may result in a loss of productivity ▪ disruptions to water and sewage for extended periods of time may require workers to work from home or travel to other locations – reducing productivity and amenity of workplace

Such disruptions may result in a direct economic loss to the business or reduced productivity and could affect business viability if disruptions continue for extended periods.

Although accidental disruptions to services as a result of construction activities are unavoidable, businesses should be given advanced notice of any planned disruptions well ahead of time. A 24 hour project hotline should also be available to businesses to report any unplanned outages.

A summary of the potential impacts of loss of power and utilities due to construction activities is provided in Table 35.

Table 35: Summary of effects of utility service interruptions

Impact	Local business precincts effected	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Planned utility disruption	All local business precincts	Slight negative	Likely	<ul style="list-style-type: none"> ▪ require cash only sales reducing potential number of customers and sales ▪ unable to operate electrical equipment including computers and machinery resulting in a loss of productivity ▪ unable to use internet or phone lines may result in a loss of productivity ▪ disruptions to water and sewage for extended periods of time may require workers to work from home or travel to other locations – reducing productivity and amenity of workplaces ▪ disruptions to services may require businesses to temporary close, impacting on business revenue 	Temporary Transport Management Plan Business management plan	Neutral
Unplanned utility disruptions	All local business precincts	Moderate negative	Possible	The extent of impact on businesses would vary dependent on the potential duration of service outage. The longer the outage, the greater the impact would have on business productivity, expenses and business revenue.	Not available	Moderate negative

3.8 Demand for goods and services from construction activities and workers

With an increase of construction workers in the study area and potential diversions in pedestrian and vehicle travel routes, there is opportunity for some businesses to benefit from construction activity.

This benefit is most likely to be experienced by businesses located in close proximity to construction sites or on route to construction sites that sell goods or services to construction workers or related industries. This can include local businesses such as service stations, food retailing and dining services and accommodation providers among others.

There are also potential scenarios in certain local business precincts, where diversions could lead more people into local business precincts, potentially increasing the passing trade opportunity and exposure of businesses.

Construction activity also generates regional demand for services such as construction recruitment agencies, construction companies and resource suppliers. Although potentially not benefiting businesses in the local business precincts, construction activities do stimulate the broader economy, creating more employment opportunities across the region.

A summary of the effects of construction on goods and services is provided in Table 36.

Table 36: Summary of effects of goods and services generated from construction

Impact	Businesses that may benefit	Significance of impact	Likelihood of impact	Potential effect on businesses	Management measure	Residual impact
Construction worker expenditure	Retail, cafes, restaurants, take-away food, convenience stores, pubs	Slight positive	Likely	<ul style="list-style-type: none"> increase in passing trade and potential sales 	Business Management Plan	Slight positive
Goods and services demand	Broader region	Moderate positive	Likely	<ul style="list-style-type: none"> increase in employment opportunities across the broader region increase in business revenue 	Nil	Moderate positive
Passing trade from diversions	Retail, cafes, restaurants, take-away food, convenience stores	Slight positive	Likely	<ul style="list-style-type: none"> increase in passing trade and potential sales 	Business Management Plan	Slight positive

4 ASSESSMENT OF OPERATIONAL IMPACTS

This section describes potential operational impacts of the project followed by an assessment of the significance of each.

4.1 Access and connectivity

The operation of the Metro would result in a range of impacts on access and connectivity for business owners, employees and customers.

These impacts may result from alterations to:

- rail service frequency and alignment
- pedestrian and cyclist connectivity
- public transport connectivity
- car parking availability
- localised traffic network.

Changes to access and connectivity arrangements have the ability to impact:

- direction and frequency of passing trade
- employee and customer access and travel time
- employee recruitment and retention
- business connectivity with other centres and customer catchment.

4.1.1 Rail service frequency and alignment

The project is proposed to be operational by 2024, with Metro trains running every four minutes in the peak or 15 trains per hour. This would enable an extra 100,000 train customers an hour to travel along the line.

With a potential high frequency, direct service from Chatswood through to Bankstown, there is capacity for businesses to attract a larger target market than the existing population. The frequency, reliability and efficiency of the new service would encourage short trips between local business precincts, improving customer access and passing trade to smaller local business precincts.

The high frequency of the trains could also increase opportunity in the shopping, dining and local retail business sectors. Around 39% of survey respondents acknowledge the potential positive impact of the project on enhanced customer access.

Once operational, the project would contribute to providing much greater connectivity between major centres and direct connection through the Sydney CBD and to the northwest. This enhanced connectivity would support the clustering of businesses (such as start-ups and entrepreneurs) looking for more affordable locations outside the CBD. Due to enhanced connectivity, larger local

business precincts such as Campsie and Bankstown may become more attractive for national and multi-national brands as a place for new business investment and growth.

Ninety-four percent of survey respondents believed that a direct, high frequency and reliable rail system between the Sydney CBD and Bankstown would enhance capacity, business opportunity and overall, be better for business operation.

The project would also enhance workforce accessibility, creating a larger labour pool, increasing staff choice and broadening the available skill set to businesses located within reasonable proximity to the Sydney Metro. To this effect, 43% of survey respondents identified that staff travel time would be improved and 19% of respondents suggested that recruitment and retention of staff would be better. The remainder of responses suggested that there would be no change from current conditions to staff travel time, recruitment and retention.

An assessment of the impact of rail service frequency is provided in Table 37.

Table 37: Rail service frequency impacts assessment

Impact	Local business precincts effected	Significance of impact	Potential effect on businesses
Rail service frequency	All local business precincts	Large positive	<ul style="list-style-type: none"> ▪ increase in passing trade ▪ increase in business connectivity ▪ increase in business revenue and viability ▪ increase in ability to recruit and retain employees ▪ improved travel times and increased transport efficiency for employees and customers ▪ potential attraction of investment into local business precincts ▪ attraction of larger national and multi-national brands ▪ increased travel efficiency allows more time for people to stay and spend in the local business precincts

4.1.2 Pedestrian and cyclist connectivity

The operation of the project would have impacts on pedestrian and cyclist movements throughout the local business precincts. This can have a direct impact on passing trade, customer numbers and business visibility.

The project has been designed to integrate, where possible, with existing landscapes, while creating new connections between stations and the local centres. An objective of the project is to provide efficiency and ease of access for pedestrians and cyclists through the integration of public plazas, bike storage facilities and accessibility treatments.

The location of the station entries, transport interchanges and pedestrian crossings can have a direct impact on passing trade as it may change traffic routes, drawing people towards some businesses and away from others. Improved safety and accessibility of pedestrian crossings can also facilitate the safe access to the local centre, encouraging people to use the centre and increasing the likelihood of additional expenditure.

The project has been designed to enable the future provision of an active transport corridor. Components of the walking and cycling infrastructure within the active transport corridor may be delivered as part of station precinct work. Other parts, such as in areas between stations, are more likely to be staged as funding becomes available.

When fully implemented, the proposed future Southwest Active Transport Corridor would provide the opportunity for pedestrians and cyclists of all ages to walk and cycle in a safe and comfortable environment. The infrastructure would facilitate strategic walking and cycling connections to a number of important destinations, including linking public transport interchanges with schools, retail and commercial precincts. The active transport links would enable ease of movement and maximise connectivity between the local business precincts. This has the potential to increase the number of people moving between neighbourhoods and visiting shops and cafes in local business districts. Safeguarding for an active transport corridor to facilitate strategic walking and cycling connections between Marrickville and Bankstown has been included in the project design.

Increased rail transport volumes and improvements in active transport connections to the stations would likely see significant improvements across all local business precincts in passing trade, business exposure and business revenue. Table 38 identifies the increase in daily patronage expected at each of the stations in 2016 and 2026. The increase in travel volumes would potentially benefit the majority of businesses however businesses that benefit from passing trade (such as convenience stores, cafes, pharmacies) are likely to experience the greatest potential growth in revenue.

Table 38: Daily current and future volumes of rail travel to/from Stations 2016 and 2026

Station	2016 entries	2026 entries	Change	2016 exits	2026 exits	Change
Marrickville	4594	6900	2306	4356	6900	2544
Dulwich Hill	2706	6802	4096	2464	6802	4338
Hurlstone Park	1532	4700	3168	1312	4700	3388
Canterbury	2426	7100	4674	2164	7100	4936
Campsie	8237	10,700	2463	8039	10700	2661
Belmore	3025	6500	3475	2847	6500	3653
Lakemba	4302	7400	3098	4130	7400	3270
Wiley Park	2006	5700	3694	1806	5700	3894
Punchbowl	2935	6500	3565	2806	6500	3694
Bankstown	8993	11,900	2907	9350	11,900	2550

Source: Parsons Brinckerhoff 2016 and NWRL SRT-PBA-SRT-PL-REP-000002

NB: Outcome for all volumes - Increased transport customer volumes and likely passing trade at all stations with the largest proportional changes expected at Canterbury Station (in) and Hurlstone Park (out).

As identified in Table 39, pedestrian crossings and shared zones have also been modified or included as a result of the upgrade. These modifications enable direct and safe access for pedestrians from the station to other transport modes or towards the local business centres. The alterations can generate an increase in trade in some locations or a reduction in trade at other businesses, dependent on the change in directional flow of traffic. Ultimately however, the Sydney Metro service is likely to encourage greater commuter numbers and therefore passing trade and business revenue would likely increase in majority of locations.

Table 39: Assessment of changes to pedestrian and cyclist environment

Local business precinct	Changes to pedestrian and cyclist environment (EIS Chapter 8 – project description – operation)	Significance of impact	Potential business impact
Marrickville	<ul style="list-style-type: none"> ▪ signalisation of Warburton Road, Schwebel Street and Illawarra Road with pedestrian facilities ▪ a new zebra crossing on Illawarra Road immediately north of Arthur Street ▪ rerouting of the existing cycle route along the southern side of the rail corridor, along Schwebel Street, Leofrene Avenue and Riverdale Avenue ▪ a new shared zone in Station Street would be provided, allowing access to the southern station entrance, with this entrance and the shared zone forming a new station plaza at the southern entrance ▪ a new accessible ramp provided from the southern entrance of the station to Schwebel Street (along Station Street). 	<p>Neutral</p> <p>Slight positive (improvement near Illawarra Road)</p> <p>Slight negative (additional station exit)</p>	<ul style="list-style-type: none"> ▪ increased connectivity to Illawarra Road local business precinct leading to growth in passing trade, business exposure and potential sales ▪ increased activation of shared zone with retail trade along Station Street ▪ slight reduction in passing trade if rail patrons exit at Riverdale Avenue instead of at Illawarra Road
Dulwich Hill	<ul style="list-style-type: none"> ▪ a new public plaza between the southern station entrance and the existing pedestrian crossing on Wardell Road ▪ potential cycle routes along Ewart Lane, Ewart Street and Dudley Street ▪ increased connectivity with light rail. 	<p>Neutral</p> <p>Slight positive (improved integration)</p> <p>Slight negative (direct light rail connection)</p>	<ul style="list-style-type: none"> ▪ increased passing trade from improved public access south of the station ▪ improved connection between the light rail and Metro services may increase service patronage potentially increasing the exposure of businesses as patrons move between transport modes ▪ the improved direct connection between light and Metro may reduce the volumes of passing trade and customers for businesses in the north of the centre including cafes and convenience stores
Hurlstone Park	<ul style="list-style-type: none"> ▪ new pedestrian crossing facilities at the southern intersection of Floss Street and Duntroon Street and on Crinan Street just north of Floss Street ▪ potential cycle route along Duntroon Street (south of rail corridor), Commons Street and Hopetoun Street ▪ 	<p>Slight positive</p>	<ul style="list-style-type: none"> ▪ increased safe and prioritised pedestrian connectivity into the local business centre ▪ increase in passing trade with Duntroon Street (north) in the line of sight from the new station exit
Canterbury	<ul style="list-style-type: none"> ▪ new primary station entrance on Broughton Street with access to new station concourse, which is a paid concourse 	<p>Slight positive</p>	<ul style="list-style-type: none"> ▪ increased connectivity between the station and the existing centre north of the station

Local business precinct	Changes to pedestrian and cyclist environment (EIS Chapter 8 – project description – operation)	Significance of impact	Potential business impact
	<ul style="list-style-type: none"> new pedestrian crossing on Broughton Street in line with concourse. 		
Campsie	<ul style="list-style-type: none"> a new shared zone along Lilian Lane between Beamish and Dewar streets a potential cycle route along Lilian Street, Lilian Lane and South Parade existing station concourse and access would be set back from Beamish Street to improve access and provide more space for pedestrians. 	Moderate positive	<ul style="list-style-type: none"> increased connectivity between the station and the remainder of the business precinct new urban plaza improving the amenity of the streetscape and creating a comfortable environment for people to spend more time in the local business precinct increased business exposure for stores along Lilian Lane and North Parade
Belmore	<ul style="list-style-type: none"> a new signalised intersection at Tobruk Avenue, Bridge Road and Burwood Road and including pedestrian crossings, providing improved access into a shared zone on Tobruk Avenue removal of existing station entrance removal of the existing signalised crossing located on Burwood Road at existing station entrance a potential cycle route on Bridge Road new entrance, stairs and lift on the northern side of the concourse in location of existing council and commuter carpark. 	Slight positive	<ul style="list-style-type: none"> increase connectivity between Tobruk Avenue and Redman Parade increased amenity of streetscape with new urban plaza potential increase in passing trade north of the station with the activated plaza leading into the main street
Lakemba	<ul style="list-style-type: none"> potential cycle route along The Boulevard west of Haldon Street and along corridor boundary east of Haldon Street. 	Neutral	Nil
Wiley Park	<ul style="list-style-type: none"> potential cycle route along the northern side of The Boulevard Activated retail plaza. 	Neutral	<ul style="list-style-type: none"> improved amenity with activated retail plaza making it more enjoyable and safe for commuters to pass through
Punchbowl	<ul style="list-style-type: none"> a potential cycle route along southern edge of the station new urban plaza on Punchbowl Road and Urunga Parade a new pedestrian crossing would be provided on Punchbowl Road north-east of Breust Place existing access to station removed. 	Slight positive	<ul style="list-style-type: none"> new plaza improves the amenity of the business precinct and strengthens sight line connections between the station exits and the commercial uses along Punchbowl Road potential increased passing trade for uses adjoining public plaza potential reductions in passing trade for uses that adjoined previous station connection pathway

Local business precinct	Changes to pedestrian and cyclist environment (EIS Chapter 8 – project description – operation)	Significance of impact	Potential business impact
Bankstown	<ul style="list-style-type: none"> ▪ public access across the unpaid concourse section to enable a pedestrian link between the northern and southern side of Bankstown. ▪ new station plazas would be constructed at both new entrances on either side of the rail corridor ▪ potential cycle route on the southern side of the station entrance to West Terrace. 	<p>Neutral</p> <p>Slight positive for increased connectivity</p> <p>Slight negative (new station location impact uses around existing station)</p>	<ul style="list-style-type: none"> ▪ potential increase trade in Bankstown Central due to the entry being in direct line of sight from the station ▪ potential reduction in passing trade for in particular convenience and food retailing businesses, less business exposure and a potential reduction in revenue around the existing station as patrons use the Metro station instead

The effects on businesses as a consequence of alterations to pedestrian and cyclist connectivity are assessed in Table 40.

Table 40: Assessment of pedestrian and cyclist connectivity alterations

Impact	Local business precincts effected	Significance of impact	Potential effect on businesses
Active Transport Corridor	All local business precincts	Large positive	<ul style="list-style-type: none"> increase in passing trade and recreation trip customers increase in business connectivity with other local centres increase in business revenue and viability
End of trip cyclist facilities	All local business precincts	Slight positive	<ul style="list-style-type: none"> encourages more people to cycle to the station increasing potential exposure of businesses and passing trade
Station accessibility	All local business precincts	Slight positive	<ul style="list-style-type: none"> encourages more people, including elderly, people with a disability or mothers with prams to use, the metro service increasing the number of people in the local business precinct and potentially increasing sale.
Increased patronage	All local business precincts	Large positive	<ul style="list-style-type: none"> increase in passing trade and purchasers as commuters travel to and from the station greater vibrancy and passive surveillance in local business precinct due to increase number of people moving through centre increased business exposure increased potential commercial rent and property values increased potential agglomeration benefits of new businesses and greater investment in the area
Pedestrian movement alterations	All local business precincts	Slight positive	<ul style="list-style-type: none"> increase safe pedestrian connectivity with the main trading areas of the local business precincts increased amenity of streetscape with new urban plaza (sometimes activated) encouraging people to stay in centres for longer potential increase or decrease in passing trade for businesses dependent on the alterations to the station entries and exits new open plazas strengthen sight line to the main business trading areas greater connectivity with other local centres increased connectivity for employees, improving workforce productivity and reducing travel time

4.1.3 Public transport connectivity

The project design integrates transport options at each station by clustering taxi, bus and light rail (Dulwich Hill) services in close proximity. This approach would enable public transport patrons to efficiently transition between the rail and other services, improving the connectivity

of the local business precinct. Improved connectivity may potentially attract more patrons to use services, increasing the exposure of businesses and overall vibrancy of the local business precincts. Improved public transport integration can also act as a catalyst for development investment, attracting more residents and businesses to a location, increasing potential trade opportunities.

The increased efficiency from public transport integration, although good for patrons, can result in the reduction of passing trade for some businesses and the increase in passing trade for others. This is due to patrons potentially not needing to pass businesses to transfer between bus and rail. The potential impacts of alterations to public transport connectivity have been analysed in Table 41.

Table 41: Assessment of public transport alterations

Impact	Location of businesses potentially most impacted	Significance of impact	Potential business impact
Changes to bus stop location	<p>Canterbury</p> <ul style="list-style-type: none"> one stop on Broughton Street would be relocated along Broughton Street to outside the new Broughton Street entrance <p>Belmore</p> <ul style="list-style-type: none"> the southbound stop would be relocated to the south of Tobruk Avenue <p>Punchbowl</p> <ul style="list-style-type: none"> the eastbound stop on The Boulevard relocated east of Arthur Street, adjacent to the new station entry 	Neutral	<ul style="list-style-type: none"> the relocation of bus stops would have limited impact on businesses. Passing trade may alter slightly however the impact would be negligible
Integrated transport	All local business precincts	Moderate positive	<ul style="list-style-type: none"> potential increase in patronage improved employee travel time leading to increased work productivity enhanced capability to attract and retain employees

4.1.4 Car parking availability

An objective of the Sydney Metro project is to achieve a no net loss of formal commuter spaces between Marrickville and Bankstown stations and associated rail corridor land from day one of operation. In addition, where conversion of a station to Metro would result in the loss of existing commuter car parking spaces, it is intended that replacement car spaces be located on rail corridor land in the immediate vicinity of the station.

The business survey identified that parking availability was one of the biggest issues across the local business precincts. Consequently, there were mixed opinions regarding the availability of parking and customer access once the project became operational. Of the business survey

respondents, a quarter were of the opinion that parking would worsen and 45% stated that it would not be improved from current levels. These concerns were largely related to permanent loss of street parking and the likely addition of more commuters wanting to park in proximity to the rail line.

The proposed stations have been designed to maximise pedestrian and cyclist access. Where possible, bus and light rail interchanges are proposed to be integrated into the station design to improve transport efficiency for patrons and reduce the need to drive.

Convenient and accessible parking plays a critical function for businesses. A reduction in parking availability potentially deters customers from going to a shopping area, impacting on business revenue and potentially the productivity of the local economy.

The proposed station and interchange designs would have an impact on the number of on-street carparks. Although a loss on car parking spaces is proposed, there is generally sufficient capacity in the surrounding on-street parking to accommodate this loss. Campsie may be the only exception to this, where already limited parking numbers and the potential loss of an additional 20 parking spaces (along Lilian Lane to make way for 80 commuter parking spaces), may cause an issue for employee and customer parking.

As part of the SEARS, Technical Paper 1 - Traffic, transport and access assessment assessed the impact upon loading zones. It was identified, in the assessment, that one loading zone located along North Parade at Campsie Station had the potential to be impacted. This potential impact was a result of the provision of a new taxi zone.

It is recommended that through further detailed design of the project and consultation with local businesses, impact upon businesses would be identified and mitigated where possible.

An assessment of the alterations to parking supply is provided in Table 42.

Overall, although parking supply may reduce across the local business precincts due to station design, the increased connectivity of active transport routes and integration of public transport is proposed to reduce the demand for commuter parking. This in turn would potentially free up more on-street parking spaces for customers and employees in the short term. An additional 80 spaces for formal commuter parking at Campsie is proposed to be delivered.

