

SYDENHAM TO BANKSTOWN
**ENVIRONMENTAL
IMPACT
STATEMENT**

> Technical Paper 7 - Landscape and
visual impact assessment

Sydney Metro, City & Southwest

Sydenham to Bankstown upgrade

Technical Paper No. 7

Landscape & Visual Impact Assessment



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ABBREVIATIONS & GLOSSARY

Abbreviations

CPTED – Crime Prevention Through Environmental Design

DCP – Development Control Plan

EPBC – Environment Protection and Biodiversity Conservation Act, 1999

HCA – Heritage Conservation Area

HV – High Voltage

LEP – Local Environmental Plan

Glossary

- **Accessibility** – A public transport customer's ability to reach their destination unhindered and as independently as possible. Includes compliance with relevant disability standards.
- **Ancillary works** – Refers to all works outside the station precincts, including services realignment and installation, traction substations, track realignments, noise barriers, security fencing and Trackside Intruder Detection System fencing, drainage works, retaining walls, embankments and cuttings, and maintenance access facilities.
- **Construction compound** – The construction compound is an area within the project area that would include site offices, amenities, workshops, material and plant storage areas, laydown area, storage of rail track and ballast, concrete batching plant etc.
- **Glare** – the uncomfortable brightness of a light source when viewed against a dark background.
- **Interchange** – A location where customers transfer from one mode of transport to another or between two services of the same mode. Also includes a place where customers join or leave the public transport system on foot, by bicycle, motorcycle, or car.
- **Landscape** - includes all elements that constitute a place including landform, vegetation, buildings, streets, parks and plazas etc.
- **Light trespass** – the spilling of light beyond the boundary of the property or area being lit.

- **Permanent way** – The structure consisting of the rail tracks, fasteners, railway sleepers and ballast (or slab track). Sometimes referred to as 'trackway'.
- **Place-making** – is '*creating public spaces that are locally relevant and 'belong' to the local community, reflecting the community's inputs and aspirations. It seeks to make place more relevant, usable and meaningful.*' (Government Architect NSW, 2016)
- **Project area** – The area of land required to construct and operate the project. It refers to the length of works including the stations, permanent way and ancillary development.
- **Public realm** - Streets, spaces and places. (Government Architect NSW, 2016).
- **Rail corridor (or corridor)** – This area includes all elements within the Sydney Rail land where it forms a linear corridor. The rail corridor includes the permanent way, cuttings and embankments, overhead lines, signalling equipment, vegetation etc.
- **'Sense of place'** - Is the intangible qualities and character of a place, interpreted and valued by people.
- **Site** – Refers to a specific part of the project area. Several sites have been identified to divide this assessment into manageable sections. Sites include each individual station precinct, and the ancillary development.
- **Sky glow** – the brightening of the night sky above our towns, cities and countryside.
- **Station precinct** – Includes the station and any development directly associated with the station such as directly adjacent retail and transport links.
- **Study area** – Extends beyond the project area to include the visual catchment of the project, adjacent open spaces and public realm, and areas of the landscape that provide a setting for the project area.
- **Station catchment** – That part of each suburb located within a radius of about 400 metres of a station.
- **Urban design** - '*is concerned with the arrangement, appearance and function of our suburbs, towns and cities. It is both a process and an outcome of creating localities in which people live, engage with each other, and engage with the physical place around them.*' Australian Urban Design Protocol (2011).
- **Worksite** – This area is the footprint of the construction works (also referred to as the project area). A range of construction activities would take place within this area including the construction of station buildings, public realm areas and ancillary works.

EXECUTIVE SUMMARY

Executive Summary

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

The project is 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 project for which approval is sought a 13 kilometre long section of the Sydney Trains T3 Bankstown Line and 10 existing stations, between Sydenham and Bankstown, to improve accessibility and enable conversion of the line to metro standards.

A key element of the project is upgrading all stations along the corridor between Marrickville and Bankstown stations, to allow better access, by providing new concourses, level platforms, and lifts at all stations. Improvements would also be undertaken within the immediate area surrounding the stations to deliver accessible interchange with other forms of transport.

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). This technical paper describes the urban design of the project, and provides an assessment of the construction and operational impact of the project on the landscape the visual setting of the project.

Approach to landscape and visual assessment

This assessment has identified the potential landscape and visual impact of works on a number of identified 'sites' including each of the 10 stations, and Corridor and Ancillary development.

The assessment identifies the landscape and visual impact during construction and operation, and during the day and at night for each of these sites.

Overview of potential impact

The following Section summarises the potential landscape and visual impact which are expected to be experienced at each site.

Marrickville Station

Landscape impact

There would be a **moderate adverse landscape impact** at Marrickville Station precinct during construction as there would be a reduction in the precinct accessibility and legibility due to the diversion of passengers around construction works.

Although this station has recently been upgraded by a Transport Access Program (TAP) project, during operation there would be a further **minor beneficial landscape impact**, as station accessibility is improved with a new ramp from Illawarra Road, and the Station Street entrance would be upgraded to include a widened plaza and a 'shared zone', and interchange.

Visual impact

During construction, there would be a **minor to moderate adverse visual impact** in views to the project due to the scale of the works near to residential areas, and the extent of works at Station Street and Illawarra Road.

Once operational, there would be a **minor beneficial visual impact** in views along Station Street given the improved finishes, and the creation of a plaza and 'shared zone'.

At night, there would be a **minor adverse visual impact** during construction with the introduction of night works in close proximity to residential properties to the north and south of the corridor.

During operation, there would be a **minor adverse visual impact** from adjacent residential streets to the southeast with the increased intensity of lighting created by the active transport corridor and extended

platforms, located near residential properties particularly to the south of the rail corridor (including Leofrene Avenue, Riverdale Avenue, Byrnes and O'Hara streets).

Dulwich Hill Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Dulwich Hill Station precinct during construction due to a reduction in legibility and accessibility as work transitions from the new station construction, to demolition of the existing concourse.

During operation, there would be a **minor beneficial landscape impact**, as station accessibility is improved with a new north and south entry, set back from Wardell Road, a new plaza along Ewart Lane, and consolidated interchange facilities.

Visual impact

There would be a **minor to moderate adverse visual impact** in views to the project during construction due to the scale of the works, located near to residential areas, and the extent of works in Ewart Lane and Bedford Crescent. This would include a **moderate adverse visual impact** in views from the Wardell Road rail bridge.

During the operation there would be **minor beneficial visual impact** in views from Ewart Lane owing to the public realm improvements and quality of the architecture. However, the view from Wardell Road would present a **minor adverse visual impact** due to the obstruction and enclosure of the heritage platform buildings and district views currently appreciated from this location.

At night there would be a **minor adverse visual impact** during construction with the introduction of night works in close proximity to residential areas.

There would also be a **minor adverse visual impact** in views at night during operation, from adjacent residential streets to the southeast, with the increased intensity of

lighting from the station, near residential properties (including properties on Bedford Crescent, Wardell Road and Ewart Lane).

Hurlstone Park Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Hurlstone Park Station precinct during construction due to a reduction in the legibility and accessibility as the existing station is demolished and the new station built, and due to the removal of vegetation to the south of the rail corridor.

During operation, there would be a **moderate beneficial landscape impact** as station accessibility is improved with a larger and more spacious station entry and concourse addressing the Duntroon Street bridge and improved interchange facilities.

Visual impact

During construction, there would be a **minor to moderate adverse visual impact** in views to the project given the scale of the works, located near to residential areas in the south and commercial areas on Floss Street.

During operation of the project there would be a **minor adverse visual impact** in views from Railway Street from the removal of vegetation and introduction of a services building within this residential area, and from residential properties directly adjacent to the station due to the scale of the buildings and proximity.

At night there would be a **minor adverse visual impact** during construction as night construction activity would occur in close proximity to residential areas.

There would also be a **minor adverse visual impact** at night during operation. This would be from the increased intensity of lighting created by the station, near residential properties, including properties on Floss, Duntroon, Commons, Hopetoun and Railway streets.

EXECUTIVE SUMMARY

Overview of potential impact

Canterbury Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Canterbury Station precinct during construction owing to a reduction in legibility and accessibility as work transitions from the new station construction to demolition of the existing concourse, and removal of vegetation particularly to the southwest of the corridor and northeast along Broughton Street.

During operation, there would be a **moderate beneficial landscape impact**, as station accessibility is improved with a new east and west entry, set back from the constrained environment of Canterbury Road, with new plazas and improved interchange facilities.

Visual impact

During construction, there would be a minor to **moderate adverse visual impact** in views to the project due to the scale of the works, and removal of mature trees. The works would be overlooked by residential properties on Broughton Street to the northeast, and from elevated residential apartments on Charles Street to the southwest.

When operational, there would be a **negligible visual impact** in views to the station as the new built form would be largely absorbed into this densely urban townscape.

At night there would be a **minor adverse visual impact** during construction due to the introduction of night construction activity in close proximity to residential areas. There would also be a **minor adverse visual impact** in views at night during operation. This would be due to the increased intensity of lighting that would be created by the station, brought closer to residential properties on Charles and Broughton Street.

Campsie Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Campsie Station precinct during construction due a reduction in the legibility and accessibility as work is staged and customer access is diverted to a temporary access structure during demolition works and construction of the new station concourse and vertical transport structures.

During operation, there would be a **minor beneficial landscape impact**, as a broader more open station entry concourse is created, set back from the constrained footpath environment of Beamish Road.

Visual impact

During construction, there would be a **minor moderate adverse visual impact** on views from Beamish Street where the works are located in close proximity to the local commercial centre. There would also be a **minor adverse visual impact** on views to the project works from Lilian Street and Lane, to the south of the corridor. This impact is due to the scale of the works and establishment of a construction compound, overlooked by residential properties opposite. Similarly, there would be minor adverse visual impact from Wilfred Avenue and North Parade, where demolition and reconstruction of the station and over rail retail buildings along Beamish Street would be seen.

During operation of the project there would be a **minor beneficial visual impact** in views from Beamish Street, where the increased scale and more open form of the new station structures would provide a level of prominence which marks it as an entry to the station. The station architecture would be visually consistent with the character of the surrounding commercial precinct.

At night there would be a **minor adverse visual impact** during construction due to the introduction of night construction activity in close proximity to residential areas, particularly on Lilian Street.

There would also be a **minor adverse visual impact** in views at night during operation with the increased intensity of lighting created by the station, and extending along the platforms to the west, bringing this light closer to residential properties on Lilian Street and Wilfred Avenue.

Belmore Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Belmore Station precinct during construction due to a reduction in the legibility and accessibility as work is staged and construction compounds are established to the north and south of the station. There would also be a direct impact on vegetation which would be removed from the reserve at Torbruk Avenue.

During operation, there would be a **minor beneficial landscape impact**, as the open spaces are reinstated and refreshed, a new southern plaza and shared zone would be established, improving accessibility, legibility and the amenity of the precinct.

Visual impact

During construction, there would be a **moderate adverse visual impact** on views to the project works from the Burwood Road overbridge, Torbruk Avenue and Redman Parade, given the scale of the works including the establishment of construction compounds and retaining wall construction in close proximity to public realm areas. There would also be a **minor adverse visual impact** on views from residential areas to the south of the station on Acacia Lane and Street.

During operation of the project there would be a **minor adverse visual impact** in views from Burwood Bridge due to the scale of the elevated concourse and canopy structure, rising above the existing heritage platform building, and intensification of built development to views within the station.

There would also be a **minor adverse visual impact** in views from the Terry Lamb Reserve with the introduction of the services building

within a parkland setting. However, there would be a **minor beneficial visual impact** in views to the new southern station entry and plaza on Torbruk Avenue, as although some mature trees would be removed, there would be improved amenity with a new plaza and park treatment. The setting of the northern station entry, viewed from Redman Parade, would have the capacity to absorb the new station buildings.

At night there would be a **minor adverse visual impact** during construction due to a reduction in the amenity of views from residential properties in Redman Parade, upper Acacia Lane and Acacia Street, and Myall Street.

There would also be a **minor adverse visual impact** in views at night during operation, particularly from adjacent residential properties, due to the intensification and greater area of lighting, seen in close proximity.

Lakemba Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Lakemba Station precinct during construction due to a reduction in the legibility and accessibility as work is staged and customer access is diverted to a temporary access structure during demolition works and construction of the new station. During operation, there would be a **negligible landscape impact**, as the open space and public realm and interchange facilities are reinstated.

Visual impact

During construction, there would be a **moderate adverse visual impact** on views to the project works from Railway Parade and The Boulevarde. There would also be **minor adverse visual impact** on views to the project works from Jubilee Reserve and areas within The Boulevarde car park, beyond the immediate setting of the station. This is due to the scale of the construction activity, including construction compounds and

EXECUTIVE SUMMARY

Overview of potential impact

temporary station access structures, as well as demolition and station construction works.

During operation, there would be a **minor adverse visual impact** in views towards the station from Railway Parade as the existing mature eucalypts would be lost, altering the scale and amenity of the view. However, there would be a **minor beneficial visual impact** in views from The Boulevard as the strong architectural statement highlights the station entry, alongside a reinstated parkland setting.

At night there would be a **minor adverse visual impact** during construction relating to the impacts on the amenity of views from residential properties adjacent to the rail corridor in Railway Parade, The Boulevard. There would also be a **minor adverse visual impact** in views at night during operation, as the new metro platforms would extend lighting to the west, and within close proximity to residential areas.

Wiley Park Station

Landscape impact

Construction works in the Wiley Park Station precinct have a **minor adverse landscape impact**. This is due to a reduction in the legibility and accessibility of the precinct as work is staged and customer access is diverted to a temporary access structure during demolition works and the new station is constructed.

During operation, there would be a **minor beneficial landscape impact**, as the public realm and interchange enhancements provide improved legibility, connectivity and amenity. These improvements would be a catalyst for urban renewal within the precinct.

Visual impact

During construction, there would be a **moderate adverse visual impact** on views to the project works from adjacent streets, residential areas and schools to the north and south of the rail corridor, and from King Georges Road. This is due to the scale of the

works including construction compounds, temporary access structures and proximity of the construction works from these locations.

During operation, there would be a **minor adverse visual impact** in views towards the station from residential properties to the north of the station as the character would be different from the existing station character with the station buildings having an increased scale and extending west of the existing station footprint, in closer proximity to adjacent residential properties. However, there would be a **minor beneficial visual impact** in views from King Georges Road as the new station architecture would improve the visual prominence of the station entry, and be visually appropriate within the commercial setting.

At night there would be a **minor adverse visual impact** during construction due to the impacts on the amenity of views from nearby schools (Wiley Park Girls High School and Wiley Park Public School) and residential properties adjacent to the rail corridor in The Boulevard, Stanlea Parade, Wiley Lane, Shadforth Street and Urunga Parade. Although during operation the level of lighting during operation would be consistent with development along King Georges Road, the lit platforms, extending west, would create a **minor adverse visual impact** at night, from residential properties to the north and south of the rail corridor.

Punchbowl Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Punchbowl Station precinct during construction due to a reduction in legibility and accessibility, and the introduction of construction compounds within the Warren Reserve and commuter car parks, to the north and south of the station.

During operation, there would be a **moderate beneficial landscape impact**, as the public realm and interchange enhancements

provide an improvement to the legibility, connectivity, safety and amenity of the station precinct.

Visual impact

During construction there would be a **minor adverse visual impact** on views to the project works from residential properties on adjacent residential areas on Urunga Parade, Warren Reserve and surrounding streets and public realm areas. This is due to the scale of the works, including construction compounds, in close proximity to these locations.

During operation, there would be a **minor beneficial visual impact** in views from the Warren Reserve, as the new station buildings would create a strong architectural statement, highlighting the northern station entry. A new northern plaza would also improve the amenity of the rail side interface with the reserve. However, there would be a **minor adverse visual impact** in views from residential properties on Urunga Parade given the intensification of rail infrastructure and removal of vegetation within the corridor.

At night there would be a **minor adverse visual impact** during construction owing to the impacts on the amenity of views from residential properties to the north of the rail corridor on Urunga Parade. Although during operation lighting would be consistent with development along The Boulevard, the lit platforms, extending west, would create a **minor adverse visual impact** at night, from residential properties to the north of the corridor.

Bankstown Station

Landscape impact

There would be a **moderate adverse landscape impact** at the Bankstown Station precinct during construction due to a reduction in legibility and accessibility from the installation of construction compounds to the north and south of the corridor, and removal of vegetation including a mature fig tree on North Terrace and eucalypts adjacent to South Terrace. During

operation there would be a **minor beneficial landscape impact**, as the public realm and interchange enhancements would provide an improvement to the legibility, connectivity, safety and amenity of the station precinct.

Visual impact

During construction there would be a **minor and moderate adverse visual impact** on views to the project works given the scale of construction activity including construction compounds to the north and south of the corridor, and removal of vegetation including the fig tree on North Terrace. This is due to the scale of the works, including construction compounds, in close proximity to these locations.

During operation, there would be a **minor beneficial visual impact** in views from surrounding streets, commercial and elevated residential properties as the new architecture and public realm improvements would create an architectural statement, identifying the station within this area of the precinct.

At night there would be a **negligible visual impact** during construction due to the absorption of the works into this brightly lit commercial setting. Similarly, during operation the level of lighting would be consistent with development along North and South terraces, and would create a **negligible visual impact** at night.

Ancillary Works

Landscape impact

Ancillary works would give rise to a **minor adverse landscape impact** along most of the corridor during construction, between Dulwich Hill Station to Bankstown Station, and for the Bankstown substation connection. This would be due to the establishment of construction compounds and worksites, particularly to the south of the corridor, the clearance of vegetation and major earthworks.

There would be a **moderate adverse landscape impact**, however, between

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Overview of potential impact

Marrickville and Dulwich Hill stations from the extension of construction activity into a portion of McNeilly Park in Marrickville, creating a direct impact on this park and temporarily reducing access for recreation.

During operation, there would be a **minor adverse landscape impact** experienced along all sections of the rail corridor, between Marrickville Station and Bankstown Station, and along the Bankstown substation connection. This is because removed trees would not be reinstated along much of the corridor and there would be an intensification of rail corridor infrastructure, including new retaining walls, embankments, drainage swales, noise barriers, overhead lines and support structures, signalling equipment, telecommunication masts, segregation fencing, and other operational infrastructure, reinforcing the corridor as a physical and visual barrier within the landscape.

Visual impact

During construction, there would be a **moderate adverse visual impact** on views to the project works at McNeilly Park in Marrickville, and Close Street, Canterbury, where the construction footprint expands into areas of open space adjacent to the rail corridor. There would also be a **minor adverse visual impact** on views to the project from areas of Marrickville, Dulwich Hill, Hurlstone Park, Belmore, Lakemba and Punchbowl due to the removal of vegetation within the corridor, and scale of the works including construction compounds and worksites in close proximity to residential areas and parks.

During operation, there would be mainly **minor adverse visual impacts** to views from surrounding streets and residential properties including areas of Marrickville, Dulwich Hill, Hurlstone Park, Canterbury, and Lakemba, where vegetation is not replaced and the intensification of rail corridor infrastructure, including new retaining walls, embankments, drainage swales, noise barriers, overhead lines and support structures, signalling equipment, telecommunication masts, segregation fencing, and other operational infrastructure would be seen in close proximity.

At night there would be a **negligible visual impact** during construction due to the absorption of the works into the existing, brightly lit night scene.

During operation, the rail corridor would not be lit at night, however, the headlights and internal lighting of a more frequent Metro train service, would be seen along the alignment, and the substations would require some lighting for security. This would be generally consistent with the surrounding night scene and would result in a **minor adverse visual impact** along the railway corridor between Marrickville Station and Punchbowl, and a **negligible visual impact** in Bankstown.

Summary of mitigation response

The following mitigation measures are proposed to avoid, reduce and manage the identified potential construction and operational landscape and visual impacts.

During construction, proposed mitigation measures would include:

- location of long-term temporary structures within compounds to minimise visual impact from sensitive receivers
- protection of existing trees where possible
- management of potential lighting impacts
- design and maintenance of hoardings to minimise visual amenity and character impact
- treatment of hoarding to reflect community character and incorporate art opportunities
- management of offensive graffiti and protection of street art.

During operation, proposed mitigation measures would include:

- lighting design to minimise glare and light spill onto private property
- management and specification of trees in accordance with TfNSW and relevant Council standards
- coordinated treatment of fencing, signalling equipment, overhead lines and lighting to minimise visual clutter
- treatment of substations and noise barriers to minimise visual amenity impact and reflect local character
- prepare and implement a Public Art Management Plan which meets the requirements of the Sydney Metro Public Art Strategy.

1. INTRODUCTION

Overview

1. Introduction

1.1. Overview

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 1.1, 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

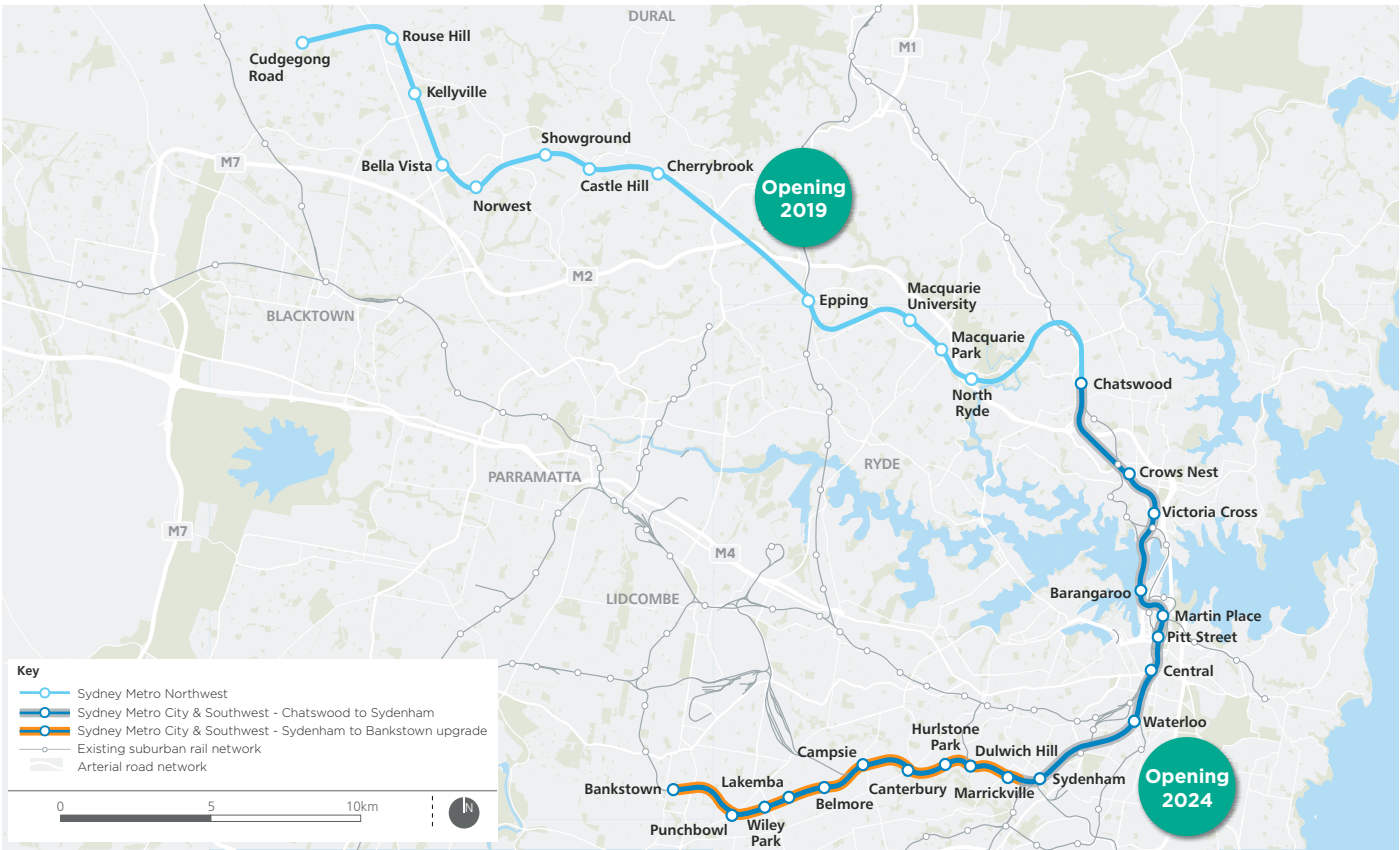


FIGURE 1.1 THE SYDNEY METRO NETWORK

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 1.1):

- 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

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 (from 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).

1.2. The project

Location

The location of the project is shown in Figure 1.2.

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 1.2.

Key features

The key features of the project are summarised below and are shown in Figure 1.2.

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

1. INTRODUCTION

The project

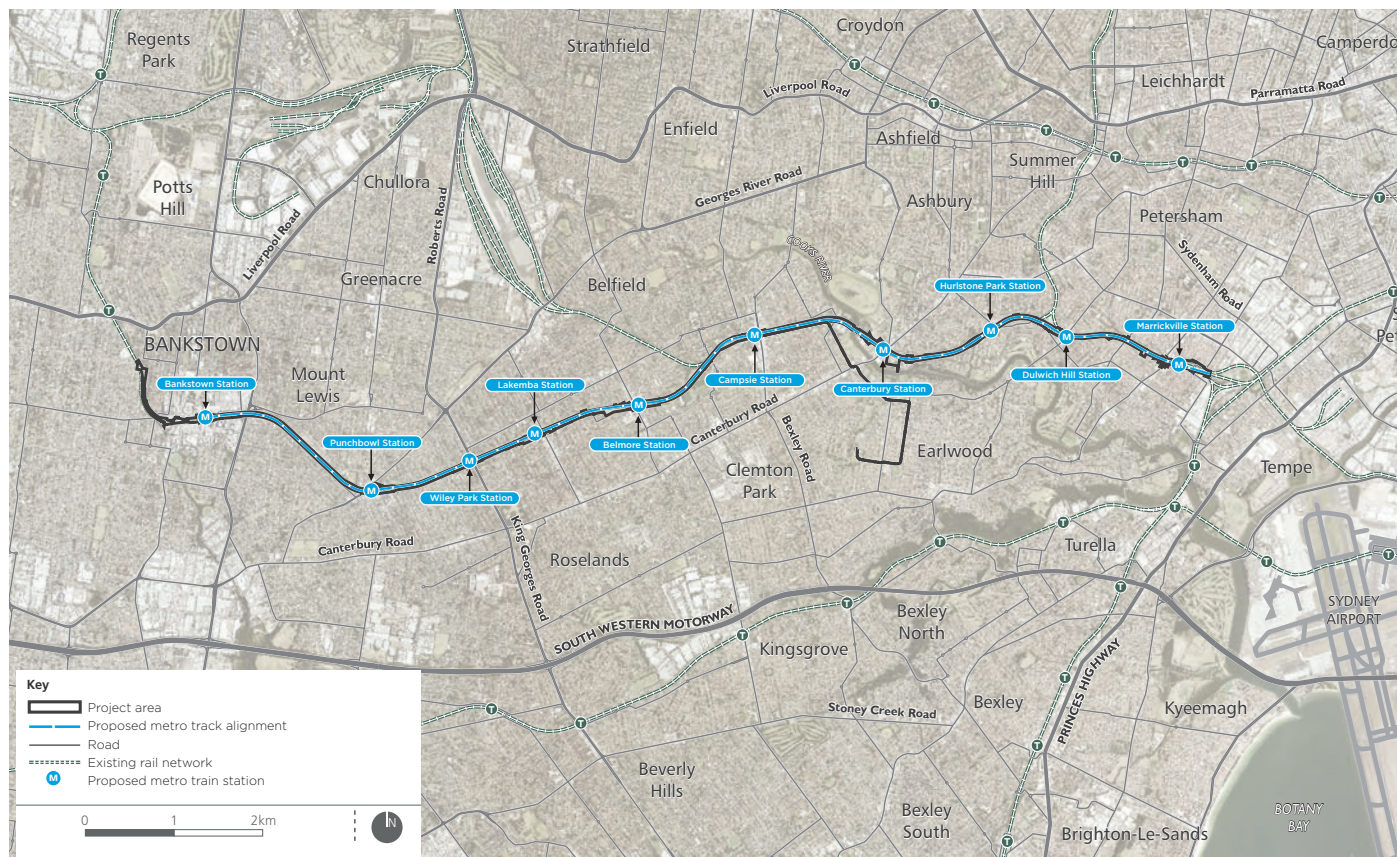


FIGURE 1.2 OVERVIEW OF THE PROJECT

- 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 turnback 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 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.

Timing

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 possession 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

1. INTRODUCTION

Purpose and scope of this report

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 report documents:

- how the project would deliver best 'place' outcomes, and
- the potential landscape and visual impacts of the project.

The scope of this report is an assessment of the landscape and visual impacts of the project area. The 'project area' is the land required to construct and operate the project. At stations, the project area is set within a 'station precinct', which includes other elements that would be associated with the project, such as facilities for integrated transport links. For the purpose of this assessment a 'study area' has been established which extends beyond the project area and station precincts to include

the visual catchment of the project and adjacent public realm areas which provide a setting for the project area.

The assessment considers the project area (see Figure 1-2) from east to west and divided into 'sites' for the purposes of this assessment. These sites are:

- Marrickville Station
- Dulwich Hill Station
- Hurlstone Park Station
- Canterbury Station
- Campsie Station
- Belmore Station
- Lakemba Station
- Wiley Park Station
- Punchbowl Station
- Bankstown Station
- Corridor and Ancillary development.

The construction and operational elements of the project have been assessed separately for each of these sites and during the day and night.

1.4. Secretary's environmental assessment requirements

The Secretary's environmental assessment requirements relating to placemaking and landscape, and where these requirements are addressed in this report, are outlined in Table 1.1.

Secretary's environmental assessment requirements

TABLE 1.1 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Topic	Secretary's environmental assessment requirements	Where addressed
14. Placemaking and Urban design The project design capitalises on opportunities to improve place, character and quality of the surrounding built and natural environment (including adjoining public spaces). The project contributes to the accessibility and connectivity of communities.	1. The Proponent must deliver functional 'place' outcomes of public benefit, inclusive of how the project integrates with land use changes occurring within the corridor, and how it contributes to the accessibility and connectivity of existing and future communities (with specific consideration given to the Sydenham to Bankstown Urban Renewal Corridor Strategy (as updated)). This must be done in collaboration with the Department of Planning and Environment and Councils, and must include but is not limited to: <ul style="list-style-type: none"> (a) the defining of existing and proposed station precincts including implications for urban renewal; (b) identifying urban design strategies and opportunities to enhance healthy, cohesive and inclusive communities (including consideration of government strategies and plans); (c) identifying the urban design and landscaping aspects and user facilities of the project and its components; (d) assessing the impact of the project on the urban and natural fabric; (e) incorporating the use of Crime Prevention Through Environmental Design (CPTED) principles during the design development process. 	Refer to the EIS
	2. The Proponent must describe the accessibility elements of the project including relevant accessibility legislation and guidelines and: <ul style="list-style-type: none"> (a) impacts on pedestrian access in and around stations and connecting streets, peak capacity of street at peak pedestrian times (including consideration of land use change); (b) enhancing the accessibility of each station and the general vicinity of walking and cycling catchments; (c) the provision of infrastructure to support accessible paths of travel and interchange; (d) impacts on cyclists (including provision of and integration with active transport routes) and pedestrian access and safety; and (e) minimising barriers across the rail corridor and opportunities to integrate cycling and pedestrian elements with surrounding networks and in the project. 	Refer to the EIS, and Technical Paper 1 – Traffic, transport and access
	3. The Proponent must assess the visual and landscape impacts of the project and any ancillary infrastructure on: <ul style="list-style-type: none"> (a) views and vistas; (b) streetscapes, key sites and buildings; (c) landscaping, green spaces and existing trees; (d) heritage items including Aboriginal places and environmental heritage; and (e) the local community. 	Chapter 5-15 (Landscape and visual assessment) of this technical paper (d) To be read in conjunction with Technical Paper 3 – Heritage impact statement
	4. The Proponent must provide artist impressions and perspective drawings of the project from key receiver locations to illustrate how the project has responded to the visual impact through urban design and landscaping.	Chapter 4 and Chapters 5-15 of this technical paper.

2. METHODOLOGY

Guidance for landscape and visual impact assessment

2. Methodology

2.1. Guidance for landscape and visual impact assessment

A range of guidance is available for the assessment of landscape and visual impact. In New South Wales the following guidelines are typically referred to:

- RMS Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment, 2013.
- The Guidance for Landscape and Visual Impact Assessment, Third Edition, prepared by the Landscape Institute and Institute of Environmental Management & Assessment, UK, 2013.

The methodology used for this assessment is described below and is consistent with the direction offered by these documents.

2.2. Method

The Landscape and visual impact assessment of the project includes, for each site:

- a review of the relevant Planning guidance
- identification of the existing environmental conditions
- identification of the landscape and visual sensitivity of key receptors
- an assessment of landscape impact during construction and operation
- an assessment of the daytime visual impact during construction and operation
- an assessment of night-time visual impact during construction and operation
- identification of mitigation measures.

2.3. Planning guidance

The Planning guidance for each site has been outlined by identifying relevant clauses that recognise the value of the landscape and visual conditions of the study area. This

includes International Agency, Federal, State and Local Government planning guidance for the landscape and visual values of the study area. Additionally, where master plans and guidance documents identify the ambitions for the study area, the relevant clauses have been recorded and their relevance to this assessment explained.

2.4. Existing environment

The existing environment has been described in terms of the key landscape and visual features of the study area for each site. Site visits were undertaken and the existing character, landscape, public realm elements and views were recorded through observations and photographs.

Where relevant, the future character and conditions of each site have been anticipated. In some cases, future projects are expected to redefine land use, development density and the character of the study area. This includes projects which are under construction and projects with development approval. It is likely that these projects will contribute to the character and conditions of the site in conjunction with construction and operation of this project.

To a lesser extent, the intent of master plans and precinct strategies has also been considered in the baseline condition, where there is a level of certainty that these plans will be implemented.

2.5. Landscape impact assessment

Landscape refers to the overall character and function of a place. It includes all elements within the public realm and the interrelationship between these elements and the people who use it.

This landscape impact assessment addresses the issues identified in the SEARs 15. Placemaking and Urban Design, Item 3 identify landscape impacts, including '(b) streetscapes, key sites and buildings; (c) landscaping, green spaces and existing trees; ... (e) the local community'.

Landscape sensitivity

Landscape sensitivity refers to the value placed on the public realm and landscape elements, and the level of service they provide to the community. The sensitivity of the landscape may reflect the frequency and volume of users in a location, but may also be valued for other characteristics such as tranquility, visual relief and contribution to microclimate. The value of the places is often described in council and state government master plans and planning guidance documents, reflecting the importance of the public realm to the local, regional and state-wide community.

The sensitivity of the landscape is therefore considered in the broadest context of possible places, from those of national importance through to those considered to have a neighbourhood importance (Table 2.1). However, there are no national or state sensitive landscapes within the study area.

Landscape modification

Landscape modification refers to the change to the public realm or landscape element that would occur as a result of the project. This includes direct impacts such as the removal of trees or open space, as well as indirect impacts, such as the functional change of an area due to changing land use and access. Landscape modification can be adverse or beneficial. Table 2.2 lists the terminology used to describe the level of landscape modification.

The levels described in Table 2.2 have been informed by the *National Urban Design Protocol* (2011) principles of good urban places and include enhancing, connected, diverse, enduring, comfortable, vibrant, safe and walkable. In addition, specific note has been made of considerations such as the functioning of footpaths, built edges, feature trees and avenues, visual and physical connections, as well as the types of activities supported in the public realm.