Table 42: Assessment of alterations to parking supply

Parking impact	Location of businesses potentially most impacted	Significance of impact	Potential business impact
Reduction in on-street and other off-street parking	<p>The removal of on-street and other off-street parking is required for the station interchange and design, resulting in a permanent loss of:</p> <ul style="list-style-type: none"> ▪ 1 car parking spaces at Marrickville Station ▪ 5 car parking spaces at Dulwich Hill Station ▪ 20 car parking spaces at Campsie Station 	Slight negative	<ul style="list-style-type: none"> ▪ reduced customer access potentially acting as a deterrent ▪ reduction in customers and business revenue ▪ reduced efficiency and reliability of deliveries and servicing ▪ reduced employee access and

Parking impact	Location of businesses potentially most impacted	Significance of impact	Potential business impact
	<ul style="list-style-type: none"> 48 car parking spaces at Belmore 10 car parking spaces at Bankstown. 		workplace productivity
Commuter parking increase	An additional 80 commuter car parking spaces are to be provided at Campsie.	Slight positive	<ul style="list-style-type: none"> increased customer and employee access to on-street parking in proximity to businesses
Loading zones	There is potential for one loading zone to be impacted at Campsie Station, on North Parade, as a result of a new taxi zone	Slight negative	<ul style="list-style-type: none"> reduced efficiency and reliability of deliveries and servicing increased cost associated with deliveries

4.1.5 Localised traffic network alterations

The new configuration of the stations will incorporate alterations to road configuration to improve the efficiency of surface road circulation around the rail stations.

Alterations to road configuration or access as a result of the upgraded station design has the potential to impact traffic movement patterns and as a consequence may alter the exposure of some businesses to passing trade. No permanent road closures are proposed as a component of the design and therefore access to commercial properties is likely to remain as exists. Alterations to road configuration and traffic movement are outlined in Table 43.

Table 43: Proposed intersection changes

Local business precinct	Intersection changes
Marrickville	<ul style="list-style-type: none"> proposed signalised intersection at Schwebel Street, Illawarra Road and Warburton Street proposed shared zone along Station Street linking through to Leofrene Avenue
Hurlstone Park	<ul style="list-style-type: none"> proposed crossing and kerb extension on Duntroon Street proposed pedestrian crossing on Crinan Street
Canterbury	<ul style="list-style-type: none"> new pedestrian crossing on Broughton Street in line with concourse
Campsie	<ul style="list-style-type: none"> proposed shared zone on Lillian Lane
Belmore	<ul style="list-style-type: none"> proposed signalised intersection between at Bridge Road and Burwood Road proposed shared zone on Tobruk Avenue between Acacia Lane and Burwood Road
Punchbowl	<ul style="list-style-type: none"> new pedestrian crossing would be provided on Punchbowl Road north-east of Bruest Place.

The operation of the project aims to achieve a reduction in congestion on roads with a higher number of people walking to the local stations. This would improve the amenity of the environment in local business precincts, increase efficiencies for freight deliveries and servicing and

also improve customer experience and access to the local business precinct. The proposed changes to the intersections seek to improve pedestrian connectivity and integration with active transport networks, enabling people to move through the local business precincts more efficiently.

Less traffic on the road within the local business precincts can also improve the safety and efficiency of the environment, making customers feel more comfortable moving around the local business precinct and more inclined to stay longer, shopping or dining in the centre.

There is potential that congestion on roads may increase at stations with park and ride facilities. This may be due to more people from the wider catchments choosing to utilise the improved rail service, therefore driving and parking near the stations. The number of commuter car parking spaces is however not proposed to increase at the stations and therefore people may be less inclined to drive.

Table 44 assesses the impact on business from localised traffic network alterations. Overall, the changes to the intersections and the introduction of high frequency transport alternatives would likely see improvements to the local road network.

Table 44: Assessment of local traffic network alterations on businesses

Impact	Local business precincts effected	Significance of impact	Potential business impact
Localised traffic network alterations	<ul style="list-style-type: none"> ▪ Marrickville ▪ Hurlstone Park ▪ Canterbury ▪ Campsie ▪ Belmore ▪ Punchbowl 	Slight positive	<ul style="list-style-type: none"> ▪ increased customer and employee access ▪ increased customer and pedestrian safety ▪ improved connectivity with the retail streets potentially increasing passing trade and sales

4.2 Visual amenity

The operation of the project would include changes to visual amenity due to the presence of new and amended infrastructure, landscaping and urban design components. The majority of these impacts would likely be localised around station and interchange areas.

Businesses that benefit from passing trade are more dependent on strong sight lines to store frontages and pleasant urban streetscapes. These urban design treatments can create a more comfortable and visually appealing environment. This improves the customer perception of a centre increasing the exposure of businesses to potential trade and revenue.

All local business precincts are expected to experience changes in visual amenity due to the new stations, plazas and ancillary facilities. In the majority of cases, the changes would have a positive impact on the local business precinct environments. Enhancements to the visual amenity of an environment improves a person’s experience and impression of the place, generally resulting people staying for longer periods of time in an environment or returning in the future. 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.

Night time visual amenity may also be affected as a result of the operation of the project. Lighting around stations would play an important role in enhancing the safety of the local business precinct, with improved lighting generally having a positive impact on businesses. Improved lighting enhances the pedestrian experience, encouraging more customers to travel to local business precincts at night time, potentially improving the night time economy of an area.

Table 45 provides an assessment of the visual impacts associated with the operation of the project.

The project has been designed with the aim of minimising visual intrusion of project elements and in a manner which respects and responds to the existing and desired character of affected areas. EIS Chapter 8 project description – operation by AECOM and Technical Paper 7 – Landscape and visual impact assessment by IRIS Visual Planning and Design illustrates the proposed urban environments around stations.

Table 45: Visual impacts summary table

Local business precinct	Location of businesses potentially most impacted	Significance of impact	Potential effect on businesses
Marrickville	Businesses on Station Street adjoining new plaza and shared zone.	Slight positive	<ul style="list-style-type: none"> increased business exposure
Dulwich Hill	The location and visual appearance of the station and public plaza is unlikely to benefit or adversely affect existing businesses.	Neutral	Nil
Hurlstone Park	The location and visual appearance of the station and public plaza is unlikely to benefit or adversely affect existing businesses.	Neutral	Nil
Canterbury	The location and visual appearance of the station and public plaza is unlikely to benefit or adversely affect existing businesses.	Neutral	Nil
Campsie	The location and visual appearance of the station and public plaza would potential benefit businesses along Beamish Street, North Parade and Lillian Lane.	Moderate positive	<ul style="list-style-type: none"> increased business exposure improved streetscape amenity making the environment more comfortable and visually enticing to customers, potentially increasing passing trade improved sight lines to businesses increasing potential customer attraction and sales opportunity
Belmore	The location and visual appearance of the station and public plaza is unlikely to benefit or adversely affect existing businesses.	Neutral	Nil
Lakemba	The location and visual appearance of the station and public plaza would potential benefit businesses along The Boulevarde and Railway Parade.	Moderate positive	<ul style="list-style-type: none"> increased business exposure improved streetscape amenity making the environment more comfortable and visually enticing to customers, potentially increasing passing trade improved sight lines to businesses increasing potential customer attraction and sales opportunity
Wiley Park	The location and visual appearance of the station and public plaza would potential benefit businesses adjoining the station along King Georges Road.	Slight positive	<ul style="list-style-type: none"> increased business exposure improved streetscape amenity making the environment more comfortable, safe and visually enticing to customers, potentially increasing passing trade
Punchbowl	The location and visual appearance of the station and public plaza would potentially benefit businesses adjoining the plaza on Punchbowl Road.	Slight positive	<ul style="list-style-type: none"> increased business exposure improved streetscape amenity making the environment more comfortable, safe and visually enticing to customers, potentially increasing passing trade improved sight lines to businesses increasing potential customer attraction and sales opportunity
Bankstown	The location and visual appearance of the station and public plaza is unlikely to benefit or adversely affect existing businesses.	Neutral	Nil

4.3 Noise and vibration

Businesses can be sensitive to noise if it exceeds comfortable levels or continues for extended periods of time. This exceedance of comfortable noise levels can affect employee health and wellbeing, employee productivity, ability to communicate and interact and work place ambiance.

The proposed Metro services would increase the frequency of passenger train services and would operate at increased train speeds compared to existing passenger train services. While the project is expected to have lower noise generating trains than those that are operating, 10% of businesses surveyed believed that the higher frequency of trains may cause noise, dust and vibration issues.

The Technical Paper 2 – Noise and vibration assessment undertaken by SLR Consulting, assessed the predicted rail noise levels of the project upon operation. The findings of the assessment identified that predicted noise levels may increase in some areas of the study area however, in the majority of areas there were limited impacts.

Specifically, the noise report identified sensitive commercial receivers to be:

- schools, educational institutions and child care centres
- places of worship
- hospital wards
- hospital other uses.

The Technical Paper 2 – Noise and vibration assessment found that sensitive commercial receivers may be impacted at:

- 56-58 Campsie Street, Campsie (split level multipurpose building including residential sleeping areas)
- 69-75 Haldon Street, Lakemba (Place of Worship: Lakemba Uniting Church)
- 10-12 Bellevue Avenue, Lakemba (Medical, Day Surgery: Anowara Medical Centre)
- 1A Hillcrest Street, Wiley Park (educational: Wiley Park Girls High School)
- 25 Kelly Street, Punchbowl (Place or Worship: Church)
- 54 Kelly Street, Punchbowl (Educational: Punchbowl Boys High School buildings and outdoor active recreation area).

Specific mitigations measures to address the noise level exceedances at commercial sensitive receivers can be found in Technical Paper 2 – Noise and vibration assessment.

Noise impacts as a result of the operation of the project do have the capacity to alter the amenity of the urban environment and impact on business revenue. This alteration may impact businesses, potentially adversely affecting:

- employee health and wellbeing

- employee productivity and concentration capacity
- the ability to communicate and interact with employees, clients and customers
- work place ambiance
- amenity and customer experience.

Despite not being specifically identified as sensitive receivers, there are some commercial uses that are more dependent on pleasant urban environments to conduct business (such as cafes, restaurants). There is potential that any of these additional noise sensitive businesses in the immediate vicinity of the stations or rail line may experience a slight decline in amenity. These impacts would however need to be considered in light of the positive impacts that the rail service provides, including increased passing trade.

An assessment of the noise impacts on businesses is provided in Table 46.

Table 46: Rail operation noise impacts assessment

Impact	Local business precinct effected	Significance of impact	Potential effect on businesses
Rail operational noise	All local business precincts	Slight negative	<ul style="list-style-type: none"> ▪ reduction in work place ambiance and customer experience at cafes and restaurants ▪ difficulty communicating with customers to assist sales ▪ reduction in productivity and concentration capacity

4.4 Increased retail opportunity

The project is a catalyst for increased retail provision to develop within all the business precincts, resulting from the uplift in residential densities, increased visitors and increased local employment.

Increased retail provision can however, increase competition between similar retail operators or increase local rents. The development of new retail space is generally viewed as a positive for a location as such investment can in turn stimulate and attract further investment and increase the revitalisation of an area.

Increased retail development can provide alternative locations and floorplates within a centre, allowing existing retailers to naturally grow in place. Increased investment can also attract new 'anchor tenants', these in turn can raise the profile of a location attracting further investment. An anchor tenant can also increase the visibility and opportunity for existing retailers to capture passing trade. An assessment of the opportunity for increased retail opportunity is provided in Table 47.

Table 47: Assessment of increased retail opportunity

Impact	Local business precinct	Significance of impact	Potential effect on businesses
New retail opportunities	All precincts	Moderate positive	<ul style="list-style-type: none"> ▪ increased business exposure ▪ increased passing trade opportunity ▪ increased investment ▪ increased opportunity to grow in place

4.5 Increased urban renewal and development capacity

The implementation and operation of the project is likely to be a catalyst for increased retail investment in local business precincts, due to improved customer access. The NSW DP&E has recognised the opportunity for urban renewal along the corridor with higher density living and employment opportunities proposed as an integrated outcome to be delivered with Sydney Metro.

The strategic planning framework guiding future development in the precincts is the *Draft Sydenham to Bankstown Urban Renewal Strategy (2017)*. The operation of the Metro and potential increased density around the stations, encouraged by the Urban Renewal Strategy, provides a catalyst for enhanced redevelopment opportunities within the local business precincts and the subsequent opportunity for businesses to leverage off a growing resident and worker population base.

An assessment of the impacts from urban renewal and increased development opportunity on businesses is provided in Table 48.

Table 48: Assessment of urban renewal and increased development opportunity

Impact	Local business precincts effected	Significance of impact	Potential effect on businesses
Urban renewal and development opportunity	All local business precincts	Moderate positive	<ul style="list-style-type: none"> ▪ increase in potential business and resident population leading to potential increase in sales and business revenue ▪ increased competition for some businesses ▪ improvements to streetscape amenity and public realm as a result of new development and increased retail opportunities around stations ▪ cumulative construction activity effects if development occurs consecutively with the project ▪ cumulative impact on parking demand if new development don't provide enough and potential reduced customer and employee access ▪ potential increased commercial rents with capacity to push some businesses out

5 RECOMMENDED MITIGATION MEASURES

To mitigate the impacts to local businesses and operations during construction and operation of the project, a range of mitigation measures have been identified and are set out in relevant technical reports associated with the EIS. The Temporary Transport Management Plans, as outlined in the Technical Paper 1 - Traffic, transport and access assessment, are of specific relevance to managing business impacts.

A business management plan would be developed, documenting key issues relating to business impacts by locality, with a particular focus on proactive consultation with affected businesses by Place Managers.

It would include:

- identification of specific businesses which are sensitive to construction activity disturbances
- a summary of the commercial character of the locality, its general trading profile (daily and annually) and information gained from the business profiling such as:
 - operating hours
 - main delivery times
 - reliance on passing trade
 - signage or advertising that may be affected
 - customer origin
 - other specific information that will need to be considered in construction scheduling and planning
- locality-specific business mitigation measures, including:
 - business management strategies for each construction site (and/or activity), identifying affected businesses and associated management strategies, including the employment of Place Managers, and specific measures to be put in place to assist small business owners adversely impacted by construction.
 - other matters raised in consultation with affected business
- a business consultation forum linked to the consultation strategy for the project
- definition of the roles and responsibilities in relation to the control and monitoring of business disturbances
- written notifications confirming in advance the dates and timing of construction works being planned including maps and diagrams to illustrate the information for easy identification of the measures that would be implemented
- when required, noise, dust and vibration monitoring, auditing, and reporting procedures
- procedure for reviewing performance and implementing corrective actions
- description of the complaints handling process.

In conjunction with the Business Management Plan, a Small Business Owners' Support Program would provide assistance to small business owners adversely impacted by construction. The assistance provided would involve working with the small business owner to identify ways of minimising the impacts of construction by providing wayfinding signage, maintaining visibility where practicable, and facilitating access and deliveries at critical times. The program would be administered by a retail advisory/support panel established by Transport for NSW.

The mitigation measures that would be implemented to address potential business impacts are provided in Table 49.

Table 49 Local business specific mitigation measure recommendations

Mitigation code	Mitigation description
Managing construction impacts on businesses	<p>A business management plan would be prepared and implemented during construction, to define the location specific measures and strategies to minimise impacts on individual businesses during construction.</p> <p>The plan would also include:</p> <ul style="list-style-type: none"> ▪ a business consultation forum ▪ roles and responsibilities ▪ monitoring, auditing, reporting, and complaints management procedures.
Supporting businesses during construction	<p>A small business owners support program would be developed and implemented to provide assistance to small business owners adversely impacted by construction. The program would be administered by a retail advisory/support panel established by Transport for NSW.</p>

6 CONCLUSION

Overall this analysis has determined that the project would result in a range of positive and negative business impacts. The impacts would vary in their distribution across geographic areas and businesses and during construction and operational stages of the project.

While the construction of the project is likely to stimulate some broader economic benefits in terms of job generation and increased expenditure in local business precincts, at the local business level, businesses may experience a degree of disruption and temporary negative impacts. These impacts would be particularly felt at locations in close proximity to the proposed stations or worksites. These impacts would need to be carefully and proactively managed with businesses being notified and effectively engaged with throughout the process.

Access and connectivity alterations were seen to potentially cause the most significant impact on businesses, with businesses in the Marrickville local business precinct predicted to be most affected. Property acquisitions and lease cessations, although directly impacting affected businesses, would unlikely cause major disruption to local economies. Campsie local business precinct would need to absorb the biggest change in services with the opportunity for some businesses to benefit from increased trade as businesses close.

The operation of the project is likely to generate large positive impacts for local businesses and the broader economy through increased connectivity, opportunity for development and improved amenity. The operation of the project may however increase demand for on-street car parking due to the removal of some spaces across the local business precincts. The increased efficiency of the rail service and integration with active transport networks may reduce this impact as more residents choose to cycle or walk to stations.

In combination with the DP&E's Urban Renewal Strategy, the project would act as a catalyst for significant urban renewal and development, potentially attracting more businesses and residents into the local business precincts. This would have a flow on benefit to local businesses with increased trade opportunities and demand for services, however may induce increased competition and commercial rent increases as the areas become increasingly more attractive for business.

The preparation and commitment to implementing a Business Management Plan would assist in reducing the impacts to local business. Effective consultation and ongoing notification of construction and operation activities would assist in managing and alleviate concerns from businesses. Preparing mechanisms to maintain pedestrian and vehicular access to businesses and ensure parking and loading zones remain available should also be prioritised. The preparation of adequate locational signage and directions to businesses would also assist in reducing construction impacts.

In summary, the construction of the project would result in numerous construction impacts on local businesses. These impacts would however be temporary in nature and in majority of cases, could be appropriately mitigated or managed. The operation of the project would be significantly positive for businesses with opportunity for increased business exposure, revenue and operational efficiencies.

APPENDIX A: BUSINESS SURVEY RESULTS ANALYSIS

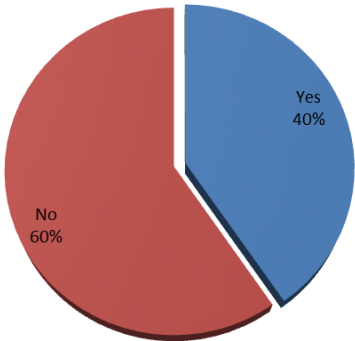
To identify the impacts associated with the Project, a snapshot survey of 100 businesses located along the proposed route was undertaken. The following Appendix provides an overview of the core themes and responses to the business survey. The implications of the findings and how they relate to the Project have been discussed in Chapter 3, 4 and 5.

Business survey results

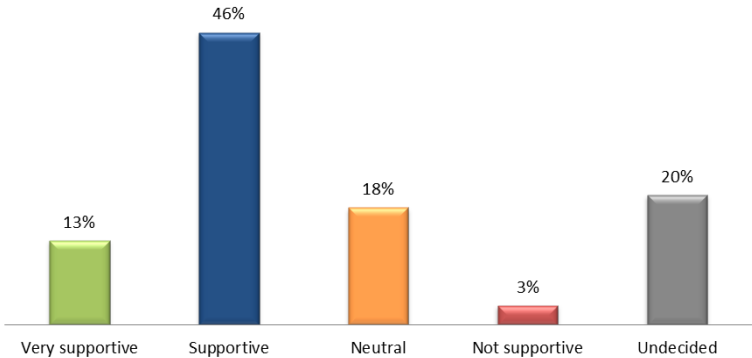
Questions regarding the knowledge and perception of the Project

Have you heard about the proposed Project?

Of the business that responded to this question, 60% were unaware of the proposed Project upgrade and 40% had heard about the Project.



How would you describe your opinion of the Project at this stage?



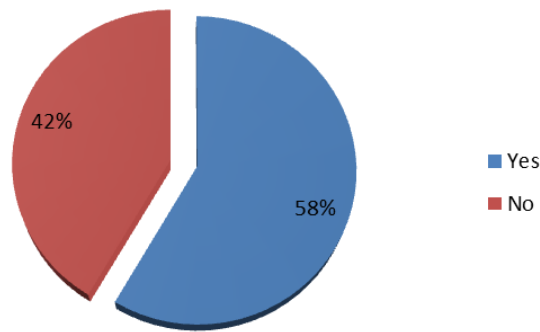
Of the businesses that responded to this question, over 59% were very supportive or supportive, 38% were undecided or neutral and 3% were not supportive of the Project at this stage.

Do you think any of the following Project elements would affect your business?

This question related to aspects of the Project that may impact the success or operation of businesses within the local business precincts. Key Project elements related to:

- improved pedestrian access to stations
- improved direct rail system to the CBD and Bankstown
- reduced traffic in the local area
- more frequent and reliable public transport.

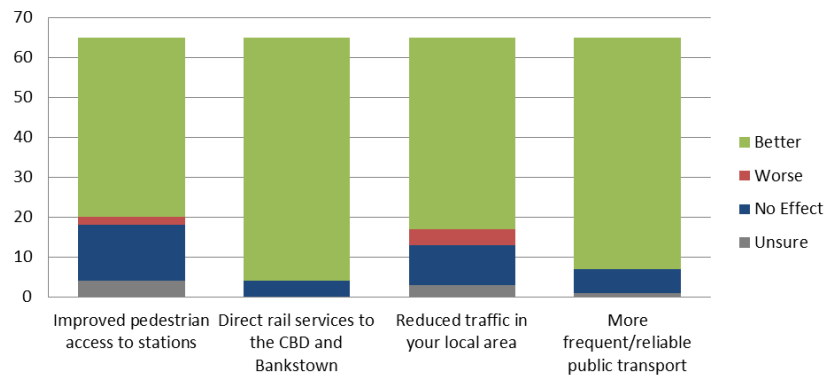
Will the following project elements affect your business?



Of the 82 businesses that responded to this question, 58% stated that such elements would affect their business while 42% believed that it would not.

When asked to what extent the Project elements would affect the business, the majority of the respondents believed that the Project elements would be better for business.

To what extent would the project elements affect your business?



Of the participants that responded to this question, 69% stated that improved pedestrian access to the station would be better for their business, 22% said it

would have no effect upon their business, 3% said it would be worse for their business and 6% were unsure.

94% of respondents stated that direct rail system to the Sydney CBD and Bankstown would be better for their business and 6% said it would have no effect.

74% of respondents stated that reduced traffic in the local area would be better for business. 6% of respondents stated that reduced traffic in the local area would be worse for business. While 15% said it would have no effect on their business and 5% were unsure how it would impact their business.

There was a resoundingly positive response to more frequent/reliable public transport with 89% of respondents suggesting it would be better for their business, 9% stating it would have no effect and 2% not sure how it would impact their business.

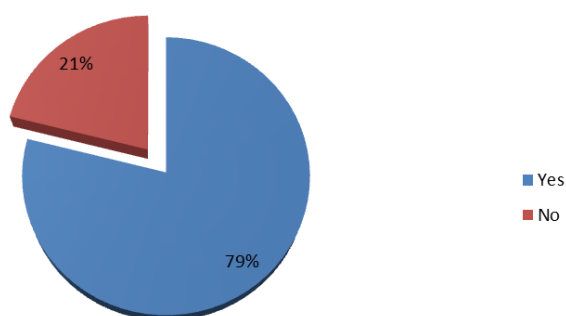
Questions regarding impacts to businesses during construction

To gain an understanding of the potential impacts the Project may have on businesses, a series of questions were asked across a number of categories. Please note however that at the time of the survey, no information was available on the design of the stations, the extent of construction works required or the location of lease cancellations or property acquisitions. Considering this, businesses responded to the survey assuming that they would still be operating as per usual.

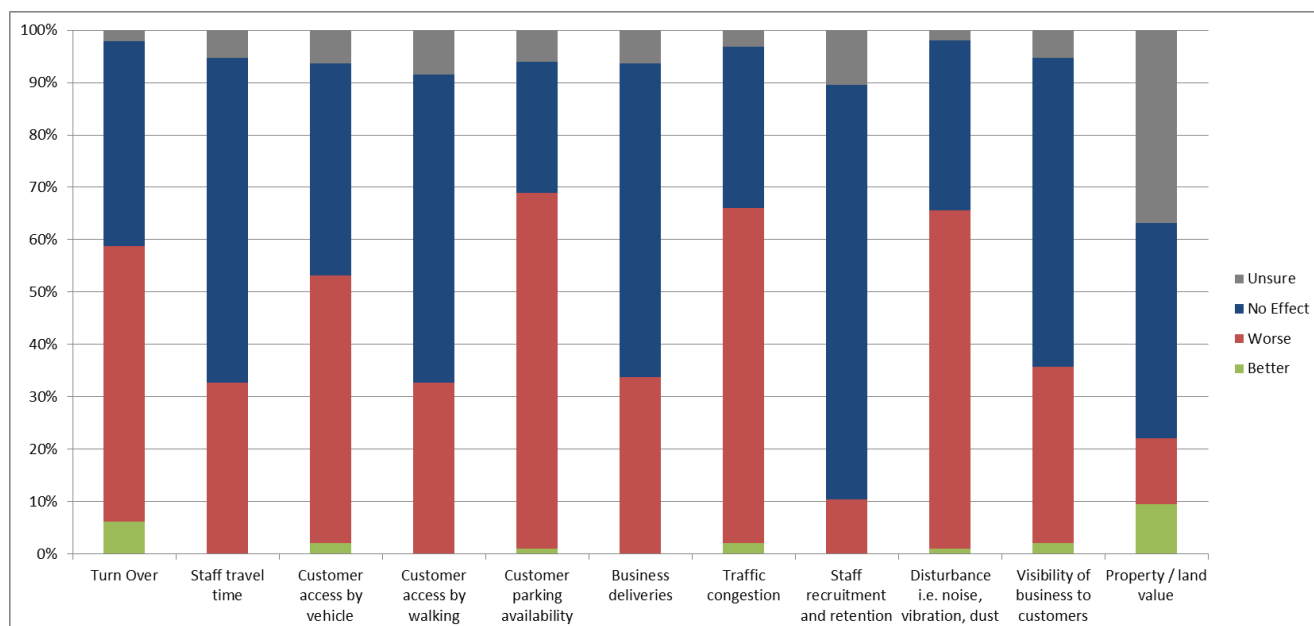
During construction, do you think the Project would affect your business?

Of the 76 respondents that answered the question, 79% stated that during construction the Project would affect their business while 21% stated that it would not.

During construction do you think the project will affect your business?



During construction, how do you think your business would be affected?



Of the businesses that responded to the question, the categories of turnover, customer access by vehicle, customer parking availability, traffic congestion and disturbance recorded the highest proportion of responses stating that impacts would be worse. The secondary response across all of these categories was no effect with only 6% of respondents stating that turnover would improve.

Across the categories of staff travel time, customer access by walking, business deliveries, staff recruitment and retention, visibility of business to customers and property/land value, the greatest proportion of responses fell into the no effect column. Of the respondents that did not believe these categories would have an effect, respondents thought that it would be worse or were unsure how it would affect them.

2% of respondents thought the visibility of their business would be improved during construction and 9% of respondents were of the opinion that the property/land value would improve.

What could minimise the negative impacts and enhance any positives during construction?

The following is a summary of possible mechanisms and methods that were identified by respondents to minimise the negative impacts and enhance any positives of the Project during construction as identified by surveyed businesses.

Mitigate the negative:

Businesses surveyed proposed various ways to mitigate the negative impacts of the Project during construction, the most frequent responses are listed as follows:

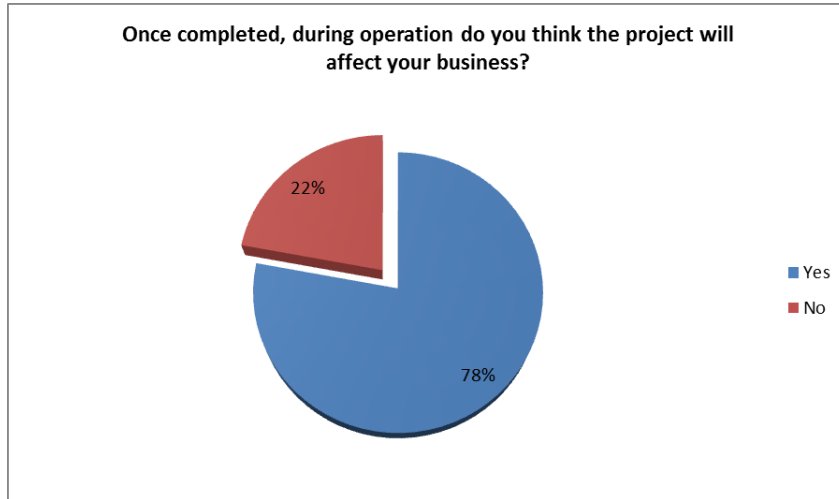
- night time or out of business hour construction work
- provide information about alternative transport methods so businesses can make changes to compensate for potential losses
- if businesses are required to relocate, allow adequate time compensation and assist with relocation
- no construction during business hours
- weekend construction
- provide more parking around stations to compensate for construction workers parking and parking being removed due to construction
- introduce parking management techniques to prevent all day parking in local business precincts i.e. short-term parking zones
- do not use loading zones for construction purposes or ensure a loading zone in close proximity is made available
- undertake construction in winter rather than summer
- manage dust, noise and vibrations
- keep businesses informed and maintain communication channels throughout the process
- compensation for loss of business or rental subsidies
- provide information up front prior to construction works.

Enhancement of positive:

There was a low response rate to this part of the question, only one respondent stated that more construction workers in the locality may increase expenditure in their business.

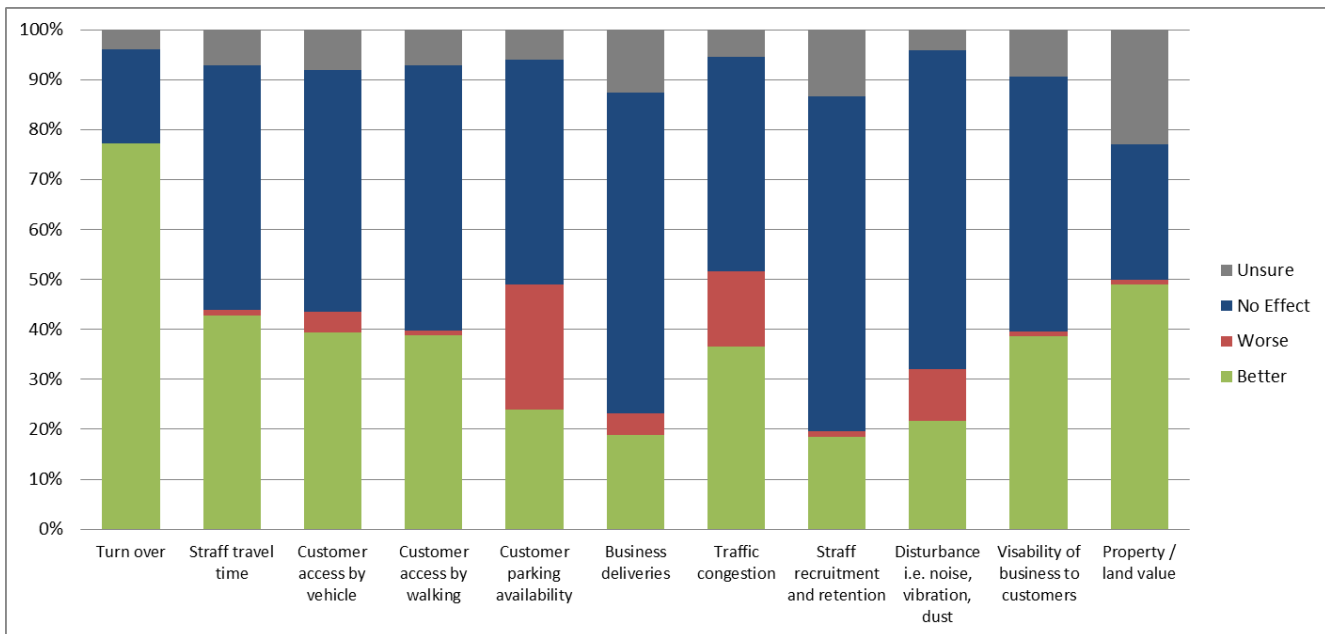
Questions regarding impacts during operation

During operation, do you think the Project will affect your business?



Of the businesses that responded, 78% stated that once completed and operational the new Project would affect their business, while 22% stated that it would not.

During operation, how would your business be affected?



Of the businesses that responded, 77% stated that turnover would increase during operation, 19% stated that there would be no effect to their turnover and 4% were unsure how their business would be affected.

49% stated that staff travel time would not be impacted by the proposed rail upgrades, whereas 43% thought that travel time would be improved. Only 1% thought that staff travel time would be worse and 7% were unsure.

The rail upgrades were said to have no effect on 48% of businesses whose customers were accessing the businesses by vehicle. 39% thought vehicle access would be improved during operation, 4% thought it would be worse and 8% were unsure how it would be impacted.

Similarly, 53% of business respondents stated that customer access by walking during operation would not be affected. 39% stated that there would be an improvement for customers walking, 1% stated that it would be worse and 7% were unsure.

The availability of customer parking was said to get better by 24% of respondents once the Project was in operation, whereas 25% stated that parking availability would be worse. 45% of respondents stated that customer parking availability would be no different to current levels and 6% of respondents were unsure.

43% of business respondents stated that traffic congestion would be no different to current levels. 37% thought that traffic congestion would be better and 15% thought that it would be worse. 5% of respondents were unsure how traffic congestion would be affected once the Project was operational.

A majority of respondents stated that the Project, once operational, would have no effect on staff recruitment and retention. 19% stated that the Project would improve opportunities for staff recruitment and retention and 1% thought it would be worse. 13% of respondents were unsure.

64% of respondents stated that disturbance such as noise, vibration and dust would have no effect on their business once the rail was established and operational. 22% of respondents stated that the amenity would be better and 10% thought it would be worse. 4% of respondents were unsure.

39% of respondents stated that the visibility of their business to customers would be improved once the Project was operational. 51% thought that it would have no effect on business visibility, 1% thought it would be worse and 9% were unsure.

49% of respondents stated that property and land values would improve once the Project was established and operational. 27% of respondents thought that it would have no impact and 23% were unsure. Only 1% of respondents thought that land and property value would be worse.

APPENDIX B: DETAILED EXISTING LOCAL BUSINESS PRECINCT CHARACTERISTICS

This Chapter outlines the existing business operations in each of the defined local business precincts (defined in Section 2) from Marrickville to Bankstown. To determine the characteristics of each local business precinct around the proposed station, site visits were undertaken in addition to desktop research.

The majority of construction compounds are associated with the proposed station upgrades and fall within the identified local business precincts. Therefore, these have not been addressed individually but rather these are considered as part of the local business precinct for each station.

Travel to work data has been collated using information available on Transport Performance and Analytics. Journey to work data is important in determining the potential passing trade and business visibility. Based on HillPDA's industry experience of retail impact assessments, persons walking or catching public transport within or surrounding a local business precinct are more likely to contribute to passing trade, than persons driving private vehicles. This may be exemplified if parking is limited or is charged.

Marrickville

Location context

Marrickville Station services the T3 Bankstown line and is located in the suburb of Marrickville in Sydney's Inner West. The station is bound by Byrnes Street to the north and Station Street to the south. Illawarra Road bridges the rail line and acts as the primary retail spine for businesses in the local business precinct. Built in 1895, elements of the station are currently on the State Heritage Register.

TfNSW is currently upgrading the station to improve access, with construction works underway at the time of this report.

Development surrounding the station is predominantly low density residential. A new medium density development has recently been built adjacent to the station on Byrnes Street. Illawarra Road is the primary retail spine.

Primary operation

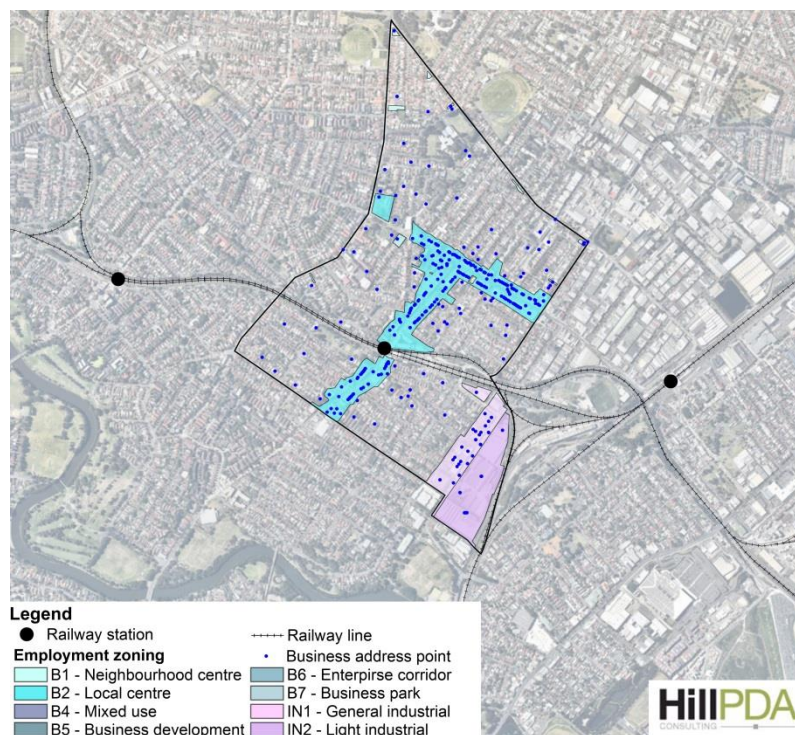
The Marrickville local business precinct is zoned predominantly low density residential (R2), dissected by the Illawarra Road retail spine which is zoned as B2 Local Centre and comprises select commercial uses and predominantly low density residential uses. The retail strip extends around 500m to the north and 480m to the south. Some larger format retail centres are also within 400m of the

station including Woolworths (400m to the south) and Illawarra Place (300m to north).

Figure 5 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 590 businesses in the local business precinct employing approximately 1645 people.

Figure 5: Marrickville local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 46, the primary employment industries in the Marrickville local business district are Retail Trade and Health Care. This is consistent with the land use zoning in the local business precinct that support these types of uses.

Table 46: Marrickville local business precinct employment by broad industry code

Description	Marrickville
Retail Trade	226
Health Care and Social Assistance	171
Manufacturing	157
Transport, Postal and Warehousing	141
Professional, Scientific and Technical Services	131
Wholesale Trade	127
Education and Training	126

Description	Marrickville
Accommodation and Food Services	118
Administrative and Support Services	103
Other Services	85
Public Administration and Safety	82
Rental, Hiring and Real Estate Services	36
Not stated	32
Financial and Insurance Services	28
Construction	27
Arts and Recreation Services	20
Inadequately described	17
Information Media and Telecommunications	15
Electricity, Gas, Water and Waste Services	3

Source: TPA JTW 2011

Population and employment snapshot

Table 47 overviews the population, dwellings, employment and workforce statistics for these travel zones.

Table 47: Marrickville Demographic Snapshot (TZ307 and TZ310)⁸

	2011	2041	Change	% change
Population	5308	6521	1213	23%
Employment	1866	2549	683	37%
Workforce	2773	3619	846	31%
Dwellings	2166	2758	592	27%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown in Table 47 for the Marrickville local business precinct, the population is forecast to increase by 23% between 2011 and 2041. This is expected to be accompanied by a 27% increase in dwelling numbers.

The Marrickville local business precinct is also projected to experience moderate growth in its employment and resident workforce population increasing by 37% and 31% respectively. As of 2011, around 1866 people were working within the Marrickville local business precinct and 2773 people were residents of a working age⁹. The majority of the resident workforce were employed in Sydney Inner City (973 resident workers) with Marrickville - Sydenham - Petersham (418 resident workers) the second largest location.

⁸ Note, the population and employment numbers here are rounded to the nearest integer. The totals may differ slightly compared to the original dataset, hence variations in forecast figures and TPA Travel Zone data as referenced below.

⁹ TPA Travel Zone Forecasts - Sept 2014 release, TZ307 and TZ310

The TPA JTW - Table04¹⁰ data highlights that the primary employment industry in the local business precinct is Retail Trade (14%), which is likely reflective of the fact the local business precinct includes Illawarra Road and the Marrickville Road retail spine at the northern border of the local business precinct. Health Care and Social Assistance and Manufacturing comprise 10% of employment within the local business precinct.

Employee and resident workforce travel behaviour

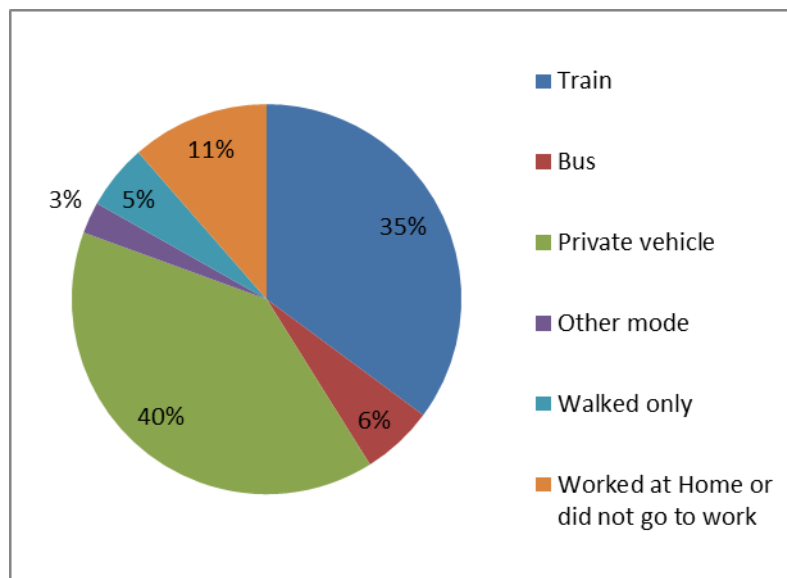
The Marrickville local business precinct is well connected by rail and bus transport. Illawarra Road is the primary collector road connecting the local business precinct and neighbourhood streets, however the local business precinct remains relatively isolated from major arterial roads.