Furthermore, the guidance offered by the Government Architect NSW the draft policy *Better Placed: A design led approach*:

TABLE 2.1 LANDSCAPE SENSITIVITY LEVELS

Landscape sensitivity	Description
	Landscape or place protected with national or international legislation, e.g. the Sydney Opera House World Heritage Listed Building and its surrounding public realm.
	Landscape or place that is heavily used and is iconic to the State, e.g. Martin Place and Hyde Park.
	Landscape or place that is heavily used and valued by residents of a major portion of a city or a non-metropolitan region, e.g. Fraser Park at Marrickville, Belmore Sports Ground and Bankstown City Plaza.
	Landscape or place valued and experienced by concentrations of residents, and/or local recreational users. Provides a considerable service to the community. For example, it provides a place for local gathering, recreation, sport, street use by cafes and/or shade and shelter in an exposed environment e.g. Jubilee Reserve at Lakemba and Warren Reserve at Punchbowl.
	Landscape or place valued and appreciated primarily by a small number of local residents e.g. street trees in a local street. Provides a noticeable service to the community. For example, it provides a seat or resting place, passive recreation, and / or some shade and shelter in a local street e.g. Unwins Bridge Road in Marrickville and Urunga Parade in Wiley Park.

TABLE 2.2 LANDSCAPE MODIFICATION LEVELS

Landscape modification	Description
Considerable reduction or improvement	Substantial portion of the landscape is changed. This may include substantial changes to parkland access or function, footpath continuity, building access, permeability of local streets, and / or a direct loss of open space or vegetation. Substantial changes to the level of comfort, vibrancy, safety and walkability, enhancement, connectivity, diversity, and enduring legacy of the public realm.
Noticeable reduction or improvement	A portion of the landscape is changed. This may include alteration of parkland function, footpath continuity, building access, permeability of local streets, and/or street tree cover. Some alteration to the level of comfort, vibrancy, safety and walkability, enhancement, connectivity, diversity, and enduring legacy of the public realm.
No perceived reduction or improvement	Either the landscape quality is unchanged or if it is, it is largely mitigated by proposed public realm improvements. Does not alter or not noticeably alter the level of comfort, vibrancy, safety and walkability, enhancement, connectivity, diversity, and enduring legacy of the public realm.

2. METHODOLOGY

Visual impact assessment

developing an Architecture and Design Policy for New South Wales (2016) has also been considered. Particularly its overarching principles of: contextual, local and of its place, sustainable, efficient and durable, equitable, inclusive and diverse, enjoyable, safe and comfortable, functional, responsive and fit for purpose, value-creating and cost effective, distinctive, visually interesting and appealing.

2.6. Visual impact assessment

This visual impact assessment considers visual amenity as experienced by the users of the site and surrounds. It aims to identify the range of views to the site which may be impacted, including views from residential areas, commercial areas, parks and streets.

This visual impact assessment addresses the issues identified in the SEARs 15. Placemaking and Urban Design, Item 3 identify visual impacts, including '*(a) views and vistas (b) streetscapes, key sites and buildings; ... (e) the local community*'.

Identification of existing visual conditions

Viewpoints were selected to illustrate the visual influence of the project. These represent publicly accessible views and vistas from a range of locations and viewing situations. Particular attention was paid to views from places where viewers are expected to congregate such as plazas, parks, public transport nodes and commercial areas, as well as views to and from heritage items.

Visual sensitivity

Visual sensitivity refers to the nature and duration of views. Locations from which a view would potentially be seen for a longer duration, where there are higher numbers of potential viewers and where visual amenity is important to viewers, can be regarded as having a higher visual sensitivity. In addition, views recognised by local, state or federal planning regulations would, by nature of their recognition in these documents, have an increased sensitivity.

The sensitivity of a viewpoint is considered in the broadest context of possible views, from those of 'national' importance through to those considered to have a 'neighbourhood' importance (Table 2.3). However, this project does not include any views of national or state sensitivity.

Visual modification

Visual modification describes the extent of change resulting from the project and the visual compatibility of these new elements with the surrounding setting. There are some general principles which determine the level of visual modification which include elements relating to the view itself, such as distance, landform, backdrop, enclosure and contrast. There are also characteristics of the project itself, such as scale, form, line and alignment. Visual modification can result in an improvement or reduction in visual amenity.

A high degree of visual modification would result if the development contrasts strongly with the existing setting. A low degree of visual modification occurs if there is minimal visual contrast and a high level of integration of form, line, shape, pattern, colour or texture between the project and the environment in which it is located.

In some circumstances, there may be a visible change to a view which does not alter the amenity of the view. This would be due to the visual absorption capacity of the setting and/or the compatibility of the project with the surrounding visual context.

Table 2.4 lists the terminology used to describe the level of visual modification.

2.7. Assessment of night-time visual impact

The assessment of night-time impact has been undertaken with a similar methodology to the daytime assessment. However, the assessment also draws upon the guidance of the Institution of Lighting Engineers (UK) and the *Guidance for the reduction of obtrusive light* (2005), as well as AS4282 Control of the obtrusive effects of outdoor lighting (1997).

AS4282 identifies three potential effects of lighting, at 2.4 Potential effects of outdoor lighting, including:

'Changes to the amenity of an area due to the intrusion of spill light into otherwise dark areas, both outdoors and indoors, and to the direct view of bright luminaires.'

A reduction in the ability of transport system users to see essential details of the route ahead, including signaling systems, due to glare from bright luminaires.

Changes to night-time viewing conditions due to a general luminous glow, i.e. skyglow, caused by the scattering of light in the atmosphere.'

This assessment addresses the first of these potential effects; changes to the amenity of an area, with a focus on the outdoors. The standard also notes the potential visual intrusion caused by the daytime appearance of outdoor lighting systems. This potential impact has also been addressed in the daytime assessment.

The Guidance from the Institution of Lighting Engineers (UK) identifies environmental zones, useful for the categorising of night-time settings. This broader approach to the assessment of obtrusive light is consistent with the detail available at the planning application stage of the project and is therefore the basis for the method applied to the night-time visual assessment contained within this report.

TABLE 2.3 VISUAL SENSITIVITY LEVELS

Visual sensitivity	Description
National	Heavily experienced view to a national icon, e.g. view to Sydney Opera House from Circular Quay or Lady Macquarie's Chair, or the view to the Three Sisters from Echo Point, Katoomba.
State	Heavily experienced view to a feature or landscape that is iconic to the State, e.g. view along the main avenue in Hyde Park, or a view to Sydney Harbour from Observatory Hill.
Regional	Heavily experienced view to a feature or landscape that is iconic to a major portion of a city or a non-metropolitan region, or an important view from an area of regional open space, e.g. views to the Sydney Town Hall from George Street, a Sydney CBD skyline view from Centennial Park.
Local	High quality view experienced by concentrations of residents and/or local recreational users, local commercial areas, and/or large numbers of road or rail users e.g. view from McNeilly Park in Marrickville or Anzac Square in Campsie.
Neighbourhood	Views where visual amenity is not particularly valued by the wider community such as views from local streets, pocket parks and small groups of residences.

TABLE 2.4 VISUAL MODIFICATION LEVELS

Visual modification	Description
Considerable reduction or improvement	Substantial part of the view is altered. The project contrasts substantially with surrounding landscape.
Noticeable reduction or improvement	Alteration to the view is clearly visible. The project contrasts with surrounding landscape.
No perceived reduction or improvement	Either the view is unchanged or if it is, the change in the view is generally unlikely to be perceived by viewers. The project does not contrast with the surrounding landscape.

2. METHODOLOGY

Assigning impact levels

TABLE 2.5 ENVIRONMENTAL ZONE SENSITIVITY - NIGHT-TIME

Environmental Zone	Description of Sensitivity
E1: Intrinsically dark landscapes	Very high sensitivity visual settings at night including national parks, state forests etc.
E2: Low district brightness areas	Highly sensitive visual settings at night including rural, small village, or relatively dark urban locations.
E3: Medium district brightness area	Moderately sensitive visual settings at night including small town centres or urban locations.
E4: High district brightness areas	Low sensitivity visual settings at night including town/city centres with high levels of nighttime activity.

TABLE 2.6 VISUAL MODIFICATION LEVELS - NIGHT-TIME

Visual modification	Description
Considerable reduction or improvement	Substantial change to the level of skyglow, glare or light trespass would be expected. The lighting of the project contrasts substantially with surrounding landscape at night.
Noticeable reduction or improvement	Alteration to the level of skyglow, glare or light trespass would be clearly visible. The lighting of the project contrasts with surrounding landscape at night.
No perceived reduction or improvement	Either the level of skyglow, glare and light trespass is unchanged or if it is altered, the change is generally unlikely to be perceived by viewers. The project does not contrast with the surrounding landscape at night.

This guidance document also defines a number of features of these environmental zones at night, including sky glow, glare and light trespass.

The method for night-time visual assessment is as follows.

Night-time visual sensitivity

The environmental zone which best describes the existing night-time visual condition for each site was selected. These zones are typical night-time settings and reflect the predominant light levels of each site. Each environmental zone has an inherent level of sensitivity as described in Table 2.5.

Night-time visual modification

Following the sensitivity assessment, the level of modification that would be expected within the study area was then identified. These changes are described, as relevant, in terms of:

- sky glow – the brightening of the night sky above our towns, cities and countryside.
- glare – the uncomfortable brightness of a light source when viewed against a dark background.
- light trespass – the spilling of light beyond the boundary of the property or area being lit.

Table 2.6 lists the terminology used to describe the level of visual modification at night.

2.8. Assigning impact levels

Assessment of landscape impact has been made by combining the landscape sensitivity and landscape modification levels for a landscape element and assigning an impact level (refer Table 2.7).

Day time visual impact has been assessed by combining the visual sensitivity and visual modification levels for an individual view and assigning an impact level (refer Table 2.8).

Assessment of night-time visual impact involved combining the visual sensitivity of the environmental zone with the night-time visual modification for each site generally and assigning an impact level (refer Table 2.9).

2.9. Mitigation measures

Throughout the assessment there has been an acknowledgment of the inherent mitigation and the integrating effects of urban design treatments contained within the project design.

Following the assessment of landscape and visual impact, measures to further mitigate potential impacts have been identified. These measures include opportunities for mitigation on and off site, during construction and operation of the project, both day and night.

2.10. Artist's impressions

Artist's impressions have been prepared to illustrate the 'look and feel' of the stations and station precincts. These images were prepared by the design team and are indicative of the design intent.

TABLE 2.7 LANDSCAPE IMPACT LEVELS

		Landscape sensitivity				
		National	State	Regional	Local	Neighbourhood
Landscape modification	Considerable reduction	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
	Noticeable reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
	No perceived change	Negligible	Negligible	Negligible	Negligible	Negligible
	Noticeable improvement	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial	Negligible
	Considerable improvement	Very high beneficial	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

TABLE 2.8 DAY TIME VISUAL IMPACT LEVELS

		Visual sensitivity				
		National	State	Regional	Local	Neighbourhood
Visual modification	Considerable reduction	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
	Noticeable reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
	No perceived change	Negligible	Negligible	Negligible	Negligible	Negligible
	Noticeable improvement	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial	Negligible
	Considerable improvement	Very high beneficial	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

TABLE 2.9 NIGHT-TIME VISUAL IMPACT LEVELS

		Visual sensitivity			
		E1: Intrinsically dark landscapes	E2: Low district brightness	E3: Medium district brightness	E4: High district brightness
Visual modification	Considerable reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse
	Noticeable reduction	High adverse	Moderate adverse	Minor adverse	Negligible
	No perceived change	Negligible	Negligible	Negligible	Negligible
	Noticeable improvement	High beneficial	Moderate beneficial	Minor beneficial	Negligible
	Considerable improvement	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

3. PLANNING CONTEXT

State planning guidance

3. Planning context

The following Chapter provides a brief review of the State and Local Authority planning documents which provide guidance for the study area as a whole. Specific precinct requirements and further detail has been provided in the relevant site specific chapters as appropriate.

3.1. State planning guidance

Sydenham to Bankstown Urban Renewal Corridor Strategy, NSW Department of Planning and Environment, 2017

This strategy provides a coordinated approach to infrastructure delivery and development across the entire Sydenham to Bankstown corridor for the next 20 years. The strategy has been developed having regard to the City & Southwest Metro Sydenham to Bankstown project and identifies opportunities for additional housing and jobs around each station and the infrastructure, land use and built form controls required to support future growth.

This Strategy has been developed through an extensive consultation process with the community, stakeholders and built environment professionals. This strategy provides guidance for the transformation and renewal of the precincts surrounding the eleven rail stations along the corridor, from Sydenham Station to Bankstown Station. Key aims of the strategy which are relevant to this assessment are to:

- Provide a ‘*cohesive framework for housing change that respects valued neighbourhood character while maximising opportunities presented by improved transport access*’ (s.1.2, p.5)
- Provide a ‘*vision and land use plan*’ for each station precinct which captures the ‘*individual character*’ and ‘*elements that make them unique*’ (s.3.1, p.17)
- Retain streets that contribute to the local character of the area and protect heritage areas, particularly streets with Federation period homes, including proposed new conservation areas in the Marrickville, Dulwich Hill and Hurlstone Park Station precincts as single dwelling neighbourhood character areas (s.3.9, p.32)
- Increase the area of higher housing between Belmore and Punchbowl

- Provision of new, improved or expanded open space in areas where there is a significant change in the amount of new homes; in particular, there is an opportunity for a *'linear park along the rail line between Belmore and Punchbowl stations'* and *'improvements to existing open spaces such as the Terry Lamb Reserve in Belmore'* (s.4.7, p.43)
- Retention of the scale and character of popular local shopping areas such as Haldon Street (Lakemba), Burwood Road (Belmore), Broughton Street (Canterbury), Wardell Road (Dulwich Hill) and Illawarra Road (Marrickville), and encourage revitalisation of quieter shopping areas
- Expansion of the 'GreenWay South West' shared path network, particularly through an additional leg of the GreenWay, which would run *'between Sydenham and Bankstown stations largely along the Sydney Metro rail reserve'* with future opportunities to *extend the path to regional open spaces at Salt Pan Creek and Sydney Park...* (s.3.6, p.26).

The aims of this strategy have been considered particularly in relation to the landscape assessment of the station precincts.

3.2. Local planning guidance

The project passes through two local government areas, the Inner West Council (including the former Marrickville Council area) and the City of Canterbury - Bankstown (including the former Canterbury Council and Bankstown Council areas). The following section describes the relevant local planning guidance for the project in each local government area.

Inner West Council

The following documents apply to the Inner West Council area which includes the Marrickville and Dulwich Hill Station precincts, as well as areas of the rail corridor between these stations and to Garnet Road in the west. Due to the recent amalgamation of the Inner West Council, these instruments use the former Marrickville Council area names.

Marrickville Local Environmental Plan, Marrickville Council, 2011

The Marrickville Local Environmental Plan (LEP) includes guidance on several factors relevant to the precincts surrounding the rail corridor and stations. Of particular relevance to the assessment of landscape and visual amenity, the LEP identifies provisions relating to the height of buildings, heritage items and landuse.

This plan aims to *'promote a high standard of design in the private and public domain'* (Part 1, Clause 1.2). Clause 4.3 (Height of buildings) promotes scale and massing of new development that ensures consistency with the *'desired future character of an area'*. The LEP does not specify heights for development within the rail corridor or stations. However, the building heights for each station precinct provide an insight into the future scale and character of the study area and has been identified in the Planning guidance section of each station precinct Chapter (e.g. section 5.1 Planning guidance).

The LEP identifies numerous local and State heritage listed items within the rail corridor,

3. PLANNING CONTEXT

Local planning guidance

stations and station precincts. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP). Any heritage items located within the project area has been identified in the Planning guidance section of each station precinct Chapter (e.g. at 5.2 Planning guidance).

Each station and the corridor are located within the Zone SP2 – Infrastructure (Rail Facilities). The objectives of this zone include: 'To provide for infrastructure and related uses', 'To protect and provide for land used for community purposes' and 'To prevent development that is not compatible with or that may detract from the provision of infrastructure' (Part 2, Land Use Table: Zone SP2). Where relevant, the land use within the study area has been identified in the Planning guidance section of each station precinct Chapter (e.g. section 5.2 Planning guidance).

Marrickville Development Control Plan Marrickville Council, 2011

The Development Control Plan (DCP) defines twelve urban design principles that are 'essential for the effective functioning of good public environments'. The DCP states that 'all development applications involving substantial external changes that are visible from or effect public space or have significant land use implications must be consistent with the relevant aspects of the 12 urban design principles that make good public environments'. These principles include: structure and connections, accessibility, complementary mix of uses and types, appropriate density, urban form, legibility, activation, fit and adaptable public space, 'sense of place' and character in streetscapes and townscapes, consistency and diversity, continuity and change, sensory pleasure. These principles have been considered in the landscape impact assessment of the station precinct, corridor and ancillary development works where appropriate.

Part 2.6 of the DCP sets out the general provisions for 'Acoustic and Visual Privacy', which address the impact of new developments on the amenity of other land users, particularly residential and other sensitive land uses.

Part 9 of the DCP divides the Local Government Area into 47 planning precincts. Each precinct has a description of existing and desired future character to guide development within the area. The project traverses several precincts, including: Marrickville Town Centre South (Precinct 24), The Warren (Precinct 30), Marrickville Town Centre (Commercial Precinct 40), Marrickville Station West (Precinct 23), Ness Park (Precinct 21), Dulwich Hill Station North (Precinct 18), Dulwich Hill Station South (Precinct 22) and New Canterbury Road West (Precinct 17).

This assessment has considered the relevant objectives that relate to the future desired character of these precincts particularly at stations. The relevant requirements of each station precinct has been identified in the Planning guidance section. (e.g. 5.2 Planning guidance).

Marrickville Urban Strategy, Marrickville Council, 2007

This Strategy provides a vision and direction to address a range of planning, community and environmental issues in the former Marrickville (now Inner West Council) Local Government Area and has been used to inform the Marrickville LEP and DCP.

Of relevance to Marrickville and Dulwich Hill stations, this strategy identifies opportunities for improved pedestrian and cycling connections to the rail station and improved car passenger drop-off facilities at rail stations in Urban Strategy No. 5: Improve local public transport, walking and cycling connections to centres (p. 23).

City of Canterbury – Bankstown

The following former Canterbury Council documents apply to the Hurlstone Park, Canterbury, Campsie, Belmore, Lakemba, Wiley Park and Punchbowl Station precincts, as well as areas of the rail corridor between these stations from Garnet Road in the east and Punchbowl Road in the west. The former Bankstown Council documents apply to the Bankstown Station precinct and areas of the rail corridor between Punchbowl Road in the east and the western extent of the project near Brancourt Avenue.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

The Canterbury Local Environmental Plan (LEP) includes guidance on several factors relevant to the precincts surrounding the rail corridor and stations. Of relevance to the assessment of landscape and visual amenity, the LEP identifies provisions relating to the height of buildings, heritage items and future landuse.

A key aim of this plan is to *'ensure that development is of a design and type that supports the amenity and character of an area'* (Part 1, Clause 1.2, para 2c). Clause 4.3 Height of buildings, promotes scale and massing of new development that ensures consistency with the *'streetscape and visual amenity of an area'*. The LEP does not specify heights for development within the rail corridor or stations. However, the building height controls for each station precinct provide an insight into the future scale and character of the study area and has been identified in the Planning guidance section of each station precinct (e.g. section 9.1 Planning guidance).

The LEP identifies numerous local and State heritage listed items within the rail corridor, stations and station precincts. Where relevant this assessment has considered the *'settings and views'* of these items (Heritage conservation, clause (5.10) of the LEP). Any heritage items located within the study area

has been identified in the Planning guidance section of each station precinct Chapter (e.g. section 9.2 Planning guidance).

Each station and the corridor are located within the Zone SP2 – Infrastructure (Rail Facilities). The objectives of this zone include: *'To provide for infrastructure and related uses', and 'To prevent development that is not compatible with or that may detract from the provision of infrastructure'*. Where relevant, the land use within the study area has been identified in the Planning guidance section of each station precinct Chapter (e.g. section 9.2 Planning guidance).

Canterbury Development Control Plan, City of Canterbury Council, 2012

The Canterbury Development Control Plan (DCP) provides detailed objectives, controls and performance standards to *'guide the form of development, as it relates to its context and the different areas of Canterbury'* (Part 1, Clause 1.1). Other relevant DCP objectives include: *'to achieve good building and landscape design', 'enhance amenity for people in Canterbury'* and *'protect natural features'* (Part 1, Clause 1.1).

Part 6 of the DCP provides generic development controls for aspects of a development that impact on amenity, such as visual impact and visibility, privacy and overshadowing. The objectives and design controls in section 6.6 (Landscaping) indicate the Council's preference for development that uses *'landscaping to integrate the built form ...'* (Clause 6.6.5, para iv) and *'... soften the visual and physical impact'* of new development (Clause 6.6.6, para i).

3. PLANNING CONTEXT

Local planning guidance

Bankstown Local Environmental Plan, Bankstown City Council, 2015

A key aim of this plan is *'to achieve good urban design in terms of site layouts, building form, streetscape, architectural roof features and public and private safety'* (Part 1, Clause 1.2, para 2i). It also aims to protect and enhance landform and vegetation in a way that maintains the *'landscape amenity of Bankstown'* (Part 1, Clause 1.2, para 2b). Clause 4.3 Height of buildings, promotes scale and massing of new development that is compatible with the *'character, amenity and landform of the area'*.

The LEP identifies local and State heritage listed items within the rail corridor, stations and station precincts. Where relevant this assessment has considered the *'settings and views'* of these items (Heritage conservation, clause (5.10) of the LEP). Any heritage item located within the study area has been identified in the Planning guidance section of each station precinct site Chapter (e.g. section 9.2 Planning guidance).

The station and corridor are located within the Zone SP2 – Infrastructure (Rail Facilities). The objectives of this zone include: *'To provide for infrastructure and related uses'* and *'To prevent development that is not compatible with or that may detract from the provision of infrastructure'* (Part 2, Land Use Table: Zone SP2). Where relevant, the land use within the study area has been identified in the Planning guidance section of each station precinct site Chapter (e.g. section 9.2 Planning guidance).

Bankstown Development Control Plan, City of Bankstown Council, 2015

Part A1, section 2 of the Bankstown Development Control Plan (DCP) specifically applies to the Bankstown CBD, including the railway station. A key aim for the Bankstown CBD is: *'To have development that achieves good urban design in terms of building form, bulk, architectural treatment and visual amenity'* (Part A1, section 1, Objective b).

The station is defined as a *'principal gateway'* to the CBD (Part A1, section 2, p. 6). The DCP advocates development around the station to be built *'to the street alignment to reinforce the urban character and strengthen the pedestrian amenity and activity at street level'* (Part A1, section 2, p. 6). Streetscape improvement works along Featherstone Street (north of station) are noted as a key opportunity to *'make the station entry more visible and to provide a high quality north–south pedestrian connection'* (Part A1, section 2, p. 6).

Bankstown CBD Local Area Plan, City of Bankstown Council, 2011

In the Bankstown CBD Local Area Plan (LAP) the Bankstown CBD is defined as a *'major activity and transport hub'* that services the City of Bankstown and the wider West Central Subregion (p. 4). The LAP sets out the vision for Bankstown CBD to strengthen its role as a Major Centre and to balance the demands for future growth with the need to protect and enhance environmental values. The station lies at the junction of three precincts, including Bankstown City Plaza and the northern and southern CBD core precincts. A key action aim of the LAP is to *'strengthen the image and amenity of the Bankstown CBD'* (p. 40), through public domain and main street improvements. In particular, the LAP program of works include *'vista and public domain improvements between the Civic Precinct and the railway station'* (p. 40). The Bankstown Station is also identified as a key site for *'redevelopment and expansion'* (p. 59).

Canterbury Road Master Plan, 2010

Canterbury Road is a major arterial route in Southwest Sydney, carrying heavy traffic volumes through eight suburbs, between Liverpool/Bankstown to Sydney. The master plan seeks to *'improve the overall sense of place along the Road, and help to generate quality development, without marginalising the current mobility function of Canterbury Road'*. It proposes a *'node of*

highest intensity, genuinely mixed use at Canterbury Town Centre, and a lower level intensity of pedestrian orientated mixed uses at important intersections along the road' (Canterbury City Council, 2010, p.19).

Canterbury town centre or the 'urban core' is focused around Canterbury Railway Station, comprising tall mixed use buildings (three to nine storeys) and active retail with commercial and residential above, creating a mixed use centre. Key objectives for this precinct include:

- revitalise a pedestrian orientated main street shopping experience along Canterbury Road
 - re-connect the town centre to the Cooks' River.
 - create a continuous river walk overlooked by residents with retail uses at ground level near Canterbury Road
 - increase the resident population living close to the town centre to improve the viability of public transport and contribute to the local economy
 - re-activate the traditional main street shops by improvements to the public domain, retail maintenance and management.
- new plazas/squares at Broughton Street and Canterbury Road, opposite the station
 - activation of pedestrian connections between the railway station and new development to the south
 - redevelopment of the riverfront district along the Cooks River, including a foreshore walk/cycleway within a unified landscape setting with strong visual and access links via 'river walk link streets' (i.e. Robert Street and laneways).

Canterbury Town Centre Public Domain Strategy, 2007

This document provides a coordinated set of design and material principles to guide improvement works within the public domain of Canterbury town centre, focused around Canterbury Railway Station. Key proposals in close proximity to the station include:

- improvements to the streetscape character of Canterbury Road and Charles Street, including boulevard tree planting, wide pavements and active frontages along Canterbury Road
- upgrade of the lower section of Canterbury Road (river area) into a gateway/boulevard

4. PROJECT DESIGN

Urban design principles

4. Project Design

4.1. Urban design principles

The urban design principles which have been adopted during the design process are outlined in the *Sydney Metro City & Southwest, Sydenham to Bankstown Design Guidelines (AECOM, et al. 2017)*. In summary, these principles are:

- be consistent with the principles and strategies of the Bankstown to Sydenham Corridor Strategy: Open space and Sydenham to Bankstown Urban Renewal Corridor Strategy
- take into account heritage considerations
- provide for an activated public domain, pedestrian connectivity and fully integrated transport system
- provide safe and convenient interchange opportunities
- explore opportunities for new development including re-purposing existing unused rail land
- incorporate sustainable design considerations such as photovoltaics, natural ventilation and light and water sensitive urban design
- enhance the immediate and broader urban context.

The design for the project has been prepared in accordance with these principles. In particular, the appearance and visual form of the project have been important considerations in the options assessment and design development process.

4.2. Station architecture and precinct elements

Each metro station would have several common elements or design features. These may include:

- **New station concourse** including:
 - o stairs and ramps
 - o canopies
 - o lifts to access the station and station platforms, and to link various transport nodes
- **Platform works**, including platform canopies and platform screen doors
- **Signage and wayfinding** within the station and precinct
- **Station service buildings** to house services, including communications equipment, signalling equipment, electrical equipment and other rail systems equipment
- **Station buildings** on platforms or at station entrances, including control and communication rooms, toilets, staff facilities, storerooms and offices
- New, upgraded or relocated **parking and kerbside facilities** within the station precinct, including accessible parking, kiss and ride and taxi facilities
- Provision of new and/or relocated **bike parking areas**
- Enhancements to the **footpaths** in the vicinity of the station entries and interchange areas
- **Landscaping and street furniture** to maintain high quality urban design outcomes.

Station architecture and precinct elements



LAKEMBA STATION, ARTIST'S IMPRESSION



PUNCHBOWL STATION, ARTIST'S IMPRESSION

4. PROJECT DESIGN

Corridor elements

4.3. Corridor elements

Elements within the corridor would be designed to integrate with the surrounding environment, and minimise visual impact. These elements are:

- **Fencing and screens**
 - galvanised steel mesh anti-throw barrier fencing would be installed on all overbridges and integrated with the bridge parapet
 - black palisade fencing would extend the length of station platforms
 - security fencing would be installed along the rail corridor with permanent gated access at controlled locations.
- **Services buildings** - would be located away from the Sydney Metro station entrances and where possible, set into the existing rail embankment to minimise visual impact.
- **Substations** - would comprise a building and vehicle access, enclosed by fencing
- **Noise Barriers** - would comprise of a consistent palette of materials, colour and texture. The intent is to treat the noise barriers as a landscape element, with simple and resolved detailing that integrates and provides a gradual transition to the adjacent landscape.
- **Retaining walls** - would comprise of a unified suite of materials, that relate to the station precincts. Retaining walls would transition into battered landscape slopes, avoiding abrupt joints. Precast concrete panels with a smooth, non-textured concrete finish would be used to create a high-quality finish. The use of shotcrete is not desirable.
- **Cuttings and embankments** - would be designed to exhibit a 'natural fit' within their landscape setting wherever possible. Where high strength rock is available, natural rock cuttings would be used. Embankments would be stabilised by mass planting with a native screen planting mix.
- **Vegetation** - Plant species would be selected which are appropriate to local conditions and relate to the character of the urban context. For example:
 - the general planting arrangements and species would suit the spatial scale of each public domain setting, without compromising pedestrian capacity and circulation outside stations
 - street trees would provide strong, legible structure planting, to reinforce spatial movement, connectivity with adjacent areas, civic quality, visual continuity, identity and character
 - screen planting would assist in mitigating the visual impact of retaining structures, noise barriers and service facilities where possible.

4.4. Construction elements

The construction assessment has been based on the following assumptions in relation to the construction elements that would be required for the project:

- the majority of works would be undertaken during standard daytime working hours (i.e. Monday to Friday 7 am to 6 pm, Saturday 8 am to 1 pm)
- it is expected that some construction activities and deliveries would be undertaken outside of standard working hours during periods of rail shutdown
- construction traffic would include heavy and light vehicles undertaking spoil and waste removal, material deliveries, and the arrival and departure of construction workers
- construction compounds would be required at each station to support construction activities. Compounds would include site amenities and offices, workshops, material storage and laydown areas, plant and vehicle parking, and spoil lay down, loading and removal areas
- long-term compounds would have hoardings or fencing with shade cloth around the perimeter
- station works would have hoardings to delineate works for passengers
- vegetation located fully or partly within the project construction site footprint is likely to be removed
- construction of the project would commence in 2018 and be completed by 2024
- each station would require a construction program of approximately four years.

5. MARRICKVILLE

Existing environment

5. Marrickville Station

5.1. Existing environment

Marrickville Station has a State heritage listing and includes several ornate platform buildings, booking office and overbridge of '*aesthetic significance*'. East and west bound passenger rail uses are on the south side of the island platform, with the Metropolitan Goods Line running to the north. There has been a recent upgrade at Marrickville Station which includes new platform stairs, lifts and entry concourse on Illawarra Road. The rail corridor is in a cutting adjacent to the station and is set below Illawarra Road so that the heritage station buildings are not visually prominent. Furthermore, the new station entry can be seen clearly from Illawarra Road and further limits views into the station and to the platform buildings from the west.

The surrounding land use includes a local commercial precinct along Illawarra Road, consisting predominantly of single and double storey terrace buildings with shopfronts. Adjacent residential areas comprise a mix of terraces, detached houses and unit blocks. A multi-storey mixed use development has recently been built on the triangular site immediately north of the station, including seven storeys of apartments which overlook the corridor.

To the east of the station the rail corridor rises on an embankment so that it is elevated generally around two metres above the adjacent residential properties, and continues to rise to meet a steel truss bridge over Victoria Road. A pedestrian footpath runs between the existing station and Victoria Road to the south of the corridor. In this area, the rail corridor is enclosed by security fencing. Residential boundary walls and fences include graffiti, particularly between Riverdale Avenue and the station. To the northeast a widened area of rail corridor is created by the Metropolitan Goods Line as it diverges from the suburban lines.

Several mature trees are located alongside the northern and southern side of the rail corridor, which filter views from nearby streets and properties.

Existing environment



- 1 CBD VIEWS FROM SCHWEBEL STREET
- 2 ILLAWARRA ROAD, SOUTH OF STATION
- 3 RESIDENTIAL UNITS ON BYRNES STREET
- 4 ILLAWARRA ROAD, NORTH OF STATION
- 5 HERITAGE CHARACTER, LOWSET BRICK HOMES ON BYRNES STREET

5. MARRICKVILLE

Planning guidance

5.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Marrickville Station precinct.

Marrickville Local Environmental Plan, Marrickville Council, 2011

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

The LEP identifies adjacent parcels of land to the north and south of the station along Illawarra Road are permitted to reach maximum building height of 26 metres. To the south east of the station the land use transitions into low density residential along Leofrene, Riverdale and Charlotte avenues, where building heights are capped at 9.5 metres.

Heritage

Marrickville Station is on the LEP Environmental heritage list (it also has a State heritage listing and is on the RailCorp Section 170 Heritage and Conservation Register) and includes several ornate platform buildings, booking office and overbridge (identified as having 'aesthetic significance'). The station is also near the following heritage places: the stone house at 1 Myrtle Street and the stonewalling, terracing and planting along the Schwebel, High, Ruby and Junction Street streetscapes. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Land use zoning

To the north and south of the station, Marrickville has a retail centre focused on Illawarra Road. This precinct is zoned B2 – Local Centre, providing retail and service based shops and more recently, multi-storey

mixed use development.

Objectives of this zone include: *'To provide a range of small-scale retail, business and community uses' and 'to provide for spaces, at street level, which are of a size and configuration suitable for land uses which generate active street-fronts.'* (Part 2, Land Use Table: Zone B2).

Land to the east is zoned RE2 – Low Density Residential and its associated planning objectives relate to the provision of *'housing needs of the community'*. (Part 2, Land Use Table: Zone RE2). McNeilly Park is located along the southern side of the rail corridor (zoned RE1 – Public Recreation), west of Marrickville Station. The objectives of this zone include: *'To provide a range of recreational settings and activities and compatible land uses [and] To protect and enhance the natural environment for recreational purposes'*. (Part 2, Land Use Table: Zone RE1)

Opposite McNeilly Park there is a small area of R4 – High Density Residential on Arthur Street, along the northern side of the rail corridor. A relevant objective of this zone is: *'To provide for well connected neighbourhoods that support the use of public transport, walking and cycling'*. (Part 2, Land Use Table: Zone R4).

Marrickville Development Control Plan, Marrickville Council, 2011

Part 9 of the Marrickville Development Control Plan (DCP) divides the Local Government Area into 47 planning precincts. Each precinct has an existing and desired future character to guide development within the area. The project is located at the junction of three precincts, including the 'Marrickville Town Centre South Precinct' (Precinct 24), 'The Warren Precinct' (Precinct 30) and 'Marrickville Town Centre Commercial Precinct' (Precinct 40).

The 'Marrickville Town Centre South Precinct' covers the northern part of this site and adjacent residential lands to the north. Relevant objectives that relate to the future

desired character of this precinct include:

- *'To protect significant streetscapes and/or public domain elements within the precinct including landscaping, fencing, open space, sandstone kerbing and guttering, views and vistas and prevailing subdivision patterns.*
- *To preserve the predominantly low density residential character of the precinct.*
- *To support pedestrian and cyclist access, activity and amenity including maintaining and enhancing the public domain quality.'* (Part 9, Clause 9.24).

To the south, the 'Warren Precinct' lies between the rail corridor and the Cooks River, encompassing elevated low density residential with pockets of residential flat development and low-lying open space along the Cooks River. Relevant objectives that relate to the future desired character of this precinct include:

- *'To protect significant streetscapes and/or public domain elements within the precinct including landscaping, fencing, open space, sandstone kerbing and guttering, views and vistas and prevailing subdivision patterns.*
- *To preserve the predominantly low density residential character of the precinct.*
- *To support pedestrian and cyclist access, activity and amenity including maintaining and enhancing the public domain quality.*
- *To encourage additional landscaping to developments to improve the visual amenity of this precinct, particularly the presentation to the street.'* (Part 9, Clause 9.30).