The Marrickville local business precinct is serviced by the Bankstown T3 rail line. The journey to work data relative to employees and residents within the Marrickville local business precinct is examined below.

Marrickville local business precinct workforce travel patterns

Residents residing within the Marrickville local business precinct are mainly reliant on the train (35%) and private vehicle transport (39%) to commute to work (refer to Figure 6). Of the remaining commuter methods, 5% walked to work and 6% caught a bus, while 11% of the working population did not go to work or worked from home.

Figure 6: Marrickville local business precinct resident mode of transport to work



¹⁰ Transport Performance and Analytics 2011, Journey To Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Source: 2011 Journey to Work, Table 12 and 13, TZ 307 and 310

As can be seen in Table 48, around 35% of the residential workforce commuted to work by train. The employment destinations with the highest percentage of residents using the train to commute to work were Sydney Inner City (54%), North Sydney - Mosman (68%), Chatswood - Lane Cove (51%) and Eastern Suburbs - North (48%), which all have established rail connections. The secondary form of transport to these locations was via private vehicle.

Table 48: Marrickville local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	966	54%	10%	22%	3%	1%	9%
Marrickville - Sydenham - Petersham	410	3%	5%	39%	3%	26%	24%
North Sydney - Mosman	90	68%	0%	22%	3%	0%	7%
No fixed place of work	84	14%	0%	67%	0%	4%	15%
Botany	80	11%	0%	64%	10%	4%	11%
Eastern Suburbs - North	79	48%	0%	33%	4%	0%	15%
Eastern Suburbs - South	72	18%	8%	56%	0%	0%	18%
Leichardt	66	11%	9%	67%	5%	5%	5%
Chatswood - Lane Cove	63	51%	5%	35%	0%	0%	10%
Strathfield - Burwood - Ashfield	62	26%	11%	58%	0%	5%	0%
Other location	476	29%	2%	62%	1%	0%	7%
<i>Figures in this row exclude those that did not state a mode of transport</i>		35%	6%	39%	3%	5%	11%

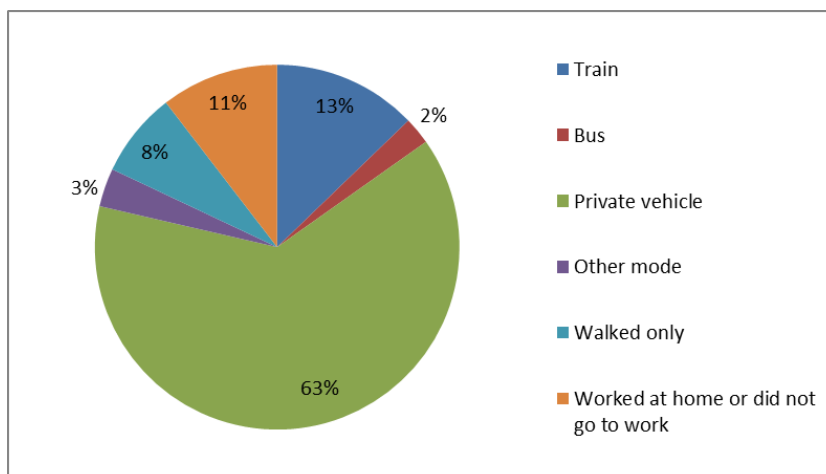
Source: 2011 Journey to Work, Table 12 and 13, TZ 307 and 310

Despite not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to catch the train.

Marrickville local business precinct employment travel patterns

Of the employed persons within the Marrickville local business precinct that stated a journey to work travel method, over 63% (1026 people) commuted to work by private vehicle, in contrast to 13% (207 people) that commuted by train (refer to Figure 7).

Figure 7: Marrickville local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ 307 and 310

The Marrickville local business precinct also recorded a relatively high number of employees working at home or not going to work (11%) and 8% of employees walking to work.

Dulwich Hill

Location context

Dulwich Hill Station is located on the suburb boundary of Dulwich Hill and Marrickville in the south west of Sydney. The Dulwich Hill Station services the Bankstown T3 line and is within 150m of the Dulwich Hill Light Rail terminus station.

The station is bound by Bedford Crescent to the north and Dudley Street to the south. Wardell Road bridges the rail line and acts as the primary retail spine for the local business precinct. Although still predominantly low density residential and retail uses, medium density shop top development is beginning to emerge to the south of the station along Wardell Road.

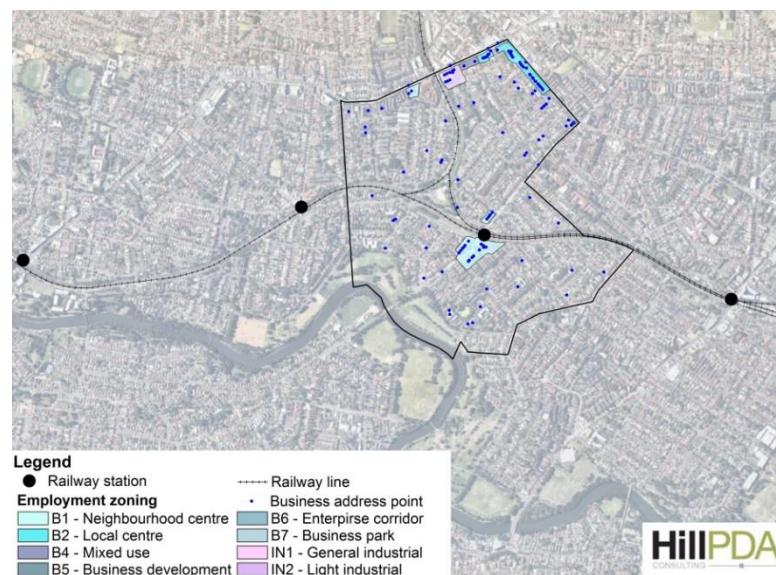
Primary operation

The area around Dulwich Hill Station is predominantly characterised by low density residential. A small number of retail and business uses are located along Wardell Road, either side of the station (as can be seen in Figure 8). The Figure illustrates the local business locations, employment zonings and local business precinct boundary.

The small retail strip extends approximately 150m to the south and 1000m to the north. There are no large format shopping complexes or multi-nationals within the centre.

There are approximately 130 businesses in the local business precinct employing approximately 575 people.

Figure 8: Dulwich Hill local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 49, the primary employment industries in the Dulwich Hill local business district are Health Care and Social Assistance and Accommodation and Food Services.

Table 49: Dulwich Hill local business precinct employment by broad industry code

Description	Dulwich Hill
Health Care and Social Assistance	91
Accommodation and Food Services	82
Professional, Scientific and Technical Services	64
Education and Training	61
Retail Trade	46
Other Services	32
Administrative and Support Services	24
Manufacturing	23
Construction	23
Financial and Insurance Services	23
Rental, Hiring and Real Estate Services	23
Arts and Recreation Services	17
Public Administration and Safety	14
Wholesale Trade	11
Transport, Postal and Warehousing	11

Description	Dulwich Hill
Inadequately described	9
Information Media and Telecommunications	9
Not stated	8
Agriculture, Forestry and Fishing	4

Source: TPA JTW 2011

Population and employment snapshot

According to TPA figures shown in Table 50, for the Dulwich Hill local business precinct, the population is forecast to increase by 25% (1635 persons) between 2011 and 2041. This is expected to be accompanied by a 27% (766 dwellings) increase in dwellings.

Table 50: Dulwich Hill Demographic Snapshot (TZ308, TZ944, TZ945, TZ946)¹¹

	2011	2041	Change	% change
Population	6538	8173	1635	25%
Employment	644	897	253	39%
Workforce	3657	4581	924	25%
Dwellings	2850	3616	766	27%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

The Dulwich Hill local business precinct is also forecast to experience moderate growth in employment and workforce population. When analysing TPA JTW data (JTW - Table 04), Health Care and Social Assistance (16%) followed by Accommodation and Food Services (14%) were the dominant industries. Across the Dulwich Hill local business precinct, 575 people were employed in the area¹².

Employee and resident workforce travel behaviour

The local business precinct is reasonably well connected to other parts of the Inner West via New Canterbury Road to the north, the Sydney Light Rail network, and the railway line. The journey to work data relative to employees and residents within the Dulwich Hill local business precinct is further explored below.

Dulwich Hill local business precinct workforce travel patterns

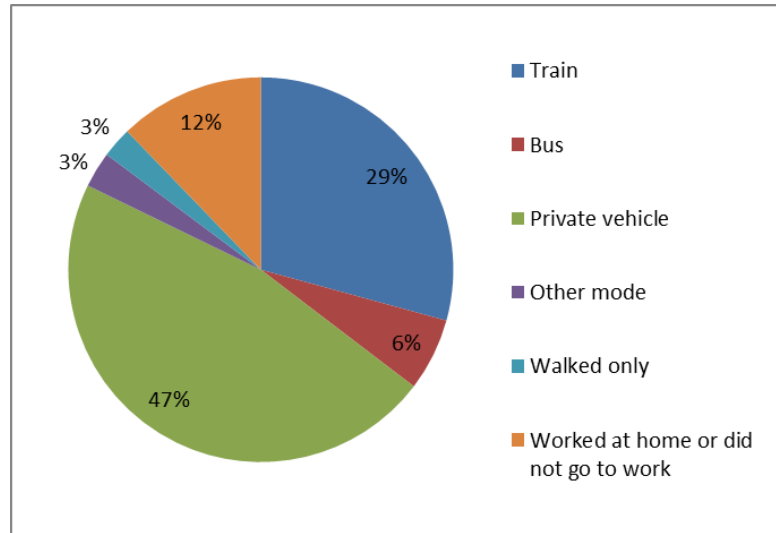
The majority of the resident workforce were employed in Sydney Inner City (1279 resident workers) with Strathfield - Burwood - Ashfield (313 resident workers) the second largest location.

¹¹ Note: the population and employment numbers here are rounded to the nearest integer. The totals may differ slightly compared to the original dataset, hence variations in forecast figures and TPA Travel Zone data as referenced below.

¹² Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Residents residing within the Dulwich Hill local business precinct were predominantly reliant on private vehicle transport (47%) to travel to work. The train system was catering for 29% of the resident workforce and 6% of the resident workforce were catching the bus¹³. Figure 9 illustrates the journey to work transport mode for residents within the Dulwich Hill local business precinct.

Figure 9: Dulwich Hill local business precinct resident journey to work transport mode



Source: 2011 Journey to Work, Table 12 and 13, TZ944, TZ945, TZ946 and TZ308

As can be seen in Table 51, around 29% of residents are currently catching the train to work with the most popular destinations being Sydney Inner City (47%), North Sydney - Mosman (56%) and Eastern Suburbs - North (51%). Despite Canterbury and Marrickville - Sydenham - Petersham being on the same train line, 78% and 58% of the resident workforce are driving to work at these locations.

Table 51: Dulwich Hill local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	1279	47%	10%	28%	3%	1%	10%
Strathfield - Burwood - Ashfield	313	6%	5%	48%	4%	13%	24%
Marrickville - Sydenham - Petersham	285	6%	6%	58%	1%	6%	22%
Botany	121	8%	5%	72%	5%	2%	7%
Chatswood - Lane Cove	116	30%	0%	53%	5%	0%	11%
North Sydney - Mosman	113	56%	0%	33%	3%	0%	9%
No fixed place of work	107	10%	0%	73%	0%	0%	17%
Leichhardt	97	10%	15%	47%	3%	7%	16%
Canterbury	91	14%	4%	78%	0%	0%	3%
Eastern Suburbs - North	87	51%	0%	34%	8%	0%	7%
Other	679	21%	2%	66%	3%	0%	8%
<i>Figures in this row exclude those that did not state a mode of transport</i>		29%	6%	47%	3%	3%	12%

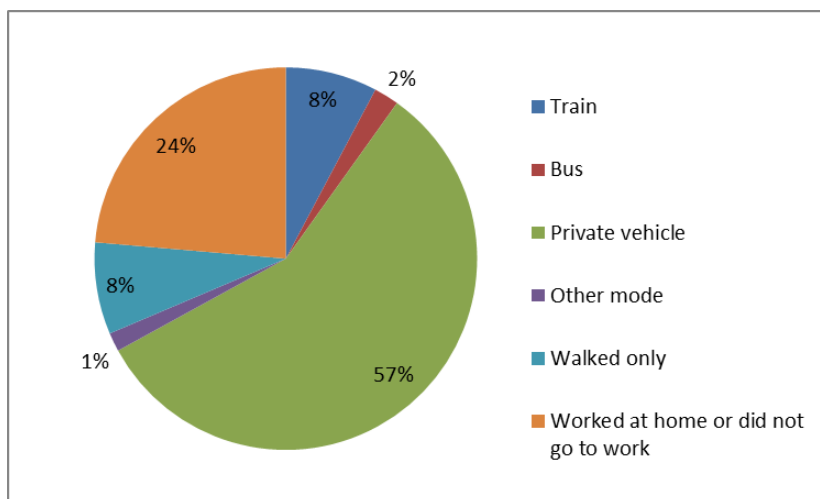
Source: 2011 Journey to Work, Table 12 and 13, TZ944, TZ945, TZ946 and TZ308

¹³ 2011 Journey to Work, Table 12 and 13, TZ944, TZ945, TZ946 and TZ308

Dulwich Hill local business precinct employment travel patterns

Of the 644 people that were employed within the Dulwich Hill local business precinct, 567 stated a journey to work travel mode.

Figure 10: Dulwich Hill local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ944, TZ945, TZ946 and TZ308

As shown in Figure 10, over 57% or 324 people employed in the Dulwich Hill local business precinct were electing to drive to work, whereas only 8% of employees were catching a train to work. The Dulwich Hill local business precinct also recorded a high number of employees living and working locally with 8% of the employment population walking to work and 24% working at home or not going to work.

The Dulwich Hill local business precinct recorded a high percentage of people driving to work and a strong local employment presence, with numerous people working at home or walking to work. There were also a limited number of employees (10%) using public transport options.

Hurlstone Park

Location context

Hurlstone Park Station is positioned in the suburb of Hurlstone Park in Sydney's south west. The station services the Bankstown T3 line and is bound by Floss Street and Duntroon Street. Crinan Street bridges the rail line and turns into the retail main street to the north of the station.

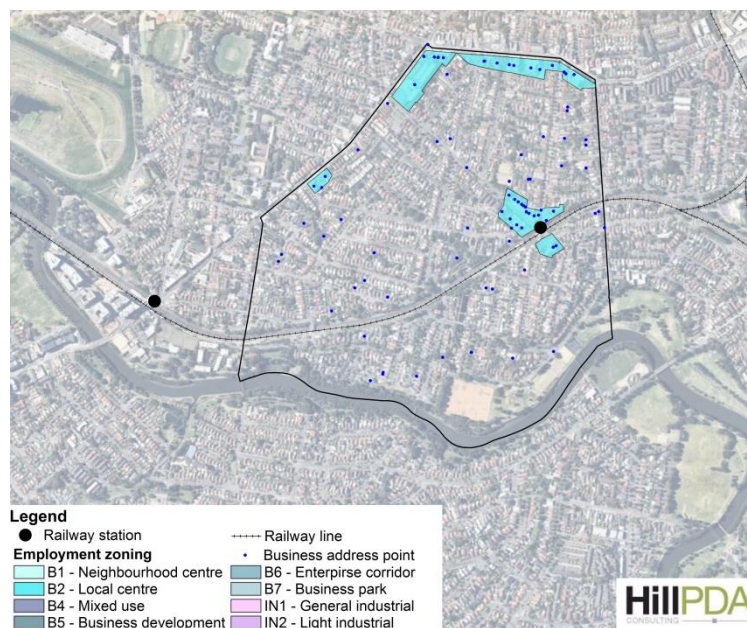
Primary operation

The Hurlstone Park area currently comprises low density residential and a small selection of retail and commercial uses along Crinan Street and Floss Street.

Figure 11 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

The retail strip extends approximately 170m to the north west of the station. There are no large format shopping complexes or multi-nationals in the centre. There are approximately 85 businesses in the local business precinct employing approximately 580 people.

Figure 11: Hurlstone Park local business precinct, land zoning and business location



Source: HillPDA 2016

The local business precinct acts as a small order local neighbourhood centre offering basic convenience services. Primary customers would be local residents and rail commuters.

Primary employment industries

As identified in Table 52, the primary employment industries in the Hurlstone Park local business district are Professional, Scientific and Technical Services.

Table 52: Hurlstone Park local business precinct employment by broad industry code

Description	Hurlstone Park
Accommodation and Food Services	149
Health Care and Social Assistance	84
Professional, Scientific and Technical Services	55
Retail Trade	54
Construction	33
Education and Training	25
Manufacturing	22

Description	Hurlstone Park
Administrative and Support Services	21
Other Services	19
Transport, Postal and Warehousing	19
Rental, Hiring and Real Estate Services	17
Arts and Recreation Services	15
Inadequately described	15
Wholesale Trade	13
Not stated	11
Financial and Insurance Services	10
Public Administration and Safety	9
Information Media and Telecommunications	9

Source: TPA JTW 2011

Population and employment snapshot

Table 53 overviews the population, dwellings, employment and workforce statistics for the Hurlstone Park local business precinct.

Table 53: Hurlstone Park Demographic Snapshot (TZ927 and TZ928)

	2011	2041	Change	% change
Population	4349	5843	1494	34%
Employment	653	920	267	41%
Workforce	2322	3038	716	31%
Dwellings	1728	2419	691	40%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release and TPA Dwelling

According to the TPA figures shown in Table 53 for the Hurlstone Park local business precinct, the population is forecast to increase by 34% between 2011 and 2041. This is expected to be accompanied by a 40% increase in dwelling numbers.

The Hurlstone Park local business precinct is also expected to experience moderate growth in its employment and workforce population increasing by 41% and 31% respectively. Despite the growth, employment opportunity within Hurlstone Park continues to remain relatively low with 653 people working within the Hurlstone Park local business precinct in 2011 and only an additional 267 people projected over the 30 year timeframe.

Greater growth is expected in the resident workforce number with an increase of 716 persons.

The TPA JTW - Table04¹⁴ data highlights that the primary employment industry in the Hurlstone Park local business precinct is Accommodation and Food Services (26%) with Health Care and Social Assistance the second trade industry at 14%. The 9% proportional result for Retail Trade and Professional Services workforce is consistent with the relatively limited expanse of retail and commercial uses within the Hurlstone Park local business precinct.

Employee and resident workforce travel behaviour

The main road network is located in the north with access to Canterbury Road and New Canterbury Road along Crinan Street or Duntroon Street.

The Cooks River acts as a natural boundary when travelling south, requiring commuters to travel west to Canterbury or east to Dulwich Hill.

Hurlstone Station services the T3 Bankstown Line. The journey to work data for the Hurlstone local business precinct including both the residential workforce and the workforce employed has been analysed below.

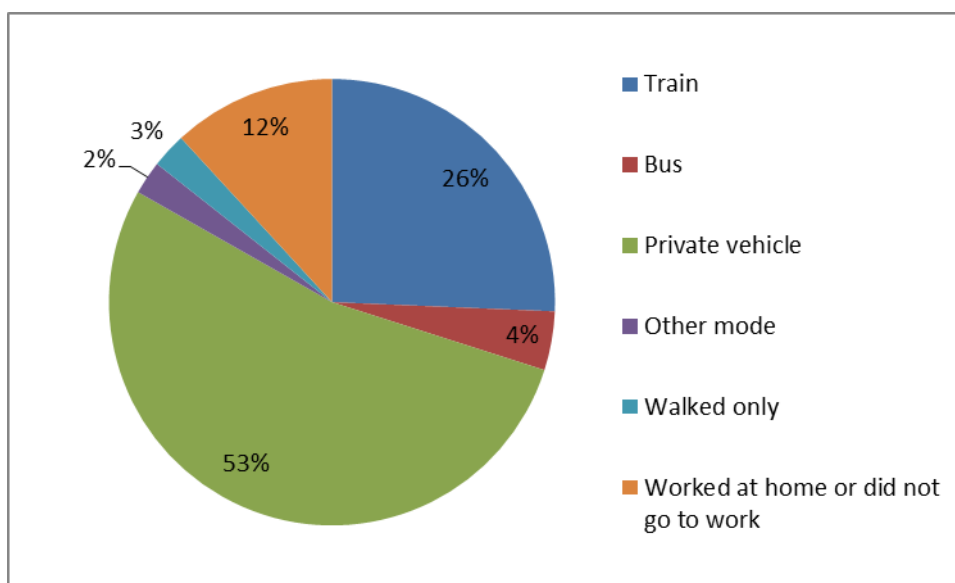
Hurlstone Park local business precinct workforce travel patterns

The majority of the resident workforce was employed in Sydney Inner City (31%) with Strathfield - Burwood - Ashfield (18%) the second largest location.