To the west, the 'Marrickville Town Centre Precinct' consists of commercial and mixed use development along Illawarra Road. Relevant objectives that relate to the future desired character of this precinct include:

- *'To support excellence in contemporary design*

- *To ensure the street building frontage of infill development complements the siting (location and orientation), scale, form (height, massing and setback), proportion (height to width and solid to void), rhythm, pattern, detail, material, colour, texture, style and general character in the design of the existing predominantly traditional two storey commercial streetscape, without being imitative*
- *To ensure new development at rear upper levels is a maximum of five storeys and is designed to be subservient to retained portions of contributory buildings or infill development to the street building front.'* (Part 9, Clause 9.40).

Sydenham to Bankstown Urban Renewal Corridor Strategy: Marrickville Station Precinct, NSW Department of Planning and Environment, 2017

This strategy proposes the following land use and associated built form changes within the immediate surrounds of Marrickville Station:

South of the station

- New urban plazas at the station entrances, Station Street and Riverdale Avenue, with improvements to the streetscape along Leofrene Avenue
- New urban plaza at the intersection of Illawarra Road and Warburton Street
- Medium high rise housing immediately to the south of the railway station (bounded by Station, Leofrene Avenue and Schwebel Street and Illawarra Road) with shop top housing development at a lower height and scale along Illawarra Road
- High rise housing and mixed use (up to 12 storeys) at 369-383 Illawarra Road
- Low rise housing area to the south of Schwebel Street and Greenbank Street, to retain its local character (including steep topography) and transition to the single dwelling areas
- Medium rise housing along Warburton

Street and north side of Greenbank Street

- New residential and mixed use precinct around Carrington Road (including north side of Myrtle Street), with improved open space and pedestrian access.

North of the station

- High rise housing and/or mixed use east of Ann Street and north of Byrnes Street
- A new Heritage Conservation Area comprising Silver Street and Gladstone Street.

5. MARRICKVILLE STATION

Character and components of the project

5.3. Character and components of the project

Construction phase

The following section describes the construction phase for Marrickville Station:

- Establishment of a worksite including demolition of:
 - permanent ways (railway lines, ballast, overhead lines) to the east of platforms 1 and 2
 - commercial properties at 2-4 and 6-12 Station Street
 - residential property at 1 Leofrene Avenue
 - Illawarra Road bridge
- Historic booking office on platform 2 would be relocated
- Removal of approximately 14-19 trees including:
 - along the southern rail corridor boundary, south of platform 2
 - on the corner of Leofrene Avenue
 - beside the Station Street entrance
- A construction compound would be located:
 - at Victoria Road, in the rail corridor between the Bankstown and Botany Goods lines
 - south of the corridor along Station Street
- Construction vehicle movement via Illawarra Road, Petersham Road, Station Street, western part of Schwebel Street, Riverdale Avenue, Charlotte Avenue, Myrtle Street and Harriet Street
- Temporary closure of Station Street between Station and Schwebel streets
- Temporary closure of the shared pathway (route L5 cycleway) south of rail corridor, between Victoria Road and Station Street.

Operation phase

The following section describes the operational phase for Marrickville Station.

- Existing structures would be retained including:
 - Illawarra Road station concourse entry, including concourse canopy and lifts
 - Station Street entrance (to be upgraded)
 - heritage listed platform buildings (platforms 1 and 2)
- New straight platforms approximately 170 metres long, extending east of the existing platforms to Victoria Road
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Emergency egress ramps and stair between the eastern end of the platform and Victoria Road
- New Illawarra Road bridge
- New platform canopies along metro platforms 1 and 2
- New platform buildings
- New station services building, located between the metro alignment and Metropolitan Goods Line
- Active transport corridor to the south of rail corridor (between Riverdale Avenue and Station Street)

Character and components of the project



MARRICKVILLE STATION, ARTIST'S IMPRESSION

- New shared zone on Station Street and Lane including:
 - new bike parking area, taxi and kiss and ride bays
 - proposed cycle route on Warburton and Schwebel streets and Leofrene Avenue
 - accessible ramp on Station Street (west) to overcome non-compliant grade
- New signalised intersection at the intersection of Illawarra Road, Warburton Road and Schwebel Street
- New pedestrian crossing on Illawarra Road, north of Arthur Street
- New tree planting in Station Street shared zone, southern station entry and along pathway south of rail corridor
- Increased rail traffic through platforms 1 and 2.

5. MARRICKVILLE STATION

Sensitivity levels



MARRICKVILLE STATION ON ILLAWARRA ROAD



O'HARA STREET PLAYGROUND

5.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Marrickville Station

Marrickville station functions as a suburban rail station and is therefore used by concentrations of residents; it provides an important transport hub for the local community. It is also a State heritage listed item, increasing its sensitivity as a visual feature within the local area. The landscape and visual values of the Marrickville Station are therefore of **local sensitivity**.

Illawarra Road commercial precinct

Illawarra Road is a key arterial and pedestrian link between Marrickville and Sydenham roads in the north and the Cooks River in the south. The streetscape is used by residents and people working locally, acting as a thoroughfare between Marrickville Station and Marrickville's main commercial precinct at the junction of Marrickville Road. The landscape and visual values of this precinct are of **local sensitivity**.

Rail corridor to Schwebel Street residential area

Streets within this precinct include a mixture of terraces, detached houses and unit blocks which are predominantly used by adjacent residents and people using the L5 cycleway between Marrickville Station and the Cooks River Cycleway. The rear fences of residential properties backing onto a laneway to the south of the station, adjacent to the rail corridor, provide a canvas for graffiti and 'street art'. There are also city views from elevated areas in this location. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

O'Hara Street playground

A small linear park connects Cavey Street and O'Hara Street to the east of Marrickville Station, adjoining the northern boundary of the existing rail corridor. It includes a small playground area with planting that partially screens the rail corridor. It provides a recreational space and localised amenity within this local neighbourhood. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

5.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Marrickville Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Marrickville Station has two entries; the main entry is on Illawarra Road, via the bridge the second on Station Street with direct access to platform 2. The Illawarra Road entry has been recently upgraded as part of the Transport Access Program (TAP), including an aerial concourse at Illawarra Road bridge with lifts and stairs to platforms. The Station Street entry has also been updated and extensive works to Station Street itself are nearing completion.

Access and connectivity to and around the station is constrained. The wide rail corridor (passenger and freight) divides neighbourhoods to the north and south of the station. In addition, Illawarra Road is a busy road and difficult to cross near the station. This road also makes access between the station and western areas (including McNeilly Park) less direct.

The steepness of the Illawarra Road bridge and adjacent Station Street also restricts access to the station entrances. Links such as local streets, parks and lanes, as well as the L5 cycle route on the southern edge of the station, provide important local connections. However, the L5 cycleway is below an acceptable width for a shared path and in poor condition. Local streets are also narrow, with poor quality footpaths and little streetscape planting.

The Marrickville Station has a distinctive 'sense of place' due to the character of the heritage platform buildings, and prominence of the new station architecture on Illawarra Road.

Construction: An area at the northern end of Station Street would be converted into a compound, requiring temporary closure and diversion of pedestrian and vehicular access to the existing Marrickville Station via Station Street. Several retail buildings on Station Street would be demolished, as would the residential property at 1 Leofrene Avenue. These changes would reduce the legibility and accessibility of the existing Marrickville Station and nearby commercial areas, for customers approaching the station from the southeast.

The Illawarra Road bridge would be demolished and reconstructed, requiring temporary closure and diversion of vehicular and pedestrian traffic. Changes to access may also reduce legibility on the approach to this entry from the north and south, and within the station.

A worksite would also be established to the south of the rail corridor, between Charlotte and Riverdale avenues and the L5 cycleway (south of the rail corridor between Station Street and Victoria Road) would be temporarily closed. Construction of the emergency egress stairs between Victoria Road and the new platform 2 extension may at times encroach on the footpath along Victoria Road, in areas adjacent to hoarding. These changes would reduce accessibility of the station from the southeast.

Safety around the station precinct would be ensured during construction with adequate lighting being provided as required. Passive surveillance from the workforce, would also increase the perception of passive surveillance.

Overall, it is expected that there would be a noticeable reduction in the landscape quality and functioning of this precinct, which is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: The Station Street entrance would include a widened plaza and a 'shared zone', improving the balance between pedestrians, cyclists and vehicles. This area would be activated with retail uses, improving safety (CPTED) and vibrancy.

An accessible ramp on Station Street (west) would improve access from Illawarra Road. New plaza trees would shade the streets and improve the comfort for users. The Illawarra Road bridge would have been replaced. However, the station entrance would be in the same location, with slight adjustments.

A new signalised intersection at Illawarra Road and Warbuton Street, would improve access to the station entries across Illawarra Road. The provision of an active transport corridor to the south of the corridor (incorporating the former L5 cycle route) would also improve the station interface with local streets and improve access to the station from the east.

Tree planting in Station Street, and canopies along the platforms, would improve amenity and comfort for users.

Although the new platform extensions and station services building would be visible from areas to the north of the station, there would be no direct impacts, and no change to the O'Hara Street playground.

The 'sense of place' experienced at Marrickville Station would be reinforced by the improved Station Street plaza area. The integration of the station into the precinct would also support urban renewal opportunities.

Overall, the project would result in a noticeable improvement in the landscape quality and functioning of this precinct, which is of local sensitivity, and a **minor beneficial landscape impact** during operation.

5. MARRICKVILLE STATION

Assessment of daytime visual impact

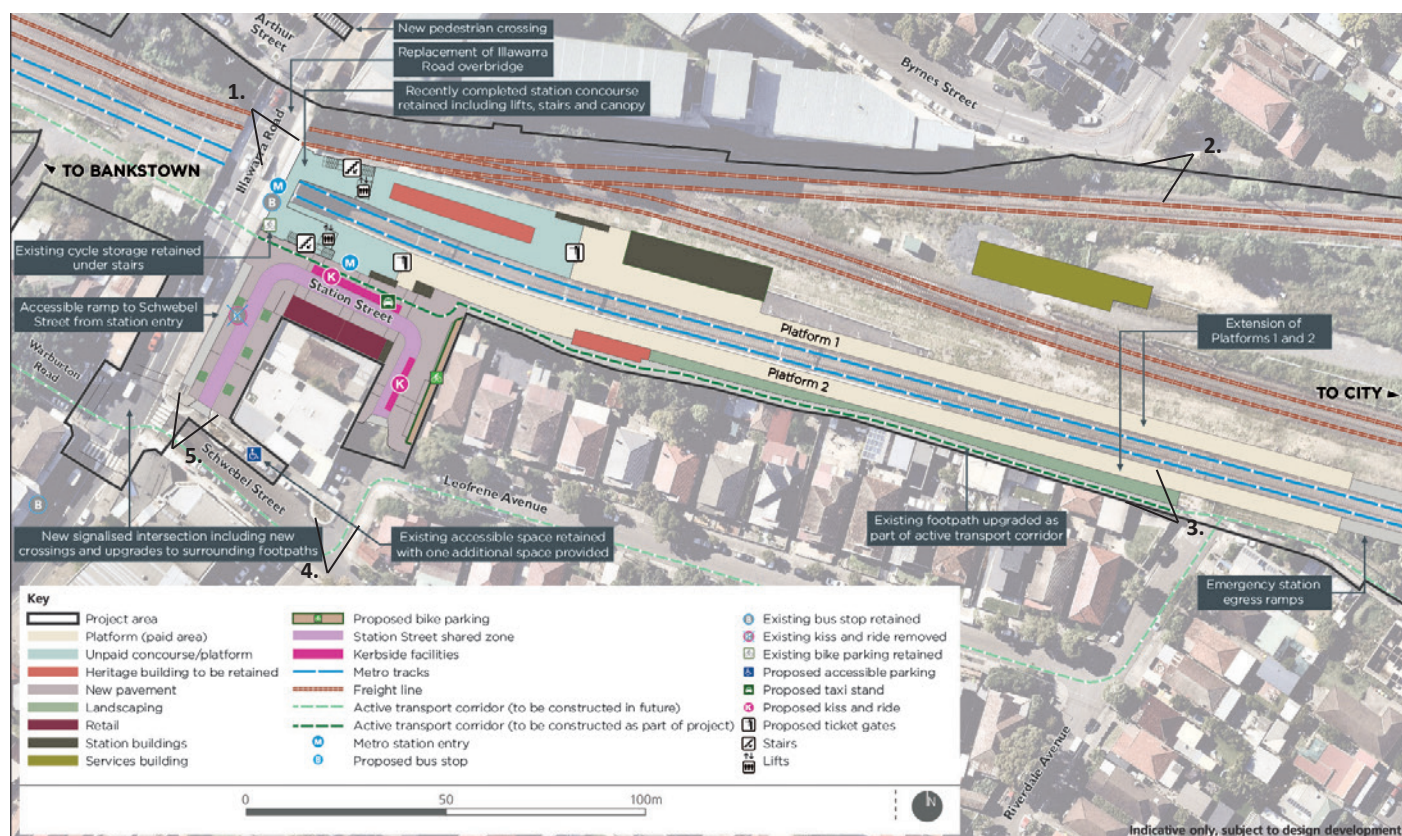


FIGURE 5.1 VIEWPOINT LOCATION PLAN

5.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to the Marrickville Station site:

1. View southeast from Illawarra Road
2. View southwest from O'Hara Street playground
3. View north from Riverdale Avenue
4. View north from Schwebel Street
5. View north from Station Street.

Refer to Figure 5.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Marrickville Station, identified in the representative viewpoint assessment and site visit observations.

Viewpoint 1: View southeast from Illawarra Road

The main station entry on Illawarra Road bridge is the focal point in this view. This entry has been recently upgraded as part of the Transport Access Program (TAP), including the new aerial concourse addressing the Illawarra Road bridge, with a canopy structure (centre of view), lifts and stairs to platforms (left of view). The Illawarra Road (foreground of view) is a busy corridor with one lane in each direction and bus stops. In this section, the bridge rises steeply, with narrow footpaths. The bridge has protective screens above the brick side walls, obstructing the station platforms and rail corridor in this view. In the background (right of view) two storey commercial and retail shopfronts can be seen on Illawarra Road, with a built form at a similar height and scale to the existing station architecture.

Construction: Demolition and reconstruction of the Illawarra Road bridge would be seen in the foreground of this view. The station entry, however, would be retained, including the concourse, overhead canopy, stairs, and lifts. Establishment of the bridge construction worksite would comprise much of this view, with temporary hoarding and machinery likely to obstruct views to the station entry. Due to the bridge construction works, there would be a considerable reduction in the amenity of this view which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The new Illawarra Road bridge would be reinstated in the foreground of this view. The Illawarra Road station entry would remain as a focal point. The new station platforms, platform buildings, platform canopies and trains would not be visible. Overall, there would be no perceived change in the amenity of this view, which is of local sensitivity. This results in a **negligible visual impact** during operation.



1 VIEW SOUTHEAST FROM ILLAWARRA ROAD

5. MARRICKVILLE STATION

Assessment of daytime visual impact



2 VIEW SOUTHWEST FROM O'HARA STREET PLAYGROUND



3 VIEW NORTH FROM RIVERDALE AVENUE

Viewpoint 2: View southwest from O'Hara Street playground

This playground is set below the rail corridor and separated from the track by chainmesh fencing and low shrubs, visible in the foreground of view. The Metropolitan Goods Line is located on embankment, visible in the middle ground, behind the chainmesh fencing and vegetation. Beyond this, the T3 Bankstown Line track, trains, overhead wiring and support structures are visible. The eastern end of heritage listed buildings on Platform 1 and 2 can be glimpsed from this location (although obstructed by a train in this image). Mature trees along the path (Route L5) to the south of the corridor are also visible in the background, beyond the T3 Bankstown Line. A multi-storey mixed use development is located on the triangular site immediately north of the station at the corner of Byrnes Street and Illawarra Road (right of view), including seven storeys of apartments which overlook the corridor.

Construction: A construction compound would be established in the centre middle ground of this view, extending south of the Metropolitan Goods Line. Installation of the station services building immediately south of the Metropolitan Goods Line would also be visible. Equipment used to construct the new station platform extensions and works on Station Street may be seen above the compound. The vegetation along the southern path would also be removed reducing the vegetated character of this view. As the rail corridor is slightly elevated above the adjacent streetscape, these elements would be visually prominent. This activity would be viewed by users of O'Hara Street playground and nearby residents living in O'Hara Street and Byrnes Road (including the multi-storey building, right of view). It is expected that there would be a considerable reduction in the amenity of this view which is of neighbourhood sensitivity. This results in a **minor adverse visual impact** during construction.

Operation: At park level, the planting and fence along the southern boundary would remain. Beyond the park, trains using the Metropolitan Goods Line would continue to be seen. Immediately south of this line, vegetation within the rail corridor would have been removed and the station services building would be visible in the centre of this view. The new permanent way alignment would be generally in the same location and the extended platforms and platform canopies would be seen, extending across the view. The heritage platform buildings are unlikely to be visible, due to intervening elements, and with the platform 2 building having been relocated to the east. Vegetation to the south of the corridor would also be replaced with new trees and would be less prominent at this distance. Due to the scale, height and contrast of the proposed station services building and station, it is expected that the project would result in a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 3: View north from Riverdale Avenue

The rail corridor is the focal point of this view, elevated on an embankment of ballast, with overhead wiring and support structures, power poles and security fencing aligned along the corridor. Trains are visible travelling across the view. A multi-storey mixed use development can be seen immediately north of the station at the corner of Byrnes Street and Illawarra Road (centre background of view), including seven storeys of apartments. The path along the south of the corridor (L5 cycleway), is visible (left of view), consisting of a narrow concrete path, located to the rear of residences, and linking Victoria Road with the Station Street station entry. There is graffiti on the walls and fences adjacent to this path.

Construction: A worksite would be seen, in the middle ground of this view, extending along the existing rail corridor. This work would include, realignment of the existing permanent way and construction of the extended station platforms and platform canopies, which would rise above the surrounding landform. The southern footpath would be closed for renovation and trees along this route would be removed. This activity would contrast with the residential setting, creating a considerable reduction in the amenity of this view which is of neighbourhood sensitivity. This results in a **minor adverse visual impact** during construction.

Operation: The alignment of the permanent way would be generally in the same location, raised up on embankment and with perimeter security fencing. The new platforms, platform canopies and trains would be seen across the centre of this view. These elements would be elevated and rise above the adjacent residential properties on Leofrene Avenue. A new active transport corridor would replace the existing path, providing a pedestrian corridor between Riverdale Avenue and the Station Street station entry. The new active transport corridor would improve the visual edge between the rail corridor and adjacent residential properties, including new tree planting, surfaces finishes and fencing. However, the proximity and scale of the station works would contrast to the adjacent residential setting. There is expected to be a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **negligible visual impact** during operation.

5. MARRICKVILLE STATION

Assessment of daytime visual impact



4 VIEW NORTH FROM SCHWEBEL STREET

Viewpoint 4: View north from Schwebel Street

This view includes Leofrene Avenue in the middle ground, and Station Street extending from the foreground of this view to become a narrow rear lane in the background. On Leofrene Avenue and Schwebel Street, to the east (right of view), single storey residential properties with street trees, low fences and brick walls can be seen. To the west (left of view) the rear windows and vehicular access to retail properties on Station Street can be seen. This includes heritage character low set brick buildings in the background. The Station Street entry to Marrickville Station is obstructed by built form in the fore and middle ground of this view. A leafy backdrop filters views to the multi-storey mixed use development located immediately north of the station.

Construction: Number 1 Leofrene Avenue, in the centre of this view, would be demolished, as would several retail properties (2-4 and 6-12 Station Street) in the background of this view, on the Station Street laneway. A construction site would be established across this area and in the northern part of Station Street (background of view). The retail buildings, seen in the foreground (left of view), would be retained. This construction activity would be clearly visible in the middle and background of the view and be visually prominent. Overall, there would be a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity. This would result in a **minor adverse visual impact** during construction.

Operation: Views to the Station Street entrance would be opened up, and a widened plaza and a 'shared zone' would be seen next to the entry, in the background of this view. This streetscape would include street trees, new pavement, taxi and kiss and ride bays and cycle parking. Additional retail buildings would also be seen to the west (left of view) on Station Street, opposite the station. It is expected that these changes would result in a noticeable improvement in the amenity



5 VIEW NORTH FROM STATION STREET

of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 5: View north from Station Street

The Station Street station entrance is the focal point in this view, seen in the middle ground at the end of Station Street. The rail corridor is located below Illawarra Road bridge. The heritage listed overbridge and station entry on Illawarra Road are visible (centre left of view). Both station entries have been recently upgraded as part of the Transport Access Program (TAP), including a new aerial concourse adjoining the Illawarra Road bridge, with a canopy structure, lifts and stairs to platforms (centre of view). The Station Street entry has also been updated including improvements to the Station Street streetscape. Built form addressing the eastern side of Station Street, in the foreground, consist of single and double storey terrace buildings with shopfronts and awnings. A multi-storey mixed use development located immediately north of the station can be seen in the centre background of view. A row of mature pine trees along the rail corridor boundary filter views to this building.

Construction: The north part of Station Street (background of view) would be converted into a worksite. Demolition of several retail properties (2-4 and 6-12 Station Street) would be visible within this worksite. The retail buildings seen in the foreground (right of view) would be retained. The Illawarra Road station entry would be maintained, however, the Illawarra Road bridge would be demolished and rebuilt, with an accessible ramp along Station Street. This construction activity would be clearly visible in the fore and middle ground of the view. Overall, construction activity would be prominent and there would be a considerable reduction in the amenity of this view, which is of local sensitivity. This would result in a **moderate adverse visual impact** during construction.

Operation: The Station Street entrance would be retained. A widened plaza and a 'shared zone' would be located next to the entry, in the background of this view, and include shade trees, pavements consistent with the character of the finishes along Station Street in the fore and middle ground of this view. Additional retail buildings would also be glimpsed adjacent to the station. An accessible ramp would be visible to the western side of Station Street (left of view) aligned parallel with Illawarra Road. The Illawarra Road bridge would also have been reconstructed and have a contemporary character. Due to the minimal change visible, it is expected that this would result in no perceived change in the amenity of this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

5. MARRICKVILLE STATION

Assessment of night-time visual impact

5.7. Assessment of night-time visual impact

The setting of the Marrickville Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definitions). This is due to the combination of the brightly lit station buildings and platforms, and commercial areas at Illawarra Road, and surrounding area of moderately lit residential streets, with lit trains using the adjacent railway corridor.

Construction: There would be night works required at this location during construction. This would include during the 24 hour possession periods, and include 24-hour construction vehicle access via local streets. The night works would be undertaken within the railway corridor and adjacent areas. These works would extend from the existing Marrickville Station to Victoria Road, and north to the Botany Goods line.

The rail corridor is in close proximity to adjacent residential properties, particularly at Leofrene, Riverdale and Charlotte avenues in the south, and O'Hara, Cavey and Queen streets in the north. There are also likely to be elevated views, over the construction compounds and worksites, from residential units in the high rise development on Byrnes Street. From these residential properties, there may be additional light visible including views to both direct light sources and general skyglow above the construction worksite. Properties adjacent to the northern end of Riverdale Avenue and Charlotte Avenue, and backing onto the rail corridor at Leofrene Avenue, are likely to experience the greatest impact. Measures would be put in place to ensure direct light spill does not extend onto neighbouring residential properties.

There are also numerous residential properties on the slopes of adjacent local hillsides, including areas rising to Schwebel Street in the south and Calvert Street in the north. These properties have elevated views

across the corridor, and would be likely to overlook the additional lighting required for construction works. Generally, there would be additional light sources and skyglow seen above the rail corridor. This additional lighting would be largely absorbed into the surrounding night scene.

Overall, it is expected that this lighting would result in a considerable reduction in the amenity of views from residential properties, creating a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting at the new Station Street shared zone and along the platforms extending between Illawarra and Victoria roads. Lighting along the active transport corridor, to the south of the rail corridor, would also be visible. This linear area of increased lighting intensity would be near residential properties on Leofrene Avenue, Riverdale Avenue, Byrnes and O'Hara Streets.

Overall it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity from adjacent residential properties due to the intensification of lighting in close proximity. As this is a medium district brightness environment, these would be a **minor adverse visual impact** at night.

5.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Marrickville Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 5.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Marrickville Station precinct	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial

TABLE 5.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View southeast from Illawarra Road	Local	Considerable reduction	Moderate adverse	No perceived change	Negligible
2	View southwest from O'Hara Street playground	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
3	View north from Victoria Road	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
5	View north from Schwebel Street	Neighbourhood	Considerable reduction	Minor adverse	Noticeable improvement	Negligible
4	View northeast from Station Street	Neighbourhood	Noticeable reduction	Minor adverse	No perceived change	Negligible

TABLE 5.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Marrickville Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

6. DULWICH HILL STATION

Existing environment

6. Dulwich Hill Station

6.1. Existing environment

Dulwich Hill is a predominantly residential area with a character of early twentieth century detached houses. The rail corridor is in a cutting and divides the village centre, which includes a small precinct of heritage character shopfronts and modern development along Wardell Road.

Dulwich Hill Station has a local heritage listing, it includes a single island platform with original platform building, an overhead booking office, access stairs and overbridge of 'aesthetic significance'. The booking office is an understated building, providing station access from Wardell Road. East and west bound passenger rail lines are located either side of the island platform, with the Metropolitan Goods Line further to the north. Commuter car parking is located to the north and south of the rail corridor, shaded by small trees.

Further to the north, the Sydney Light Rail follows the former Rozelle freight rail corridor. The light rail stop includes a single platform connected to a drop off zone and parking at Bedford Crescent by a combined lift and stair structure. The Dulwich Hill Light Rail Stop is located a short distance from the station, however, the pedestrian connection is indirect being via Bedford Crescent and Wardell Road. To the west, Jack Shanahan Park is a local skatepark located between the light rail and the metropolitan goods and T3 Bankstown Line at Ness Avenue and with a pathway connection to the Dulwich Hill Light Rail Stop.

The South Dulwich Hill HCA is located to the north and south of the corridor. In this area, a high concentration of early twentieth century detached Federation style houses create a unified heritage character. The streetscapes possess an open, suburban quality due to the low density and single storey residential development with wide verges and generous building setbacks. In the remaining areas to the north and south of the rail corridor a variety of residential buildings including flats and apartments (up to three storeys), duplexes and detached houses surround Wardell Road commercial precinct. There are two commuter car parks in Bedford Crescent and Ewart Lane, north and south of the rail corridor respectively, overlooking the station.

Existing environment



- 1 DULWICH HILL STATION
- 2 WARDELL ROAD, SOUTH OF STATION
- 3 BEDFORD CRESCENT ENTRANCE TO DULWICH HILL LIGHT RAIL STATION
- 4 ENTRANCE TO DULWICH HILL LIGHT RAIL STATION FROM JACK SHANAHAN RESERVE
- 5 EWART LANE

6. DULWICH HILL STATION

Planning guidance

6.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Dulwich Hill Station precinct.

Marrickville Local Environmental Plan, Marrickville Council, 2011

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the south of the station along Wardell Road are permitted to reach maximum building heights of up to 23 metres. To the north, building heights at the eastern end of Bedford Crescent are permitted to reach 14 metres, whereas the western end is capped at 9.5 metres.

Heritage

Dulwich Hill Station has a local heritage listing (also on the RailCorp Section 170 Heritage and Conservation Register), which includes an overhead booking office, access stairs and overbridge of 'aesthetic significance'. The station is also adjacent to the South Dulwich Hill HCA, which contains a high concentration of detached, single storey Federation bungalows stretching either side of the rail corridor between Cannonbury Grove and Livingstone Road. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Land use zoning

Dulwich Hill has a small retail centre focused upon Wardell Road and extending to the north and south of the station. This precinct is zoned B1 – Neighbourhood Centre, providing retail and service based shops. Objectives of this zone include: *'To provide a range of small-scale retail, business and community uses' and 'to provide for spaces,*

at street level, which are of a size and configuration suitable for land uses which generate active street-fronts.' (Part 2, Land Use Table - Zone B1). Most of the land use around this retail precinct is zoned R1 – General Residential and R2 – Low Density Residential, with the exception of a small block of land to the south of the station zoned R4 – Medium Density Residential, between Ewart Street, Murray Lane, Bayley Street and Dudley Street. The objectives of these zones relate to the provision of *'housing needs of the community'* (Part 2, Land Use Table - Zone R1, R2 and R4).

Marrickville Development Control Plan, Marrickville Council, 2011

Part 9 of the DCP divides the Local Government Area into 47 planning precincts. Each precinct has an existing and desired future character to guide development within the area. The project is located at the junction of three precincts, including the 'Dulwich Hill Station North Precinct' (Precinct 18), 'Ness Park Precinct' (Precinct 21) and 'Dulwich Hill Station South Precinct' (Precinct 22).

The Dulwich Hill Station North Precinct covers the northern part of this site including the station, adjacent commercial centre along Wardell Road and surrounding low-density residential land to the north. Relevant objectives that relate to the future desired character of this precinct include:

- *'To protect significant streetscapes and/or public domain elements within the precinct including landscaping, fencing, open space, sandstone kerbing and guttering, views and vistas and prevailing subdivision patterns.'* ... and
- *'To retain, maintain and enhance existing pedestrian and cyclist connectivity to Dulwich Hill railway station.'* (Part 9, Clause 9.18)

To the north, the 'Ness Park Precinct' covers residential land to the east of Wardell Road. Relevant objectives that relate to the future desired character of this precinct include:

- *'To protect significant streetscapes and/or public domain elements within the precinct including landscaping, fencing, open space, sandstone kerbing and guttering, views and vistas and prevailing subdivision patterns.'*
- *'To support pedestrian and cyclist access, activity and amenity including maintaining and enhancing the public domain quality.'* (Part 9, Clause 9.21)

To the south, the 'Dulwich Hill Station South Precinct' covers the commercial centre along Wardell Road and surrounding residential land to the south of the station. Relevant objectives that relate to the future desired character of this precinct include:

- *'To protect and enhance the character of streetscapes and public domain elements within the precinct including views and vistas, prevailing subdivision patterns, building typologies, materials and finishes, setbacks, landscaping, fencing, open space, carriageway and footpath design and kerb and guttering.'*
- *'To promote sustainable transport (public transport, walking and cycling) by providing higher development density around Dulwich Hill Station; restricting the provision of off-street car parking around Dulwich Hill Station; increasing provision of parking and car -sharing (off-street and on -street) and carefully managing general on -street car parking.'* (Part 9, Clause 9.22)

Sydenham to Bankstown Urban Renewal Corridor Strategy: Dulwich Hill Station Precinct, Department of Planning and Environment, 2017

This strategy proposes the following land use and associated built form changes within the immediate surrounds of Dulwich Hill Station:

South of the station

- Main street shop top housing along Wardell Road
- New urban plaza on Ewart Lane at station entrance
- Medium-high rise housing (maximum of 8 storeys) along Ewart Lane and Bayley Street, transitioning to low rise residential development to the south-east and south-west
- Retain the *'heritage and conservation areas which contribute to the character of the area along with the 'village-like' feel of the neighbourhood'* (p.2).

North of the station

- Medium rise housing along Bedford Crescent and west of Hercules Street
- Medium to high rise housing east of Hercules Street with a new linear park along the light rail corridor
- Low rise housing (2-3 storeys) north of Keith Lane and along The Parade, between Terrace and Garnet Lanes
- Improvements to 'quality of the footpaths, street trees and lighting, especially around Wardell Road and the railway station' (p.2).

6. DULWICH HILL STATION

Character and components of the project

6.3. Character and components of the project

Construction phase

The following section describes the construction phase for Dulwich Hill Station:

- Establishment of a worksite including demolition of:
 - permanent ways (railway lines, ballast, overhead lines) between platforms 1 and 2
 - parts of the commuter car park on Ewart Lane and southern side of Bedford Crescent, including on-street parking and adjacent footpath
 - overhead booking office and stairs (heritage listed) on Wardell Road (following construction of new footbridge)
- Removal of approximately 4 - 6 trees including:
 - along the northern rail corridor
 - on south side of Bedford Crescent
- Cessation of commercial property leases at the station
- Construction compound located in Ewart Lane, south of the corridor, at the existing commuter car park between Wardell Road and Ewart Street
- Widening the rail corridor to the south
- Installation of a new retaining wall to replace the exposed sandstone cutting
- Temporary closure of footpaths:
 - on western side of Wardell Road overbridge
 - between Ewart Lane and Wardell Street
 - on southern side of Bedford Crescent
- Temporary closure and retrofit of existing station building on platform 1-2
- Protection and maintenance of Wardell Road overbridge

- Construction vehicle movement via Wardell Road, Ewart Street, Ewart lane and Ness Avenue.

Operation phase

The following section describes the operational phase for Dulwich Hill Station:

- Reconstructed curved island platform approximately 170 metres long
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- New retaining wall along the southern rail corridor boundary
- New overhead footbridge between Bedford Crescent and Ewart Lane (linking with existing light rail stop access), vertical transport connections to platforms and Ewart Lane, and overhead canopy
- New platform canopies along metro platforms 1 and 2
- Emergency egress ramps and stair between the western end of the platforms and Ewart Lane
- New northern station entry and transport interchange on Bedford Crescent including:
 - kiss and ride
 - taxi parking
- New southern station entry and transport interchange on Ewart Lane including:
 - stair and lift access to concourse
 - services building
 - bike parking area
 - reconfigured commuter car park in Ewart Lane
 - active transport corridor (incorporating the L9 cycleway) along Ewart lane

Character and components of the project



DULWICH HILL STATION, ARTIST'S IMPRESSION

- Retained existing structures:
 - platform building on platform 1-2 (heritage listed)
 - Wardell Road overbridge (heritage listed)
 - light rail stop entry on Bedford Crescent, including lift and stairs
 - parking on north side of Bedford Crescent
 - bus stops on Dudley Street and Wardell Road
- New trees and planting at the new southern station entrance plaza, Ewart Lane and on Bedford Crescent
- Increased rail traffic through platforms 1 and 2.

6. DULWICH HILL STATION

Sensitivity levels

6.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Dulwich Hill Station

Dulwich Hill Station functions as a suburban passenger rail station and is used by residents. The location of a light rail stop and bus stops near this station results in it functioning as a local transport hub, with the opportunity for interchange between modes. The station buildings are local heritage listed, increasing its importance as a visual feature within the local area. The landscape and visual values of the Dulwich Hill Station are therefore of **local sensitivity**.

Dulwich Hill Light Rail Stop

The Dulwich Hill Light Rail Stop is used by those travelling in Sydney's inner west, between Dulwich Hill and Lilyfield and beyond to the Sydney CBD. The location of this station adjacent to the Dulwich Hill railway station increases its importance as a local transport hub with opportunities for interchange between transport modes. Views from this precinct are largely contained by landform to the east and vegetation to the west. The landscape and visual values of the light rail stop are of **local sensitivity**.

Jack Shanahan Park

Following renovations in 2014, the Jack Shanahan Park (referred to locally as the Dulwich Hill Skatepark) includes a new multi-use court and large street skate area. This facility attracts a wide range of users during the day and night. Mature trees and parkland areas provide amenity for the local area and recreational opportunities for the community. The landscape and visual values of this precinct are of **local sensitivity**.

Wardell Road commercial precinct

Wardell Road provides a local traffic and pedestrian thoroughfare through Dulwich Hill, linking Marrickville Road in the north with Permanent Avenue and the Cooks River to the south. The rail corridor is in a cutting as it passes under Wardell Road, dividing this precinct. This area functions as a local retail centre and provides access to both the Dulwich Hill Station and Dulwich Hill Light Rail Stop. The landscape and visual values of Wardell Road are of **local sensitivity**.

South Dulwich Hill heritage residential area

This precinct has a unified heritage character and forms part of South Dulwich Hill HCA in the Marrickville LEP. These areas are used primarily by residents and visitors to the neighbourhood. Due to the heritage character of this area, the landscape and visual values of this precinct are of **local sensitivity**.

Dulwich Hill residential areas

This area is predominantly used by residents of the flats and apartments (up to three storeys), duplexes and detached houses within this precinct. The landscape and visual values of this precinct are of varied quality and are of **neighbourhood sensitivity**.