Residents residing within the Hurlstone Park local business precinct are mainly reliant of private vehicle (53%) or the train (26%), as can be seen in Figure 12. Of the remaining commuter methods, 3% walked, 4% caught the bus and 2% caught another mode of transport. 12% of the resident population worked at home or did not go to work.

¹⁴ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Figure 12: Hurlstone Park local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ927 and TZ928

Of the resident workforce commuting via rail, the most popular employment destinations are Sydney Inner City (49%) and North Sydney - Mosman (57%) (refer to Table 54). Despite being on a rail line, the private vehicle remains the most popular method of transport to Strathfield - Burwood - Ashfield (59%), Marrickville - Sydenham - Petersham (64%) and Canterbury (69%).

Table 54: Hurlstone Park local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	629	49%	7%	31%	3%	0%	10%
Strathfield - Burwood - Ashfield	360	3%	2%	59%	2%	10%	25%
Marrickville - Sydenham - Petersham	123	12%	11%	64%	2%	2%	8%
Botany	91	18%	0%	69%	3%	0%	10%
Canterbury	89	19%	0%	69%	0%	3%	9%
No fixed place of work	78	9%	0%	81%	0%	4%	6%
Ryde - Hunters Hill	61	26%	0%	51%	5%	0%	18%
Leichhardt	52	0%	13%	79%	0%	0%	8%
Kogarah - Rockdale	51	18%	0%	71%	6%	0%	6%
North Sydney - Mosman	51	57%	0%	25%	6%	6%	6%
Other	434	21%	3%	66%	3%	0%	8%

Figures in this row exclude those that did not state a mode of transport 26% 4% 53% 2% 3% 12%

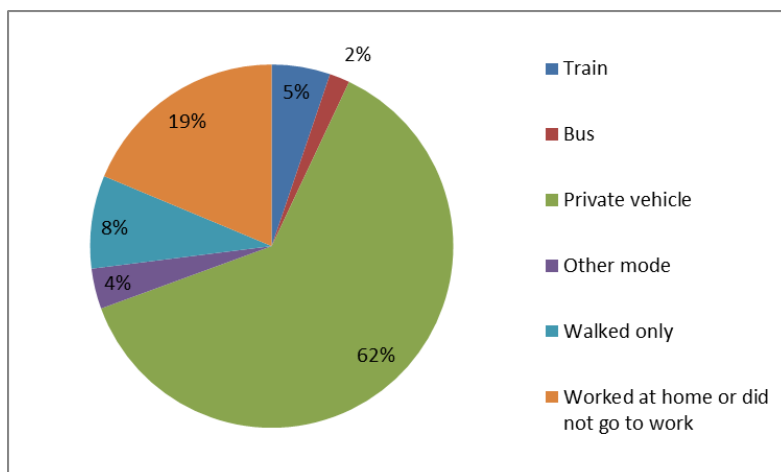
Source: 2011 Journey to work, Table 12 and 13, TZ927 and TZ928

Despite not being the most dominant method of transport, apart from Leichhardt, all resident employment destinations recorded a proportion of commuters electing to catch the train.

Hurlstone Park local business precinct employment travel patterns

Of the 580 people that were employed within the Hurlstone Park local business precinct, 556 stated a journey to work travel mode.

Figure 13: Hurlstone Park local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ944, TZ945, TZ946 and TZ308

As shown in Figure 13, over 347 persons (62%) were electing to drive to work, in contrast to the 29 persons (5%) that were catching the train. The Hurlstone Park local business precinct also recorded a relatively high number of employees living and working locally (19%) and 8% of persons walking to work.

Canterbury

Location context

Canterbury Station is located in the suburb of Canterbury in Sydney's south west. The station services the Bankstown T3 line and is bound by Broughton Street in the north. Canterbury Road bridges the rail line and is the main arterial road connecting the local business precinct to the broader region.

Primary operation

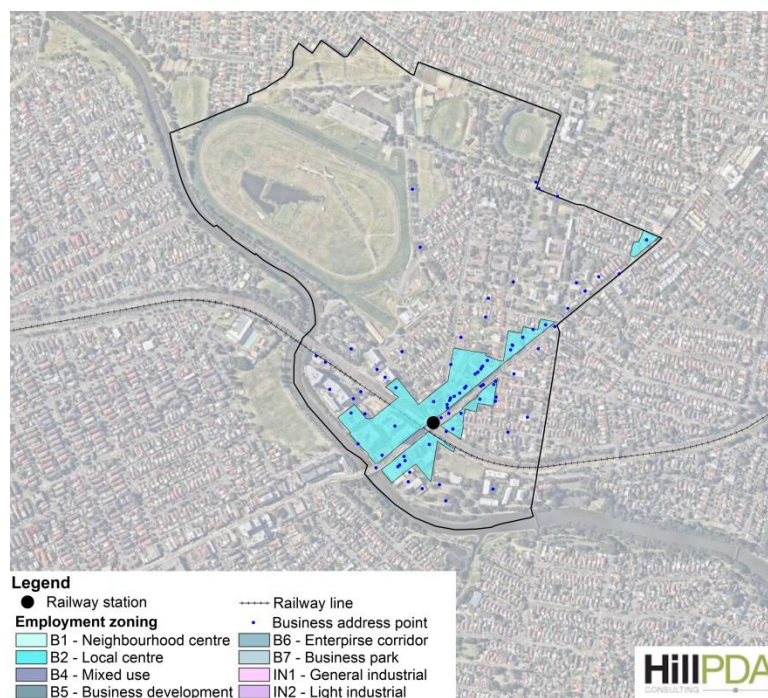
The local area around Canterbury Station is predominantly categorised by low density residential and open space areas. Higher density residential development is beginning to emerge south of the station along Charles Street.

The majority of retail uses are concentrated to the north of the station along Jeffrey Street and Canterbury Road. The retail strip is approximately 250m in length, extending north-east of the station. The local business precinct contains one multi-national larger format supermarket. Some manufacturing and warehouse uses are located along Close Street south of the station. At the time of the report, there were numerous vacant shops along Canterbury Road.

Figure 14 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 160 businesses in the local business precinct employing approximately 796 people.

Figure 14: Canterbury local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 55, the primary employment industries in the Canterbury local business district are Education and Training and Manufacturing.

Table 55: Canterbury local business precinct employment by broad industry code

Description	Canterbury
Education and Training	214
Manufacturing	134
Retail Trade	79
Construction	79
Arts and Recreation Services	49
Health Care and Social Assistance	42
Professional, Scientific and Technical Services	38
Other Services	37
Accommodation and Food Services	25
Wholesale Trade	24
Administrative and Support Services	20

Description	Canterbury
Transport, Postal and Warehousing	13
Inadequately described	10
Financial and Insurance Services	9
Not stated	8
Public Administration and Safety	6
Rental, Hiring and Real Estate Services	3
Information Media and Telecommunications	3
Agriculture, Forestry and Fishing	3

Source: TPA JTW 2011

Population and employment snapshot

Table 56 overviews the population, dwellings, employment and workforce statistics for the Canterbury local business precinct.

Table 56: Canterbury Demographic Snapshot (TZ926)

	2011	2041	Change	% change
Population	2253	3800	1547	69%
Employment	904	1190	286	32%
Workforce	1273	1978	705	55%
Dwellings	2177	3168	991	46%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown Table 56 for the Canterbury local business precinct, the population is forecast to increase significantly by 69% between 2011 and 2041. This is expected to be accompanied by a significant 46% increase in dwelling numbers.

The Canterbury local business precinct is also expected to experience moderate growth in its employment population and higher growth in its workforce population increasing by 32% and 55% respectively. Despite the growth, employment opportunity within Canterbury continues to remain marginal with 904 people working within the Canterbury local business precinct in 2011 and an additional 286 (32%) people projected over the 30 year timeframe.

Greater growth is expected in the resident workforce number with an increase of 55% (from 1273 to 1978 persons).

The TPA JTW - Table04¹⁵ data highlights that the primary employment industry in the Canterbury local business precinct is Education and Training (27%) with Manufacturing the second largest industry at 17%.

Employee and resident workforce travel behaviour

Canterbury Road is a major arterial road extending perpendicular to the rail line. The Cooks River acts as a natural boundary to the south, however both the river and the rail line are bridged by Canterbury Road, which is subject to heavy traffic.

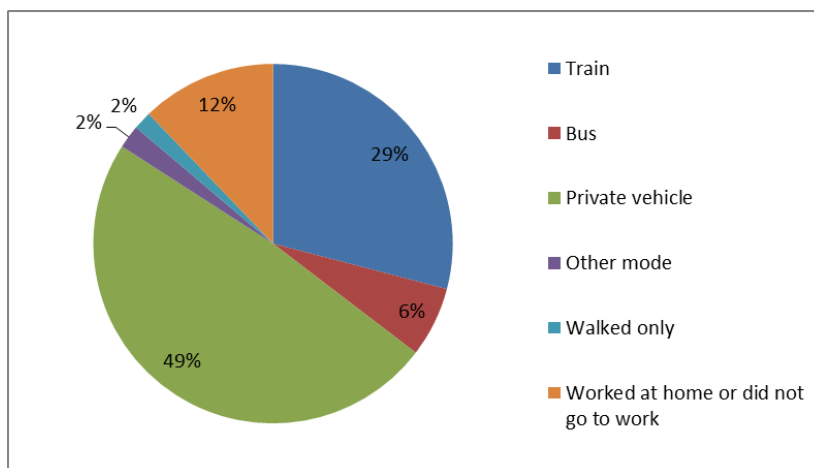
Canterbury Station services the T3 Bankstown Line. The journey to work data for Canterbury local business precinct, including both the residential workforce and workforce employed has been analysed below.

Canterbury local business precinct workforce travel patterns

The majority of the resident workforce were employed in Sydney Inner City (350 resident workers) with Strathfield - Burwood - Ashfield (165 resident workers) the second largest location.

Residents residing within the Canterbury local business precinct are mainly reliant on private vehicles (49%) or the train (29%), as can be seen in Figure 15. Of the remaining commuter methods, 2% walk, 6% commute using buses and 2% use alternative modes of transport. Of the resident population, 12% work at home or do not go to work.

Figure 15: Canterbury local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ926

Of the resident workforce commuting via train, the most popular employment destinations were Sydney Inner City (48%) and North Sydney – Mosman (69%), as shown in Table 57. Despite being on a rail line, the private vehicle remains the

¹⁵ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

most popular method of transport to Strathfield - Burwood - Ashfield (56%) and Marrickville - Sydenham – Petersham (56%). The work destination of Canterbury recorded the largest dependency on private vehicle transport (77%), despite being the local area.

Table 57: Canterbury local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	350	48%	11%	28%	4%	1%	9%
Strathfield - Burwood - Ashfield	162	2%	7%	56%	0%	9%	27%
Marrickville - Sydenham - Petersham	57	16%	11%	56%	0%	0%	18%
Canterbury	52	12%	6%	77%	0%	0%	6%
No fixed place of work	48	25%	0%	50%	8%	0%	17%
Botany	41	17%	0%	61%	15%	0%	7%
Leichhardt	42	7%	21%	57%	0%	0%	14%
Ryde - Hunters Hill	40	28%	0%	58%	0%	0%	15%
Chatswood - Lane Cove	33	36%	0%	55%	0%	0%	9%
North Sydney - Mosman	29	69%	0%	10%	0%	0%	21%
Other	685	10%	0%	23%	0%	0%	2%

<i>Figures in this row exclude those that did not state a mode of transport</i>	29%	6%	49%	2%	2%	12%
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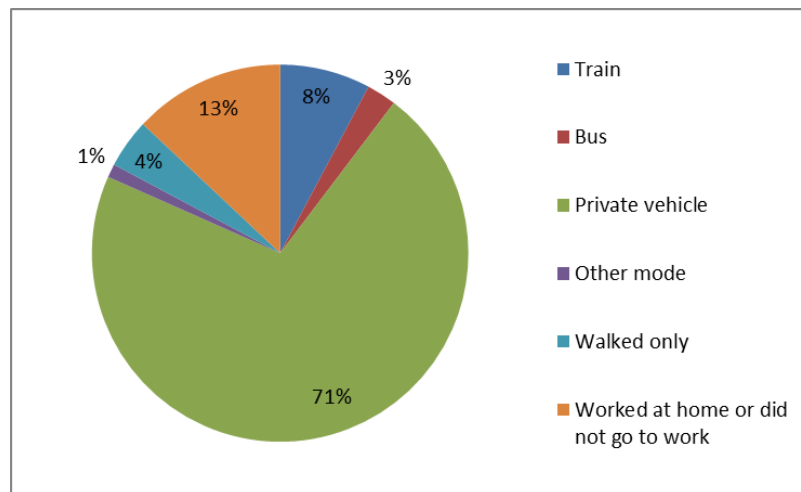
Source: 2011 Journey to work, Table 12 and 13, TZ926

Despite not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to commute to their place of employment by train.

Canterbury local business precinct employment travel patterns

Of the 796 people that were employed within the Canterbury local business precinct, 784 stated a journey to work travel mode.

Figure 16: Canterbury local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ926

As shown in Figure 16, over 559 persons (71%) drive to work, in contrast to the 61 persons (8%) commuting by train. The Canterbury local business precinct also recorded a relatively high number of employees living and working locally (13%) and 4% that walk to work.

Campsie

Location context

Campsie Station is located in the suburb of Campsie in Sydney's south west. The station services the Bankstown T3 line and is bound by North Parade and Wilfred Avenue to the North and Lilian Lane and South Parade to the south. Beamish Street bridges the rail line and is the main collector road connecting the local business precinct to the broader region. Beamish Street is also the main business and retail street.

Primary operation

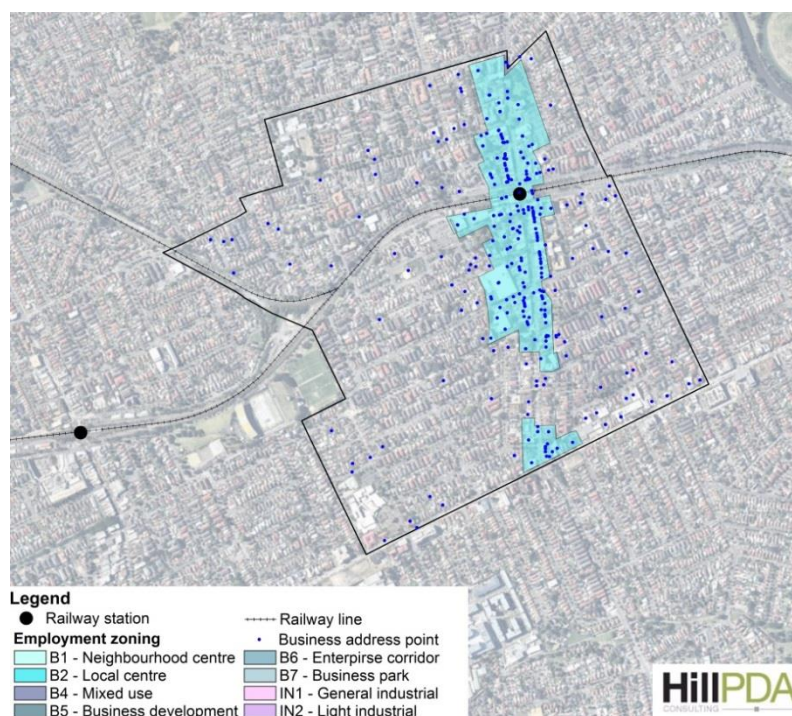
The existing local area around Campsie Station is predominantly categorised by low to medium density residential.

Retail and business uses are concentrated along Beamish Street and Lilian Lane. Some larger format retail centres are also within 400m of the station including Campsie Central and Woolworths. The retail strip extends around 300m to the north and 480m to the south. Retail uses are also concentrated on either side of Beamish Street as it crosses the rail line.

Figure 17 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 510 businesses in the local business precinct employing approximately 4079 people.

Figure 17: Campsie local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 58, the primary employment industries in the Campsie local business district are Health Care and Social Assistance and Retail Trade.

Table 58: Campsie local business precinct employment by broad industry code

Description	Campsie
Health Care and Social Assistance	1293
Retail Trade	701
Public Administration and Safety	456
Accommodation and Food Services	296
Education and Training	227
Construction	147
Other Services	133
Professional, Scientific and Technical Services	130
Administrative and Support Services	121
Transport, Postal and Warehousing	106
Financial and Insurance Services	95
Rental, Hiring and Real Estate Services	91
Not stated	61
Manufacturing	57
Inadequately described	57

Description	Campsie
Wholesale Trade	56
Information Media and Telecommunications	30
Arts and Recreation Services	19
Agriculture, Forestry and Fishing	3

Source: TPA JTW 2011

Population and employment snapshot

Table 59 overviews the population, dwellings, employment and workforce statistics for the Campsie local business precinct.

Table 59: Campsie Demographic Snapshot (TZ2511, TZ2512, TZ2514, TZ2515)

	2011	2041	Change	% change
Population	11,731	18,214	6483	55%
Employment	4612	6679	2067	45%
Workforce	5514	8304	2790	51%
Dwellings	4492	7301	2810	63%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown in Table 59 for the Campsie local business precinct, the population is forecast to increase by 55% between 2011 and 2041. This is expected to be accompanied by a significant 63% increase in dwelling numbers.

The Campsie local business precinct is also expected to experience substantial growth in its employment population and higher growth in its workforce population increasing by 45% and 51% respectively. Strong growth in the residential sector is likely to stimulate employment growth with an additional 2067 people projected by 2041. For similar reasons, the resident working population is also likely to increase with upgrades to the rail system required to service this growth.

The TPA JTW - Table04¹⁶ data highlights that the primary employment industry in the Campsie local business precinct is Health Care and Social Assistance (32%), which is likely due to the Canterbury Hospital being located within Campsie local business precinct.

Retail Trade (17%) is the second largest employment industry in the Campsie local business precinct with 701 employees. Considering the Beamish Street retail main street is over 700m long and there are two large format shopping centres within the Campsie local business precinct, this result is reflective of existing land uses.

¹⁶ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Public Administration and Safety is the third largest employment industry (11%), which is likely due to both Centrelink and Canterbury-Bankstown Council offices being located within the Campsie local business precinct.

Employee and resident workforce travel behaviour

Beamish Street is the main collector road extending perpendicular to the rail line to Canterbury Road in the south. The Cooks River acts as a natural boundary to the north with Brighton Avenue providing a bridge across the river and access to northern locations.

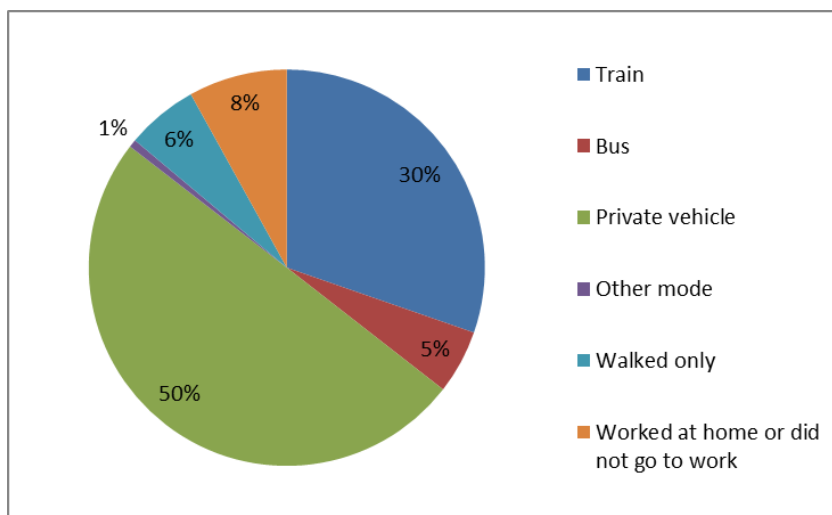
Campsie Station services the T3 Bankstown Line. The journey to work data for Campsie local business precinct, including both the residential workforce and workforce employed has been analysed below.