Sensitivity levels



- 1 WARDELL ROAD COMMERCIAL PRECINCT
- 2 BEDFORD CRESCENT COMMUTER PARKING
- 3 SOUTH DULWICH HILL HERITAGE RESIDENTIAL AREA
- 4 SHOPFRONT ON BEDFORD CRESCENT
- 5 EWART ROAD RESIDENTIAL AREA

6. DULWICH HILL STATION

Assessment of landscape visual impact



DULWICH HILL LIGHT RAIL STOP



JACK SHANAHAN RESERVE

6.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Dulwich Hill Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Dulwich Hill Station has one main entry on the west side of the Wardell Road overbridge, including a small heritage listed overhead booking office and concourse level with the overbridge. At this location, the rail corridor is in cut, and an uncovered staircase provides access between the concourse and a single island platform. Access and connectivity to and around the station is limited to this one entry. Footpaths along the overbridge are narrow, and the Wardell Road approach to the overbridge is very steep from the south.

Commuter car parking is located to the north and south of the rail corridor in Bedford Crescent and Ewart Lane. Pedestrian access to the station along Ewart Lane is constrained by the steep terrain, narrow road corridor and lack of footpaths. The Ewart Lane car park and streetscape has no planting, presenting a poor pedestrian environment and general level of amenity.

North of the station, the terrain is quite flat. There is a small drop off zone and car park in Bedford Crescent, with streetscape planting and narrow footpaths on both sides linking to the Wardell Road commercial area and overbridge. The Sydney Light Rail L1 Dulwich Hill Line terminus is also accessed from Bedford Crescent by a combined lift and stair structure. The light rail stop includes an at grade crossing to Jack Shanahan Park, a local skatepark located between the light rail and the metropolitan goods and T3 Bankstown Line at Ness Avenue.

Overall, access around the station is constrained and the lack of shade and narrow footpaths present an uncomfortable pedestrian environment. The wide rail corridor (passenger and freight) divides the community and there is indirect access from

the station to the light rail terminus and Jack Shanahan Park.

Construction: During the initial stages of construction, the existing station entry would remain open, including the overhead booking office and stairs. A construction compound would be established to the south of the station adjacent to Ewart Lane, requiring the removal of the existing commuter car park. The worksite would also be established on Bedford Crescent in the north, requiring the removal of some trees along this edge of the rail corridor.

The worksite would extend over the central portion of the station platforms between Bedford Crescent and Ewart Lane to facilitate the construction of the new footbridge. There would be a reduced platform area available for commuters during this time.

Construction of the northern station entrance would require demolition of the southern side of Bedford Crescent, including the removal of several street trees, some on-street parking and a portion of the adjacent footpath.

The light rail lift and stair at Bedford Crescent, however, would remain open during construction, requiring the diversion of the existing footpath. The removal of commuter parking and the closure or diversion of footpaths in some areas, would reduce the legibility and accessibility of this precinct by vehicle and for pedestrians. However, the continued use of the existing station entry would assist in wayfinding for customers during the initial stages of construction.

Once the new footbridge and station entrances at Bedford Crescent and Ewart Lane have been constructed, the overhead booking office and stairs would be removed, requiring temporary closure of the footpath on the western side of the Wardell Road overbridge. This would reduce east west connectivity within the precinct during this time.

There would continue to be a reduced platform area available for commuters as demolition works occur to the east of the station and on Wardell Road. The continued presence of construction would reduce the legibility of the station entries and approach routes. Legibility of the station precinct would be reduced somewhat during this time while new routes and connections are learned.

The staged works, which require several changes to station access, removal of street trees, closure of car parks, and the temporary diversion of pedestrian pathways, would reduce the connectivity, legibility and amenity of this station precinct. Therefore, it is expected that there would be a considerable reduction in the landscape quality and functioning of this precinct which is of local sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The location of the new station entry, approximately 65 metres to the west of Wardell Road, and off the main pedestrian and vehicular thoroughfare makes access to the station somewhat less direct for pedestrians and less visually prominent from the high street. However, by moving the station entry away from the heavily trafficked Wardell Road, where the public realm is highly constrained, more spacious and well laid out concourse and plaza spaces would be created. Furthermore, the single station entrance on Wardell Road would be replaced by two new station entrances, at Bedford Crescent in the north and Ewart Lane to the south.

The northern entrance would connect directly with the existing light rail stop lift and stair structure and include a kiss and ride zone, and taxi parking. This would consolidate access and improve pedestrian safety (CPTED) and legibility particularly for those customers transferring between the light and commuter rail network. The footpath and street trees in this location

would also be reinstated, restoring local amenity.

The southern station entrance would have stair and lift access to the concourse. There would be improved access and legibility for cyclists with a bike parking area. There would also be an active transport corridor (reinstating the L9 cycleway) along the south of the corridor.

There would be new planting in the entry plazas at Bedford Crescent and Ewart Lane, and the canopy structures extending over the footbridge and metro platform would provide shade, comfort and amenity in meeting and waiting areas.

The 'sense of place' experienced at the Dulwich Hill Station would be transformed by the project, with the improved prominence of the station architecture, and new location, set back from Wardell Road. Although the prominence of the heritage architecture of the station would be reduced, the introduction of new plazas would provide opportunities for locally distinctive placemaking initiatives. The integration of several public transport modes and improvements to the accessibility of the station would support urban renewal opportunities.

Although the removal of the heritage listed overhead booking office and stairs would alter the legibility, 'sense of place' and character of the precinct, the platform building would be retained and new station entrances and overall design would result in a noticeable improvement in the functionality of this precinct, which is of local sensitivity. This results in a **minor beneficial landscape impact** during operation.

6. DULWICH HILL STATION

Assessment of daytime visual impact

6.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

- 1. View south from Jack Shanahan Reserve
- 2. View southeast from Dulwich Hill Light Rail Stop
- 3. View south from Bedford Crescent to Dulwich Hill Light Rail Stop entrance
- 4. View west to Dulwich Hill Station from Wardell Road rail bridge
- 5. View west from corner of Wardell Road and Dudley Street
- 6. View southeast from Ewart Lane.

Refer to Figure 6.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction

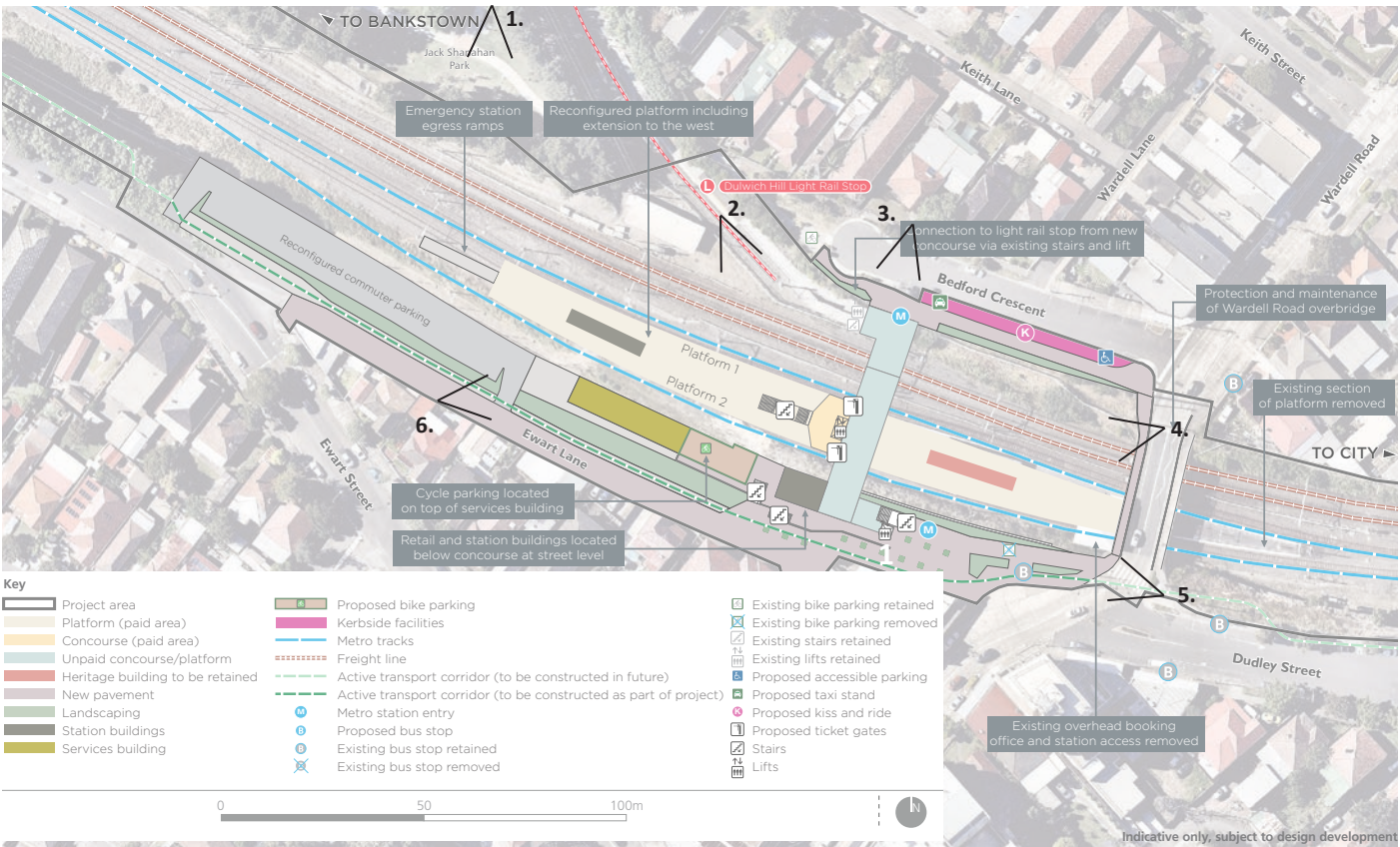
and operation of Dulwich Hill Station, identified in the representative viewpoint assessment and site visit observations.

Viewpoint 1: View south from Jack Shanahan Reserve

The Jack Shanahan Reserve and skate park is visible in the foreground of this view. The rail corridor can be seen, filtered views through intervening parkland vegetation, creating the southern park boundary. In this view the rail corridor is elevated on embankment and the view includes trains, overhead wiring and support structures, as well as corridor perimeter fencing. Residential buildings in Ewart Lane can be glimpsed in the background.

Construction: The Metropolitan Goods Line, would continue to be seen in the foreground of this view. Beyond this, demolition and

FIGURE 6.1 VIEWPOINT LOCATION PLAN



reconstruction of the platform would be occurring, including widening and extending the platform to the west. The rail corridor widening works to the south would be seen in the background, including construction of a new retaining wall rising above the track. Above the retaining wall, construction of the combined service and the bike parking area would also be seen, partly obstructing views to residential buildings on Ewart Lane, in the background. This activity would create a noticeable reduction in the amenity of this view which is of local sensitivity. This results in a **minor adverse visual impact** during construction.

Operation: From this location, the new metro platform, platform canopy structures, and segregation fencing along the metro track would be visible, beyond the Metropolitan Goods Line. The combined service and bike parking area in Ewart lane would also be visible, in the background, partly obstructing the view to commercial and residential areas south of the station beyond. These changes would comprise a small part of this view, and the new structures would be largely consistent with the character of the existing station and rail corridor. Therefore, the project would not create a perceived change in the amenity this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 2: View southeast from Dulwich Hill Light Rail Stop

This view is from the platform at Dulwich Hill light station. Security fencing along the platform and the Bedford Crescent lift shift and staircase dominate the fore and middle ground. The platform is level to the adjacent T3 Bankstown Line rail corridor, offering filtered views through security fencing to the sandstone cuttings, track, platforms, overhead wiring and support structures. Beyond this, the residential towers within Dulwich Hill commercial area along Wardell Street south and Ewart Lane provide a backdrop to this view.



1 VIEW SOUTH FROM JACK SHANAHAN RESERVE



2 VIEW SOUTHEAST FROM DULWICH HILL LIGHT RAIL STATION

6. DULWICH HILL STATION

Assessment of daytime visual impact



3 VIEW SOUTH FROM BEDFORD CRESCENT
TO DULWICH HILL LIGHT RAIL STATION
ENTRANCE



4 VIEW WEST FROM THE CORNER OF
WARDELL ROAD AND DUDLEY STREET

Construction: The light rail lift and stair access at Bedford Crescent would remain open during construction, as would the Sydney Trains network and Metropolitan Goods Line, seen in the fore ground of this view. Demolition and reconstruction of the platform would be clearly visible in the middle ground. The rail corridor widening works to the south would also be visible in the background, including construction of a new retaining wall rising above the track. Above the retaining wall, installation of the footbridge, southern station entrance and adjacent combined services and bike parking area in Ewart Lane would be clearly seen, partially obstructing views to the residential towers in the Dulwich Hill commercial area. This activity would create a noticeable reduction in the amenity of this view which is of local sensitivity. This results in a **minor adverse visual impact** during construction.

Operation: The new metro platform, platform canopy structures, security screens and segregation fencing along the metro track would be visible in the middle ground of this view. Although the curved alignment and general layout of the permanent way would be retained, the rail corridor would be widened to the south, replacing the natural rock face with a concrete retaining wall along the entire length of the metro platform. The new footbridge and canopy structure, extending over the rail corridor, would be a prominent skyline feature, obstructing views to commercial and residential areas to the south of the station. Despite these changes, the new structures would be consistent with the character of the surrounding rail corridors, there would not be a perceived change in the amenity this view. This view is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 3: View south from Bedford Crescent to Dulwich Hill Light Rail Stop entrance

This location represents views from residences in Bedford Crescent and the adjacent commuter car park. The lift shaft, visible in the middle ground of this view, was constructed as part of the Sydney Light Rail L1 Dulwich Hill Line project, and provides access to the Light Rail stop and Jack Shanahan Reserve. The rail corridor is in a cutting and defined by wire mesh fencing and vegetation, concealing views to any rail structures or buildings. Residential towers (up to 7 storeys) within the commercial area of Dulwich Hill along Wardell Street south and Ewart Lane are visible in the background.

Construction: The removal of the commuter car parking to the south of Bedford Crescent, streetscape planting, bollards, footpath and fencing along the rail corridor, would be visible in the middle ground of this view. Works would include installation of the new northern station entrance and footbridge which would be clearly seen in the middle ground, rising above the cutting. This work would be seen in the context of the existing backdrop of built form along Wardell Road and Ewart Lane. The light rail lift and stair access at Bedford Crescent would remain open during construction, requiring the diversion of the existing footpath and associated pedestrian management devices. As the station is in cutting, demolition of the platforms and station buildings would not be visible from this location. It is expected that there would be a considerable reduction in the amenity of this view which is of local sensitivity. This results in a **moderate adverse visual impact** during construction.

Operation: The new northern station entrance, including the footbridge and canopy structure, would be prominent in the middle ground of this view, rising higher than the existing light rail lift structure. An entry plaza with new paving and planting would be created and transform the foreground of this view. Car parking to the east (left of

view) would be replaced with a transport interchange including taxi parking and a kiss and ride zone. As there would be more station structures visible, rising above the existing built form, the project would create a noticeable reduction in the amenity of this view. This view is of local sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 4: View west to Dulwich Hill Station from Wardell Road rail bridge

This is an elevated view over the station from the Wardell Road rail bridge. The entire rail corridor, including sandstone cuttings, track, platforms, station buildings, overhead wiring and support structures are visible in the middle and foreground of this view. To the north of the station (right of view) the Metropolitan Goods Line is aligned parallel to the T3 Bankstown Line and platforms. In the background of the view, the undulating and leafy suburban character of Dulwich Hill south can be seen.

Construction: Demolition and reconstruction of the central island platform would be clearly visible. The rail corridor would be widened to the south, including the removal of the sandstone cutting and construction of a new retaining wall along the entire length of the new platform. The heritage listed platform building would be protected by temporary fencing and hoarding during construction and later refurbished, to be integrated into the operation of the metro platform. A construction compound, and construction of the footbridge, lifts and stairs, southern station entrance would be seen in the middle and background of this view, obstructing district views to the southwest of the station. A construction compound would also be seen in the middle ground of this view, to the north of the station, requiring removal of trees along the cutting and opening up views to the existing light rail lift in the background. Overall, it is expected that there would be a considerable reduction in the amenity of this view which is of local

sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: This view would include the entire metro station seen in context with the surrounding residential and commercial setting of Dulwich Hill. Although the curved alignment and general layout of the permanent way would be retained, the rail corridor would be widened to the south, replacing the natural rock face with a concrete retaining wall along the entire length of the metro platform. The heritage platform building would be retained, however it's visual setting would be altered as the new footbridge, station entrances, overhead and platform canopy structures would be of a larger scale, creating a strong visual contrast with the small scale and detailed heritage architecture. The footbridge would be set back and the height of this canopy would, however, provide some space around this building so that it can be seen in its entirety. From this location, the footbridge and canopy structure would rise above the horizon line, and become a dominant element in this view, obstructing district views. Overall, the project would comprise a large portion of this view, increasing the scale of development seen at the station, therefore there would be a noticeable reduction in the amenity of this view. As this view is of local visual sensitivity, this would result in a **minor adverse visual impact** during operation.

6. DULWICH HILL STATION

Assessment of daytime visual impact



5 VIEW WEST FROM CORNER OF WARDELL ROAD AND DUDLEY STREET

Viewpoint 5: View west from corner of Wardell Road and Dudley Street

This view across the Wardell Road rail bridge and along Ewart Lane includes the overhead booking office as the focal point. This building contains the main station entry and consists of a simple square, timber weatherboard clad building. The rail corridor is in cutting and there is a glimpse of the track, platforms, platform buildings, overhead wiring and support structures filtered views through safety and security fencing. Mature street tree planting (*London planetree* and *Lophostemon species*) along Ewart Street are seen in the background of this view. Beyond this, the undulating and leafy suburban character of Dulwich Hill south provides a backdrop to this view.

Construction: A construction compound and worksite would be located on Ewart Lane, in the middle and background of the view. The compound would be within the rail corridor and would be enclosed by temporary security fencing and hoarding, partially obstructing views to the rail corridor

and associated demolition and construction works required for the rail corridor widening and new metro platform works. Construction of the footbridge and new southern entrance would be seen above the hoarding, including construction of the lift shafts and east facing access stairs. Construction vehicles would be visible when accessing this site via Wardell Road. Following construction of the new station entrances, demolition of the overhead booking office would be visible, unobstructed in the foreground of this view. Reinstatement works at the overbridge, including footpath reconstruction, throw protection screens and security fencing, would also be seen in the foreground of this view. It is expected that there would be a noticeable reduction in the amenity of this view which is of local sensitivity. This results in a **minor adverse landscape impact** during construction.

Operation: The overhead booking office, located in the centre of this view, would have been removed. The new footbridge and canopy structures would be visible in the middle to background of this view, spanning Ewart Lane and Bedford Crescent. A southern station entry also with an overhead canopy would be located adjacent to the street, in the middle ground of this view. Both canopies would rise above the skyline and obstruct distant views. Alongside the new station buildings a plaza would extend along Ewart Lane. This plaza would be shaded by trees, and include new paving and furnishings. It is expected that the rail corridor landscape would have the capacity to absorb these new structures into the view, and that the newly configured station and station architecture would contribute to an improvement in the quality of this view. The project would create a noticeable improvement in the amenity this view, which is of local sensitivity, resulting in a **minor beneficial visual impact** during operation.

Viewpoint 6: View southeast from Ewart Lane

This view represents the outlook from residential properties on Ewart Lane and adjacent residential areas of south Dulwich Hill. The commuter car park and Ewart Lane create a vehicular dominated character to the foreground of this view. To the south (right of view) are several residential properties, of one to five storeys, presenting both garages and windows to the lane. In the middle ground, the permanent way and platforms are visible elevated above the viewer, on an embankment and allowing a clear view to trains, overhead wiring and support structures. Adjacent to the corridor are numerous light posts, corridor fencing, power lines and an electrical substation, adding clutter to the view. The heritage platform buildings are obstructed by these intervening elements and landform. The Wardell Road rail bridge, overhead booking office are visible to the east (right of view) in the background of this view, beyond the commuter car park. To the north (left of view) the upper part of the light rail lift shaft, mature street tree planting between the base of the rail embankment and Ewart Street block views to the light rail corridor.

Construction: The commuter car park would be closed and replaced with the construction compound, surrounded by temporary security fencing and hoarding. Construction vehicles would be seen accessing this site via Ewart Lane. Construction of the footbridge, southern station entrance, and a combined service and bike parking area would be seen to the north (left of view), above the surrounding station level, in the middle ground of this view. This work would extend across the Lane between the viewer and Wardell Road to create a plaza. Following construction of the new station buildings, demolition of the overhead booking office would occur in the background of the view. This activity would be mostly obstructed by the new station buildings. Due to scale and proximity of this work to local residences, it is



6 VIEW SOUTHEAST FROM EWART LANE

expected that there would be a considerable reduction in the amenity of this view which is of neighbourhood sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: The commuter car park would be reconfigured and reinstated to the south, and the foreground of this view would be transformed into a plaza, with new trees filtering views towards the station. In the centre middle ground of the view there would be the new station buildings, and a combined service and bike parking area. These buildings would be visually prominent, rising above the existing light rail lift shaft on Bedford Crescent (left of view), and above surrounding residential development (right of view). The prominence of the footbridge would mark the entry to the station, and reflect the urban density of the built form of the commercial properties, in the background of the view. The metro platforms, canopies, and platform screens within the station, and segregation fencing along the metro track, would also be visible

6. DULWICH HILL STATION

Assessment of night-time visual impact

extending west from the new station buildings (left of view). The new station architecture would contribute to the quality of this view, as would the improvements to the public realm. The introduction of trees would filter and soften lower level views towards the station. Overall, despite the scale of the built form, this would result in a noticeable improvement in the amenity this view. This view is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

6.7. Assessment of night-time visual impact

The setting of the Dulwich Hill Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the railway corridor, adjacent light rail stop and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the station itself, to the southwest at Ewart Lane and north to Bedford Crescent. It is likely that additional light sources and skyglow would be seen from adjacent residential areas on Ewart Lane and Wardell Road. There would also be works on Bedford Crescent, opposite residential properties on the north side of the street. This may result in some additional light visible from these properties including views to both direct light sources and general skyglow above the southeastern area of the station. Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from residential properties on Bedford Crescent and Ewart Lane, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new footbridge and along the platforms extending to the northeast of the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2-3. This lighting would be generally consistent with the intensity of lighting seen at the existing station.

At the southern entry to the station, the location of lighting on the elevated footbridge, and within the plaza would extend the lighting beyond the existing station area, and towards residential areas on Wardell Road and Ewart Lane. Similarly, near Bedford Crescent, the new footbridge, station entry plaza, and interchange areas would be brightly lit. This increased area of increased intensity of lighting would be near residential properties on both Ewart Lane and Bedford Crescent. It is expected that there would be a reduction in amenity in views at night from these locations.

Overall, it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity, particularly from adjacent residential properties, due to the intensification of lighting in close proximity. As this is a medium district brightness environment, the project would give rise to a **minor adverse visual impact** at night.

6.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Dulwich Hill Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 6.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Dulwich Hill Station precinct	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial

TABLE 6.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View west to Dulwich Hill Station from Wardell Road rail bridge	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible
2	View south from Jack Shanahan Reserve	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible
3	View south from Bedford Crescent to Dulwich Hill Light Rail Stop entrance	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
4	View west to Dulwich Hill Station from Wardell Road rail bridge	Local	Considerable reduction	Moderate adverse	Noticeable reduction	Minor adverse
5	View west from corner of Wardell Road and Dudley Street	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial
6	View southeast from Ewart Lane	Neighbourhood	Considerable reduction	Minor adverse	Noticeable improvement	Negligible

TABLE 6.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Dulwich Hill Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

7. HURLSTONE PARK STATION

Existing environment



- 1 VIEW SOUTH TO STATION FROM THE DUNTROON STREET BRIDGE
- 2 CRINAN STREET
- 3 RESIDENTIAL AREAS OF HURLSTONE PARK
- 4 DUNTROON STREET, SOUTH OF STATION
- 5 STATION WITH 101 DUNTROON STREET IN THE BACKGROUND

7. Hurlstone Park Station

7.1. Existing environment

Hurlstone Park is a predominantly residential suburb consisting of mainly detached houses. Hurlstone Park Station and its underbridge at Foord Avenue have local historical importance and are on the RailCorp S170 Heritage and Conservation Register. The station concourse building is a simple brick structure creating an understated address to Floss Street. Within the Station, the platform buildings (c 1915) have a historic character, with gabled roof and decorative mouldings. A distinctive excavated sandstone rock face is located to the rear of platform 2, and is identified as a 'landscape/natural feature' within the heritage listing. East and west bound passenger rail uses are on the southern side of the island platform, with the Metropolitan Goods Line running to the north. The rail corridor is in a cutting and the station is accessed via an overbridge and overhead booking office on Floss Street. The overbridge provides elevated views to the northeast and southwest along the rail corridor, with clear views to the station buildings. The Hurlstone Park commercial centre is located along Crinan Street, spreading north and south of the station, consisting predominantly of single and double storey terrace buildings with shopfronts amidst a low density suburban setting.

7.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Hurlstone Park Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the north and south of the station along Crinan and Duntroon Street are permitted to reach a maximum building height of 14 metres.

Heritage

Hurlstone Park Station is listed in the LEP as a heritage item (also on the RailCorp Section 170 Heritage and Conservation Register). Where relevant this assessment has considered the '*settings and views*' of these items (Heritage conservation, clause (5.10) of the LEP).

Landuse zoning

Hurlstone Park has a small retail centre focused along Crinan Street, to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: '*To provide a range of retail, business and entertainment and community uses*' and '*to facilitate and support investment, economic growth and development for active, diverse and well-designed centres*' (Part 2, Land Use Table - Zone B2). There are two small blocks of land to the north of the station zoned R4 – High Density Residential, focused along Floss and Duntroon streets. The objectives of these zones relate to the provision of '*a variety of housing types within a high density residential environment*' (Part 2, Land Use Table - Zone R4). Otherwise, the land use

around the station is zoned R3 – Medium Density Residential with small pockets of RE1 – Public Recreation.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Hurlstone Park Station Precinct, Department of Planning and Environment, 2017

This strategy proposes the following land use and associated built form changes within the immediate surrounds of Hurlstone Park Station:

South of the station

- Medium rise housing (maximum of 5 storeys) between Floss Street and the rail corridor, and retention of the surrounding low density neighbourhood character.

North of the station

- The '*revitalisation of Crinan Street with cafes, outdoor dining, more retail and specialty shops, and streetscape improvements such as street trees and refurbished shop fronts*' (p.9)
- Heritage-sensitive shop top housing along Crinan and Floss Streets (maximum of 5 storeys) (p.22)
- Medium rise housing between the rail corridor and Crinan Street
- Retain the surrounding low density neighbourhood character with identification of seven potential new heritage conservation areas, including Crinan Street shops, Duntroon Street, Floss Street, Hampden Street, Melford Street and Tennent Parade (p.15).

7. HURLSTONE PARK STATION

Character and components of the project

7.3. Character and components of the project

Construction phase

The following section describes the construction phase for Hurlstone Park Station:

- Establishment of a worksite including demolition or removal of:
 - platforms 1 and 2
 - the heritage listed platform building on platform 1
 - heritage listed overhead booking office on Floss Street, footbridge and stairs
 - heritage listed rock face to rear of platform 2
 - permanent ways (railway lines, ballast, overhead lines) between platforms 1 and 2
- Temporary closure and retrofit of existing station building on platform 2
- Removal of approximately 2 - 5 street trees impacted by this site including on:
 - Duntroon Street
 - Crinan Streets
- Widening of rail corridor to the south and installation of a new retaining wall, to replace the exposed sandstone cutting (heritage listed)
- A construction compound to be located on the Floss Street car park to the north of the station
- Temporary closure of the footpath on north side of Duntroon Street (at proposed station entry), extending over the west side of Floss Street overbridge
- Temporary closure of the Floss Street car park
- Construction vehicle movements along Crinan and Floss streets.

Operation phase

The following section describes the operational phase for Hurlstone Park Station:

- New straight platforms approximately 170 metres long
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Emergency egress ramps and stair between the western end of the platforms and Railway Street
- New station entry with widened concourse at the Duntroon Street overbridge with vertical transport connections to platforms, and canopy
- New platform canopies along metro platforms 1 and 2
- New station entry on the Duntroon Street bridge comprising:
 - new paved plaza
 - throw protection screens on the Duntroon Street overbridge
 - bus stops
- Active transport corridor to the south of the station
- Existing structures to remain:
 - heritage listed building on platform 2 (retrofit for metro station use)
 - heritage listed rock face to rear of platform 2
- New services building in rail corridor, southwest of station near Railway Street
- New pedestrian crossing at:
 - Duntroon Street
 - Crinan Street
- Kiss and ride, and taxi stand northeast of the station on Floss Street
- Accessible parking to the south of the station on Duntroon Street
- Bike parking area in the Floss Street carpark
- Increased rail traffic through platforms 1 and 2.



7.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Hurlstone Park Station

Hurlstone Park station functions as a suburban rail station. It is used by residents and provides an important transport hub for the local community. It is also a local heritage item (on both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register) and a visual feature within the local area. The excavated rock face to the rear of Platform 2 is identified as a 'landscape/natural feature' in the listing statement (RailCorp Section 170 Heritage and Conservation Register). Hurlstone Park Station is therefore of **local sensitivity**.

Crinan Street commercial precinct

Crinan Street provides a local traffic and pedestrian thoroughfare through Hurlstone Park, linking Canterbury Road in the north with the train station. It functions as a traditional retail precinct, spreading north and south of the train station. There is a small commuter car park overlooking the station, immediately north of the rail corridor. The landscape and visual values of this precinct are of **local sensitivity**.

Hurlstone Park residential precinct

Streets within this precinct include a high concentration of single storey detached houses surrounding the commercial precinct, with some apartment and flat development along the rail corridor, near the station in Floss Street. This area is predominantly used by residents and their visitors. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

HURLSTONE PARK STATION FROM FLOSS STREET, ARTIST'S IMPRESSION



CRINAN STREET CAFES

7. HURLSTONE PARK STATION

Assessment of landscape impact

7.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Hurlstone Park Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Hurlstone Park Station has one main entry on the Floss Street overbridge, to the east of the station. The rail corridor is in a cutting and a small overhead booking office provides stair access to platform 2 on the south and an island platform on the north. Access and connectivity to and around the station is restricted by this single entry point. Bus stops for interchange are located on the overbridge, outside the station entry, where there is also a pedestrian crossing. There is no taxi and kiss and ride provision. There are some bike racks on the station concourse.

A small commuter car park is located to the north of the station in Floss Street, shaded by street trees and pathways on both sides. Further north, a row of local shops along Crinan Street forms the village centre. Approaches to the station from the centre are relatively steep. However, the narrow carriageway, low vehicular speed and concentration of single and double storey terrace buildings with awnings shading adjacent footpaths provides a comfortable and attractive public domain for pedestrians.

A distinctive excavated sandstone rock face is located to the rear of platform 2, and is identified as a 'landscape/natural feature' within the heritage listing.

Construction: The temporary structures required to maintain operations during construction would be located to the west of the existing station, set back from the Duntroon Street overbridge. These structures would not be directly connected to the high street and residential areas, reducing the accessibility and legibility of the station and precinct.

The Floss Street car park would be closed and replaced by a temporary construction compound. The existing heritage listed overhead booking office, footbridge and stairs would be demolished and a construction site established. Temporary access to the worksite and compound would be from Railway Street, Foord Avenue, Floss Street car park and Floss Street (east of overbridge). The heritage listed platforms and building on platform 1 would be also be removed and reconstructed. A worksite would be established along the southern side of the track, between Foord Avenue and the station, requiring removal of several trees.

This work would require temporary closure of footpaths and diversions of pedestrian traffic along the Duntroon Street overbridge, Floss, Crinan and Duntroon streets. There would also be a reduced area of platform available for commuters during this time, reducing the accessibility of the suburban rail network from this station.

The removal of commuter parking, and the closure and diversion of footpaths in some areas would reduce the legibility and accessibility of this precinct by vehicle and for pedestrians. Due to the scale of works, and demolition of the entire station, this construction activity would result in a considerable reduction in the landscape quality and functionality of this precinct. As this precinct is of local sensitivity, this would result in a **moderate adverse landscape impact** during construction.

Operation: The existing station entrance on Duntroon Street would be replaced with a new station entrance building, spanning the width of the overbridge, and with a generous plaza and concourse area. This would provide a safe and legible station entry, well connected to the Crinan Street commercial area.

To the north and south of the new station entrance there would be some landscape treatment and pavement resurface works, to integrate the station with the local streets. This would include the reinstatement of the

Assessment of landscape impact

Floss Street commuter carpark, and new bike parking area to the west. There would be upgraded pavements and new pedestrian crossings on Crinan Street and across the Duntroon Street bridge, where bus stops would be located. These improvements would extend south to Floss Street in the east where taxi and kiss and ride facilities would be located, and south to Duntroon Street where accessible parking would be located. These works would improve pedestrian safety and streetscape amenity.

The trees and canopy structures, extending along the footbridge and metro platform, would also provide shade, comfort and amenity for customers. The heritage listed excavated rock face to the rear of Platform 2 would be retained, protecting this important station landscape feature.

The new station architecture would have a greater visual presence within the village than the relatively understated existing station buildings. Furthermore, the location of the new station entry would provide a direct access to the commercial centre on Duntroon Street, supporting urban renewal opportunities.

Although the removal of the heritage listed overhead booking office, footbridge and stairs would alter the 'sense of place' and character in these streetscapes, the new station building would improve legibility of the station entry, and the design would have an improved character and prominence.

Overall, this would result in a considerable improvement in the landscape quality and functionality this precinct, which is of local sensitivity. There is expected to be a **moderate beneficial landscape impact** during operation.