Campsie local business precinct workforce travel patterns

The majority of the resident workforce was employed in Sydney Inner City (27%) with Canterbury (19%) the second largest location.

Residents residing within the Campsie local business precinct are mainly reliant on the private vehicle (50%) or the train (30%), as can be seen in Figure 18. Of the remaining commuter methods, 6% walk to work, 5% commute by bus and 1% use another mode of transport. Of the resident population, 8% worked at home or did not go to work.

Figure 18: Campsie local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2511, TZ2512, TZ2514, TZ2515

Of the resident workforce commuting via rail, the most popular employment destinations were Sydney Inner City (64%), North Sydney - Mosman (71%) and Chatswood - Lane Cove (50%) (refer to Table 60). Despite being on the same rail

line, the private vehicle remains the most popular method of transport to Bankstown (81%) and Marrickville - Sydenham - Petersham (65%).

Table 60: Campsie local business precinct mode of transport to workplace

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	1167	64%	2%	25%	0%	0%	8%
Canterbury	822	5%	3%	46%	2%	28%	15%
Strathfield - Burwood - Ashfield	333	5%	15%	65%	0%	4%	11%
Marrickville - Sydenham - Petersham	209	28%	2%	65%	0%	0%	6%
No fixed place of work	181	10%	0%	80%	0%	6%	4%
Botany	171	13%	17%	67%	0%	0%	4%
Bankstown	172	15%	2%	81%	2%	0%	0%
North Sydney - Mosman	120	71%	3%	23%	0%	0%	3%
Auburn	112	17%	0%	75%	0%	3%	5%
Chatswood - Lane Cove	111	50%	0%	44%	0%	0%	6%
Other	1013	25%	9%	61%	0%	0%	5%
<i>Figures in this row exclude those that did not state a mode of transport</i>		30%	5%	50%	1%	6%	8%

Source: 2011 Journey to work, Table 12 and 13, T22511, T22512, T22514, T22515

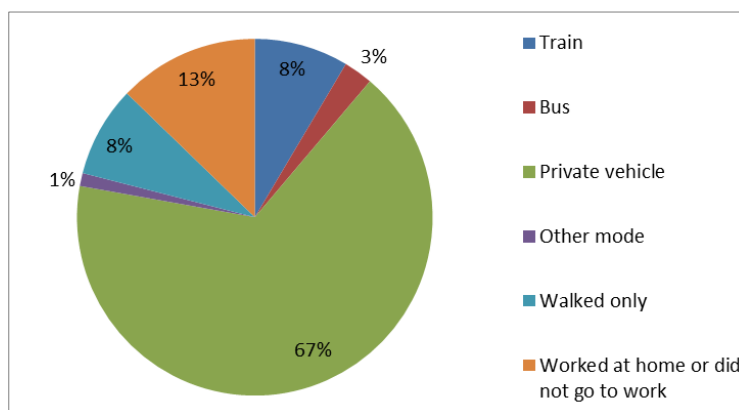
Although not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to commute to work by train.

As a higher order retail centre, Campsie acts as a destination in its own right and would likely not be as dependent on passing trade from commuters. Businesses in close proximity (within 100m) or on the main pedestrian pathways from the station are more likely to be susceptible to any shifts in train commuter travel patterns.

Campsie local business precinct employment travel patterns

Of the 4079 people that were employed within the Campsie local business precinct, 3997 stated a journey to work travel mode.

Figure 19: Campsie local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2511, TZ2512, TZ2514, TZ2515

As shown in Figure 19, over 2662 persons (67%) elected to drive to work, in contrast to the 342 persons (9%) that elect to commute to work by train. The Campsie local business precinct also recorded a relatively high number of employees living and working locally (13%) and 8% that walk to work.

Belmore

Location context

Belmore Station is located in the suburb of Belmore in Sydney's Inner West. The station services the Bankstown T3 line and is bound by Redman Parade in the north and Bridge Road in the south. Burwood Road bridges the rail line and is the main collector road connecting the local business precinct to the broader region.

Primary operation

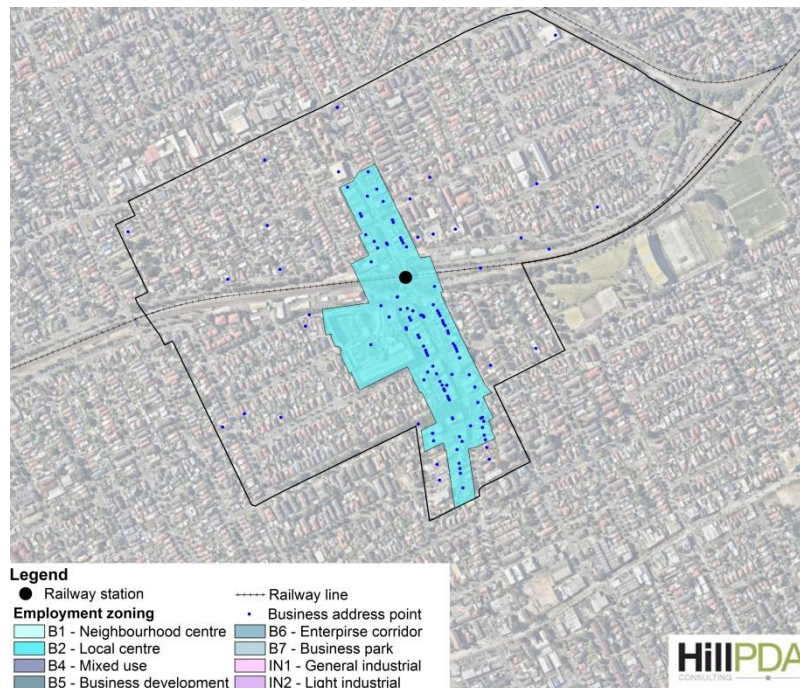
The local area around Belmore Station is predominantly categorised by low density residential. Some higher density residential development is beginning to emerge around the station.

Retail uses are concentrated along Burwood Road to the north (210m) and the south (300m) of the station. The Canterbury League Club is a major stakeholder on a large landholding within the immediate vicinity of the station (within 100m). There are no other multi-national businesses in the centre.

Figure 20 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 205 businesses in the local business precinct employing approximately 1164 people.

Figure 20: Belmore local business precinct, land zoning and business locations



Source: HillPDA 2016

Primary employment industries

As identified in Table 61, the primary employment industries in the Belmore local business district are Accommodation and Food Services and Health Care and Social Assistance.

Table 61: Belmore local business precinct employment by broad industry code

Description	Belmore
Accommodation and Food Services	423
Health Care and Social Assistance	147
Retail Trade	78
Transport, Postal and Warehousing	73
Education and Training	58
Manufacturing	51
Administrative and Support Services	49
Other Services	46
Construction	44
Arts and Recreation Services	34
Professional, Scientific and Technical Services	32
Public Administration and Safety	29
Not stated	27
Rental, Hiring and Real Estate Services	23
Inadequately described	16

Description	Belmore
Wholesale Trade	15
Financial and Insurance Services	13
Information Media and Telecommunications	6

Source: TPA JTW 2011

Population and employment snapshot

Table 62 overviews the population, dwellings, employment and workforce statistics for the Belmore local business precinct.

Table 62: Belmore Demographic Snapshot (TZ2503, TZ2504)

	2011	2041	Change	% change
Population	3689	4052	363	10%
Employment	1313	1756	443	34%
Workforce	1676	1914	238	14%
Dwellings	1355	1578	223	16%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown Table 62 for the Belmore local business precinct, the population is forecast to increase by only 10% (363 persons) between 2011 and 2041. This is expected to be accompanied by a small growth in dwelling numbers of 16% (223 dwellings).

Trending with the population and dwelling growth, the residential workforce growth is expected to be conservative with an increase of 14% or 283 persons. Employment growth in the Belmore local business precinct is projected to be more substantial at 34%, increasing from 1313 jobs in 2011 to 1756 jobs in 2041. This could reflect a potential intensification of commercial and retail uses along Burwood Road or the growth of Canterbury Leagues Club.

The TPA JTW - Table04¹⁷ data highlights that the primary employment industry in the Belmore local business precinct is Accommodation and Food Services (36%) with Health Care and Social Assistance the second trade industry at 13%. The 7% proportional result for Retail Trade is consistent with the relatively limited expanse of retail uses within the Belmore local business precinct.

Employee and resident workforce travel behaviour

The main road network is located in the south of the local business precinct, with access to Canterbury Road via Burwood Road. The Southern Sydney Freight Line

¹⁷ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

extends to the north of Belmore Station, with Burwood Road providing access across the line.

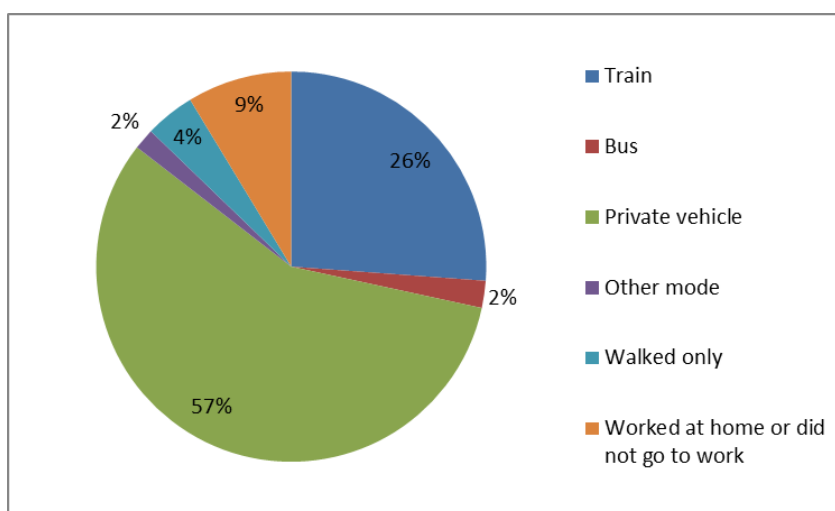
Belmore Station services the T3 Bankstown Line. The journey to work data for the Belmore local business precinct including both the residential workforce and the workforce employed within the Belmore local business precinct has been analysed below.

Belmore local business precinct workforce travel patterns

The majority of the resident workforce was employed in Sydney Inner City (23%) with Canterbury (21%) the second largest location.

Residents residing within the Belmore local business precinct are mainly reliant of private vehicle (57%) or the train (26%), as can be seen in Figure 21. Of the remaining commuter methods, 4% walked, 2% caught the bus and 2% caught another mode of transport. 9% of the resident population worked at home or did not go to work.

Figure 21: Belmore local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, T22503 and 2504

Of the resident workforce commuting via rail, the most popular employment destination was Sydney Inner City (66%) (Refer to Table 63). Despite being on the same rail line, the private vehicle remains the most popular method of transport to Bankstown (79%), Marrickville - Sydenham - Petersham (71%) and Canterbury (48%).

Table 63: Belmore local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	310	66%	1%	24%	0%	1%	8%
Canterbury	274	8%	2%	48%	6%	19%	17%
Bankstown	91	11%	3%	79%	0%	0%	7%
Strathfield - Burwood - Ashfield	86	8%	15%	70%	3%	0%	3%
No fixed place of work	79	9%	0%	80%	0%	0%	11%
Marrickville - Sydenham - Petersham	65	23%	0%	71%	0%	0%	6%
Auburn	52	15%	0%	85%	0%	0%	0%
Botany	51	20%	6%	49%	8%	0%	18%
Canada Bay	40	13%	0%	88%	0%	0%	0%
Kogarah - Rockdale	38	0%	0%	82%	0%	8%	11%
Other	298	24%	1%	70%	0%	0%	4%
<i>Figures in this row exclude those that did not state a mode of transport</i>		26%	2%	57%	2%	4%	9%

Source: 2011 Journey to work, Table 12 and 13, T22503 and 2504

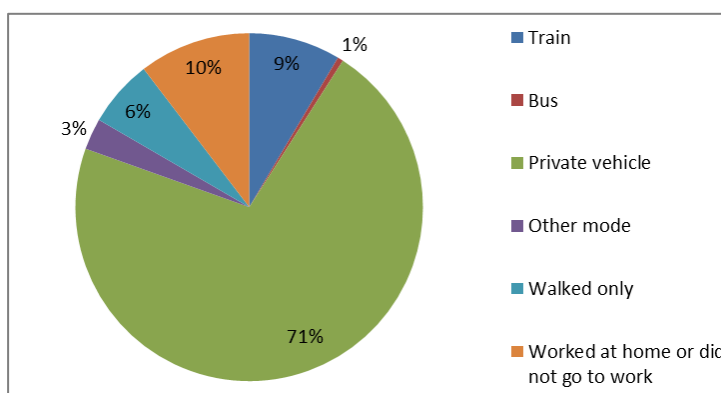
Although not being the most dominant method of transport, all resident employment destinations, except Kogarah-Rockdale, recorded a proportion of commuters electing to commute to work by train.

Canterbury Leagues Club is located in the local business precinct and is a destination attraction in its own right. The Club may contribute to a proportion of passing trade and people commute to and from the station and surrounding areas to visit the Club.

Belmore local business precinct employment travel patterns

Of the 1164 people that were employed within the Belmore local business precinct, 1136 stated a journey to work travel mode.

Figure 22: Belmore local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2503 and 2504

As shown in Figure 22, over 811 persons (71%) elect to drive to work, in contrast to the 97 persons (9%) that commute by train. Of the employees that live in the local catchment, 6% walk to work. Only a small percentage of employees commute by train.

Lakemba

Location context

Lakemba Station is located in the suburb of Lakemba in Sydney's south west. The station services the Bankstown T3 line and is bound by Railway Parade to the north and The Boulevarde to the south. Haldon Street bridges the rail line and is the main collector road connecting the local business precinct to the broader region. Haldon Street is also the main business and retail street, with commercial uses predominantly focussed to the south of the rail line. The Boulevarde and Railway Parade also contain some retail and business uses directly adjacent to the rail line.

Primary operation

The local area around Lakemba Station is predominantly categorised by low density residential and a mix of retail, commercial and community uses.

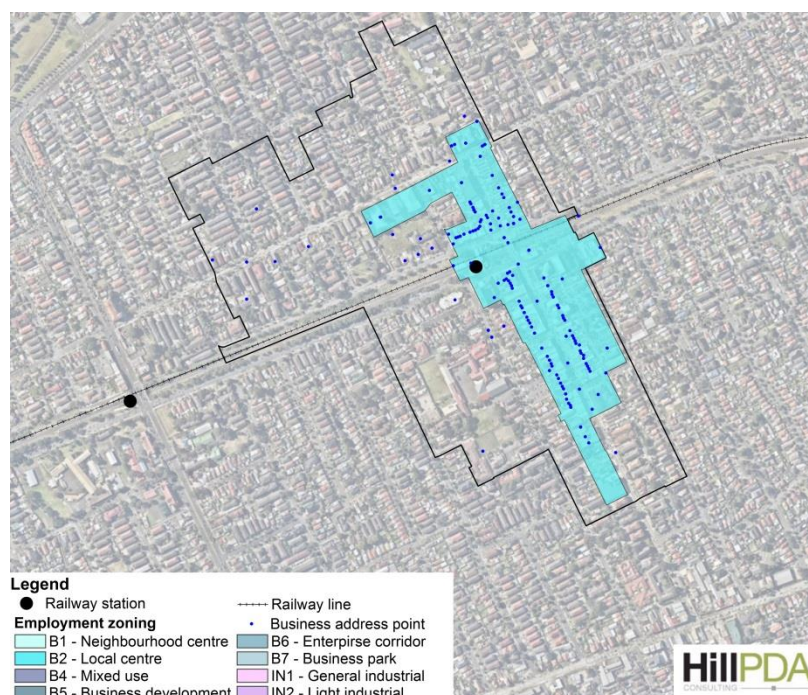
Retail and business uses are concentrated along Haldon Street and fronting the rail line along Railway Parade and The Boulevarde between Haldon Street and Croydon Street. The majority of the uses are specialised retail and commercial.

The Haldon Street retail strip is around 700m long, extending around 200m to the north and 500m to the south of the station. Aldi is the only large format supermarket in the local business precinct, located approximately 600m from the centre.

Figure 23 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 255 businesses in the local business precinct employing approximately 1040 people.

Figure 23: Lakemba local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 64, the primary employment industries in the Lakemba local business district Health Care and Social Assistance and Education and Training.

Table 64: Lakemba local business precinct employment by broad industry code

Description	Lakemba
Health Care and Social Assistance	210
Education and Training	192
Retail Trade	166
Public Administration and Safety	92
Accommodation and Food Services	64
Professional, Scientific and Technical Services	54
Transport, Postal and Warehousing	50
Financial and Insurance Services	43
Other Services	30
Rental, Hiring and Real Estate Services	27
Not stated	24
Manufacturing	20
Administrative and Support Services	20
Construction	13
Inadequately described	13
Wholesale Trade	10

Description	Lakemba
Arts and Recreation Services	6
Information Media and Telecommunications	3
Electricity, Gas, Water and Waste Services	3

Source: TPA JTW 2011

Population and employment snapshot

Table 65 overviews the population, dwellings, employment and workforce statistics for the Lakemba local business precinct.

Table 65: Lakemba Demographic Snapshot (TZ2533, TZ2535)

	2011	2041	Change	% change
Population	3964	6009	2045	52%
Employment	1176	1670	494	42%
Workforce	1559	2421	862	55%
Dwellings	1331	2107	777	58%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown Table 65 for the Lakemba local business precinct, the population is forecast to increase by 52% between 2011 and 2041. This is expected to be accompanied by a significant 58% increase in dwelling numbers. The additional 2045 residents projected within the Lakemba local business precinct triggers the subsequent growth in the resident workforce of 862 persons (55% increase).

In contrast to the population and dwelling growth, there is projected to be moderate growth in the number of people employed within the Lakemba local business precinct with an additional 494 jobs by 2041.

The TPA JTW - Table04¹⁸ data highlights that the primary employment industry in the Lakemba local business precinct is Health Care and Social Assistance (20%), followed closely by Education and Training at 18%. These results are likely due to the high number of community care facilities, medical centres and schools within the Lakemba local business precinct.

Retail Trade is the third largest employment industry (16%), which is reflective of jobs associated with the retail main street.

¹⁸ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Employee and resident workforce travel behaviour

Haldon Street and Lakemba Street are the main local collector roads connecting to the major arterials of Canterbury Road and King Georges Road.

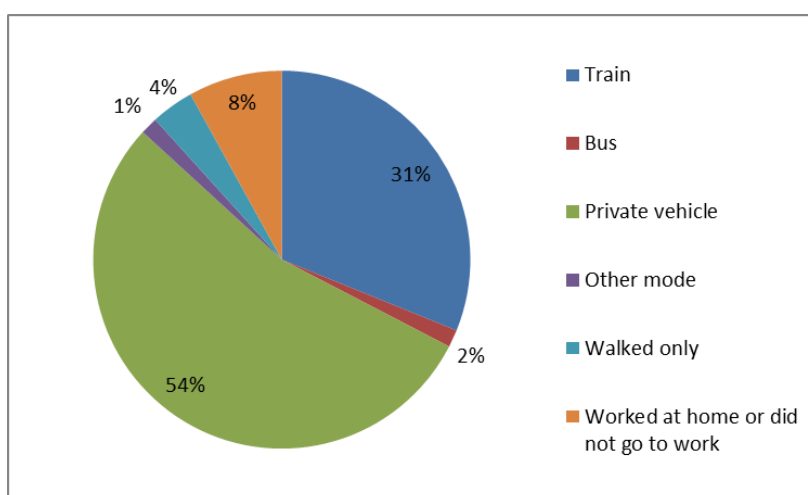
Belmore Station services the T3 Bankstown Line. The journey to work data for Lakemba local business precinct, including both the residential workforce and workforce employed has been analysed below.

Lakemba local business precinct workforce travel patterns

The majority of the resident workforce was employed in Sydney Inner City (26%) with Canterbury (18%) the second largest location.

Residents residing within the Lakemba local business precinct are mainly reliant on the private vehicle (54%) or the train (31%), as can be seen in Figure 24. Of the remaining commuter methods, 4% walked, 2% commute by bus and 1% use another mode of transport. Of the resident population, 8% worked at home or did not go to work.

Figure 24: Lakemba local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, T22533, T22535

Of the resident workforce commuting via rail, the most popular employment destination was Sydney Inner City (62%) (Refer to Table 66). Despite being on the same rail line, the private vehicle remains the most popular method of transport to Bankstown (68%), Canterbury (55%) and Marrickville - Sydenham - Petersham (54%).