FLOSS STREET



CRINAN STREET COMMERCIAL PRECINCT

7. HURLSTONE PARK STATION

Assessment of daytime visual impact

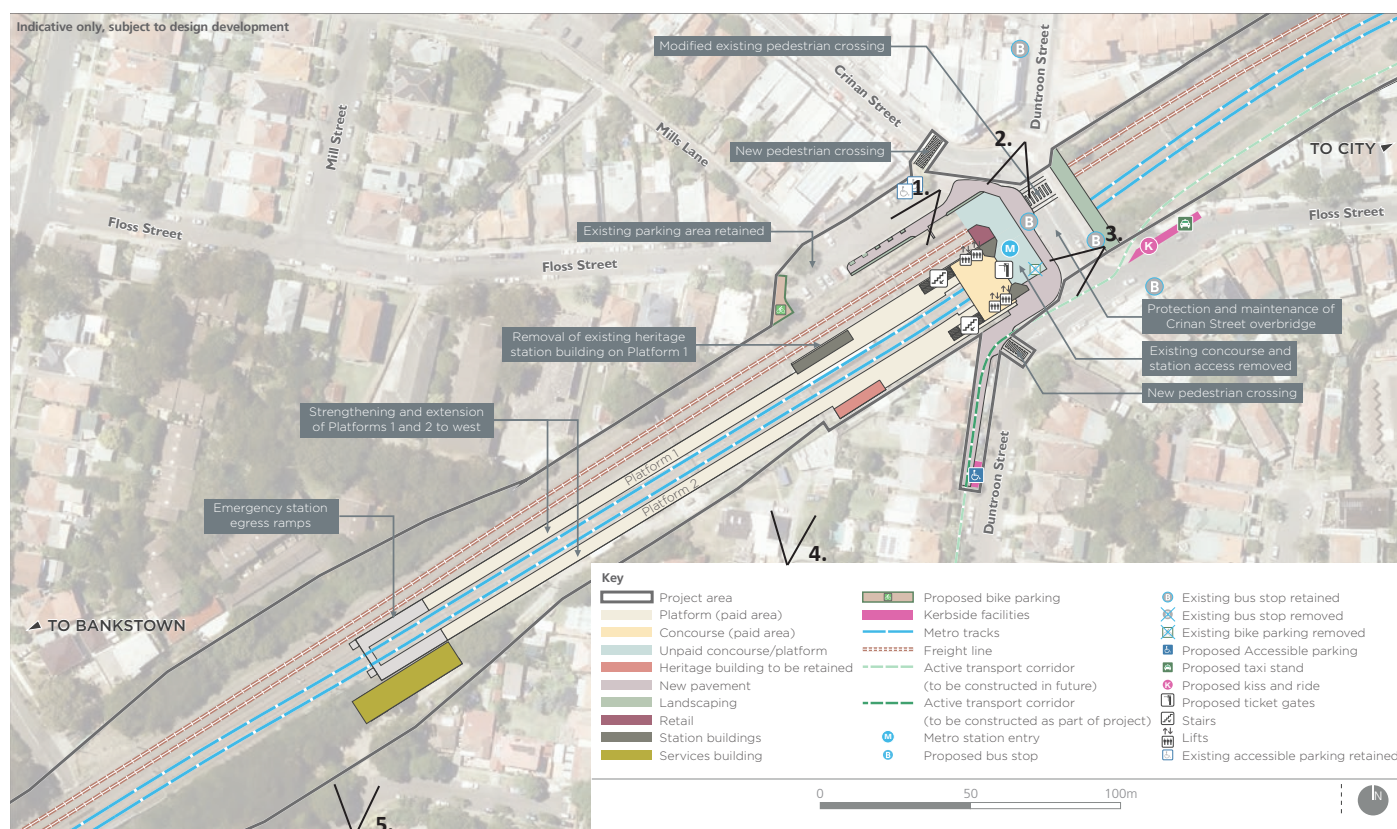


FIGURE 7.1 VIEWPOINT LOCATION PLAN

7.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View southwest from the Floss Street commuter car park
2. View southwest across Floss Street
3. View southwest from the Duntroon Street rail bridge
4. View north from Commons Street
5. View from Railway Street.

Refer to Figure 7.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Hurlstone Park Station, identified in the representative viewpoint assessment and site visit observations.

Viewpoint 1: View southwest from the Floss Street commuter car park

This view is from the Crinan Street entrance to the Floss Street car park, beside the Hurlstone Park high street. From this location, most of the rail corridor is hidden by a timber boundary fence, leaving only the overhead wiring and upper parts support structures visible. Mature vegetation along the north and south side of the rail corridor is also visible, providing some visual enclosure to the corridor.

Construction: The Floss Street car park would be closed during certain periods of construction to allow for the establishment of a construction compound, which would be visible in the centre of this view. The construction compound would be enclosed by site security fencing and hoarding, and construction vehicles would be seen accessing the site from this location. This activity would create a considerable reduction in the amenity of this view which is of local sensitivity. This results in a **moderate adverse visual impact** during construction.

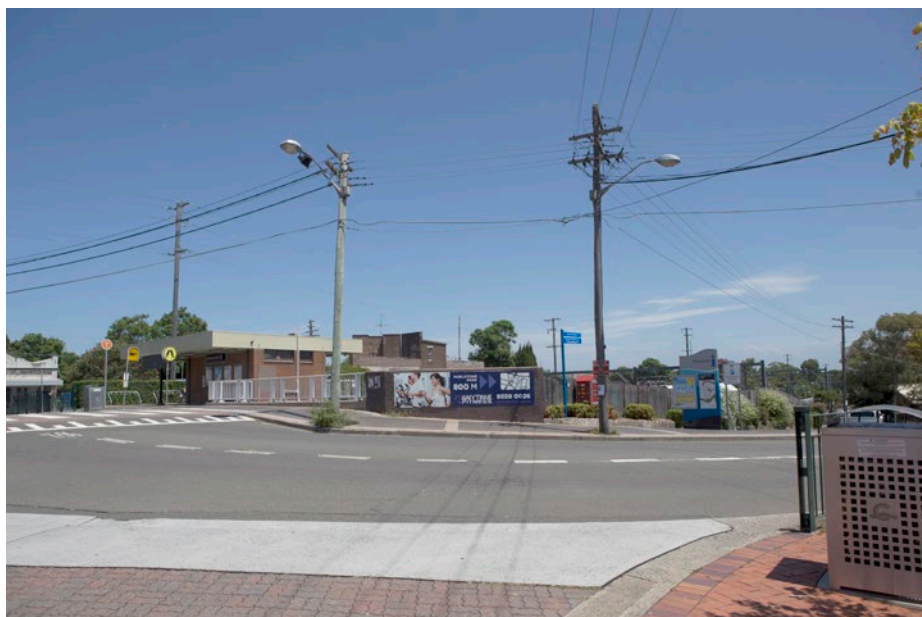
Operation: The commuter carpark would be reinstated, and an avenue of trees established alongside the corridor. Bike parking would be visible in the western corner of the carpark, in the background of this view. The existing timber fencing would be replaced with palisade security fencing, opening-up views to the rail corridor and station platforms which would be located at a level below the carpark. New platforms, buildings and canopies, would be seen aligned parallel to the carpark and extending west along the corridor. The scale and form of these new canopy structures would be larger than surrounding residential built form, and create an overall greater developed character to this view. Overall, the rail corridor, and adjacent landscape, is considered to have the capacity to absorb these new structures. There would be no perceived change in the amenity this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.



1 VIEW SOUTHWEST FROM THE FLOSS STREET COMMUTER CAR PARK

7. HURLSTONE PARK STATION

Assessment of daytime visual impact



2 VIEW SOUTH FROM DUNTROON STREET

Viewpoint 2: View southwest across Floss Street

This view, from the Floss Street rail bridge, shows the pedestrian crossing and main entrance to the station in the middle ground (left of view) and the Floss Street car park (right of view). The brick wall of the Duntroon Street bridge obstructs views into the rail corridor, however, some overhead wiring and support structures are visible above the wall. In the background, there are distant views to mature vegetation along the northern and southern side of the rail corridor.

Construction: A construction compound and worksite would be seen in the middle ground of the view, extending across the station (left and centre of view) and the Floss Street car park (right of view). Demolition of the overhead booking office and station entrance, and construction of the footbridge and canopy, would be seen unobstructed in this view. Construction vehicles would be seen travelling along Crinan and Duntroon streets, and accessing the construction compound in the fore and middle ground. Overall, this activity would result in a considerable reduction in the amenity of this view which is of local sensitivity, and result in a **moderate adverse visual impact** during construction.

Operation: The overhead booking office would be replaced with a new station building which extends the full length of the bridge, and would include ticket gates, wayfinding signage and retail. The new station buildings would be a prominent feature of this view and would obstruct views to the rail corridor. Although the scale of the station entry building would increase in both height and width, this would be an incremental change, which would be visually appropriate in the station setting. Overall, there would be no perceived change in the amenity this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 3: View southwest from the Duntroon Street rail bridge

This view, from the southern end of the Duntroon Street rail bridge, shows the main station booking office in the foreground (right of view). The station platforms and heritage listed platform buildings are located below the level of the overbridge, and can be seen glimpsed through rail corridor and roadside fencing. The excavated sandstone rock face to the rear of platform 2, identified as a 'landscape/natural feature' within the station's heritage listing, can also be seen. Views to the residential houses and terraces located to the south of the corridor and along Duntroon Street are filtered by intervening vegetation. In particular, the building at 101-105 Duntroon Street, has a number of windows and a rooftop terrace which are in close proximity and overlooking the rail corridor (centre of view). In the background, distant views to the surrounding leafy suburbs provide a depth to this view.

Construction: A construction site would be established over the station area, surrounded by site security fencing or hoarding. Demolition of the overhead booking office (right of view) and installation of the new station entry and concourse building, would be prominent in this view, and in close proximity views from the north facing terrace and windows of 101 Duntroon Street. This work would obstruct distant suburban views, and views across the station. Properties in Duntroon Street would be retained, and seen adjacent to this construction activity. It is likely that works to demolish and reconstruct the platforms would also be visible, including the removal of the heritage listed building on platform 1. The rail corridor would be widened to the south, and a concrete retaining wall constructed in front of the heritage listed rock face, and extending along the entire length of the metro platform. The heritage listed building on platform 2 would be protected by temporary fencing during construction and later refurbished. Overall, it is expected that there would be a



3 VIEW SOUTHWEST FROM THE FLOSS STREET RAIL BRIDGE SOUTH

considerable reduction in the amenity of this view which is of local sensitivity. This results in a **moderate adverse visual impact** during construction.

Operation: The overhead booking office would be replaced with a new station building which extends the full length of the bridge, and would include ticket gates, wayfinding signage and retail. The new station buildings would be a prominent feature of this view and would obstruct views to the rail corridor. The scale of the station entry building would increase considerably as it would extend across a larger area, and have a greater visual mass. The canopy architecture would rise to a similar height to the buildings on Duntroon Street, and in close proximity, creating a visually continuous built edge. Overall, due to the extent of change, which would be visible in close proximity to 101 Duntroon Street in particular, it is expected that there would be a considerable reduction in the amenity this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during operation.

7. HURLSTONE PARK STATION

Assessment of daytime visual impact



4 VIEW NORTH FROM COMMONS STREET

Viewpoint 4: View north from Commons Street

This view has been selected to represent views from neighbouring residential properties to the south of the station. Existing vegetation, fencing and built form along the southern side of the rail corridor, and in the rear gardens of properties on Duntroon and Commons Street, filter views to the rail corridor. The location of the station, set in cutting, below the adjacent landform level, obstruct much of the station platforms. The rooves of the adjacent platform buildings, overhead wiring and upper parts support structures are visible from the rear gardens of adjacent residential properties and glimpsed between houses as shown in this view.

Construction: From this location, a slot view through the existing houses would include the worksite, adjoining the rear boundary line of residential properties in Duntroon and Commons streets. Demolition of the heritage building on platform 1 would be glimpsed. Construction of the platform canopy structures would also be visible above the westward extension of the platforms. The new footbridge and station entry canopies may also be seen in some views from this area. The proximity of this activity to residents would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The canopy structures along the platforms would be visible in the background of this view. System segregation fencing along the metro track would also be visible. The western part of the large canopy structure, spanning the footbridge, concourse and access stairs, may also be visible rising above the station. The visual containment of the station due to the cutting, intervening vegetation and buildings would allow for the absorption of the new station into the view. The proximity of these new structures to residents would create

a considerable reduction in the amenity of this view. The view has neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 5: View from Railway Street

This view towards the railway corridor is flanked by single storey residential properties, along a local residential street, filtered with street trees. Mature vegetation can be seen in the centre of the view, along the southern side of the rail corridor, obstructing views to the rail corridor.

Construction: From this location, the removal of trees along the rail corridor and establishment of a worksite, between Railway Street and the permanent way, would be seen in the middle ground of this view. This would reduce the leafy character of the view, and contrast with the adjacent residential properties and leafy gardens. Construction activity and equipment would be seen rising above the site. The proximity of this activity to residents would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The emergency access stair and ramps would be seen in the centre, background of the view, at the western end of the extended Metro station platforms. There would also be a services building located in the background to the east (right of view), located partly behind the adjacent residential properties. System segregation fencing along the metro track would also be visible in the middle ground. The proximity of these new structures to residents would contrast with the surrounding leafy street and would create a considerable reduction in the amenity of this view. The view has neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.



5 VIEW FROM RAILWAY STREET

7. HURLSTONE PARK STATION

Assessment of night-time visual impact

7.7. Assessment of night-time visual impact

The setting of the Hurlstone Park Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the station itself and adjacent areas, including the construction compound to the north of the track at the Floss Street car park, and worksite to the south of the track between Foord Avenue and the station, and at 107 Duntroon Street.

This construction activity may result in some additional light visible from residential properties adjacent to the rail corridor in Duntroon Street, Commons Street, Railway Street, Foord Avenue and Floss Street, including views to both direct light sources.

Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from residential properties alongside the rail corridor, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new footbridge and along the platforms extending to the southwest of the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2. This lighting would be generally consistent with the intensity of lighting seen at the existing station.

The new Duntroon Street station entrance would be brightly lit. From the north, and located adjacent to the existing commercial areas, this lighting would be contained and generally absorbed into the surrounding commercial precinct.

To the south, the new station entry and associated interchange areas on Duntroon Street would be brightly lit. This new plaza would increase the intensity of lighting near residential and commercial properties on Duntroon Street. It is expected that there would be a reduction in amenity in views at night from these adjacent residential areas.

Overall, it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity, particularly from adjacent residential properties, due to the intensification of lighting in close proximity. As this is a medium district brightness environment, there would be a **minor adverse visual impact** at night.

7.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Hurlstone Park Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 7.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Hurlstone Park Station precinct	Local	Considerable reduction	Moderate adverse	Considerable improvement	Moderate beneficial

TABLE 7.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View southwest from the Floss Street commuter car park	Local	Considerable reduction	Moderate adverse	No perceived change	Negligible
2	View southwest across Duntroon Street	Local	Considerable reduction	Moderate adverse	No perceived change	Negligible
3	View southwest from the Duntroon Street rail bridge south	Local	Considerable reduction	Moderate adverse	Considerable reduction	Moderate adverse
4	View north from Commons Street	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
5	View from Railway Street	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse

TABLE 7.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Hurlstone Park Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

8. CANTERBURY STATION

Existing environment



- 1 CANTERBURY HOTEL
- 2 CANTERBURY ROAD STATION ENTRANCE
- 3 PLAZA SOUTH OF THE STATION
- 4 VIEW FROM STATION TO CHARLES STREET
- 5 BROUGHTON STREET

8. Canterbury Station

8.1. Existing environment

Canterbury Station has a State heritage listing and includes several ornate platform buildings, overhead booking office, signal box and an overbridge of 'aesthetic significance'. East and west bound passenger rail uses are located to the south of the island platform, with the Metropolitan Goods Line running to the north. The rail corridor is in cutting and the station platforms are set below Canterbury Road.

Canterbury's commercial and retail centre extends north and south from the train station and contains a mixture of commercial, retail, industrial and residential developments. To the north, the streetscape consists of mainly double storey terraces with heritage character shopfronts facing Canterbury Road. Larger modern development sits behind this 'high street'.

To the south, the land between the station and Cooks River consists of light industry, which is undergoing renewal for mixed use and higher density residential development, featuring buildings with a larger footprint and rising to eight storeys. A multi-storey mixed use development has been recently built along Charles Street, immediately to the south of the station and extends along the rail corridor. It includes eight storeys of apartments and ground level retail.

There are extensive areas of parkland on the banks of the Cooks River, including Canterbury Park Racecourse, Tasker Park, Heynes Reserve and Sutton Reserve, linked by the Cooks River Cycleway. Several mature trees are located alongside the rail corridor and along Broughton Street, filtering views to the station and corridor.

8.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Canterbury Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

The LEP identifies adjacent parcels of land to the north and south of the station along Broughton and Charles streets are permitted to reach maximum building heights of up to 27 metres.

Canterbury Station has a State heritage listing, including the platform buildings, overhead booking office, overbridge and signal box. The station and the rail bridge to the west crossing the Cooks River, are also heritage items on the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register. The station is also near the Federation post office building at the junction of Jeffrey and Broughton streets and the former Hotel Canterbury at the junction of Canterbury Road and Tincombe Street, both local heritage items. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Landuse zoning

Canterbury's retail centre focused along Canterbury Road, to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: *'To provide a range of retail, business, entertainment and community uses' and 'to facilitate and support investment, economic growth and development for active, diverse*

and well-designed centres' (Part 2, Land Use Table: Zone B2) There are two small blocks of land to the north of the station zoned R4 – High Density Residential, along Broughton and Charles streets. The objectives of these zones relate to the provision of *'a variety of housing types within a high density residential environment'* (Part 2, Land Use Table: Zone R4). Otherwise, the land use around the station is zoned R3 – Medium Density Residential with large pockets of Public and Private Recreation (RE1 and RE2) along the Cooks River.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Canterbury Station Precinct, Department of Planning and Environment, 2017

This strategy proposes to maintain the *'main street shop top housing'* (p.18) along Canterbury Road whilst accommodating a new retail strip along Robert and Jeffrey Streets to support new growth. The strategy proposes the following land use and associated built form changes within the immediate surrounds of Canterbury Station:

Southwest of the station

- Main street shop top housing along Canterbury Road
- Medium-high rise housing (up to 8 storeys) between the rail corridor, Cooks River and Robert Street
- High rise housing and/or mixed use (up to 12 storeys) east of Canterbury Road.

Northeast of the station

- New retail strip along Robert and Jeffrey Streets to support new growth
- High rise housing and/or mixed use along Broughton and Tincombe streets
- Medium to high rise housing (up to 8 storeys) south of Broughton Street
- A new urban plaza linking the station with Broughton Street.

8. CANTERBURY STATION

Character and components of the project

8.3. Character and components of the project

Construction phase

The following section describes the construction phase for Canterbury Station:

- Establishment of a worksite including demolition of:
 - platforms 1 and 2 (heritage listed platform buildings to be retained)
 - permanent ways (railway lines, ballast, overhead lines) between platforms 1 and 2
 - heritage listed overhead booking office and concourse/footbridge on Canterbury Road, including stairs and ramp access to platforms
 - art deco public amenities building in Broughton Street
- Removal of approximately 11 - 27 trees impacted including:
 - south side of Broughton Street
 - trees to the south of Platform 1
- Cessation of commercial property leases at the station
- Construction compounds to be located at:
 - Broughton Street, north of station
 - Charles Street, at the car park site northwest of station
- Temporary closure of adjacent footpaths, including south side of Broughton Street and west side of Canterbury Road overbridge
- Construction of a new service building, northwest of the station, on Charles Street
- Construction vehicle movement via Canterbury Road, Broughton and Charles Streets.

Operation Phase

The following section describes the operational phase for Canterbury Station:

- New straight platforms approximately 170 metres long, extending west from the existing station
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Emergency egress ramps and stair between the western end of the platforms and Charles Street
- New northern entry and interchange plaza on Broughton Street comprising:
 - lift and stair access to aerial concourse
 - kiss and ride zone, accessible parking, taxi stand, bus stops and bus shelter
 - bike parking area
 - new amenities building
 - new retail
 - streetscape and entry plaza planting
- New southern entry comprising:
 - lift and stair access to platform level concourse
 - bike parking area
 - new retail
 - connection to existing plaza with connections through to Charles Street
- New overhead footbridge between Broughton Street and existing plaza to the south of the station, with aerial concourse (approximately 200 metres west of Canterbury Road), vertical transport connections to platforms, and overhead canopies
- New platform canopies along metro platforms 1 and 2

Character and components of the project



CANTERBURY STATION, ARTIST'S IMPRESSION

- Existing structures to remain:
 - heritage buildings on platform 1 and 2
 - Canterbury Road overbridge
 - heritage signal box building east of Canterbury Road
 - Canterbury Road bus stops
- New services building, northwest of the station, on Charles Street
- New padmount substation on Broughton Street
- Active transport corridor to the south of the corridor
- Increased rail traffic through platforms 1 and 2.

8. CANTERBURY STATION

Sensitivity levels

8.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Canterbury Station

Canterbury station functions as a suburban rail station. It is used by concentrations of residents and provides an important transport hub for the local community. It is also a State heritage listed item, and includes several ornate platform buildings, overhead booking office, signal box and overbridge of '*aesthetic significance*'. These features increase its sensitivity as a visual feature within the local area. The landscape and visual values of Canterbury Station are therefore of **local sensitivity**.

Canterbury Road commercial precinct

This precinct contains commercial, retail, industrial and residential developments. It attracts residents and workers to access these businesses and the station. The run-down character of many of these premises and contrasting new development create a disjointed quality to the area. The landscape and visual values of this precinct are of **local sensitivity**.

Canterbury residential area

The residential areas of Canterbury are mostly used by residents of the neighbourhood and their visitors. In some areas, a high concentration of single storey detached houses creates a residential character which contrasts with the high density residential development along the rail corridor. The high rise development provides elevated viewing locations and increased numbers of potential views. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

Sensitivity levels



- 1 CANTERBURY ROAD COMMERCIAL AREA
- 2 HIGH DENSITY RESIDENTIAL UNITS ON CHARLES STREET
- 3 LOW DENSITY RESIDENTIAL ON BROUGHTON STREET
- 4 HERITAGE LISTED SUBSTATION
- 5 NARROW FOOTPATH ON CANTERBURY ROAD AT STATION ENTRY

8. CANTERBURY STATION

Assessment of landscape impact



PLAZA SOUTH OF THE STATION



BUS STOPS ON BROUGHTON STREET

8.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Canterbury Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Canterbury Station entry is currently located on Canterbury Road. This road is a busy connector thoroughfare with heavy traffic, extended clearways, steep gradients and narrow, uneven footpaths, creating an unpleasant pedestrian environment. It forms the principal north-south spine connecting the town centre with the station. To the north of the station a five-way intersection further reduces pedestrian movement and connectivity to the station. The station does not have any dedicated taxi or kiss and ride interchange bays, and no bike parking. The rail corridor and Canterbury Road also create a barrier for north-south movement, limiting pedestrian and cycle connectivity throughout the station precinct, in particular limiting connections to the Cooks River.

The land between the rail station and the Cooks River is undergoing renewal for mixed use and higher density residential uses. Recent mixed use developments, to the southwest of the station, have created a pedestrian plaza aligned parallel to the station, with some commercial and retail entries, and several pedestrian connections through to Charles Street.

There are mature street trees on Broughton Street, and some trees to the south of the corridor including a mature conifer on the corner with Canterbury Road.

Construction: Worksites would be established to the northeast and southwest of the rail corridor extending to Broughton and Charles streets. This would require the removal of vegetation, areas of existing open space and demolition of an art deco amenities building on Broughton Street.

Works to construct the new station buildings and platform alterations would extend between these worksites, and across parts of the station platforms.

There would be a reduced platform area available for commuters as demolition works and construction occurs within the station. Adjustments to the station access arrangements, and diversion and reduction of footpath widths would also reduce the legibility and accessibility of this precinct for pedestrians and vehicles, including along pedestrian plaza to the southwest of the station, Canterbury Road, Broughton and Charles streets.

The presence of construction activity and removal of mature trees, open space and historic buildings would also reduce the amenity of the areas near the station and comfort for pedestrians.

Demolition and reconstruction of the platforms would occur within the station. The heritage listed buildings on platform 1 and 2 would also be protected and retained during this time, however the platform canopies would be removed, slightly altering the character of the station during this time.

Following construction of the new station buildings, the existing station entry building on Canterbury Road would be demolished. This would require temporary closure of the footpath on the western side of the Canterbury Road overbridge. The heritage listed signal box building to the east of Canterbury Road would, however, be retained.

The perception of safety within the public realm may also be reduced as new approaches to the station bring users away from Canterbury Road to an area where there is less passive surveillance. However, measures would be in place to ensure the security of customers at this time.

Overall, due to the scale of construction, it is expected that there would be a considerable reduction in the landscape quality and functioning of this precinct which is of local

sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The new station entries would be located away from Canterbury Road, reducing its visibility and connectivity with the commercial areas to the northeast. However, the proposed location would set the station back from the busy and constrained environment of Canterbury Road, and allow for the creation of more spacious entrance plaza and prominent station entry on Broughton Street. The station would include an aerial concourse, spanning the rail corridor.

There would be upgraded footpaths to the north of the corridor, between Canterbury Road and the new station entry, and to the south of the corridor, access to the existing pedestrian plaza would be restored. An active transport corridor to the south of the corridor would also improve circulation.

The provision and layout of transport interchanges would be improved. To the north on Broughton Street there would be a new accessible parking, kiss and ride, and taxi stand complementing reconfigured and existing bus stops. There would also be bike parking and retail, located in a plaza at the station entry, with improved pavements and planting.

To the south the existing pedestrian plaza would connect the station with Canterbury Road, and to existing connections through to Charles Street. This connection would be improved by the introduction of retail and a bike parking within the station, further activating the existing plaza. The new aerial concourse would create a cross-corridor connection between Broughton Street, via existing plazas, to Charles Street, improving the permeability and the accessibility of the station precinct.

Street trees and canopy structures would provide shade, comfort and amenity in station meeting and waiting areas, and the increased area of platform canopies would provide shade and improved the comfort for users within the station.

The 'sense of place' experienced at Canterbury Station would be transformed by the project, with the station being set back from Canterbury Road and comprising an entirely new concourse structure. The introduction of prominent new station architecture, and plazas connecting to the existing and emerging urban renewal precincts, would create a new place with a distinctive identity within Canterbury.

Although the relocated station entries would change the legibility, 'sense of place' and character in this station precinct, the new station entrances and associated access, street activation and level of comfort would improve. Overall, there would be a considerable improvement in the functioning and quality of this landscape, which is of local sensitivity, resulting in a **moderate beneficial landscape impact** during operation.

8. CANTERBURY STATION

Assessment of daytime visual impact

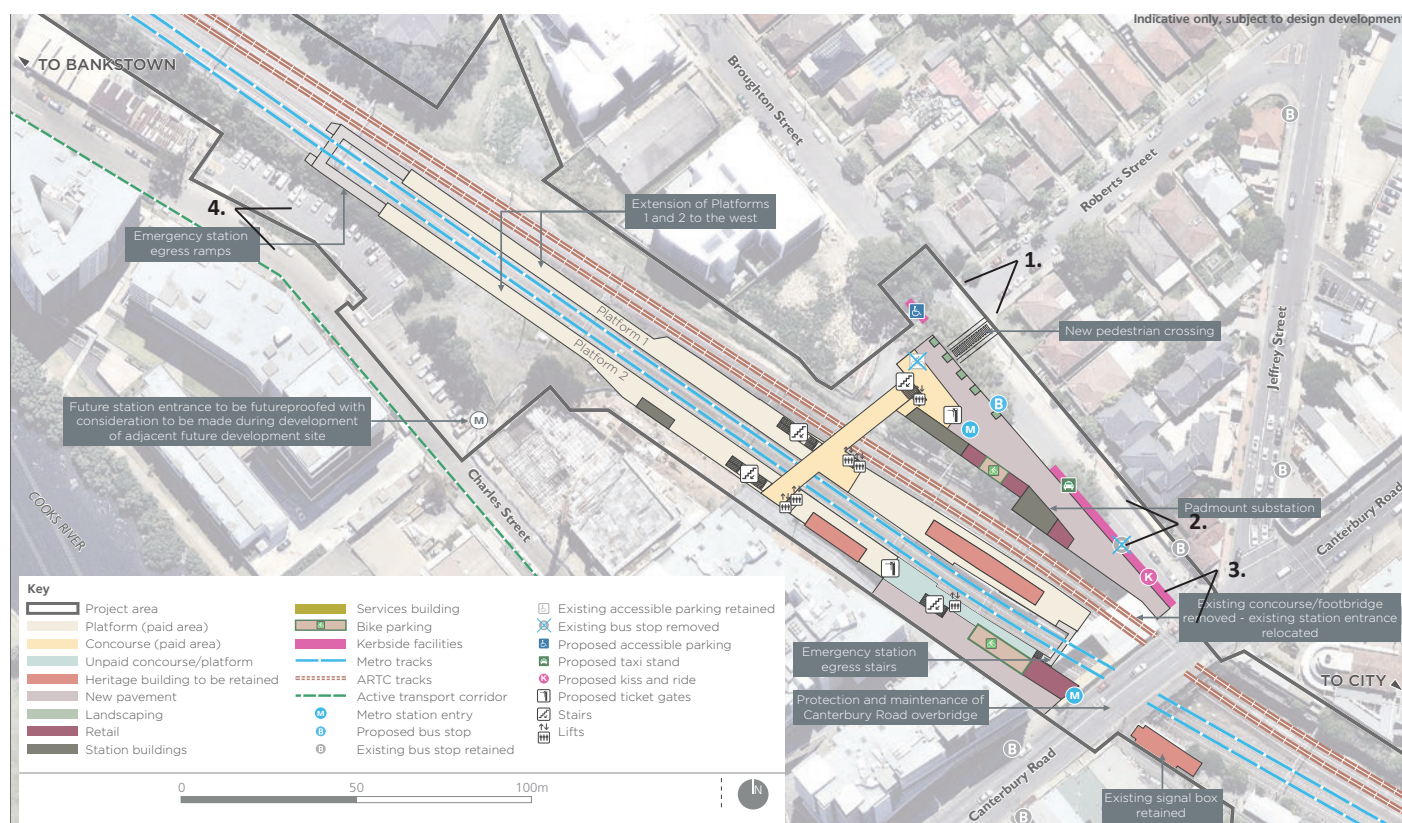


FIGURE 8.1 VIEWPOINT LOCATION PLAN

8.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View southwest from Robert Street
2. View northwest from Broughton Street
3. View southwest from corner of Broughton Street and Canterbury Road
4. View northeast from Charles Street.

Refer to Figure 8.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Canterbury Station, identified in the representative viewpoint assessment and fieldwork visit observations.

Viewpoint 1: View southwest from Robert Street

This view is in a low density residential street extending between the Canterbury commercial precinct and Broughton Street. A small area of open space extends along the eastern perimeter of the station, between Broughton Street and the rail corridor (centre of view), including an Art Deco public amenities building (out of view), seating and lawn area. The large trunks and canopies of mature Camphor laurel and Eucalyptus street trees along Broughton Street partially obstruct views to the rail corridor, allowing filtered glimpses to the track as it emerges from the cutting and extends towards the Cook River valley. The heritage listed building on platform 1 is visible (left of view). The western parts of the platforms, overhead wiring and support structures are visible in the middle ground, with the recently constructed residential towers in Charles Street seen beyond the rail corridor. Higher density residential buildings recently built in Broughton Street alongside the rail corridor are also visible (right of view).

Construction: The construction compound on Broughton Street would be seen in the middle ground of this view, occupying the open space alongside the rail corridor. The mature camphor laurel streets trees visible in Broughton Street would be retained. The Art Deco amenities building would be demolished and installation of the new station buildings would be visible beyond the compound hoarding. Construction vehicles would be seen moving along Broughton Street, with site access located adjacent to the development site at 2 Broughton Street. In the background of the view, the rail corridor would be widened to the south, requiring removal of existing fencing and vegetation along the rail embankment. The platforms would be reconstructed and extended to the northwest (right of view), and the heritage listed platform buildings would be retained. Construction of the aerial concourse and footbridge would be seen to



1 VIEW SOUTHWEST FROM ROBERT STREET

east (centre of view). Overall, there would be a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new northern entry plaza would be located in the centre of this view, including a new pedestrian crossing across Broughton Street (left of view). The new station building entry with stairs and adjacent lift would be located in the centre of this view, connecting to the new aerial concourse. The canopy structure would be elevated over the concourse. This new built form would obstruct views to the residential towers in Charles Street somewhat. Existing mature street trees in Broughton Street would shade the station entry plaza and filter views to the rail corridor. The footbridge and central canopy structure would be prominent built form aligned in the centre of this view, seen against a highly urban backdrop of mid-rise residential development, so that it would be somewhat absorbed into the character of the view. The platforms and canopy structures, extending west from the station would also

8. CANTERBURY STATION

Assessment of daytime visual impact



2 VIEW NORTHWEST FROM BROUGHTON STREET



3 VIEW SOUTHWEST FROM CORNER OF BROUGHTON STREET AND CANTERBURY ROAD

be visible through security fencing. Overall, it is expected that there would not be a perceived change in the amenity of this view, which is of neighbourhood sensitivity. This would result in a **negligible visual impact** during operation.

Viewpoint 2: View northwest from Broughton Street

This view is from Broughton Street, and represents views from the bus stop and adjacent residences to the north of the station. An art deco amenities building is visible in the foreground, located in a linear reserve along the north of the station. This building, as well as the mature street camphor laurel street trees and container style facilities buildings within RailCorp land, partially obstruct views to the rail corridor, with only glimpses to the overhead wiring, support structures and track seen. The residential towers in Charles Street are visible beyond the rail corridor in the background of this view.

Construction: The reserve between Broughton Street and the rail corridor would become a worksite and the amenities building and bus shelters would be demolished. Three camphor laurel street trees in Broughton Street would also be removed. Construction of the padmount substation and bike parking areas would be seen in the centre of view. Further to the west, construction of the new northern station entry and footbridge would also be visible (right of view). Construction vehicles would be seen moving along Broughton Street. Overall, due to the extent of change seen in this view, there would be a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The footpath along Broughton Street would be replaced with a wider pathway, with new paving and streetscape planting, providing a legible and comfortable link for pedestrians, between Canterbury

Road and the new northern station entry plaza. New kiss and ride bays and taxi parking with overhead canopy structure would be seen along this section of Broughton Street. A padmount substation and adjacent bike parking areas would also be visible in the centre of view, beside the rail corridor. Further to the west, the new northern station entry plaza, aerial concourse and canopy structure would rise prominently in this view. These new buildings and structures would block views to the metro corridor and high rise buildings on Charles Street. Although much of this view would change, these changes would be absorbed into the surrounding highly urban environment. Overall, it is expected that there would not be a perceived change in the amenity of this view, which is of local sensitivity. This would result in a **negligible visual impact** during operation.

Viewpoint 3: View southwest from corner of Broughton Street and Canterbury Road

This viewpoint is located adjacent to the heritage listed post office building. In the foreground of the view is the heavily trafficked Canterbury Road and the station entrance, including the overhead booking office (c. late 1980s), with awnings extending to the road and brick garden walls. To the left of view, the heritage listed signal box building is visible, beside the southern overbridge abutment. The bus shelters and three mature camphor laurel street trees on Broughton Street are also visible from this location (right of view). In the background of this view recent medium-density development can be seen to the south of the station. The rail corridor and station is in a cutting and therefore not visible from this location.

Construction: The entire middle ground of this view would become a worksite and the existing station building and bus shelters on Broughton Street, would be demolished. To the west (right of view), construction of the new northern entry plaza may also be visible from this location. Construction vehicles

would be seen moving along Canterbury Road and Broughton Street. Overall, due to the extent of change seen in this view, there would be a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The Canterbury Road station entry would be removed and views would be opened up to the metro corridor, including the new platforms and moving trains. The heritage listed platform buildings would also become visible. The footpaths along Canterbury Road would be reinstated. On Broughton Street, new paving and kiss and ride bays, with a canopy structure would be seen. Although the Canterbury Road station entry building would be removed, it is a recent addition, and does not have the historic and visual importance of the platforms buildings. The loss of this building would open up views to the metro corridor which would be absorbed into the view to the high rise buildings on Charles Street seen beyond. This would create no perceived change in the amenity of this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

8. CANTERBURY STATION

Assessment of daytime visual impact



4 VIEW SOUTHEAST FROM CHARLES STREET

Viewpoint 4: View northeast from Charles Street

This view includes several medium-density residential buildings on Charles Street (right of view), and on Broughton Street in the background of the view, beyond the rail corridor. A surface car park and vacant RailCorp land, on Charles Street, is visible in centre, foreground of this view. In this location, the T3 Bankstown Line is raised on embankment. Vegetation along the rail embankments filter views to the corridor, so that only the overhead wiring and upper parts of the support structures and trains are visible.

Construction: The car park and RailCorp land, visible in the middle ground (centre of view), would be converted into a construction compound. Construction of the services building would be seen in the middle ground and beyond this, the western station entry plaza in Charles Street and the cross-corridor aerial concourse. Works on the adjacent rail corridor would also be visible, including platform extension works, installation of the platform canopies, barriers and segregation fencing. This work would be overlooked by adjacent residential properties. Overall, the project would create a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible adverse visual impact** during construction.

Operation: The surface car park would be reinstated and the new services building would be visible. Rising to an approximate height of four metres, it would be a relatively small structure compared to the adjacent medium-rise apartment buildings. A vacant block of Railcorp land would be visible beside the services building, prepared for future development (subject to separate approval). Beyond this, the new southern station entry plaza would be visible (centre of view), including a new plaza between Charles Street and the station, with new paving, bike parking area, stair and lift access to the station. The aerial concourse

Assessment of daytime visual impact

and canopy structure would also be visible in the background of the view, rising above the station, and providing a new skyline feature. Vegetation along the rail embankment would have been removed to allow room for the new metro platforms. The platforms canopies, security fencing, signaling equipment and trains moving through the station would be visible to the west of the station (left of view). The new station would have a character consistent with the highly urban character of this view, and would absorb these changes. Overall, it is expected that there would be no perceived change in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

8. CANTERBURY STATION

Assessment of night-time visual impact

Assessment of night-time visual impact

The setting of the Canterbury Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, street lighting along Canterbury Road and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the station itself and within the compounds on Broughton Street in the north and Charles Street in the south. This construction activity may result in some additional light being visible from residential properties adjacent to the rail corridor, including the units overlooking the rail corridor in apartment buildings on Charles and Broughton streets, and several detached houses and townhouse buildings on Broughton Street. These properties would have views to both direct light sources and general skyglow above the station. Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from residential properties on Broughton and Charles streets, resulting in a **minor adverse visual impact** at night.

Operation: The lighting at the new station would be generally consistent with the intensity of lighting seen at the existing station. However, it would be located further to the west and be seen across a larger station concourse area. Lighting would be seen on the platforms extending further west than the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2. To the north of the station, the new plaza entry and transport interchange on Broughton Street would be brightly lit, increasing the level of lighting in this area. To the south of the station, the new plaza entry, kiss and ride, taxi stand, accessible parking area and service building would also be brightly lit, increasing the intensity of lighting in this area. This lighting would be seen from residential properties on Charles Street and on Broughton Street which overlook the station. Overall, it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity, particularly from adjacent residential properties, due to the intensification of lighting. As this is a medium district brightness environment, this would result in a **minor adverse visual impact** at night.

8.7. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Canterbury Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 8.1 LANDSCAPE IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Canterbury Station Precinct	Local	Considerable reduction	Moderate adverse	Considerable improvement	Moderate beneficial

TABLE 8.2 DAY TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	View southwest from Robert Street	Neighbourhood	Considerable reduction	Minor adverse	No perceived change	Negligible
2	View northwest from Broughton Street	Local	Considerable reduction	Moderate adverse	No perceived change	Negligible
3	View southwest from corner of Broughton Street and Canterbury Road	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Negligible
4	View northeast from Charles Street	Neighbourhood	Noticeable reduction	Negligible	No perceived change	Negligible

TABLE 8.3 NIGHT-TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Canterbury Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

9. CAMPSIE STATION

Existing environment



- 1 BEAMISH STREET
- 2 BEAMISH STREET STATION ENTRANCE
- 3 ANZAC MALL
- 4 ANZAC SQUARE
- 5 LILIAN STREET

9. Campsie Station

9.1. Existing environment

Campsie is a major hub for bus and rail interchange. The commercial centre of Campsie is centred on Beamish Street, extending north and south of the station. It has a built form of traditional terraces with ground level shopfronts and mature street trees. The rail corridor is in a cutting and the station is set below Beamish Street. The station is accessed via a recently upgraded entry concourse on Beamish Street, including new platform stairs and lifts. This entry is integrated into the surrounding built form and is not visually prominent.

Campsie Station has local historical significance and is on the RailCorp S170 Heritage and Conservation Register. It is not visible from the main street, although esplanade streets along the north and south of the rail corridor allow neighbourhood views towards the heritage station buildings, filtered through chainmesh fencing, mature street trees and on street car parking. There are slot views to the rail corridor, from Anzac and Carrington Squares in the south.

Local visual landmarks include the War Memorial clock tower and inter-war period commercial building on the Anzac Mall to the south of the station, which are also local heritage items. The residential areas surrounding the commercial core consist of a mix of two to three storey residential units and single detached houses on large blocks.

Surrounding the commercial precinct, residential areas to the north and south of the rail corridor comprise of a variety of residential buildings including medium rise flats and apartment buildings, duplexes and detached houses. This precinct contains two key public open spaces, Anzac and Carrington Squares. The location of streets and associated built form allows slot views to the rail corridor from both squares. There are several commuter car parks alongside the rail corridor, in North and South parades, Wilfred Avenue and Lilian Street.

The proposed substation is located west of Campsie Station, in an elevated location along Lilian Street, at the top of the rail cutting. It is a visually prominent location, situated across the road from residential properties in Lilian Street. Mature street trees along Lilian Street provide streetscape planting and partial screening of the rail corridor.

9.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Campsie Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

The LEP identifies adjacent parcels of land to the north and south of the station along Beamish Street are permitted to reach maximum building heights of up to 18 metres, with the exception of a block of land between Dispensary Lane and London Street (north of the station), which is permitted to reach up to 27 metres. The majority of land along Wilfred Avenue (north of the rail corridor) is permitted to reach up to 11.5 metres. At Lilian Street, building heights are capped at 14 metres between Anzac Square and Carrington Street.

Heritage

Campsie Station is listed as a heritage item in the LEP and RailCorp Section 170 Heritage and Conservation Register. The station is also near the following heritage places: the federation style Coffill's Buildings at the junction of North Parade and Beamish Street (north of station); the Station House building at the junction of South Parade and Beamish

Street (south of station); the War memorial clock tower in Anzac Mall; and Anzac Park. Where relevant this assessment has considered the *'settings and views'* of these items (Heritage conservation, clause (5.10) of the LEP).

Land use zoning

Campsie's retail centre is located around Beamish Street, extending to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: *'To provide a range of retail, business, entertainment and community uses'* and *'to facilitate and support investment, economic growth and development for active, diverse and well-designed centres'* (Part 2, Land Use Table: Zone B2). Elsewhere, the land surrounding the station and commercial precinct is zoned High and Medium Density Residential (R3 and R4), with large pockets of Public and Private Recreation (RE1 and RE2) along the Cooks River.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Campsie Station Precinct, Department of Planning and Environment, 2017

Campsie is identified as a *'Priority Precinct, with height and density controls to be determined through a detailed masterplanning process'* (p.2). The strategy envisages Campsie as *'a highly urbanised centre with high rise apartment buildings up to 25 storeys located throughout the core area, stretching from Ninth Avenue to Claremont Avenue'* (p.16). The vision for Beamish Street is to retain this fine-grain retail strip as the precinct grows. Key sites within the precinct such as the Campsie RSL, Campsie Shopping Centre and Council's Administration Centre provide a catalyst for urban renewal, transformation and transit-oriented development within easy walking distance of Campsie Station.

It also proposes the following land use and associated built form changes to the LEP within the immediate surrounds of Campsie Station:

North of the station

- Main street shop top housing along Beamish Street
- Medium (8 storeys) and high rise and/or mixed use development (up to 12 storeys) north of Wilfred Avenue, incorporating design measures to integrate with predominant two to four storey built form
- Rejuvenate Beamish Street as a *'thriving local shopping area'* (p.2) and investigate opportunity for a new urban plaza at the junction of Beamish and Campsie streets.

South of the station

- Main street shop top housing along Beamish Street
- High rise residential and/or mixed use development between the station and Claremont Street
- Development north of Carrington and Anzac Squares be limited to five storeys
- Medium and high rise residential (8 storeys) along Lilian Lane and Carrington Square
- Opportunity to increase open space by connecting Carrington and Anzac Squares.

9. CAMPSIE STATION

Character and components of the project

9.3. Character and components of the project

Construction phase

The following section describes the construction phase for Campsie Station:

- Establishment of worksite including demolition of:
 - platforms 1 and 2, including heritage listed platform awnings, but excluding the heritage platform buildings
 - permanent ways (railway lines, ballast, overhead lines) between platforms 1 and 2
 - heritage listed overhead booking office and concourse
 - commuter car park in Lilian Street, adjacent to rail corridor (site of new service building)
 - demolition and reconstruction of over rail retail buildings on Beamish Street
- Construction of a detention basin within the rail corridor on Lilian Street
- Removal of approximately 27 - 42 trees including:
 - along the north side of Lilian Lane and Lilian Street
 - to the north of the existing platforms
- Cessation of commercial property leases at the station
- Construction compounds to be located on:
 - Lilian Street, southwest of the station
 - Wilfred Street, north of the station
 - South Parade
- Temporary closure of the following footpaths and lane
 - overbridge footpaths on east and west side of Beamish Street (closures to be staged to allow

north-south pedestrian movement in Campsie commercial precinct)

- south side of North Parade (at proposed station entry)
- Lilian Lane
- Construction vehicle movement along Beamish Street, North and South parades, Campsie Street, Asset Street, Wilfred Avenue and Browning Street
- Construction vehicle access to the corridor at:
 - corner of Assets Street and Wilfred Avenue
 - North Parade, near Browning Street
 - South Parade, near Park Street.

Operation Phase

The following section describes the operational phase for Campsie Station:

- New straight platforms approximately 170 metres long
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Replacement of overbridge, including a new retaining wall extending west to start of new platform
- Enlarged unpaid concourse and station entry plaza and provision for integrated retail development set back from Beamish Street
- New northern station entry at North Parade (linking with Beamish Street concourse) comprising:
 - lift and stairs providing access to concourse
 - bike parking area
 - transport interchanges (taxi parking and bus stop)
- New southern station entry at Lilian Lane (linking with Beamish Street concourse)
- Overhead canopy structure spanning the concourse

Character and components of the project



CAMPSIE STATION, ARTIST'S IMPRESSION

- Canopy structures extending along the metro platforms
- New overtrack platform, new retail space and lane access with kiss and ride zone between North and South parades, east of Beamish Street
- Service building and substation located in corridor, southwest of station at Lilian Street
- Shared zone on Lilian Lane (including widening), between Dewar and Beamish Streets
- Active transport corridor to the south of the corridor
- Existing structures retained:
 - location of existing station entry at Beamish Street
 - heritage listed platform buildings (platforms 1 and 2)
 - heritage listed excavated rock face to rear of platform 2
 - bus stops on South Parade
 - commuter car parks in North Parade and South Parade
- Emergency egress ramps and stair between the western end of the platform and Lilian Street.

9. CAMPSIE STATION

Sensitivity



CAMPSIE STATION FROM BEAMISH STREET



STATION PLATFORM BUILDINGS FROM WILFRED AVENUE

9.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Campsie Station

Campsie station functions as a suburban rail station. It is used by concentrations of residents and provides an important transport hub for the local community. It is also a local heritage item (on both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register) and a visual feature within the local area. The landscape and visual values of Campsie Station are therefore of **local sensitivity**.

Beamish Street commercial precinct

Beamish Street functions as the 'high street' of Campsie, extending north from the station and to Canterbury Road in the south. This precinct consists of traditional single and double storey terrace buildings with ground level shops, restaurants and offices. The streetscape and pedestrian plaza in Anzac Mall is well shaded by large canopy trees. This precinct is generally used by nearby residents and people working locally in Campsie. The landscape and visual values of this precinct are of **local sensitivity**.

Campsie residential area

The residential areas surrounding the station precinct include a variety of residential buildings including medium rise flats and apartment buildings, duplexes and detached houses. This area is predominantly used by residents and their visitors. The landscape and visual values of this precinct are of varied character and are of **neighbourhood sensitivity**.



BEAMISH STREET

9. CAMPSIE STATION

Assessment of landscape impact



VIEW EAST ALONG LILIAN LANE



VIEW WEST ALONG LILIAN LANE

9.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Campsie Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Campsie Station has one main entry at the Beamish Street overbridge, to the east of the station. This entry has been recently upgraded as part of the Transport Access Program (TAP), and has a generous concourse area with a ticket office, public toilets, provision for retail, lifts and covered stairs leading to the platforms. This entry is at grade with adjacent Beamish Street retail and therefore well integrated into the surrounding built form. Access and connectivity to and around the station is limited to this one entry via narrow footpaths along Beamish Street. Opposite the station an over rail platform with commercial uses create a continuous active frontage.

The rail corridor is in a cutting and the station is set below Beamish Street. A distinctive excavated rock face is located to the rear of platform 2, and is identified as a 'landscape/natural feature' within the heritage listing. Anzac Mall, Anzac Square, Anglo Road and Carrington Square form a string of important public spaces immediately south of the station. The streetscape of Beamish Street and the adjacent Anzac Mall form the spine of the centre's busy public realm. There is no pedestrian provision on Lilian Lane, an important link to the station from the southwest. To the north, localised steepness on Beamish Street at the corner of North Parade reduces the accessibility of this route. In addition, there are limited accessible pathways between North Parade (from bus stops, taxi bays and the kiss and ride zone) and the station.

Construction: The temporary structures required to maintain operations during construction would be located to the west of the existing station, some 150 metres

from the Beamish Road high street. This access would be located within an area of residential development to the north, and an area of warehousing and commercial rear access on a narrow laneway to the south. The location of this temporary station access away from the main commercial area of Campsie would reduce the accessibility and legibility of the station and precinct.

The station entry and retail premises on both sides of the Beamish Street overbridge would be demolished, and a worksite would be established to construct a new concourse and station entrances between North Parade and Lilian Street, and a new over track platform with new retail and lane access parallel to Beamish Street. This work would require temporary closure of footpaths and diversions of pedestrian traffic along Beamish Street, North Parade and Lilian Street. There would also be a reduced area of platform available during this time, reducing the accessibility of the suburban rail network from this station.

Resurfacing works in Lilian Lane and installation of the southern station entrance and construction compound (between the track and Lilian Street) would require temporary closure of Lilian Lane, including pedestrian and vehicular traffic. Legibility of the station precinct would be reduced during this time while new routes and connections are established.

The extent of construction works on Beamish Street, reduction in accessible platform area, diversion of pedestrian and vehicular traffic at times and the presence of construction activity, would alter the pedestrian connectivity and legibility of this station precinct. It is expected that there would be a considerable reduction in the landscape quality and functionality of this precinct which is of local sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The setting back of the station building from Beamish Street, allowing for the creation of a more generous plaza space,

would improve the functioning of the station. The canopy structure, stepping up from the surrounding built form, would create a more prominent architectural statement on Beamish Street and improve legibility of the station entry. An additional station entrance would be provided on North Parade, creating increased permeability and accessibility of the station.

Canopy structures over the station concourse and platforms would provide shade, comfort and amenity in meeting and waiting areas.

The heritage listed platform buildings (platforms 1 and 2) and excavated rock face to the rear of platform 2 would be retained. The heritage listed platform awnings would be removed, slightly changing the character of the station.

The provision and layout of transport interchange facilities would be improved with a new taxi stand and bike parking area complementing existing bus stops on Wilfred Avenue to the north. To the east of the station a new lane would be formed, between North and South parades with additional kerbside facilities including a kiss and ride zone.

A new shared zone in Lilian Lane, and an active transport corridor to the south would facilitate pedestrian movement throughout the precinct. Improvements to station accessibility would support urban renewal opportunities within this community.

The activation of streets around the station would provide improved pedestrian safety (CPTED) due to passive surveillance, and improve access to the station precinct.

New retail premises would be provided within the station facing Beamish Street, and on the eastern side of the Beamish Street bridge and facing the new lane and kiss and ride facility to the east. This commercial development would activate the station precinct, improving customer safety (CPTED) and vibrancy.

The 'sense of place' of this precinct would be transformed as much of the station

architecture is replaced with a new structure. The station entry would be more open to Beamish Street and surrounded by high quality plazas, including Lilian Lane.

On balance, the improved plaza and station entrance would result in a noticeable improvement in the landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **minor beneficial landscape impact** during operation.

9. CAMPSIE STATION

Assessment of daytime visual impact

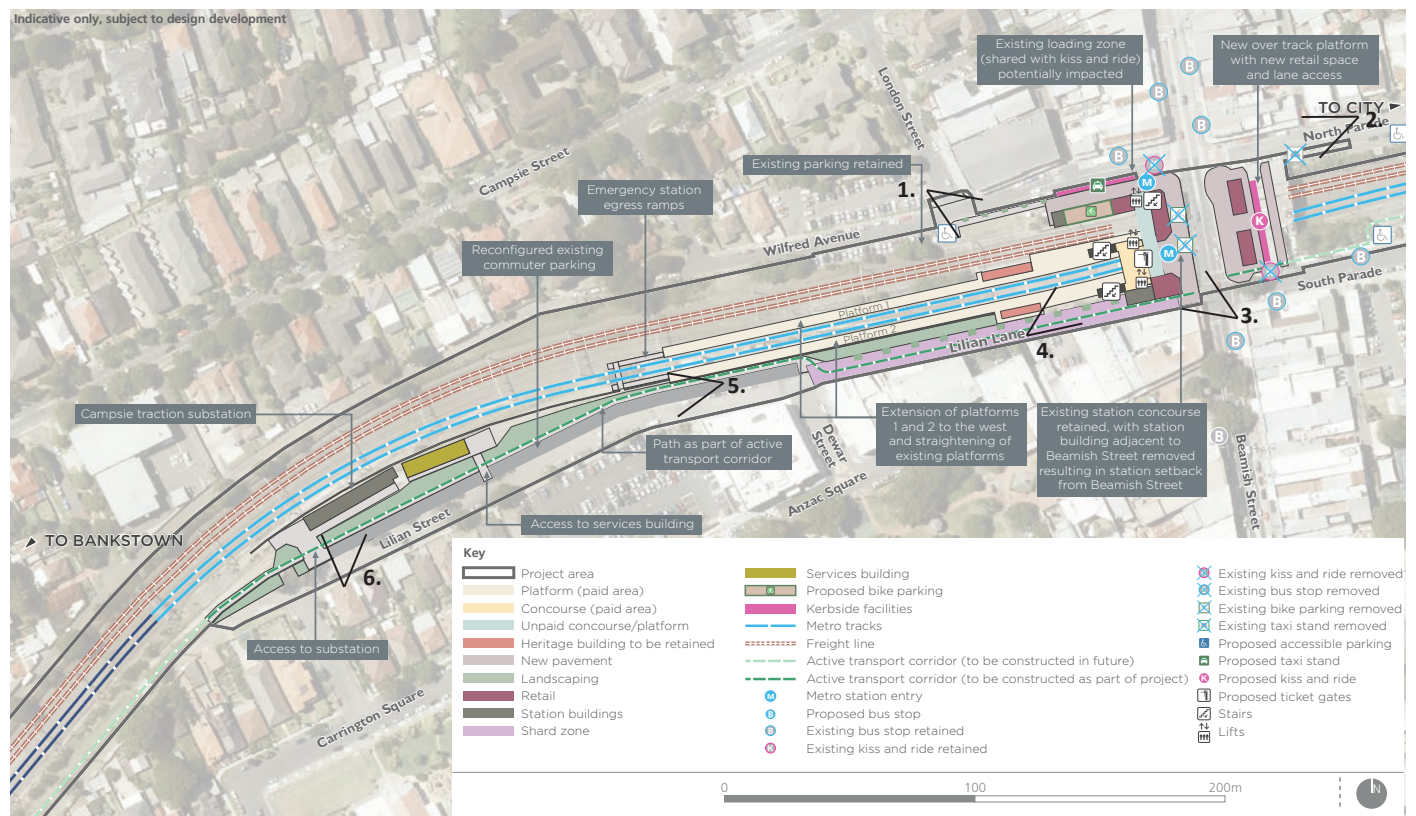


FIGURE 9.1 VIEWPOINT LOCATION PLAN

9.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View southeast from corner of Wilfred Avenue and London Street
2. View west along North Parade
3. View southwest from Beamish Street
4. View northeast from Lilian Lane
5. View west from Lilian Street
6. View east from Lilian Street.

Refer to Figure 9.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Campsie Station, identified in the representative viewpoint assessment and site visit observations.

Viewpoint 1: View southeast from corner of Wilfred Avenue and London Street

In this view the rail corridor can be seen emerging out of a cutting at the station. The station platforms, awnings and building on platform 1 (all heritage listed), as well as trains, overhead wiring and support structures, can be seen from this location, filtered through black, mesh security fencing. The heritage listed overhead booking office, station concourse and adjacent retail precinct along Beamish Street are also visible.

Construction: The erection of a temporary station access structure would be seen in the foreground of this view. The existing retail along the Beamish Street overbridge, extending into North Parade, would be demolished and the footpaths would close during construction. A compound would be established to the south of Wilfred Avenue, in the centre of this view. This worksite would be enclosed by temporary security fencing and hoarding, and there would be construction vehicle access along North Parade and Wilfred Avenue, in the middle ground of this view. Beyond this, construction of retail at the Beamish Street entrance, the northern station entrance, adjacent bike parking area and the overhead canopy structure would be visible above the hoarding. There would be construction activity across much of this view, likely to obstruct views to the heritage platforms during this time. Overall, construction of the project would create a considerable reduction in the amenity of this view which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The concourse and overhead canopy structures would be visible extending over the rail corridor and rising above surrounding development. The scale of these structures would reflect the importance of the station entry and be a prominent feature of the view. The retail buildings at the station on North Parade would be replaced by the



1 VIEW SOUTHEAST FROM CORNER OF WILFRED AVENUE AND LONDON STREET

new northern station entrance, including new paving, stairs and lift access to the concourse. The bike parking area would be prominent, partially obstructing views to the new northern station entry. Improvements to the pavements around the station entry and on Wilfred Street, would be visible, including adjacent taxi parking bays. The heritage platform building would remain and be visible from this location, partly obstructed by the cutting and station perimeter fencing and new street tree planting. Overall there would be noticeable improvement in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

9. CAMPSIE STATION

Assessment of daytime visual impact



2 VIEW WEST ALONG NORTH PARADE

Viewpoint 2: View west along North Parade

In view includes the rail corridor in the middle ground (left of view) including corridor security fencing and vegetation filtering views. The rail corridor is located in a cutting in this location so that only the upper portions of the overhead lines and support structures are visible. In the centre, middle ground of this view single storey retail buildings can be seen extending across the rail corridor along the Beamish Street rail bridge. The station entry building can be glimpsed beyond this building, and set amongst retail along Beamish Street. To the north (right of view) the built form transitions from one and two storey commercial buildings to residential properties with grassed footpaths, overhead powerlines and small street trees.



3 VIEW SOUTHWEST FROM BEAMISH STREET

Construction: Demolition and reconstruction of the Station and retail on the Beamish Street rail bridge would be clearly visible in the middle ground of this view. This work would include construction of a platform, bridging over the rail corridor, a new lane and retail development. Construction vehicles would be seen travelling along Beamish Street, in the centre of this view, and entering the site. It is expected that there would be a considerable reduction in the amenity of this view which is of neighbourhood sensitivity. This would result in a **minor adverse visual impact** during construction.

Operation: A new lane would be seen in the centre of this view. This would include kerbside facilities and new retail space (the use of the retail space would be subject to a separate approval process). The plaza space created in this area, and set back to retail would open up views to Beamish Street and the new station entrance beyond. The architecture of the station would be distinctive and be a focal point glimpsed in the background of this view. The more open built form and new kerbside facilities would reduce the visual enclosure of this view for adjacent residents. Overall, the

new built form and kerbside facilities would be visually consistent with the character of the surrounding commercial precinct. This change would result in no perceived change in the amenity this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 3: View southwest from Beamish Street

In this view the built form, scale and set back of the main station entrance building is consistent with the adjacent retail buildings so that the façade is integrated into the streetscape. The rail corridor is in a cutting and the buildings along Beamish Road conceal views to the station platforms and platform buildings.

Construction: Demolition and reconstruction of the Beamish Street station entrance, including the overhead booking office, station concourse and adjacent retail properties on both sides of Beamish Street would be clearly visible in the middle ground of this view. This work would extend across Lilian Lane and to Wilfred Avenue. It is expected that there would be a considerable reduction in the amenity of this view which is of local sensitivity. This would result in a **moderate adverse visual impact** during construction.

Operation: The new Beamish Street station entrance would be the central focal point in this view. Retail premises would be reinstated and set back from the road with a widened entry plaza, and reduced visual clutter. The station entry concourse building would be consistent in scale with the surrounding built form. Lilian Lane would have new pavements and have a pedestrian character. Overall, the increased scale and more open form of the new station structures would provide a level of prominence which marks it as an entry to the station, whilst being visually consistent with the character of the surrounding commercial precinct. This change would result in noticeable improvement in the amenity this view, which is of local sensitivity,



4 VIEW NORTHEAST FROM LILIAN LANE

resulting in a **minor beneficial visual impact** during operation.

Viewpoint 4: View northeast from Lilian Lane

This view is from Lilian Lane, a narrow one-way laneway within the commercial precinct of Campsie. At this point the rail corridor is emerging out of a cutting and nearly level with the lane. The track, trains, platforms and heritage platform buildings are visible through car parking, steel security fencing and vegetation along the southern rail embankments. Commercial buildings along the south side of Lilian Lane have zero set back and use Lilian Lane for rear access, deliveries and car park access, with minimal room for pedestrians.

Construction: Lilian Lane would be closed to pedestrian and vehicular traffic during construction for construction works. A construction compound and worksite would be located on RailCorp land along the northern side of Lilian Lane, requiring the removal of the vegetation along the rail embankment. The compound would be enclosed by hoarding, and the worksite by

9. CAMPSIE STATION

Assessment of daytime visual impact



5 VIEW WEST FROM LILIAN STREET

temporary security fencing, adding visual clutter and enclosing this view. Construction of the southern station entrance would be visible rising above the station. The demolition of retail buildings adjacent to the Beamish Street station entrance would also be seen in the background of the view. Overall, the project would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: Lilian Lane would be resurfaced, widened and converted into a shared zone. Pedestrian movement would be prioritised and commercial property access would be maintained. The shared zone would create a transition to the new southern station entrance, which would be visible in the distant middle ground of this view. Removal of the vegetation along the southern rail embankments would open-up views to the station, allowing elevated views over the metro platforms and heritage platform buildings with the concourse and overhead canopy seen in the middle to background. The scale and form of these new structures would be larger than surrounding retail

buildings, and rise above the heritage platform buildings, which would be retained. The scale of this architecture would be generally consistent with the surrounding dense urban built form of the Campsie retail centre. Overall, there would be a noticeable improvement in the amenity this view, which is of neighbourhood sensitivity. This would result in a **negligible visual impact** during operation.

Viewpoint 5: View west from Lilian Street

In this view the rail corridor is generally level with the road, however, it is obstructed by buildings within the rail corridor. In the background a row of parallel parking can be seen to the north of Lilian Street (centre of view) and to the south, a large surface car park can be seen in the middle ground of the view, with residential properties with some scattered trees beyond.

Construction: The building to the north (right of view) would be demolished and a construction compound would be established on the rail corridor and extending across the linear car park. This compound would be enclosed by temporary security fencing and hoarding, which would be seen along the road in the middle ground and enclosing this view (right of view). Construction of a service building would be seen in the background, rising above the hoarding. In this view, the project would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The linear car park along the rail corridor would be replaced by a services building. This building would be a prominent new structure. Beyond this building a traction substation would be visible, seen in the background. These changes would be generally consistent in character with the mix of residential and commercial development along the rail corridor. Overall, there would be a noticeable reduction in the amenity

of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 6: View east from Lilian Street

In this view the rail corridor is located in a deep cut and there are a few mature eucalypts, located on the road verge. The permanent way, overhead wiring and support structures can be seen rising above the cutting, seen through wire mesh security fencing on the corridor perimeter. To the north and south (right and left of view), a mix of low and medium density residential properties and commercial properties can be seen with some scattered trees.

Construction: Construction works would be established within the rail corridor and including the substation site in the middle ground of this view. This worksite would be enclosed by temporary security fencing with shade cloth, which would be seen along the road in the middle ground of this view. Construction of a service building would also be seen, beyond the substation works. The mature eucalypts on the road verge would be retained, filtering this view somewhat. Overall, however, the project would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The open rail corridor would be replaced by a services building. This building would be a prominent new structure, obstructing views to the metro platforms and rail corridor and filtered through existing mature trees on the road verge. The services building would also be seen in this view, creating a built edge along the northern side of Lilian Street. These changes would be generally consistent in character with the mix of residential and commercial development along the rail corridor. Overall, there would be no perceived change in the amenity this view. This view is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.



6 VIEW EAST FROM LILIAN STREET



6A VIEW EAST FROM LILIAN STREET TO SUBSTATION, ARTIST'S IMPRESSION

9. CAMPSIE STATION

Assessment of night-time visual impact

9.7. Assessment of night-time visual impact

The setting of the Campsie Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This area includes existing brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, street lighting along Beamish Street and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. The three site access points at the corner of Assets Street and Wilfred Avenue, North Parade (near Browning Street) and South Parade (near Park Street) are located adjacent to residential properties that may overlook the additional lighting required for night-time haulage.

Much of the night works would occur within the station itself, along the rail corridor and adjacent areas. It is likely that there would be additional lighting seen from retail and residential buildings adjacent to the station entry in Beamish Street and along North Parade.

Construction activity would extend southwest of the station, including a construction compound and worksite on Lilian Lane. Additional skyglow and direct light sources may be seen from residential properties on upper Lilian Street. Although these additional light sources and skyglow would be visible in these areas, this additional lighting would be generally consistent with the existing, brightly lit night scene.

Works on the Beamish Street bridge would extend potential night works to the east, and within view of adjacent residential and commercial properties on North and South parades.

Overall, it is expected that this lighting would create a noticeable reduction in the amenity

of views from residential properties on Lilian Street, Wilfred Avenue, North and South parades, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new station entry on Beamish Street, concourse, new northern and southern station entrances and along the platforms extending to the southwest of the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2. This lighting would be generally consistent with the intensity of lighting seen at the existing station, however, it would extend across a greater area.

The new station entrance in North Parade, would increase and extend lighting beyond the existing station area. To the south of the station, the new Lilian Lane station entrance and adjacent shared zone would also increase the level of lighting in this area, as would the new interchange facilities to the east of the station on the Beamish Street bridge.

To the south west of the station, the new service building in Lilian Street would require some security lighting. Although this facility would be located near residential properties on upper Lilian Street, the lighting levels at this service building would be similar to the surrounding area brightness. It is expected, however, that there may be a reduction in amenity in views at night from adjacent residential properties.

Overall, it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity, particularly from adjacent residential properties, due to the intensification and greater area of lighting, seen in close proximity. As this is a medium district brightness environment, there would be a **minor adverse visual impact** at night.

9.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Campsie Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 9.1 LANDSCAPE IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Campsie Station precinct	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial

TABLE 9.2 DAY TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	View southeast from corner of Wilfred Avenue and London Street	Neighbourhood	Considerable reduction	Minor adverse	Noticeable improvement	Negligible
2	View west along North Parade	Neighbourhood	Considerable reduction	Minor adverse	No perceived change	Negligible
3	View southwest from Beamish Street	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial
4	View northeast from Lilian Lane	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
5	View west from Lilian Street	Neighbourhood	Considerable reduction	Minor adverse	No perceived change	Negligible
6	View east Lilian Street	Neighbourhood	Considerable reduction	Minor adverse	No perceived change	Negligible

TABLE 9.3 NIGHT-TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Campsie Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

10. BELMORE STATION

Existing environment



- 1 BURWOOD ROAD, SOUTH OF STATION
- 2 BURWOOD ROAD, NORTH OF STATION
- 3 'COTTER ENTRANCE' TO BELMORE SPORTSGROUND AND TERRY LAMB RESERVE
- 4 BURWOOD ROAD STATION ENTRANCE
- 5 REDMAN PARADE RESIDENTIAL AREA

10. Belmore Station

10.1. Existing environment

The platforms of Belmore Station are in a cutting in this location, with the station entry on the overbridge at Burwood Road. This building contributes to the character of the street, with formal gardens and commuter car parking to the north and south of the corridor providing visual separation between the station building and surrounding built form. A post war bus shelter and public lavatories building are located on the corner of Burwood Road and Redman Parade and have an art deco character and local heritage listing. A federation home (the former Station Master's cottage), also of local heritage significance, is located opposite the station on Burwood Road, adding to the eclectic historic character of the station precinct.

The centre of Belmore comprises a commercial precinct running perpendicular to the rail corridor along Burwood Road, consisting of one to two storey terrace buildings with ground level shopfronts and some larger brick art deco commercial buildings. Belmore Station has a State heritage listing which includes the platform buildings, overhead booking office and overbridge which are of 'aesthetic significance'. To the southwest of the station, the Canterbury Leagues Club complex, which is currently under renovation, is a contemporary visual landmark. Its elaborate palatial façade and landscaped entrance, with terraced water feature, on Bridge Road are in stark contrast to the surrounding landscape character.

Surrounding this commercial centre are residential areas of mixed buildings styles including medium rise flats and apartment buildings, duplexes and detached houses (including some heritage listed Federation style houses). There is some industrial and commercial development spreading alongside the rail corridor, including an aged care facility and Belmore Youth and Resource Centre in Redman Parade and an electricity

substation on Bridge Road. Several at-grade commuter car parks are located alongside the rail corridor on Bridge Road, Tobruk Avenue and Redman Parade.

A footpath extends from Lilian Lane to the southwest via the Belmore sportsground and linear parkland to Belmore Station. A narrow linear parkland reserve is located on rail corridor land between the rail line and pathway linking to the 'Cotter Entrance' to Belmore sportsground and Terry Lamb Reserve.

A linear park is also located between Wortley Avenue and Railway Parade and the corridor to the north of the rail corridor and west of the station. Residential areas surrounding Bridge Road commercial precinct include a mix of two to three storey residential units and single detached houses and terraces set within tree-lined streets.

10.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Belmore Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the north and south of the station along Burwood Road are permitted to reach maximum building heights of up to 18 metres, with the exception of a block at the junction of Bridge Road and Paragon Lane, to the south of the station (currently occupied by the Canterbury Leagues Club), which has a permitted height of up to 30 metres. Building heights between Bridge Street and the rail corridor are permitted to reach 11.5 metres. To the

east of the station, building heights are capped at 8.5 metres between Acacia Lane and Belmore Sportsground, and 11.5 metres along Redman Parade up to Sudbury Street.

Heritage

Belmore Station has a State heritage listing (also on the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register), including the platform buildings, overhead booking office and overbridge of 'aesthetic significance'. The station is also near the following heritage places: the former station master's cottage (north of the station along Burwood Road), the Post-war bus shelter and public lavatories (north of the station along Redman Parade) and the former post office (south of the station along Burwood Road). Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Land use zoning

Belmore's retail centre is located along Burwood Road, to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: 'To provide a range of retail, business, entertainment and community uses' and 'to facilitate and support investment, economic growth and development for active, diverse and well-designed centres' (Part 2, Land Use Table: Zone B2). Elsewhere, the land surrounding the station and commercial precinct is zoned High and Medium Density Residential (R3 and R4), with a large pocket of RE1 – Public Recreation associated with the Belmore Sports Ground and Terry Lamb Reserve, east of the station.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Belmore Station Precinct, Department of Planning and Environment, 2017

This strategy aims to 'retain the character of the low scale 2 and 3 storey buildings fronting Burwood Road with apartments above' (p.16). It also proposes the following land use and associated built form changes to the LEP, within the immediate surrounds of Belmore Station:

North of the station

- Medium rise (maximum 5 storeys) residential north to Lakemba Street
- High rise and/or mixed use development (maximum 18 storeys) along Redman Parade, incorporating commuter parking, community facilities, active uses at ground floor to Burwood Road and Redman Parade, and commercial offices and community uses at first and second floor
- Enhancement of the open spaces on Wortley Avenue and Redman Parade.

South of the station

- Medium-high rise housing and high rise and/or mixed use development south of the station to Leylands Parade
- New urban plaza at the intersection of Collins Street and Burwood Road
- Improve access to Belmore Sportsground via a linear park along the rail corridor.