Table 66: Lakemba local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	285	62%	1%	30%	0%	0%	7%
Canterbury	207	4%	1%	55%	5%	14%	20%
Bankstown	78	22%	0%	68%	0%	4%	6%
Botany	61	10%	0%	79%	0%	0%	11%
No fixed place of work	54	7%	0%	69%	6%	13%	6%
Strathfield - Burwood - Ashfield	39	33%	0%	67%	0%	0%	0%
Auburn	48	21%	0%	79%	0%	0%	0%
Marrickville - Sydenham - Petersham	39	31%	0%	54%	8%	0%	8%
Ryde - Hunters Hill	36	25%	0%	75%	0%	0%	0%
Parramatta	31	52%	10%	39%	0%	0%	0%
Other	266	31%	3%	60%	0%	1%	5%
<i>Figures in this row exclude those that did not state a mode of transport</i>		31%	1%	54%	1%	4%	8%

Source: 2011 Journey to Work, Table 12 and 13, T22533, T22535

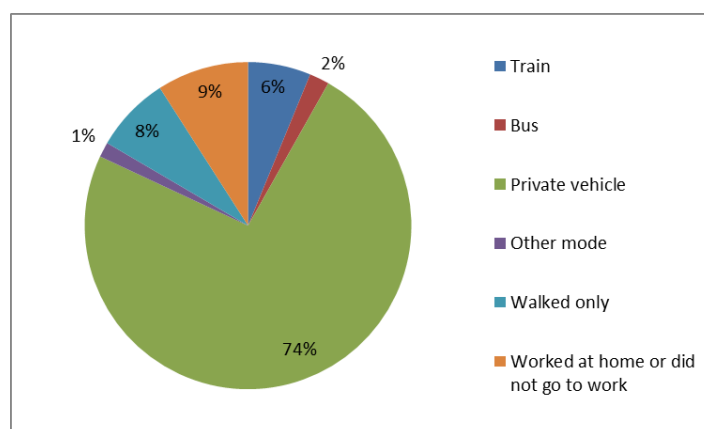
Although not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to catch the train.

As a retail centre that offers various ethnic specialities, Lakemba acts as a speciality destination and would not be as dependent on passing trade from commuters. Businesses in close proximity (within 100m) or on the main pedestrian pathways from the station may be more susceptible to any shifts in rail commuter travel patterns.

Lakemba local business precinct employment travel patterns

Of the 1040 people that were employed within the Lakemba local business precinct, 1014 stated a journey to work travel mode.

Figure 25: Lakemba local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, T22533, T22535

As shown in Figure 25, over 748 persons (74%) commute to work by private vehicle, in contrast to the 63 persons (6%) that commute by train. Nine percent work from home or do not go to work and 8% walk to work.

Wiley Park

Location context

Wiley Park Station is in the suburb of Wiley Park in Sydney's south west. The station services the Bankstown T3 line and is bound by The Boulevard and Wiley Lane. King Georges Road bridges the rail line, with a selection of commercial uses fronting the road.

Primary operation

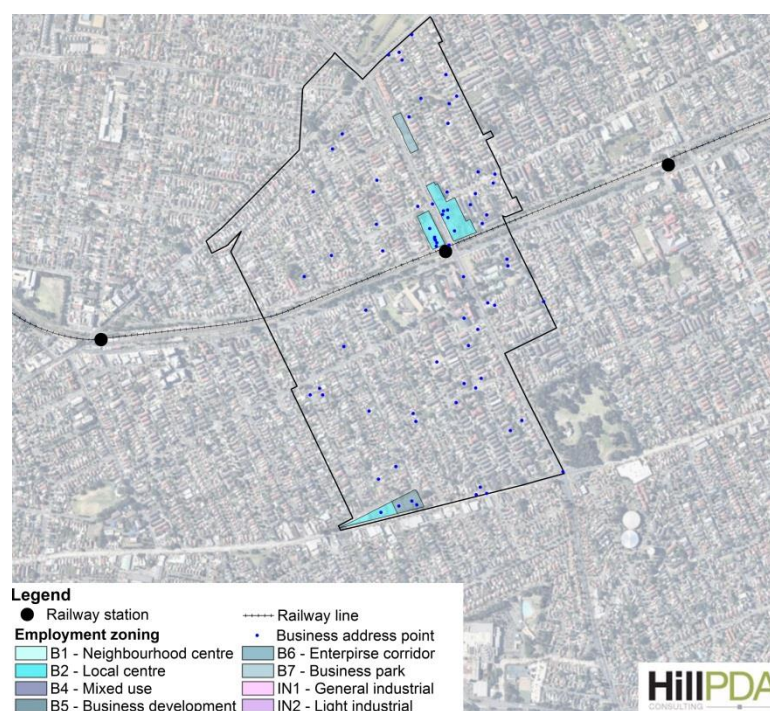
The Wiley Park area around the station currently comprises low density residential and a small selection of retail and commercial uses along King Georges Road.

Figure 26 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan. Small retail local business precinct uses are dispersed for approximately 200m to the north of the station along King Georges Road.

The local business precinct acts as a small local neighbourhood centre offering basic, and some specialised, convenience services. Primary customers for these businesses would be local residents and rail commuters.

There are approximately 70 businesses in the local business precinct employing approximately 488 people.

Figure 26: Wiley Park local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 67, the primary employment industries in the Wiley Park local business are Education and Training and Accommodation and Food Services.

Table 67: Wiley Park local business precinct employment by broad industry code

Description	Wiley Park
Education and Training	134
Accommodation and Food Services	86
Transport, Postal and Warehousing	59
Retail Trade	46
Health Care and Social Assistance	39
Construction	28
Administrative and Support Services	21
Professional, Scientific and Technical Services	14
Other Services	12
Public Administration and Safety	9
Financial and Insurance Services	9
Wholesale Trade	7
Not stated	6
Manufacturing	6
Inadequately described	6
Rental, Hiring and Real Estate Services	3
Mining	3

Source: TPA JTW 2011

Population and employment snapshot

Table 68 overviews the population, dwellings, employment and workforce statistics for the Wiley Park local business precinct.

Table 68: Wiley Park Demographic Snapshot (TZ2534, TZ2538)

	2011	2041	Change	% change
Population	9151	13,499	4348	48%
Employment	548	758	210	38%
Workforce	3786	5724	1938	51%
Dwellings	3090	4740	1650	53%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown in Table 68 for the Wiley Park local business precinct, the population is forecast to increase by 48% (4348) between 2011 and 2041. This is expected to be accompanied by a significant 53% (1650) increase in dwelling numbers.

Despite the growth, employment opportunity within Wiley Park continues to remain low with 548 people working within the Wiley Park local business precinct in 2011 and only an additional 210 people projected over the 30 year timeframe. Although the overall employment opportunity remains low, the growth still indicates a 40% increase from 2011 levels.

Greater growth is however expected in the resident workforce number with a projected increase of 1938 persons or 51% growth from current levels.

The TPA JTW - Table04¹⁹ data highlights that the primary employment industry in the Wiley Park local business precinct is Education and Training (27%) with Accommodation and Food Services the second largest trade industry at 18%. This result is likely reflective of three schools being located within the Wiley Park local business precinct, which may be inflating employment levels within this industry.

Employee and resident workforce travel behaviour

King Georges Road extends perpendicular to the rail line and is a major arterial connector road connecting Wiley Park to the broader region.

Wiley Park Station services the T3 Bankstown Line. The journey to work data for the Wiley Park local business precinct including both the residential workforce and the workforce employed has been analysed below.

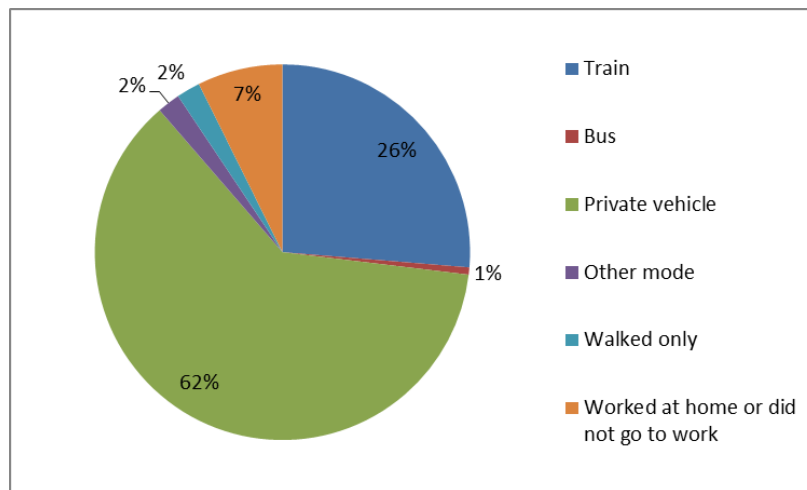
Wiley Park local business precinct workforce travel patterns

¹⁹ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

The majority of the resident workforce was employed in Sydney Inner City (20%) with Canterbury (16%) the second largest location.

Residents residing within the Wiley Park local business precinct are mainly reliant on private vehicles (62%) or the train (26%), as can be seen in Figure 27. Of the remaining commuter methods, 2% walk, 1% commute by bus and 2% commute using other modes of transport. Seven percent of the resident population worked at home or did not go to work.

Figure 27: Wiley Park local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ 2534 and 2538

Of the resident workforce commuting via rail, the most proportionally popular employment destinations were Sydney Inner City (64%) and the Eastern Suburbs - North (49%) (Refer to Table 69). Despite being on the same rail line, the private vehicle remained the most popular method of transport to Canterbury (65%), Marrickville - Sydenham - Petersham (67%) and Bankstown (81%).

Table 69: Wiley Park local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Sydney Inner City	569	64%	1%	28%	2%	0%	6%
Canterbury	447	6%	0%	65%	4%	11%	14%
Bankstown	302	11%	0%	81%	3%	0%	4%
Botany	156	15%	0%	79%	2%	0%	4%
Strathfield - Burwood - Ashfield	155	14%	2%	72%	0%	2%	10%
No fixed place of work	145	17%	0%	66%	5%	2%	11%
Marrickville - Sydenham - Petersham	103	27%	3%	67%	0%	0%	3%
Auburn	93	25%	0%	67%	4%	0%	4%
Hurstville	69	9%	0%	83%	0%	0%	9%
Eastern Suburbs - North	70	49%	9%	37%	0%	0%	6%
Other	778	22%	0%	70%	1%	1%	6%
<i>Figures in this row exclude those that did not state a mode of transport</i>		26%	1%	62%	2%	2%	7%

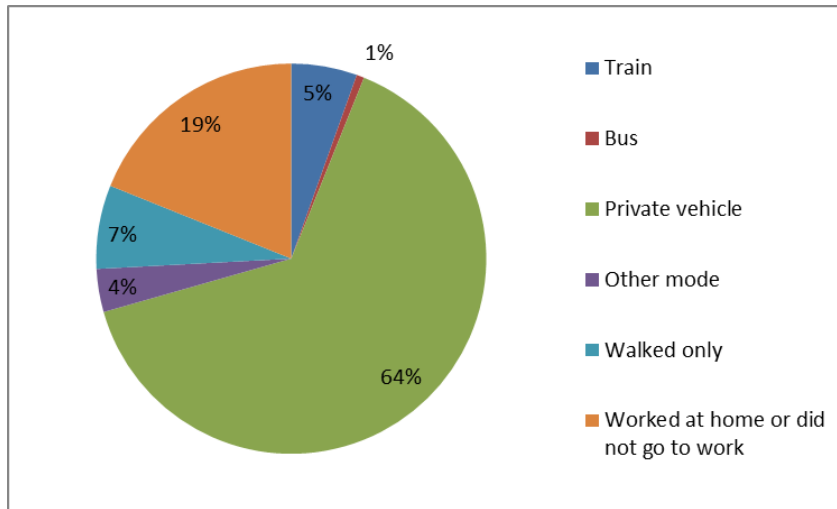
Source: 2011 Journey to work, Table 12 and 13, TZ 2534 and 2538

Although not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to catch the train.

Wiley Park local business precinct employment travel patterns

Of the 488 people that were employed within the Wiley Park local business precinct, 476 stated a journey to work travel mode.

Figure 28: Wiley Park local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ 2534 and 2538

As shown in Figure 28, over 307 persons (64%) drive to work, in contrast to the 26 persons (5%) that commute by train. The Wiley Park local business precinct also recorded a relatively high number of employees living and working locally (19%) and 7% of persons walking to work.

Punchbowl

Location context

Punchbowl Station is located in the suburb of Punchbowl in Sydney's south west. The station services the Bankstown T3 line and is bound by Punchbowl Road and The Boulevarde. Punchbowl Road bridges the rail line and contains a relatively high concentration of retail and business uses in the vicinity of the Station. The Boulevarde also contains a large number of retail and business uses.

Primary operation

The local area around Punchbowl Station is predominantly characterised by low density residential and a mix of retail, commercial and community uses.

Retail and business uses are concentrated along both Punchbowl Road and The Boulevarde, with the majority of commercial uses to the south of the station.

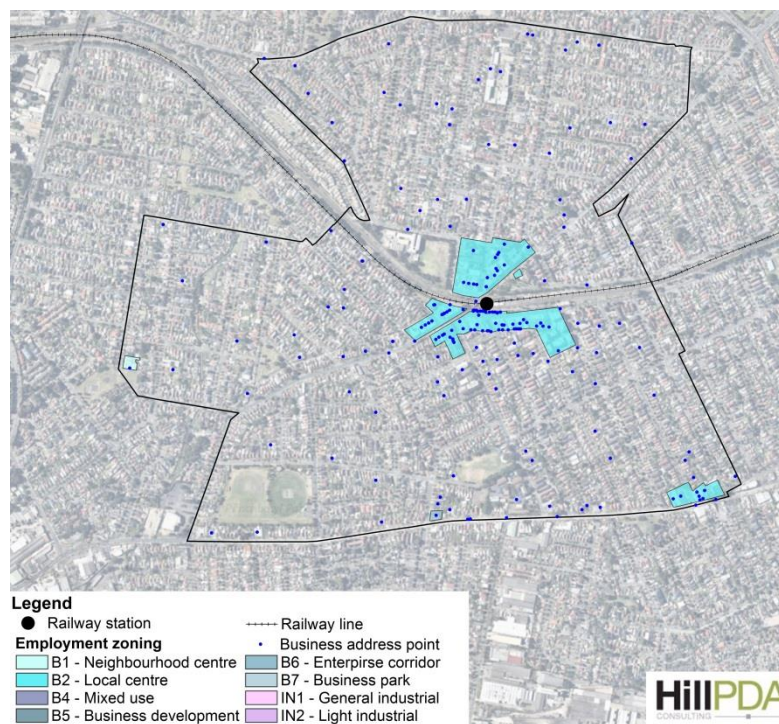
The majority of the business zone is comprised of strip retailing predominantly fronting Punchbowl Road and The Boulevarde. There is one large format shopping centre in the local business precinct at Broadway Plaza, located approximately 230m to the east of Punchbowl Station.

The strip retailing extends north east along Punchbowl Road for approximately 450m. It also extends east west for approximately 350m along The Boulevarde.

Figure 29 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 195 businesses in the local business precinct employing approximately 1179 people.

Figure 29: Punchbowl local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 70, the primary employment industries in the Punchbowl local business district Education and Training and Health Care and Social Assistance.

Table 70: Punchbowl local business precinct employment by broad industry code

Description	Punchbowl
Education and Training	414
Health Care and Social Assistance	129
Retail Trade	116
Accommodation and Food Services	77
Construction	77
Transport, Postal and Warehousing	73
Other Services	65
Professional, Scientific and Technical Services	45
Administrative and Support Services	33
Public Administration and Safety	32
Manufacturing	31
Wholesale Trade	21
Rental, Hiring and Real Estate Services	18
Financial and Insurance Services	16
Not stated	10
Inadequately described	9
Agriculture, Forestry and Fishing	4
Arts and Recreation Services	3
Information Media and Telecommunications	3
Electricity, Gas, Water and Waste Services	3

Source: TPA JTW 2011

Population and employment snapshot

Table 71 overviews the population, dwellings, employment and workforce statistics for the Punchbowl local business precinct.

Table 71: Punchbowl Demographic Snapshot (TZ2541, TZ2542, TZ2543, TZ2545)

	2011	2041	Change	% change
Population	11,935	17,488	5553	47%
Employment	1330	1873	543	41%
Workforce	4350	7737	3387	78%
Dwellings	3589	5420	1830	51%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown in Table 71 for the Punchbowl local business precinct, the population is forecast to increase by 47% between 2011 and 2041. This is expected to be accompanied by a significant 51% increase in dwelling numbers. The additional 5553 residents projected within the Punchbowl local

business precinct are likely to trigger subsequent growth in the resident workforce, predicted to increase by 3387 persons (78% increase).

In contrast to the population and dwelling growth, there is a smaller projected growth in the number of people employed within the Punchbowl local business precinct, with a growth of 41% (543 additional jobs) by 2041.

The TPA JTW - Table04²⁰ data highlights that the primary employment industry in the Punchbowl local business precinct is Education and Training (35%), followed by Health Care and Social Assistance at 11%. These results are likely due to three schools being located in the Punchbowl local business precinct, along with a number of medical centres and social assistance services.

Retail Trade is the third largest employment industry (10%), which is reflective of jobs associated with the retail main street.

Employee and resident workforce travel behaviour

Punchbowl Road is the main local collector road connecting the local business precinct to the major arterials of Canterbury Road and King Georges Road. Punchbowl Station services the T3 Bankstown Line.

The journey to work data for Punchbowl local business precinct, including both the residential workforce and workforce employed has been analysed below.

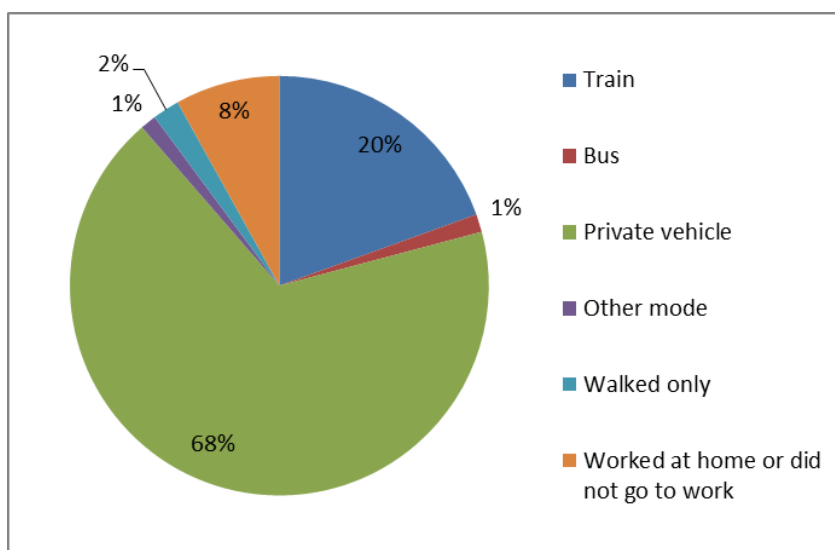
Punchbowl local business precinct workforce travel patterns

The majority of the resident workforce was employed in Canterbury (19%) with Sydney Inner City (17%) the second largest location. Bankstown was also a popular employment destination for residents of Punchbowl with 15% (497) workers commuting there daily.

As can be seen in Figure 30, residents residing within the Punchbowl local business precinct are heavily reliant on the private vehicle (68%) for commuting to work. Train travel only attracted 20% of residents commuting to work. Of the remaining commuter methods, 2% walk, 1% commute by bus and 1% use alternative modes of transport. Eight percent of the resident population worked at home or did not go to work.

²⁰ Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Figure 30: Punchbowl local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2541, TZ2542, TZ2543 and TZ2545

Of the resident workforce commuting via rail, the most popular employment destination was Sydney Inner City (61%) (Refer to table 72). Despite being on the same rail line, proportionally private vehicles remain the most popular method of transport to Bankstown (80%), Canterbury (69%) and Marrickville - Sydenham - Petersham (74%).