10. BELMORE STATION

Character and components of the project

10.3. Character and components of the project

Construction Phase

The following section describes the construction phase for Belmore Station:

- Establishment of a worksite including demolition of:
 - island platform, including the awning structure between platform building and stairs, but excluding the heritage platform building
 - permanent ways (railway lines, ballast, overhead lines)
 - public reserve at corner of Tobruk Avenue and Burwood Road
 - Tobruk Avenue car park
- Temporary closure and retrofit of the following heritage listed buildings:
 - platform building
 - overhead booking office on Burwood Road
- Temporary closure of:
 - the north section of Tobruk Avenue
 - the car park in Redman Parade, north of station
- Construction compounds would be established:
 - on the car park in Redman Parade, north of station
 - public reserve at corner of Tobruk Avenue and Burwood Road, south of the station
 - Railway Parade

- Removal of approximately 24 - 43 street including:

- trees in the rail corridor north and south of the station
- trees within the public reserve on Tobruk Avenue, south of the station
- trees at end of Myall Street at the services building site
- Cessation of commercial property leases at the station
- Construction vehicle movement along Burwood Road, Redman Parade, Bridge Road and Tobruk Avenue.

Operation Phase

The following section describes the operational phase for Belmore Station:

- New straight island platform approximately 170 metres long with new platform buildings at eastern end
- New station building at the eastern end of the new platform
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Widened rail corridor with two new retaining walls along the north and south side of the rail corridor (each approximately 200 metres long) and adjacent planting
- Upgrade of Burwood Road overbridge (protection, widening and maintenance of works)
- New overhead concourse between Tobruk Avenue and Redman Parade (approximately 70 metres east of Burwood Road Bridge) with overhead canopy and vertical transport connections to platforms

Character and components of the project

- Canopy structure extending along metro platform, east of the elevated concourse
- New northern station entry at Redman Parade including:
 - ramp and stairs providing access to new elevated concourse
 - accessible parking, taxi stand and kiss and ride bays in Redman Parade
- New southern station entry at Tobruk Avenue including:
 - a new shared zone in Tobruk Avenue with accessible parking, taxi stand and kiss and ride bays
 - station entry plaza with new paving and streetscape planting
 - new retail
 - ramp and stairs providing access to new elevated concourse
 - bike parking area
 - new signalised intersection at junction of Tobruk Avenue and Burwood Road.
- Increased rail traffic through platforms 1 and 2
- Active transport corridor between Tobruk Avenue station entrance and Belmore sportsground
- Service building located in corridor, south-east of the station, off Myall Street
- Existing structures to be retained:
 - heritage listed overhead booking office on Burwood Road (station entry removed)
 - heritage listed platform building (retrofit for metro station use)
 - Redman Parade council parking and commuter car park (to be reconfigured).



BELMORE STATION, VIEW EAST FROM BURWOOD ROAD, ARTIST'S IMPRESSION

10. BELMORE STATION

Character and components of the project

10.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Belmore Station

Belmore station functions as a suburban rail station and is therefore used by concentrations of residents, and it provides an important hub for the local community. It is also a State heritage listed item, increasing its sensitivity as a visual feature within the local area. The landscape and visual values of Belmore Station are therefore of **local sensitivity**.

Belmore Station linear park

To the east of Belmore Station, a narrow linear parkland reserve is located between the rail corridor and pathway linking to the 'Cotter Entrance' of the Belmore sportsground and Terry Lamb Reserve. Mature trees provide an avenue setting to the pathway and filter views to the rail corridor from the pathway and adjacent residences. This precinct is viewed by adjacent residences, people commuting in the rail corridor and pedestrians using the adjacent pathway. The landscape and visual values in this area are of **neighbourhood sensitivity**.

Burwood Road commercial precinct

The commercial precinct functions as the 'high street' of Belmore and is generally used by nearby residents, people working locally in Belmore and those visiting local facilities such as the Belmore Sports Club and Canterbury League Club. Canterbury League Club is a key landmark and destination in the precinct, located immediately south of the rail corridor in Bridge Road. The landscape and visual values of this precinct are of **local sensitivity**.

Belmore residential area

The residential areas of Belmore comprise a mix of buildings styles including detached heritage properties, medium rise flats, apartment buildings and duplexes. The landscape and visual values of this precinct are of varied character and are generally experienced by those living or working locally and visiting local facilities such as Belmore Youth and Resource Centre. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

Sensitivity levels



1



2



3



4



5

- 1 VIEW TO TORBRUK AVENUE FROM BURWOOD ROAD
- 2 HERITAGE BUILDING ON BURWOOD ROAD
- 3 FORMAL GARDENS ON THE CORNER OF BURWOOD ROAD AND REDMAN PARADE
- 4 REDMAN PARADE COMMUTER CAR PARK
- 5 CANTERBURY LEAGUES CLUB

10. BELMORE STATION

Assessment of landscape impact

10.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Belmore Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Belmore Station has one entry on the Burwood Road over bridge, west of the station, located adjacent to the retail high street. The rail corridor is in a cutting and the heritage listed overhead booking office provides covered stair access to the central island platform. Access and connectivity to and around the station is limited to this one entry.

The Council facilities on Redman Parade, the Canterbury Leagues Club and the Belmore Sports Ground are key attractors near the station, drawing pedestrian traffic. The sporting facilities bring large event related crowds to the station, which are connected via a north south active transport corridor along Tobruk Avenue. Bus stops for interchange are located on Burwood Road, split between areas to the north and south of the station. However, Burwood Road is a barrier to free east west movement in the precinct and there are no dedicated crossings at the intersection of Bridge and Burwood roads, outside the station entry. The rail corridor also constrains north-south movement in the precinct to the narrow footpaths along the Burwood Road overbridge and a pedestrian only underpass between the Belmore Sports Ground and Redman Parade, east of the station. Formal gardens and commuter car parking to the north and south of the corridor provide separation between the station and surrounding built form. The car parks are located adjacent to the rail corridor, in close proximity to the station entrance.

Construction: The current station entry on Burwood Avenue would remain open during construction, including the overhead booking office, stairs and lift. Road access

and footpaths on Burwood Road would also remain open, so that north-south connectivity over the rail corridor would be maintained. The continued use of the existing station access would assist in wayfinding for customers during construction.

In the area, north of Tobruk Avenue, the public car park would be closed and a construction compound established, requiring the removal of numerous existing trees. This work would require temporary diversions of pedestrian and vehicular traffic around Tobruk Avenue. Access to the construction compounds from the north would be via the Tobruk Avenue and Redman Parade car parks, crossing pedestrian footpaths and requiring some diversions and reduction in accessible footpath width.

Within the rail corridor trees would be removed to accommodate the metro tracks, the new elevated concourse, retaining walls, platform reconstruction works and installation of segregation fencing and signalling equipment. This would reduce the amenity and shade within the precinct.

There would be a direct impact on the public reserve on Tobruk Avenue, linear park and trees located to the south of the rail corridor to allow for the construction of the station and a services building at Myall Street. This work may require temporary diversions of the shared path which leads to the Terry Lamb Reserve in the south east.

There would be a reduced platform area available for commuters during construction of the new station entry, elevated concourse and alterations to the station platforms and permanent ways. The introduction of this construction activity would reduce accessibility and visibility around the precinct. It may also reduce the perception of passive surveillance, as lines of sight are obstructed by hoarding and construction activities.

Overall, it is expected that this construction activity, including the rail corridor widening works, removal of vegetation, construction

of a new elevated concourse, station entries, shared zone and plaza, and associated disruptions to pedestrian and vehicular traffic would result in a considerable reduction in the landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The Burwood Road overhead booking office building would be retained but no longer be in operation, altering the patterns of access to the station, away from the main street. Although wayfinding signage would be introduced, this change would reduce the legibility of the station entry, as the function of this building may not be apparent in approaches to the station.

The new station concourse building would be set back about 70 metres from Burwood Road, and would have a northern entry on Redmond Parade, and southern entry via Torbruk Avenue and Acacia Lane. The relocation of the station to the east allows for more generous entry and concourse spaces, improving customer experience, accessibility and permeability of the station.

The formal gardens and commuter car park at the corner of Torbruk Avenue and Burwood Road would be redeveloped, including a new station entrance set within a spacious plaza and provision for new retail development. This area would continue to provide visual separation between the main station entrance and surrounding built form, provide a setting for the station buildings, and place for waiting and meeting. The new station architecture including building canopies at the station entrance and elevated concourse would create a visually prominent station entry, providing some legibility to the precinct from the south.

The provision and layout of transport interchanges would be improved as a shared zone would be created in Torbruk Avenue. This zone would include a taxi stand, accessible parking and kiss and ride bays within close proximity to the station. There would also be a new bike parking area at

the station entrance, improving bike parking facilities. The proposed plaza arrangement would improve pedestrian safety through passive surveillance from adjacent retail areas and improve accessibility to the station.

To the north, the car park in Redman Parade would be reconfigured to include a new northern station entry, with access to the elevated concourse and nearby a taxi stand, accessible parking and kiss and ride bays.

The redevelopment along Torbruk Avenue and new station entries would alter the legibility, 'sense of place' and character of this precinct. However, historic landmark buildings would remain, including the main station building on Burwood Road, Art Deco post war bus shelter and public lavatories building in Redman Parade. These heritage buildings maintain the legacy and contribute to the vibrancy of the built form of this precinct.

The location of the services building to the southeast of the station, near Myall Street, would reduce the tree cover and amenity of the adjacent path somewhat. However, this location separates this use from the main station precinct, limiting impacts on access around the station and east west movement.

Overall, the new station entrances would result in a noticeable improvement in the landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **minor beneficial landscape impact** during operation.

10. BELMORE STATION

Assessment of daytime visual impact

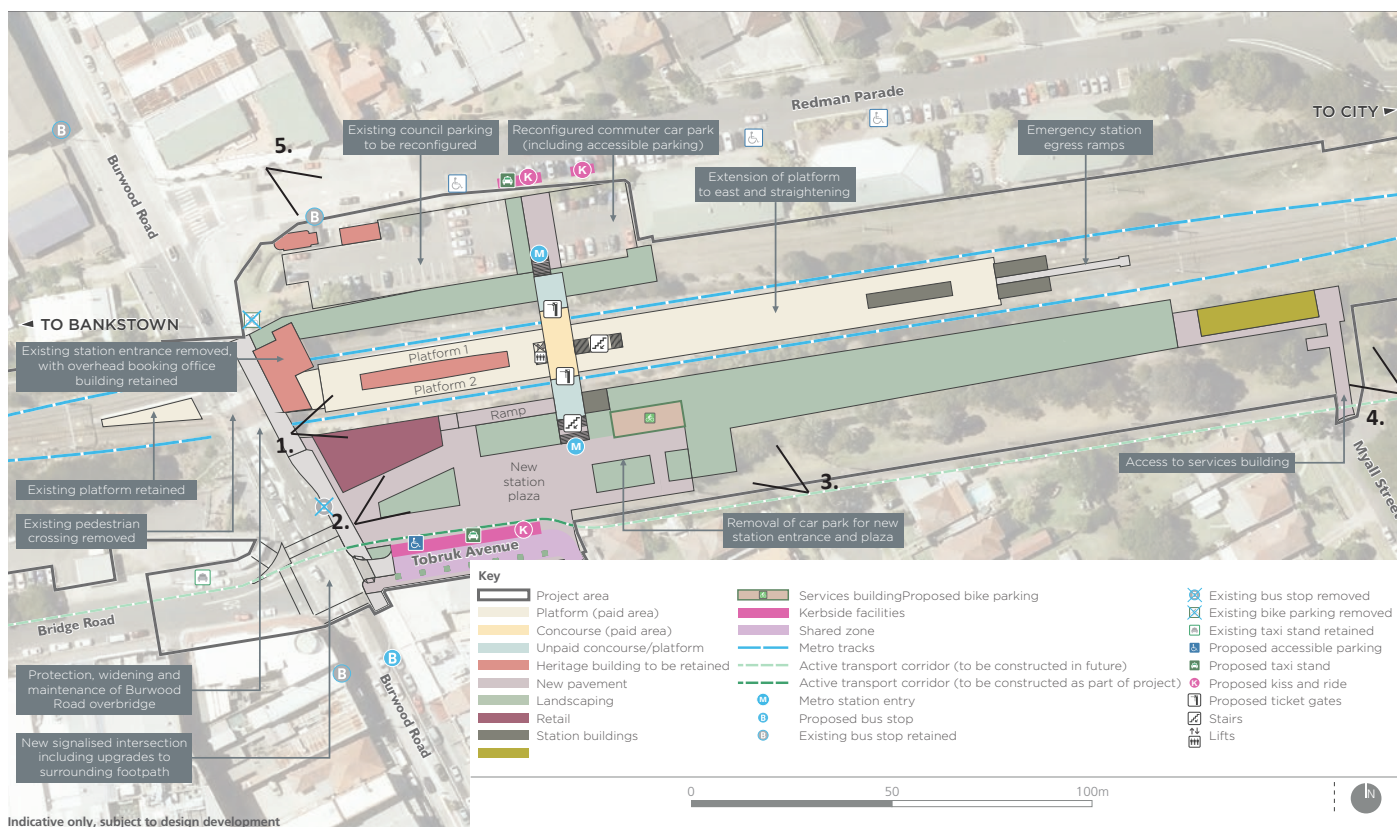


FIGURE 10.1 VIEWPOINT LOCATION PLAN

10.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View east from Burwood Road overbridge
2. View northeast from Tobruk Avenue
3. View northwest from shared path linking to the Terry Lamb Reserve
4. View west from the Terry Lamb Reserve
5. View southwest from Redman Parade.

Refer to Figure 10.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Belmore Station, identified in the representative viewpoint assessment and fieldwork visit observations.

Viewpoint 1: View east from Burwood Road overbridge

This is an elevated view over the station from the Burwood Road overbridge. The entire rail corridor, including the shotcrete cuttings, vegetation and fencing along the rail corridor, track, platforms, platform building and awnings, overhead booking office, overhead wiring and support structures are visible in the fore and middle ground. The Tobruk Avenue car park is also seen, filtered by chain mesh fencing to the south. The flood lights and stadium at Belmore sportsground provide a backdrop to this view.

Construction: Demolition and reconstruction of the central platform would be clearly visible from this location. Works to widen the rail corridor and construction of the new retaining wall to the south of the corridor and extending from the bridge for the length of the station would be visible. The heritage listed platform building would be protected during construction and later refurbished. Installation of the elevated concourse, southern station entrance and adjacent bike parking area would also be clearly visible. The construction compound in Redman Parade would also be seen, in the background (left of view) including the removal of some trees and opening-up views beyond to development to the northeast the station. After completion of the new elevated station concourse and entries, the existing contemporary structures connecting the existing overhead booking office (left of view) and platform buildings (both heritage listed), would be demolished, creating some visual separation between the existing heritage buildings.

Overall, construction activity would alter much of this view, and create a considerable reduction in the amenity of this view which is of local sensitivity. This would result in a **moderate adverse visual impact** during construction.



1 VIEW EAST FROM BURWOOD ROAD OVERBRIDGE

Operation: The widening of the rail corridor, removal of vegetation and replacing of the rail cuttings with a retaining wall along the entire length of the metro platform would be seen unobstructed in this view. The new station buildings would be seen beyond the existing heritage platform building. The scale and form of the new elevated concourse, station entrances would rise above the surrounding station buildings and dominate this view.

The removal of the contemporary structures (stairs, canopies etc.) connecting the existing overhead booking office (left of view) and platform buildings (both heritage listed), would create some visual separation between the existing heritage buildings, as there would be less elements attached to the heritage building, improving the setting of this building in this view. However, the new elevated concourse and canopy structure would rise above the existing heritage platform building, visually enclosing this building in the background (to the east). On balance, these changes would maintain its prominence within the view.

10. BELMORE STATION

Assessment of daytime visual impact



2 VIEW NORTHEAST FROM TORBRUK AVENUE

The project would comprise a large portion of this view, creating a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 2: View northeast from Torbruk Avenue

This view includes Torbruk Avenue in the foreground, and the existing public car park and shared path and a park in the middle ground of the view. A mature eucalypt tree and numerous smaller trees filter and provide dappled shade to the vehicles, which are dominant in this view. This view includes filtered glimpses to the heritage listed platform building roof beyond the car park, however much of the station is not visible. One and two storey commercial buildings can be seen to the south of Torbruk Avenue (right of view), and low density suburban Belmore can be seen to the south, in the background (right of view).

Construction: This view would be replaced with a construction compound, enclosed by temporary security fencing and hoarding. Construction of the new southern station entrance, including the entry plaza, retail buildings, bike parking area would be partially seen above the hoarding. This section of Torbruk Avenue would also be converted into a shared zone, requiring the closure of Torbruk Avenue and the adjacent public park and car park during construction. The mature eucalypt tree (right of view) would be protected during construction. Construction vehicle access would be located at the eastern end of the car park, so that construction vehicles would be seen from this location. Overall, this activity would create a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The foreground of this view would become a shared zone. The existing mature eucalypt tree would be retained and the car park would be replaced with an entry plaza with buildings to support future

retail, new paving, planting, bike parking area. These elements would comprise the middle ground of this view, and the elevated concourse would be seen beyond the plaza, rising above the rail corridor. It is expected that the project would result in a noticeable improvement in the amenity of this view, resulting in a **minor beneficial visual impact** during operation.

Viewpoint 3: View northwest from the shared path linking to the Terry Lamb Reserve

This view, from the linear park along the southern side of the rail corridor, includes several mature native and exotic trees along the fence line, providing shade, amenity and a visual screen to the rail corridor from both the shared path and adjacent residential areas. The Tobruk Avenue car park is partially seen behind the trees in centre of view. Rail corridor security fencing defines the northern edge of the park. Beyond this there is a flat fully fenced lawn rail reserve at the top of the rail cutting, used for RailCorp maintenance and access.

Construction: A construction compound would be established along the rail corridor and within this park, and would be seen unobstructed across the middle ground of this view. This work would require the removal of trees, and would be enclosed by hoarding. Haulage vehicles may be visible along Tobruk Avenue, with site access at the eastern end of the commuter car park. The commuter car park would be closed and works to construct the new southern station entrance and elevated concourse would be seen in the centre background of this view, rising above the hoarding. Due to the removal of vegetation and introduction of construction activity into an area of open space, these works would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.



3 VIEW NORTHWEST FROM PATHWAY TO THE TERRY LAMB RESERVE

Operation: The commuter car park and northern part of the linear parkland would be replaced with the southern station entrance in the middle ground and adjacent plaza and retail buildings in the background of this view. The overhead canopy structure and elevated concourse building would be visible from this location, rising above the rail corridor. A bike parking area would be located to the east of the station entry, and have a consistent architectural character to the entry. To the east (right of view), the eastern platform buildings may be visible as the track emerges from the cutting. The removal of vegetation along the rail corridor and introduction of new built form would result in a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.

10. BELMORE STATION

Assessment of daytime visual impact



4 VIEW WEST FROM THE TERRY LAMB RESERVE

Viewpoint 4: View west from the Terry Lamb Reserve

This view includes the linear park along the southern side of the rail corridor, with mature trees along the rail corridor, providing a visual screen to the rail corridor from both the shared path and adjacent residential areas. The Cotter entrance gate marks the end of the Terry Lamb Reserve. To the south (left of view) are residential properties and scattered, existing mature trees.

Construction: Work to construct the services building would be seen in the middle ground of this view. This work would include the removal of several trees. Haulage vehicles would be visible along Myall Street, with site access crossing the shared path. Due to the removal of vegetation and introduction of construction activity into an area of open space and residential properties, these works would create a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new services building would be seen in the middle ground of this view, filtered through new trees proposed to be planted along the new active transport corridor (incorporating the shared path). The services building would obstruct views to the rail corridor. In the background of this view, the mature trees within the linear parkland would remain, screening views to much of the new station entry. A new entry road would be seen, extending between the services building and Myall Street, across the active transport corridor, to a gated hardstand area surrounding the building. The scale of this building would be slightly larger than the adjacent residential dwellings, however, there would be some visual separation provided by the open space. The removal of vegetation and introduction of new built form would result in a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 5: View southwest from Redman Parade

The Redman Parade commuter car park and adjacent council car park are seen in the centre of this view, alongside the rail corridor. Trees filter views across the car park and enclose the view to the east, so that only glimpses of the Belmore Youth and Resource Centre can be seen (left of view). The heritage listed art deco style post-war bus shelter and public lavatories building can be seen prominently at the corner of Burwood Road. The track and station are in a cutting, concealed by landform, vegetation and fencing along the car park boundary.

Construction: The entire car park would be replaced with a construction compound and enclosed by temporary security fencing and hoarding. Construction vehicle movement and site access would be seen on Redman Parade. Removal of vegetation along the railway cutting and construction of the new northern station entry, elevated concourse, retaining walls along the rail corridor and possibly the upper parts for the southern station entrance in Tobruk Avenue would be visible. Due to the extent of works seen, this would create a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: In the foreground of this view, the heritage post-war bus shelter and public lavatories building would be retained, and the car park would be reconfigured. The vegetation along the top of the railway cutting would have been removed, opening-up views to the new northern station entry and elevated concourse with vertical transport and canopy structures. The new station buildings would be a prominent skyline feature and focal point of this view. Leading from the station entry to Redman Parade, would be a new paved plaza area with trees and landscaping, with a kiss and ride and taxi stand on Redman Parade. Although there would be substantial changes in the character of this view, it is expected



5 VIEW SOUTHWEST FROM REDMAN PARADE

that the setting of this view has the capacity to absorb this change. On balance, this would result in no perceived change in the amenity of this view, which is of local sensitivity, and a **negligible visual impact** during operation.

10. BELMORE STATION

Assessment of night-time visual impact

10.7. Assessment of night-time visual impact

The setting of the Belmore Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, street lighting along Burwood Road and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. These night works would occur within the station itself as well as in the adjacent construction compounds extending the works into the commuter car parks in Redman Parade and Tobruk Avenue, the public reserve on Tobruk Avenue, and the worksite at Myall Street. At these locations, there may be views to direct light sources and skyglow above this site.

Although this lighting would be absorbed into the surrounding night scene to some extent, it is expected that the additional light sources and skyglow would create a noticeable reduction in the amenity of views from residential properties in Redman Parade, upper Acacia Lane and Acacia Street, and Myall Street, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including lighting around the station entries, new elevated concourse, and metro platforms. There would also be headlights from the additional metro trains using platforms 1 and 2. Much of the light within the station would be contained by the adjacent cuttings and generally consistent with the intensity of lighting seen at the existing station. However, lighting from the elevated concourse would be seen above the cuttings and from surrounding areas, as would lighting from the platforms in areas

to the east where the new platforms would be generally level with the surrounding landform.

The new shared zone, station entries and transport interchanges would be well-lit for safety and legibility, including both direct light sources and a general skyglow around the station. This additional lighting would be seen from within the new plazas in Tobruk Avenue and Redman Parade, and adjacent commercial areas and residential properties, including the northern end of Acacia Lane and Acacia Street. Although this would both extend the lighting beyond the existing station area and increase lighting levels, it would be generally consistent with the lighting seen at the existing station and surrounding commercial precinct.

There would be some security lighting required at the services building adjacent to Myall Street. However, this would be set back from the adjacent residential properties, and seen against the existing rail corridor and lighting of development to the north of the corridor.

Overall, it is expected that during operation the lighting of the project would create a noticeable reduction in visual amenity, particularly from adjacent residential properties, due to the intensification and greater area of lighting, seen in close proximity. As this is a medium district brightness environment, resulting in a **minor adverse visual impact** at night.

10.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Belmore Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 10.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Belmore Station precinct	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial

TABLE 10.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View east from Burwood Road overbridge	Local	Considerable reduction	Moderate adverse	Noticeable reduction	Minor adverse
2	View northeast from Tobruk Avenue	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial
3	View northwest from shared path linking to the Terry Lamb Reserve	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
4	View west from the Terry Lamb Reserve	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
5	View southwest from Redman Parade	Local	Considerable reduction	Moderate adverse	No perceived change	Negligible

TABLE 10.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Belmore Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

11. LAKEMBA STATION

Existing environment



- 1 SOUTHERN STATION ENTRANCE, THE BOULEVARD
- 2 HALDON STREET, SOUTH OF STATION
- 3 CORNER PARK AT RAILWAY PARADE AND HALDON STREET
- 4 WAR MEMORIAL, THE BOULEVARD
- 5 NORTHERN STATION ENTRANCE, RAILWAY PARADE

11. Lakemba Station

11.1. Existing environment

Lakemba Station has local historical significance and is on the RailCorp S170 Heritage and Conservation Register. It includes a single island platform, with original platform building, servicing east and west bound passenger rail lines, and with the Metropolitan Goods Line further to the north. The station is accessed via a recently upgraded entry concourse with stair and lift access to the platform and a footbridge linking the station with Railway Parade in the north and The Boulevard in the south. The new footbridge has a contemporary skillion roof at each entrance, set within parkland. These are visually prominent features when viewed from the adjacent streets.

At the southern station entrance a war memorial (local heritage item) set within a small square lawn area, is a local visual landmark, framed by planting along the rail corridor boundary.

The rail corridor is in cutting and aligned in an east-west direction, perpendicular to Haldon Street. Several mature trees and shrubs have been planted along the rail embankments and adjacent streets. Commuter parking is located either side of Haldon Street. The Lakemba commercial area faces the station on Railway Parade and The Boulevard and consists mainly of one to two storey terrace buildings with ground level shopfronts.

A prominent five storey building (Telstra) in Croydon Street is incongruous with the surrounding streetscape. The Uniting Church, at the corner of Haldon Street and The Boulevard, is a local visual landmark. Areas surrounding Haldon Street commercial precinct include a mix of two and three storey and single detached houses, commonly with tree lined streets, including Federation weatherboard and Inter-war house styles.

Alongside the northern rail corridor boundary in Railway Parade, the rail corridor rises to become an embankment to the west. Mature street trees provide an avenue setting to Railway Parade and screen views to the rail corridor from the road, Jubilee Reserve and adjacent residences. This precinct is viewed by adjacent residences, people commuting in the rail corridor and pedestrians using the adjacent pathway.

11.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Lakemba Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the north and south of the station along Haldon Street are permitted to reach maximum building heights of up to 18 metres, with the exception of two blocks permitted to reach up to 21 metres along Railway Road (northwest of the station) and between Gillies Lane and Quigg Street South (southeast of the station).

Heritage

Lakemba Station is listed as a heritage item in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register. The station is also near the Lakemba Post Office, also a local heritage asset, located immediately south of the station along The Boulevard. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Landuse zoning

Lakemba's retail centre is located on Haldon Street and extends to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: *'To provide a range of retail, business, entertainment and community uses' and 'to facilitate and support investment, economic growth and development for active, diverse and well-designed centres'* (Part 2, Land Use Table: Zone B2). Elsewhere, the land surrounding the station and commercial precinct is zoned High and Medium Density Residential (R3 and R4), interspersed with small pockets of RE1 – Public Recreation.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Lakemba Station Precinct, Department of Planning and Environment, 2017

A key aim of this strategy is to retain the 'village-like' feel of Haldon Street' (p.17) and 'ensure that new development is complementary' (p.2). It also proposes the following land use and associated built form changes to the LEP, within the immediate surrounds of Lakemba Station:

North of the station

- New urban plaza at the new station forecourt
- High rise residential and mixed use development (up to 12 storeys) along Railway Parade, west of Croydon Street
- Main street shop top housing along Haldon Street
- Medium rise residential (6 storeys) north of Railway Parade, east of Quigg Street North, along Bellevue Avenue and Lakemba Street.

South of the station

- Main street shop top housing along Haldon Street
- High rise residential and mixed use development between Croydon Street and Oneata Lane and Gillies Lane and Quigg Street South

- Medium-high rise residential (8 storeys) along The Boulevard, ensuring that any development provides for a through site link in line with Oneata Street
- Enhancement of Jubilee Reserve
- New urban plaza within a redeveloped car park on Quigg Street South.

11. LAKEMBA STATION

Character and components of the project

11.3. Character and components of the project

Construction phase

The following section describes the construction phase for Lakemba Station:

- Establishment of a worksite, including demolition of:
 - part of the listed brick central island platform (Haldon Street end)
 - parts of the concourse building (western side)
 - a section of three permanent ways (railway lines, ballast, overhead lines)
 - parkland on Railway Parade to the east of the station entry.
- Construction compounds would be established:
 - on The Boulevarde, southwest of the station
 - on Railway Parade, northwest of the station
- Removal of approximately 20 to 40 trees impacted by this site including:
 - trees on Railway Parade, north of the station
 - one tree beside car park on The Boulevarde, southwest of station
 - trees, shrubs and small area of parkland, on Railway Parade, southeast of the station.
- Cessation of commercial property leases at the station

Operation phase

The following section describes the operational phase for Lakemba Station:

- New straight central island platform (approximately 170 metres long) with a total extension of approximately 24 metres to the west
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Staff and services buildings at eastern end of the platform
- Retaining walls along the northern edge of the corridor
- Emergency egress ramps and stair between the eastern end of the platform and Railway Parade
- New canopy structures extending along metro central island platform
- New station canopy roof structure
- Expansion of the existing concourse to the west
- Southern station entry on The Boulevarde with transport interchange comprising:
 - bus stops
 - new taxi parking
 - new accessible parking
 - proposed on-road cycle route
- Northern station entry on Railway Parade with transport interchange comprising:
 - new kiss and ride
 - existing bus stops
 - retained car parking
- Services building on The Boulevarde, southwest of the station
- New street trees on The Boulevarde and Railway Parade

Character and components of the project



LAKEMBA STATION, ARTIST'S IMPRESSION

- Existing structures to be retained:
 - Heritage listed 1919 platform building
 - Existing station concourse building
 - War memorial
 - Retail to the southwest of the station.
- Active transport corridor to the south of the rail corridor
- Potential future development area to the southwest of the station.

11. LAKEMBA STATION

Sensitivity levels



VIEW NORTHWEST ALONG HALDON STREET



VIEW SOUTHEAST FROM HALDON STREET

11.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Lakemba Station

Lakemba station is a suburban rail station which attracts residents from the local area. It provides an important transport hub for the local community and is also a local heritage item, increasing its sensitivity as a visual feature within the local area. The landscape and visual values of Lakemba Station are therefore of **local sensitivity**.

Haldon Street commercial precinct

The commercial precinct of Lakemba includes mainly two storey terraces with street level shopfronts. A war memorial (local heritage item), set within a small square lawn and framed by planting along the rail corridor boundary, located at the southern station entrance, is a local visual landmark. The precinct is generally used by nearby residents, people working locally in Lakemba and those visiting local facilities such as Lakemba Branch Library and Lakemba Uniting Church. The landscape and visual values of this precinct is of **local sensitivity**.

Lakemba residential area

This area includes a variety of residential buildings including medium rise flats and apartment buildings, duplexes and detached houses (including some heritage listed Federation style houses), community buildings and educational facilities, surrounding the commercial precinct. The public realm of this precinct are of varied character and generally experienced by those living or working locally and visiting local facilities such as Jubilee Reserve, Canterbury City Community Centre and Holy Spirit College. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

11.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Lakemba Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Lakemba Station has been recently upgraded as part of the Transport Access Program (TAP). An aerial concourse traverses the rail corridor, with stair and lift access to the station entry plazas in Railway Parade and The Boulevard. The station plazas form an important part of the town centre public domain and contain locally significant elements, including a heritage listed war memorial.

The precinct is well served by pedestrian crossings, although the steep gradients in Railway Parade and The Boulevard provide difficult access between the station and nearby taxi bays, bus stops and retail areas on Haldon Street. The Haldon Street overbridge also has narrow footpaths. Bike parking provision at the station entries is limited and not connected to an identified cycle route.

Construction: The existing station, including entries on Railway Parade and The Boulevard, would be maintained during construction while the new station buildings are constructed immediately to the west, and construction compounds are established on Railway Parade. The location of this construction activity adjacent to the station existing entries would reduce the visual prominence of the station and legibility of the station during construction. Work at the station, and particularly at the corner of Haldon Street and Railway Parade, would require temporary closure of footpaths and diversions of pedestrian traffic along adjacent streets, reducing the ease of access around the station precinct.

The setting of the station generally provides opportunities for passive surveillance due to the surrounding commercial areas which face the station precinct.

Works would extend across parts of the existing open space to the north and south of the railway corridor, however, the war memorial would be retained and protected during these works.

Due to the demolition works and requirement for temporary station access structures, together with potential temporary diversion and closure of pedestrian routes around the station precinct, there would be a reduction in the amenity, connectivity and legibility of the station precinct. It is expected therefore that there would be a considerable reduction in the landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The functioning of this precinct would be restored as the two station entrances, situated on Railway Parade and The Boulevard, would be reinstated.

The expansion of the concourse area within the station building would result in a more spacious and well laid out station concourse, improving access for customers.

Street trees and shade structures at the station entrances, concourse and platforms would provide shade, comfort and amenity in meeting and waiting areas. The heritage listed platform buildings would be retained, preserving the character of the station somewhat.

The provision and layout of transport interchanges would be improved, including the introduction of a kiss and ride zone on Railway Parade, a bike parking and storage facility integrated into both the north and south station entrances, proposed active transport corridor along The Boulevard, and additional car parking along Railway Parade.

This would somewhat improve pedestrian access around the precinct and safety (CPTED). These improvements to public transport accessibility and interchange would support the urban renewal opportunities of this precinct.

The open spaces along the rail corridor would be reinstated including the setting of the war memorial, restoring amenity and access to open space in this precinct.

The location of the station buildings would be unchanged, however, minor additions to widen the concourse area, and the new roof and platform canopies would slightly alter the 'sense of place' and character of the station and surrounding streetscapes. The increased strong architectural statement and consistency with the form of the metro station architecture would improve the prominence and legibility of the station entries. The provision of new plazas, and importantly, upgrades to the existing square and memorial space on The Boulevard, would maintain the sense of local identity.

Overall, as the existing facilities have been recently upgraded, although some minor improvements have been made, the project would result in a noticeable improvement in landscape functioning of this precinct. As this is a precinct of local sensitivity, this would result in a **minor beneficial landscape impact** during operation.

11. LAKEMBA STATION

Assessment of day time visual impact

11.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View northeast from Railway Parade
2. View southwest along The Boulevard
3. View southwest from The Boulevard commuter car park
4. View southeast from Jubilee Reserve.

Refer to Figure 13.1 Viewpoint location plan.