Table 72: Punchbowl local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Canterbury	613	5%	1%	69%	2%	7%	16%
Sydney Inner City	574	61%	1%	31%	0%	1%	6%
Bankstown	486	6%	2%	80%	2%	3%	7%
No fixed place of work	248	5%	0%	80%	8%	2%	5%
Strathfield - Burwood - Ashfield	166	8%	2%	78%	0%	2%	10%
Botany	166	10%	5%	79%	2%	0%	4%
Auburn	137	19%	0%	69%	0%	0%	12%
Hurstville	117	9%	8%	70%	0%	3%	10%
Marrickville - Sydenham - Petersham	96	23%	0%	74%	0%	0%	3%
Parramatta	83	31%	0%	64%	0%	0%	5%
Other	731	17%	1%	77%	0%	0%	5%
<i>Figures in this row exclude those that did not state a mode of transport</i>		19%	1%	68%	1%	2%	8%

Source: 2011 Journey to Work, Table 12 and 13, TZ2541, TZ2542, TZ2543 and TZ2545

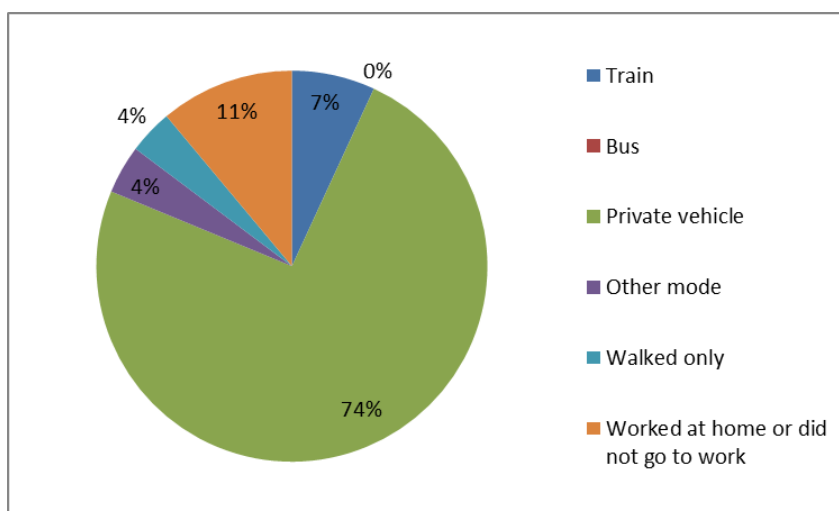
Although not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to commute to work by train.

As a retail centre that offers various ethnic specialities, Punchbowl acts as a destination in its own right and would not be as dependent on passing trade from commuters. Businesses in close proximity (within 100m) or on the main pedestrian pathways from the station are more likely to be susceptible to any shifts in rail commuter travel patterns.

Punchbowl local business precinct employment travel patterns

Of the 1179 people that were employed within the Punchbowl local business precinct, 1146 stated a journey to work travel mode.

Figure 31: Punchbowl local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2541, TZ2542, TZ2543 and TZ2545

As shown in Figure 31, over 852 persons (74%) commute to work by private vehicle, in contrast to the 79 persons (7%) that commute by train. Eleven percent of work from home or did not go to work and 4% walk to work.

Bankstown

Location context

Bankstown is a Strategic Centre located in the south west of Sydney. The station services the Bankstown T3 line and is bound by Bankstown City Plaza, North Terrace and South Terrace. A bus interchange adjoins Bankstown Station, as well as various business and commercial uses built over the rail line.

Commercial uses occupy a majority of the 400m radius from the Bankstown Station, with the large format shopping centre of Bankstown Central also located in the local business precinct.

Primary operation

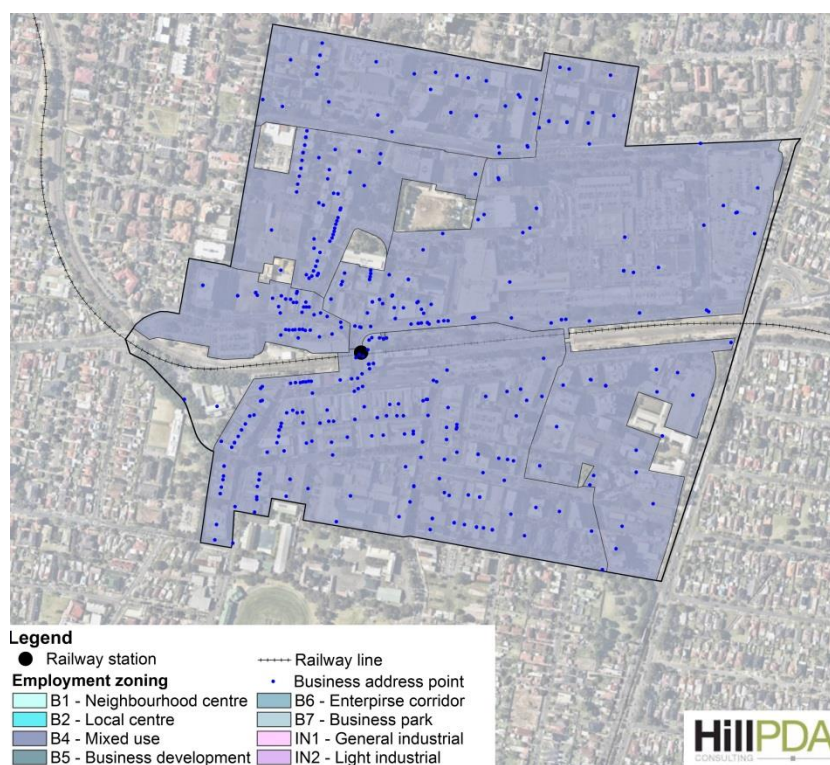
The local business precinct around Bankstown Station is predominantly zoned mixed use and categorised by commercial uses. This includes a large number of retail and service industries as well as office space and larger format shopping centre uses, such as Bankstown Central.

As a Strategic Centre²¹, Bankstown also contains a wide variety of civic, community and education facilities. Higher density residential development is also contained within the local business precinct, with low to medium density residential uses in the surrounding localities.

Figure 32 illustrates the local business precinct boundary, location of businesses and current land use zoning from the local environmental plan.

There are approximately 1090 businesses in the local business precinct employing approximately 8159 people.

Figure 32: Bankstown local business precinct, land zoning and business location



Source: HillPDA 2016

Primary employment industries

As identified in Table 73, the primary employment industries in the Bankstown local business district Retail Trade and Health Care and Social Assistance.

²¹ as defined in A Plan For Growing Sydney 2014

Table 73: Bankstown local business precinct employment by broad industry code

Description	Bankstown
Retail Trade	1671
Health Care and Social Assistance	1273
Public Administration and Safety	1247
Accommodation and Food Services	883
Financial and Insurance Services	517
Professional, Scientific and Technical Services	480
Education and Training	378
Administrative and Support Services	377
Rental, Hiring and Real Estate Services	309
Other Services	228
Not stated	149
Arts and Recreation Services	123
Manufacturing	119
Transport, Postal and Warehousing	115
Information Media and Telecommunications	92
Inadequately described	75
Wholesale Trade	58
Construction	57
Electricity, Gas, Water and Waste Services	8

Source: TPA JTW 2011

Population and employment snapshot

Table 74 overviews the population, dwellings, employment and workforce statistics for the Bankstown local business precinct.

Table 74: Bankstown Demographic Snapshot (T22307, T22305)

	2011	2041	Change	% change
Population	3481	9725	6244	179%
Employment	9241	12,278	3037	33%
Workforce	1422	3855	2433	171%
Dwellings	1347	3938	2591	192%

Source: TPA, Population and Employment Travel Zone Forecasts - September 2014 Release

According to the TPA figures shown in Table 74 for the Bankstown local business precinct, the population is expected to nearly triple with a forecast increase of 179% (6244 persons) between 2011 and 2041. This is expected to be accompanied by a similar percentage increase in dwelling numbers of 192% (2591 dwellings).

The Bankstown local business precinct is also expected to experience high growth in both its employment population (3037 people) and workforce population (2433 people). Strong growth in the residential sector is likely to be achieved through higher density infill development. This, in turn, is likely to generate increased demand for commercial services, triggering further expenditure in the commercial and retail sector.

The TPA JTW - Table04²² data highlights that the primary employment industry in the Bankstown local business precinct is Retail Trade (20% or 1671 employees), which is reflective of the significant extent of retail uses in the Bankstown local business precinct.

Health Care and Social Assistance (16%) is the second largest employment industry in the Bankstown local business precinct with 1273 employees followed closely by Public Administration and Safety (15%) with 1247 employees.

Employee and resident workforce travel behaviour

Stacey Street is the main arterial road providing direct access into the local business precinct from Hume Highway in the north and Canterbury Road and the South Western Motorway (M5) to the south. Chapel Road is the other neighbourhood collector road extending north-south, also linking the local business precinct with Canterbury Road and the Hume Highway.

Bankstown Station services the T3 Bankstown Line. The journey to work data for Bankstown local business precinct, including both the residential workforce and workforce employed has been analysed below.

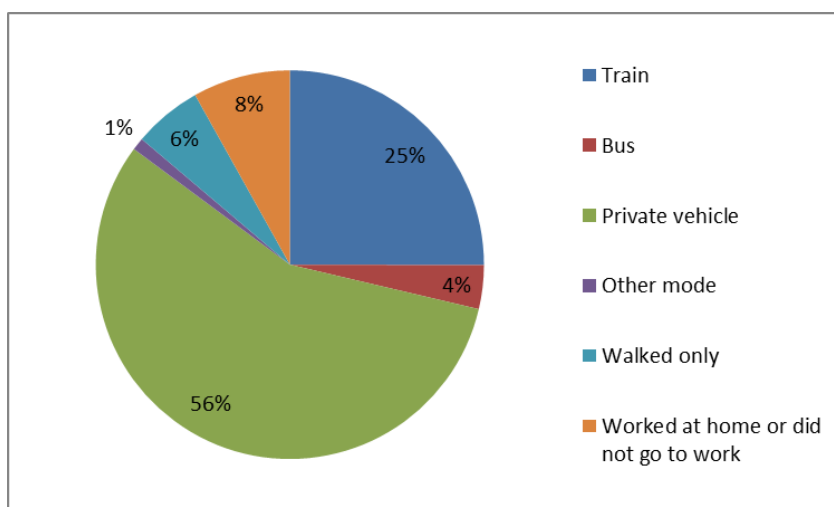
Bankstown local business precinct workforce travel patterns

Considering Bankstown is a Strategic Centre and commercial uses are the primary land use, the resident workforce population is not as extensive. The majority of the resident workforce was employed in the local Bankstown (25%) with Sydney Inner City (20%) the second largest location.

Residents residing within the Bankstown local business precinct are mainly reliant on the private vehicle (56%) or commuting by train (25%), as can be seen in Figure 33. Of the remaining commuter methods, 6% walk to work, 4% commute by bus and 1% use another mode of transport. Eight percent of the resident population worked at home or did not go to work.

²² Transport Performance and Analytics 2011, Journey to Work Release Table 04: Destination TZ x Industry (1 digit) x Mode15 V1.3, Transport for NSW

Figure 33: Bankstown local business precinct resident mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2305 and TZ307

These figures can be further refined by analysing the destinations of the commute as provided in Table 75. Of the resident workforce commuting via rail, the most popular employment destinations were Sydney Inner City (75%) and Parramatta (45%). Despite being on the same rail line, the private vehicle remains the most popular method of transport to Canterbury (91%).

The below figure also suggests that there is a high Bankstown containment rate with the largest proportion of resident workers seeking employment within the centre.

Table 75: Bankstown local business precinct mode of transport to workplace destination

Destination	Employees	Train	Bus	Private vehicle	Other mode	Walked only	Worked at home or did not go to work
Bankstown	290	3%	8%	53%	2%	21%	12%
Sydney Inner City	224	75%	0%	16%	0%	0%	8%
Strathfield - Burwood - Ashfield	58	7%	0%	81%	0%	0%	12%
Auburn	55	29%	5%	65%	0%	0%	0%
No fixed place of work	47	0%	9%	72%	13%	0%	6%
Botany	40	18%	0%	65%	0%	0%	18%
Liverpool	39	8%	8%	85%	0%	0%	0%
Canterbury	33	9%	0%	73%	0%	9%	9%
Ryde - Hunters Hill	34	9%	0%	91%	0%	0%	0%
Parramatta	29	45%	0%	45%	0%	0%	10%
Other	309	20%	3%	71%	0%	1%	5%
<i>Figures in this row exclude those that did not state a mode of transport</i>		25%	4%	56%	1%	6%	8%

Source: 2011 Journey to Work, Table 12 and 13, TZ2305 and TZ307

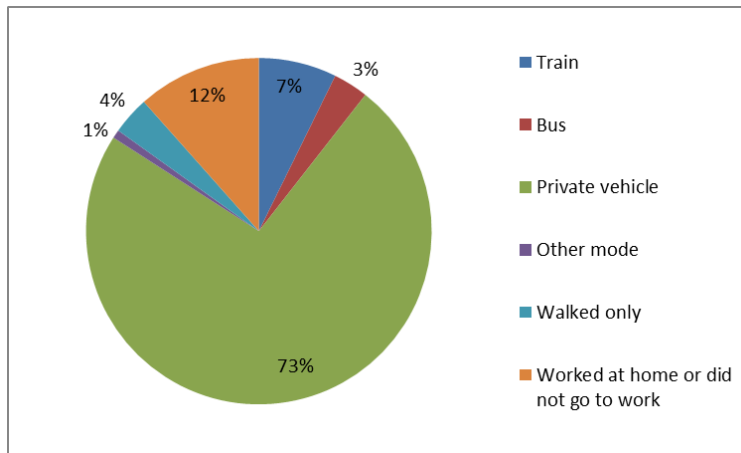
Although not being the most dominant method of transport, all resident employment destinations recorded a proportion of commuters electing to catch the train.

As a Strategic Centre, Bankstown acts as a destination in its own right and would attract retail and entertainment customers, as well as the general commuter population.

Bankstown local business precinct employment travel patterns

Of the 8159 people that were employed within the Bankstown local business precinct, 7978 stated a journey to work travel mode.

Figure 34: Bankstown local business precinct employee mode of transport to work



Source: 2011 Journey to Work, Table 12 and 13, TZ2305 and TZ307

As shown in Figure 34, over 5862 persons (73%) commute to work by private vehicle, in contrast to the 582 persons (7%) that commute by train. The Bankstown local business precinct also recorded a proportionately high number of employees that worked at home or did not go to work (924 persons).

APPENDIX C: GOVERNMENT POLICY REVIEW

Appendix C provides an overview of the key legislation, plans, strategies and policies guiding development and Government objectives across the local business precincts. The Chapter focusses on how current planning policy and land use controls support, govern and impact local businesses in relation to the Project.

State Government Plans and Strategies

NSW 2021 and Making It Happen

NSW 2021: A Plan to Make NSW Number One sets the Government's agenda for change in NSW. The original strategy contained five key strategies which have since been adapted and updated to meet the intentions and priorities of the current government. The revised strategies include:

- a strong budget and economy
- building infrastructure
- protecting the vulnerable
- better services
- safer communities.

As a key focus, the Government highlights the need to provide for public transport, particularly in metropolitan Sydney. There are a number of goals specifically relating to the improvement of public transport and growing patronage, including:

- ensure on-time running for public transport
 - maintain or improve the reliability of public transport services over the next four years.

The Project will assist in achieving this goal by improving access and frequency of public transport.

A Plan for Growing Sydney (2014)

'A Plan for Growing Sydney' was released by the NSW Department of Planning and Environment in December 2014. It is the primary planning policy to guide development and land use in Sydney over the next 25 years.

One of the key strategies in 'A Plan for Growing Sydney' is to bring Sydney's residents together with a common purpose and to develop a competitive economy with world-class services and transport²³. The plan outlines future

²³ A Plan for Growing Sydney, NSW Planning & Environment 2014

growth precincts for residential and commercial operations and the related need to preserve future transport corridors allowing for Sydney's transport networks to develop as the city's population grows.

In light of this, Section 1.11 of the paper details the commencement of a Corridor Strategy for the Sydney Metro. The NSW Government has initiated preservation of a dedicated corridor for the Project and identified opportunities to maximise the delivery of jobs closer to homes and homes closer to jobs. Further, the plan identifies the potential future transport corridor for Sydney Metro connecting the Sydney Metro Northwest (previously known as North West Rail Link) to Bankstown. The plan also highlights a future potential extension of Sydney Metro to Hurstville.

The Sydney Metro would help to facilitate the NSW Government's goal to develop Sydney as a strong global city and a great place to live by better connecting one of the largest growth areas (the North West Region) with Global Sydney and other major emerging employment and cultural centres in the global economic corridor.

Rebuilding NSW State Infrastructure Strategy (2014)

The 'Rebuilding NSW' State Infrastructure Strategy highlights the importance of sustaining productivity growth in our major centres and our regional communities by rebuilding NSW infrastructure including transport, education, sports and arts.

The Strategy highlighted an infrastructure funding allocation, including the reservation of \$7 billion for the 'Sydney Rapid Transit' (now known as the Sydney Metro). This allocation would be funded from 2016-17 with the intention to develop a Sydney Metro harbour crossing which would facilitate the commencement and operation of the Sydney Metro. The Strategy highlights key benefits of a Sydney Metro including:

- reduced travel times
- remove over 17 million car trips from the road each year
- enable growth of around 40,000 additional jobs in Sydney
- trigger significant increase in economic 'value-add' generated by businesses along its route, reaching over \$5 billion per year.

NSW Long Term Transport Masterplan (2012)

The NSW Long Term Transport Master Plan outlines a framework for the NSW Government to deliver an integrated, modern transport system that puts the customer first. It identifies the challenges that the transport system in NSW should address over the next twenty years and sets out a series of actions to combat these challenges.

Section 4, 'Getting Sydney Moving Again' sets out a series of transport challenges facing Sydney with particular regard to keeping Sydney's most important

transport corridors moving and providing travel options that support and enhance the strength and success of Sydney. The plan identifies short and long term goals in modernising Sydney's rail network, this includes undertaking detailed planning for a Sydney Metro Harbour Crossing through the CBD.

A 12 month Master Plan consultation process was conducted with customers, experts (industry, government and business) and the community. There was positive feedback on the transport plan in the context of supporting businesses to provide goods and services to society and in so doing, supports jobs and economic productivity.

Sydney City Centre Access Strategy (2013)

The Sydney City Centre Access Strategy is a guide for the delivery of a fully integrated transport network that prepares Sydney's city centre for the future. It identifies the challenges that the transport system in NSW should address over the next twenty years and sets out a series of actions to combat these challenges.

The Strategy outlines the benefits of developing the Sydney Metro to the City of Sydney. Specifically, the Strategy points out 'The transition to a metro transit system would offer frequent, fast, comfortable and high capacity link between suburban regions such as the North West to the city centre'.

Sydenham to Bankstown Urban Renewal Corridor Strategy (2015)

The *Sydenham to Bankstown Urban Renewal Corridor Strategy (SBURCS)* was developed in consultation with Marrickville Council, City of Canterbury and Bankstown City Council to guide future development and infrastructure delivery along the renewal corridor over the next 20 years.

The SBURCS aligns with the Project with the core objective to deliver more homes and jobs within walking distance of the Sydney Metro stations.

The aims of the strategy are:

- improve parks and open space
- provide greater housing choice
- add to the vibrant streetscape of restaurants, shops and parks that locals already enjoy
- enhance walking and cycling tracks
- help create more local jobs for the community.

Council - Plans and Strategies

Marrickville Local Environmental Plan (2011)

Marrickville Local Environmental Plan 2011 is the relevant environmental planning instrument for land use planning within the former Marrickville Local Government Area boundary. The overarching aims of the Plan relevant to the Project are to:

- support the efficient use of land, vitalisation of centres, integration of transport and land use and an appropriate mix of uses
- increase residential and employment densities in appropriate locations near public transport while protecting residential amenity
- promote sustainable transport, reduce car use and increase use of public transport, walking and cycling.

Bankstown Local Environmental Plan (2015)

Bankstown Local Environmental Plan 2015 is the relevant environmental planning instrument for land use planning within the former Bankstown Local Government Area boundary. The overarching aims of the Plan relevant to the Project are to:

- to provide a range of business and industrial opportunities to encourage local employment and economic growth
- to concentrate intensive trip-generating activities in locations most accessible to rail transport to reduce car dependence and to limit the potential for additional traffic on the road network.

Bankstown CBD Local Area Plan (2011)

The Bankstown Local Area Plan (BLAP) sets out the vision for the Bankstown CBD to plan for future growth and protect environmental values. The BLAP informs changes to the statutory planning framework and industry priorities.

The top priority actions relevant to this Project include:

- C1 - redevelop and expand the Bankstown Station
- I2 - Plan for additional job growth in the CBD Core.

The Project directly addresses one of these top priorities by planning for the redevelopment and expansion of the Bankstown Station.

Canterbury Local Environmental Plan (2012)

Canterbury Local Environmental Plan 2012 is the relevant environmental planning instrument for land use planning within the former Canterbury Local Government Area boundary. The overarching aims of the Plan relevant to the Project are to:

- to create vibrant town centres by focusing employment and residential uses around existing centres and public transport nodes.
- to promote healthy lifestyles by providing open space that supports a variety of leisure and recreational facilities and encouraging an increased use of public transport, walking and cycling.

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SYDENHAM TO BANKSTOWN
ENVIRONMENTAL IMPACT STATEMENT

> Technical Paper 6 – Business impact assessment