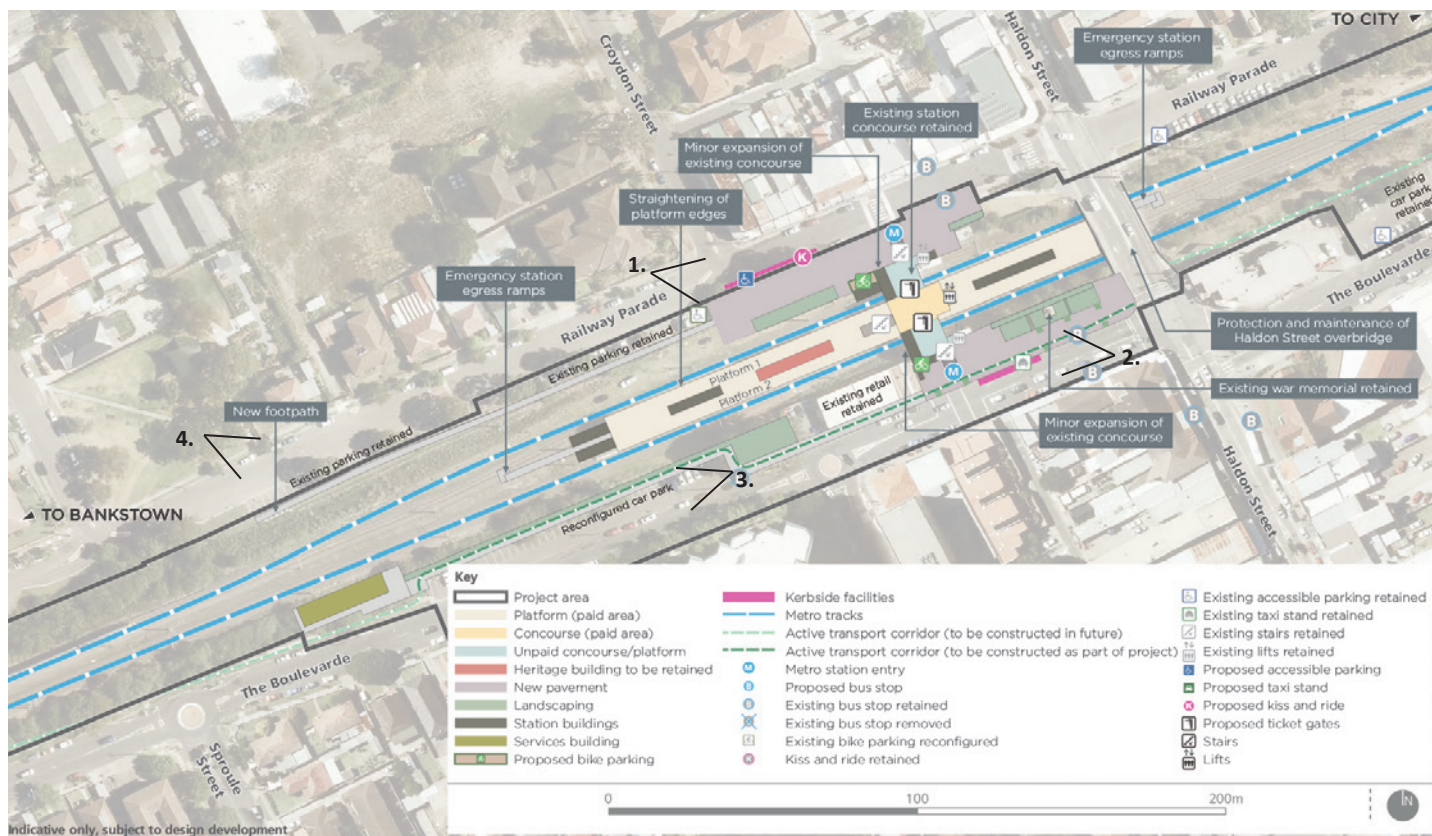
The following sections summarise the daytime visual impact of the construction and operation of Lakemba Station, identified in the representative viewpoint assessment and from fieldwork visit observations.

Viewpoint 1: View northeast from Railway Parade

This view, from the commercial precinct to the southwest of existing station (left of view) includes one and two storey 1920's commercial buildings (left of view), which overlook the station. A stand of visually prominent mature eucalypts, located in the Railway Parade verge, filter views of the heritage listed island platform building (right of view) and existing Lakemba Station overhead concourse and railway corridor infrastructure. Beyond this, canopies of trees within the small public gardens on the corner of Haldon Street and Railway Parade can be seen in background.

Construction: Whilst the station and Railway Parade would remain open, a worksite would be established on the site

FIGURE 11.1 VIEWPOINT LOCATION PLAN



of the existing station and along Railway Parade, in the middle ground of this view. Demolition of parts of the existing station concourse building and removal of the mature eucalypt trees would be visible in the centre of this view. Construction works to expand the existing concourse building, erect new canopy structures, platform works, the construction of platform canopies and fencing would be seen to the west of the station concourse building (right of view).

In the background of this view a construction compound would be visible, beyond the existing station, along Railway Parade and extending to Haldon Street. Construction vehicles would be seen accessing the worksite via Railway Parade.

As these works will be mainly modifications to the existing buildings, works on the platforms and reconfiguration of the public realm, the amenity of this view would be noticeably reduced. As this is a view of local visual sensitivity, this would result in **minor adverse visual impact** during construction.

Operation: In the centre, middle ground, of this view the station buildings would be a prominent visual feature. The removal of the large existing trees would open up views to the existing concourse building which would have been modified to increase the concourse area and incorporate new additional roof structures. To the west of the station (right of view), new platform canopies, retained heritage platform buildings and station security fencing would be seen along the platforms. New street trees would be provided along Railway Parade, however, these would not have the same filtering effect as the existing trees. The northern plaza would have a new pavement treatment improving the amenity of the ground plain. These modifications would have a character and scale similar to the existing view and consistent to that of the retail frontages opposite.



1 VIEW NORTHEAST FROM RAILWAY PARADE

Overall, it is expected that the project would result in a noticeable reduction in the amenity of this view, due to the loss of these mature trees. This view is of local visual sensitivity, resulting in **minor adverse visual impact** during operation.

Viewpoint 2: View southwest along The Boulevard

This view across The Boulevard is framed to the south (left of view) by the awnings and shop fronts opposite the station. A park with war memorial, surrounding lawns and gardens (right of view) characterise the middle ground of the view. Trees within this park filter views to the existing station, platforms and rail corridor. The station concourse building is largely obstructed in this view and is visually continuous with the adjacent single storey retail seen beyond the station in the background of the view.

Construction: Construction activity would be seen in the vicinity of the station concourse building, in the middle ground of this view. The worksite would partly obstruct views to the rail corridor from this location. There

11. LAKEMBA STATION

Assessment of day time visual impact



2 VIEW SOUTHWEST ALONG THE BOULEVARDE

would be construction works around the station and existing concourse building including the construction of additional canopy structures, which would be visible in the middle ground of this view. Several trees within the memorial park and along the southern rail corridor embankment would be removed, however, the war memorial would be retained and some protective measures may temporarily obstruct views to these landscape areas. It is expected that the project would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in **minor adverse visual impact** during construction.

Operation: The existing station building would be the visible in the centre middle ground of this view, with additional new roof structures, and a new plaza space addressing The Boulevard. The war memorial would be retained and complemented with new planting, filtering views to the platforms and rail corridor beyond. It is expected that the project would result in a noticeable improvement in the amenity of this view, which is of local visual sensitivity, resulting in **minor beneficial visual impact** during operation.

Viewpoint 3: View southwest from The Boulevard car park

This view is from within the existing commuter car park looking southwest on the southern side of the rail corridor adjacent to The Boulevard. Street trees to the left of view and along the rail corridor characterise this view, with a mature *Phoenix canariensis* visible amongst the canopies (centre view). This vegetation screens the adjacent fencing, security gates, track, platforms, overhead wiring and support structures beyond and further west. A gap in this vegetation provides direct views into the corridor to the western end of the fenced central platform, permanent way, gravel stockpiles and ballast (right of view). Residences can be seen in the middle ground, over the rail corridor and through the street trees (left of view).

Construction: A construction compound would be visible in the centre of this view, established across the rail corridor and adjacent car parking area. All vegetation within the compound area along the corridor fence line would be removed. Construction vehicle movement and access to and from the construction compound would be seen on The Boulevard in the foreground of this view. The worksite and compound would be enclosed by site perimeter hoarding, obstructing views to the rail corridor from this viewpoint and from adjacent residences. It is expected that the project would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: A reconfigured commuter car park would be visible in the fore and middle ground of this view. A new single storey services building would also be seen at the western end of the carpark, in the background. It would be set at street level, and partly enclosed by the adjacent rail embankment. The removal of trees along the rail corridor would open-up views to the station, including new corridor segregation fencing, signalling equipment, overhead

wires and catenary structures; the western platform extension with lighting, and safety barrier fencing. It is expected that the project would result in a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in **negligible visual impact** during operation.

Viewpoint 4: View southeast from Jubilee Reserve

In this view the rail corridor is visible raised some four to five metres above of a steep, vegetated embankment. Catenary structures, overhead wires, rail and ballast can be seen above the embankment. This embankment contains views to the south, so that only tree canopies along The Boulevard can be seen in the background of the view. In the foreground, the mature park trees and grassed areas of Jubilee Reserve characterise this view, and frame views to the rail corridor, Railway Parade and on street parking in the middle ground of the view. These trees also filter views to the brick residences adjacent this park (left of view).

Construction: The construction of a retaining wall along the northern side of the rail corridor would be visible in the middle ground of this view. This view would also include works to construct the services building at the western end of the extended metro platforms, above the retaining wall, and may include glimpses to the temporary access structures. Vegetation in the background of this view, on the southern side of the rail corridor, would be removed for the construction compound. Due to the scale of construction activity seen within this view it is expected that the project would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in **minor adverse visual impact** during construction.

Operation: In this view, the new retaining wall would be prominent in the middle ground of the view. There would also be an emergency egress stair, leading down from platform level to Railway Parade. Above the



3 VIEW SOUTHWEST FROM THE BOULEVARDE COMMUTER CAR PARK



4 VIEW SOUTHEAST FROM JUBILEE RESERVE

11. LAKEMBA STATION

Assessment of night-time visual impact

embankment there would be segregation fencing and signalling equipment along the rail corridor. It is expected that the services building on the western end of the metro platforms would be seen rising above the embankment. Overall, the project would result in a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity resulting in a **negligible visual impact** during operation.

11.7. Assessment of night-time visual impact

The setting of the Lakemba Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during the 24 hours possession periods, and would include 24-hour construction vehicle access via local streets. Much of the night works would occur within the station and adjacent areas including the construction compounds southeast of the station on The Boulevarde, and northwest of the station on Railway Parade. This construction activity may result in some additional light visible from residential properties adjacent to the rail corridor in Railway Parade, The Boulevarde, including views to both direct light sources and general skyglow above the station. Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from residential properties alongside the rail corridor, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the expanded station concourse building and along the platforms extending to the west of the station. There would also be headlights

seen on the additional metro trains using platforms 1 and 2.

The reinstated station entrances in Railway Parade and The Boulevarde would be generally consistent with the intensity of lighting seen at the existing station, and would be absorbed into the surrounding commercial precinct.

The platform lighting and train headlights, however, would extend the brightly lit station environment west, and in a location elevated above the surrounding residential areas to the south of The Boulevarde and north of Railway Parade. It is expected that there would be a reduction in amenity in views at night from these locations.

To the south west of the station, the new service building would require some low-level security lighting, however, this would be consistent with the adjacent street lighting and moderately lit residential areas. Overall, this lighting would be generally consistent with the surrounding medium district brightness environment, however, the new metro platforms would extend this lighting to the west, and within close proximity to residential areas. This would result a noticeable reduction in the visual amenity and a **minor adverse visual impact** at night.

11.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Lakemba Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 11.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Lakemba Station precinct	Local sensitivity	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial

TABLE 11.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View northeast from Railway Parade	Local sensitivity	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
2	View southwest along The Boulevarde	Local sensitivity	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial
3	View southwest from The Boulevarde commuter car park	Neighbourhood sensitivity	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
4	View southeast from Jubilee Reserve	Neighbourhood sensitivity	Considerable reduction	Minor adverse	Noticeable reduction	Negligible

TABLE 11.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Lakemba Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

12. WILEY PARK STATION

Existing environment



- 1 VIEW FROM KING GEORGES ROAD
STATION ENTRANCE
- 2 THE BOULEVARD, WEST OF KING GEORGES
ROAD
- 3 LANEWAY BETWEEN KING GEORGES ROAD
AND SHADFORTH STREET
- 4 KING GEORGES ROAD RAIL BRIDGE
- 5 THE BOULEVARDE, EAST OF KING
GEORGES ROAD

12. Wiley Park Station

12.1. Existing environment

Wiley Park Station is located on King Georges Road, a major north south route which is six to seven lanes wide. This local shopping precinct includes a mix of heritage character and contemporary shopfronts of one to two storeys. An art deco style brick corner building located adjacent to the station is a local visual feature. This streetscape also includes several residential developments ranging from two to six storeys in height and of mixed architectural quality.

The station has a split platform layout and is in a cutting. The overhead booking office is elevated above the station facing King Georges Road. This building is surrounded by single storey shop fronts and is therefore not visually prominent. Wiley Park Station has a local heritage listing and is on the RailCorp S170 Heritage and Conservation Register. It is identified as having some 'aesthetic significance' due to its 1930s platform buildings and overhead booking office. Due to several contemporary alterations to the station including skillion roofs, palisade fencing and platform access ramps, the character is of mixed visual quality.

The station is surrounded by a wide turfed corridor with scattered trees which filter views from the surrounding residential areas to the north and south. A footpath extends east from the station to Railway Parade and west to Urunga Parade to the north of the corridor and The Boulevard provides an east west route to the south and parallel to the corridor.

12.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Wiley Park Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the north of the station along King Georges Road are permitted to reach maximum building heights of up to 27 metres. To the south, the maximum building height at the corner of King Georges Road and The Boulevarde is 21 metres. Elsewhere, the built form around the station is generally permitted to reach a maximum height of 8.5 to 11.5 metres.

Heritage

Wiley Park Station is listed as a heritage item in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register. The Lakemba Pumping Station, also a local heritage asset, is located immediately south of the station between The Boulevarde and Hillcrest Street. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Landuse zoning

Wiley Park's retail centre is focused along King Georges Road, to the north of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: 'To provide a range of retail, business, entertainment and community uses' and 'to facilitate and support investment, economic growth and development for active, diverse and well-designed centres' (Part 2, Land

Use Table: Zone B2). Elsewhere, the land surrounding the station and commercial precinct is zoned High and Medium Density Residential (R3 and R4), interspersed with pockets of RE1 – Public Recreation, including Wiley Park at the junction of King Georges and Canterbury Road, south of the station.

Sydenham to Bankstown Urban Renewal Corridor Strategy: Wiley Park Station Precinct, Department of Planning and Environment, 2017

This strategy proposes the following land use and associated built form changes to the LEP, within the immediate surrounds of Wiley Park Station:

North of the station

- High rise residential and/or mixed use development (up to 12 storeys) along King Georges Road, to Lakemba Street
- Medium-high rise housing (8 storeys) east of Shadforth Street
- Medium rise residential (6 storeys) along Urunga and Railway Parades.

South of the station

- New linear park along the train line
- Medium-high rise development adjacent to the rail line, along The Boulevard to the east and west of the station
- Medium rise housing west from Wiley Park Girls High School, to connect with similar densities in the Punchbowl Station Precinct.

12. WILEY PARK STATION

Character and components of the project

12.3. Character and components of the project

Construction phase

The following section describes the construction phase for Wiley Park Station:

- Establishment of a worksite including demolition of:
 - heritage listed overhead booking office on King Georges Road, platform buildings, ramped platforms and roof structures
 - platforms 1 and 2
 - permanent ways (railway lines, ballast, overhead lines) between platforms 1 and 2
 - existing platform toilet block
- Removal of approximately 25 - 38 trees including:
 - trees along the rail corridor and King Georges Road
 - trees and shrubs along northern side of The Boulevarde
 - trees along Stanlea Parade between Shadforth and Cornelia streets
- Cessation of commercial property leases at the station
- Construction compounds to be located at:
 - The Boulevarde, south of the station
 - Urunga Parade, north of the station
- Establishment of a temporary station access structure
- Construction vehicle movement along The Boulevarde and Urunga Parade.

Operation phase

The following section describes the operational phase for Wiley Park Station:

- New straight platforms approximately 170 metres long
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- New platform canopies along metro platforms 1 and 2
- Two new entrances from the corner of The Boulevarde and King Georges Road, and Stanlea Parade and King Georges Road
- New retail premises and new paving along King Georges Road
- New elevated concourse building with overhead canopy, vertical transport and stair connections to platforms
- Transport interchange along north side of The Boulevarde, south of King Georges Road, comprising:
 - bike parking area
 - retained existing bus stops
 - off-street car parking area south of station (to be provided by Roads and Maritime Services as part of the clearway project)
- Transport interchange along north side of The Boulevarde, east of King Georges Road, comprising:
 - accessible parking
 - kiss and ride bays
 - taxi stand
- Active transport corridor to the south of the rail corridor
- Services building in rail corridor, southwest of station near The Boulevarde
- Increased rail traffic through platforms 1 and 2.



12.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Wiley Park Station

Wiley Park station functions as a suburban rail station and is therefore used by concentrations of residents. It provides an important transport hub for the local community and is also a local heritage item, increasing its sensitivity as a visual feature within the local area. The landscape and visual values of Wiley Park Station are of **local sensitivity**.

King Georges Road commercial precinct

The commercial precinct of Wiley Park runs perpendicular to the rail corridor along King Georges Road, consisting of a cluster of one to two storey terrace buildings with ground level shopfronts and several taller residential developments (up to six storeys), spreading north of Wiley Park Station. An art deco style

brick corner building located adjacent to the station is a local visual feature. The precinct is generally used by nearby residents, people working locally in Wiley Park and students attending local schools. The landscape and visual values of this precinct are of **local sensitivity**.

Wiley Park residential area and schools

This precinct lies to the north and south of the rail corridor. It consists of a variety of residential buildings, including medium rise flats and apartment buildings, duplexes and detached houses and schools, including Wiley Park Girls High School, Wiley Park Public School and Lakemba Public School. The rail corridor is level with some surrounding streets west of the station, allowing partial views to the station platforms through mature trees from Shadforth Street in the north and parts of The Boulevard in the south. This precinct has a varied character, and is generally experienced by those living, working or attending schools locally. The landscape and visual values of this area are of **neighbourhood sensitivity**.

WILEY PARK STATION, VIEW FROM KING GEORGES ROAD, ARTIST'S IMPRESSION

12. WILEY PARK STATION

Assessment of landscape impact



VIEW TO STATION ENTRY ON KING GEORGES ROAD



VIEW WEST ALONG LANE FROM KING GEORGES ROAD

12.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Wiley Park Station precinct. (refer to Table 2.7 for impact levels)

Existing conditions: The station precinct is dominated and divided by King Georges Road, a busy six to seven lane road. The station has one main entry on the King Georges Road overbridge, to the east of the station, including a small concourse area with covered ramps leading to the platforms. Access and connectivity to and around the station is limited to this one entry. King Georges Road is a hostile environment for pedestrians, with crossing points limited to the signalised intersection at The Boulevarde and the pedestrian bridge, south of the station. The extended clearway zones along King Georges Road also preclude interchange drop off adjacent to station entry and there is no taxi, kiss and ride or bike parking provision.

The station approaches offer limited pedestrian amenity and comfort. The station has an unattractive street frontage and pathway access from the west along The Boulevarde and the Stanlea Parade laneway, offer steep approaches. The surrounding three public schools to the south of the station (Wiley Park Girls High, Wiley Park Public School and Lakemba Public School) are key attractors to the station, drawing pedestrian traffic along the narrow footpaths either side of King Georges Road.

Construction: Temporary access to the station platforms would be constructed to the west of the existing station so that the existing station buildings including the overhead booking office (heritage listed) on King Georges Road, adjacent retail buildings, ramps, stairs and platform buildings can be demolished. The heritage listed platform buildings would also be removed, substantially changing the character of the

station, and reducing the area of platform available for use during this time. However, the relocation of the station at a distance from the main commercial street, loss of the locally identifiable station entry buildings on the main street, and approach routes diverted along laneways and narrow footpaths, would combine to reduce the overall accessibility of the station.

There would be a reduced opportunity for passive surveillance, as the station access is moved away from the commercial street and towards residential areas, reducing the perception of safety (CPTED).

Installation of the southern station entrance and construction compound (between the track and The Boulevard, opposite Wiley Park Girls High School) would require changes or diversion to regular pedestrian and vehicular traffic, temporary closure and diversions of pedestrian traffic along adjacent streets.

Overall, the removal of heritage listed concourse and platform buildings, diversion of pedestrian and vehicular traffic at times and the presence of construction activity, would change the landscape amenity, pedestrian connectivity and legibility of this station precinct. It is expected that there would be a noticeable reduction in the landscape quality and functioning of this precinct which is of local sensitivity. This results in a **minor adverse landscape impact** during construction.

Operation: The permeability and accessibility of the station would be somewhat restored with station entries at the corner of King Georges Road and Stanlea Parade and, King Georges Road and The Boulevard. The station entries would be set back from the main street, providing a less constrained pedestrian environment. The entry building would have a strong architectural form which increases the visual prominence of the station buildings, however, new retail along King Georges Road would reduce the legibility of the station entries.

Footpaths would be reinstated and canopies at the station entrances, concourse and along the platforms would provide shade, comfort and amenity in both meeting and waiting areas.

The provision and layout of transport interchanges would be improved with a pedestrian plaza in Stanlea Parade, and bike parking at platform level to the north and south of the station. The active transport corridor would connect with the station along The Boulevard. These facilities would increase opportunities for passive surveillance and improve the perceived safety (CPTED) of the interchange areas. These improvements would also be a catalyst for the urban renewal of this precinct.

The loss of heritage character built form on the platforms and King Georges Road, would alter the 'sense of place' and character of the station and surrounding streetscapes somewhat. The new station entrances and overall design would have a contemporary style, established along the entire metro network, with improved plaza and streetscape finishes, and activated by retail.

Overall, the project would create a noticeable improvement to the landscape quality and functioning of this precinct, which is of local sensitivity. This results in a **minor beneficial landscape impact** during operation.

12. WILEY PARK STATION

Assessment of daytime visual impact

12.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View southwest from laneway at King Georges Road
2. View northwest across King Georges Road
3. View northwest along The Boulevard
4. View northeast from The Boulevard.

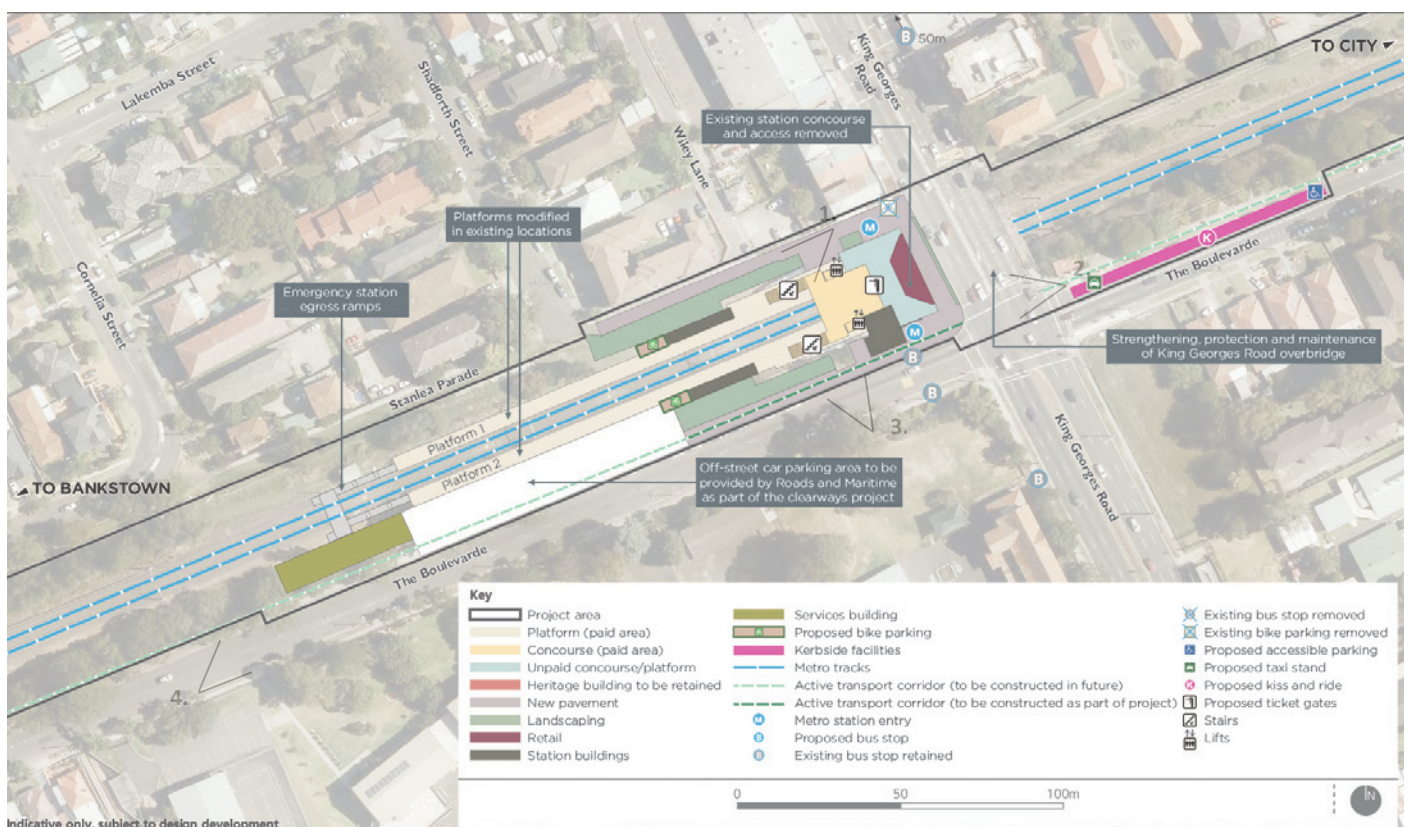
Refer to Figure 12.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Wiley Park Station, identified in the representative viewpoint assessment and fieldwork visit observations.

Viewpoint 1: View southwest from laneway at King Georges Road

This view is visually cluttered with barrier fencing either side of a pathway, residential buildings to the north (right of view), and the station to the south (left of view). The station includes lighting, catenary structures and overhead lines, an angled roof structure over the station ramps, and white palisade fencing on the platforms. The Station platforms, platform building and rail corridor are visually prominent in the foreground and middle ground in this view. The background of this view is enclosed by mature vegetation (centre of view). There are glimpses of high rise development in the background above the tree line in the right of this view. Three storey residential units can be seen to the northwest (right of view), close to the station and with residential balconies overlooking the station.

FIGURE 12.1 VIEWPOINT LOCATION PLAN



Construction: A temporary station access structure would be established in the middle ground of this view. The footpath between King Georges Road and Stanlea Parade would be closed, to allow construction of the new northern station entry and footbridge. The construction compound and worksite on Stanlea Parade would be established to the south of the footpath (left of view). The construction compound would be enclosed by hoarding, obstructing views to the rail corridor from this viewpoint and from adjacent ground level residences. Works in this area would include demolition of the platform building, fencing and covered ramps (left of view). This activity would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The foreground of this view would include upgraded paving and planting alongside the station. The new station building would transform the southern areas of this view with a new station building including an elevated footbridge, overhead canopy and vertical transport connecting to the platforms. Beyond this, the new station platforms, with transparent barrier walls, platform canopies and platform buildings would be aligned parallel to the view. These elements would be seen through perimeter fencing and planting. The character would be markedly different from the existing station character with an increased scale and height of station architecture in relation to the existing station architecture, but set below the adjacent residential midrise properties. Overall, it is expected that the project would result in a noticeable reduction in the amenity of this view, which is of local visual sensitivity resulting in a **minor adverse visual impact** during operation.



1 VIEW SOUTHWEST FROM LANEWAY AT KING GEORGES ROAD

12. WILEY PARK STATION

Assessment of day timevisual impact



2 VIEW NORTHWEST ACROSS KING GEORGES ROAD

Viewpoint 2: View northwest across King Georges Road

This view includes the existing King Georges Road entrance and adjacent commercial high street. This view is characterised by varying built form of one to two storey older style buildings along King Georges Road, a busy six lane road with pedestrian crossing, traffic signage and barrier fencing along both median and footpaths. A two storey brick art deco style building at the corner of Wiley Lane and King Georges Road, is a feature in this view, contributing to the character of this area. Views are contained by this linear commercial development with limited views to landscape beyond.

Construction: In the centre, middle ground of this view, a worksite would be visible on the western side of King Georges Road. Demolition of the existing station entry concourse and adjacent buildings would be seen, as well as construction of the new station entrance and footbridge. The worksite would be visually prominent due to the elevated location of King Georges Road. The worksite would be somewhat absorbed into the commercial character of King Georges Road. Overall, the project would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: In this view the local heritage listed station entrance would be removed, however, it is not a prominent architectural feature on King Georges Road. It would be replaced by a new, more visually prominent contemporary station structure, set back from King Georges Road but with awnings extending to shade the footpath. This would create some separation between the busy road and station concourse. New retail would extend along King Georges Road, and a station entry would be seen at the corner with The Boulevard. The streetscape would include new paving and furnishings, improving the image of the station buildings from King Georges Road. The new station

entry building would create a strong architectural statement, highlighting the new station entry. The station would be consistent with the height of the adjacent commercial development to the north, maintaining the predominant scale of the built form along King Georges Road. It is expected that there would be a noticeable improvement in amenity of this view, which is of local sensitivity, resulting in a **minor beneficial visual impact** during operation.

Viewpoint 3: Northwest from The Boulevard

This view includes the rail corridor, rail infrastructure and trains in middle ground partially obstructed by the cutting at Wiley Park Station and King Georges Road overpass. The station is aligned across this view, and the roofline of the ramps connecting the station platforms with King Georges Road, create a strong angled line leading from the station platforms. The form of residential housing and rear of commercial properties can be seen in the background of this view, and enclose this view to the north and northwest. Electricity poles and lines can be seen prominently to the north and south of the station. There is a small grassed public open space (Johnson Square) in the centre of the view, adjacent to the rail barrier fencing. Trees within this reserve provide some filtering of views to the rail corridor and residential precinct beyond.

Construction: The worksite on The Boulevard would be seen across the middle ground of this view, extending along the rail corridor. Several trees, along the rail corridor fence line, would be removed and temporary station access structures would be established to the west of the station buildings (left of view). This would be followed by demolition of the station entrance on King Georges Road, platform buildings, fencing and covered ramps seen in the middle ground of view. This activity would be absorbed somewhat into the commercial areas of King Georges Road, seen in the background of this view. The



project would, however, create a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **negligible visual impact** during construction.

Operation: A new station entry building and footbridge would be seen in the centre of this view. These buildings would be enclosed by a roof and with canopies extending along the platforms which would be aligned across this view. The increased scale of these buildings would give a visual prominence to the station which would be visually compatible with the existing commercial buildings on King Georges Road (right of view). The new station buildings would obstruct views to the rear of the commercial buildings beyond. The built form of the new station entry buildings would step down from King Georges Road, so that it would be lower than the residential unit development seen beyond the station and to the west (left of view). It is expected that the project would result in a noticeable improvement in the amenity of this view, which is of neighbourhood visual sensitivity resulting in a **negligible visual impact** during operation.

3 VIEW NORTHWEST FROM THE BOULEVARDE

12. WILEY PARK STATION

Assessment of daytime visual impact



4 VIEW NORTHEAST ALONG THE BOULEVARDE

Viewpoint 4: View northeast from The Boulevard

This view includes mature trees along the rail line, which is elevated on embankment, a chain mesh barrier fence on the northern side of The Boulevard (left of view), and mature street trees to the south (right of view). The Boulevard is flanked by on street parking. The mature vegetation, which characterises this view, obstructs views of the rail line beyond. This view includes some glimpses of red brick residential buildings to the northern side of the rail line, in the centre of this view. Trees to the right of the view, on the south side of The Boulevard, balance this streetscape visually and provide additional screening to adjacent residences. The signalised intersection with King Georges Road can be seen in the background.

Construction: A construction compound would be seen in the middle distance and background of this view on the northern side of The Boulevard (centre view). This compound would be enclosed by hoarding and obstruct views to the rail corridor from this location and from adjacent residences. There would be a loss of several background trees in the rail corridor and embankment area. Temporary station access structures would be established in the background (centre of view) followed by demolition of platform buildings and ramped canopy. There would be an extension to the existing platforms. Street trees (left of view) would be retained, alongside the compound area, and would filter views to the worksite. Construction vehicles would access this site via The Boulevard so that some traffic management measures would be seen. Overall, the project would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: A new single storey services building would be seen in the middle ground of this view, set against an embankment on The Boulevard. The removal of trees along the corridor would open up views to the new station platform buildings and overhead footbridge, in the background (centre of view). It would be partially visible, with a new canopy structure over the new concourse and stepping down to lower platform canopies at street level. There would be a new retaining wall and the platforms would have been extended to the west (left of view). A new off-street car parking area along The Boulevard would be visible beyond the service building (by others). This view of the corridor would include new corridor segregation fencing, signalling equipment, overhead wires and catenary structures. On the platforms, lighting and transparent barrier walls would be seen along the length of the platform. The active transport corridor would also be visible, south of the station. These elements would remain filtered by the existing foreground vegetation. It is expected the project would result in a noticeable reduction in visual amenity of this view, which is of neighbourhood visual sensitivity, resulting in **negligible visual impact** during operation.

12. WILEY PARK STATION

Assessment of night-time visual impact

12.7. Assessment of night-time visual impact

The setting of the Wiley Park Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, street lighting along King Georges Road and moderately lit surrounding commercial and residential areas.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the station itself and adjacent areas, including construction compounds southwest of the station along The Boulevarde (between Renown Avenue and King Georges Road) and northwest of station adjacent Shadforth Street. This construction activity may result in some additional light visible from nearby schools (Wiley Park Girls High School and Wiley Park Public School) and residential properties adjacent to the rail corridor in The Boulevarde, Stanlea Parade, Wiley Lane, Shadforth Street and Urunga Parade, including views to both direct light sources and general skyglow above the station.

Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from residential properties alongside the rail corridor, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new entries on King Georges Road, Shadforth Street and The Boulevarde, plazas, footbridge, lifts and along the platforms extending to the west of the station. The new footbridge and station entrances, would be elevated above the platforms, increasing their prominence within the station precinct. The lighting associated with the extension of the platforms to the west, would introduce platform lighting into residential areas to the west of the existing station. There would also be headlights seen on the additional metro trains using platforms 1 and 2.

The project would increase and extend the lighting beyond the existing station area. Additional static and moving light sources, and a general skyglow, would be seen from residential properties to the north and south of the corridor, and school alongside the rail corridor. From King Georges Road, the additional lighting would be generally consistent with the intensity of lighting seen at the existing station, and would be absorbed into the adjacent commercial precinct.

Overall, in this area of medium district brightness environment, there would be a noticeable reduction in amenity and a **minor adverse visual impact** at night.

12.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Wiley Park Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 12.1 LANDSCAPE IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Wiley Park Station precinct	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial

TABLE 12.2 DAY TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	View southwest from laneway at King Georges Road	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
2	View northwest across King Georges Road	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial
3	View northwest along The Boulevarde	Neighbourhood	Noticeable reduction	Negligible	Noticeable improvement	Negligible
4	View northeast from The Boulevarde	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible

TABLE 12.3 NIGHT-TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Wiley Park Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

13. PUNCHBOWL STATION

Existing environment



13. Punchbowl Station

13.1. Existing environment

Punchbowl Station has local historical significance and is on the RailCorp S170 Heritage and Conservation Register. The overhead booking office and footbridge have some heritage character whereas the remainder of the station has been subject to modern additions and alterations, creating a mixed character. The station platforms are located in a cutting and the main station entry is located on Punchbowl Road. The booking office is raised on a steel frame and is aligned at a 45 degree angle to the adjacent four lane road bridge, creating juxtaposition between the station and surrounding streetscape.



To the north of the station, Warren Reserve provides a visual setting to the northern station entry, including a heritage listed art deco style building at 748 Punchbowl Road (former Punchbowl Baby Health Centre). To the south, the station entry and rail corridor are enclosed along The Boulevard by terraced shopfronts and a large linear commuter car park with a network of mature trees. The commercial centre of Punchbowl extends north and south along Punchbowl Road and east along The Boulevard. This precinct includes a mix of heritage character shopfronts and modern mixed use developments and forms a dense urban centre around the station. A brick building of heritage character on the corner of Punchbowl Road and The Boulevard includes a clocktower which is a local visual landmark. Opposite this, a group of mature eucalypt trees within the rail corridor mark the bridge crossing and soften views to the urban streetscape.

Residential areas surround the commercial centre of Punchbowl. In these areas there are a variety of residential buildings, including medium rise flats and apartment buildings, duplexes, townhouses and detached houses. A few schools, including Punchbowl Boys High School, are located within this area.

- 1 PUNCHBOWL COMMERCIAL PRECINCT
- 2 SOUTHERN STATION ENTRANCE
- 3 PARK ALONG PUNCHBOWL ROAD
- 4 VIEW OVER PUNCHBOWL STATION
- 5 SOUTHERN STATION ENTRANCE

13.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Punchbowl Station precinct.

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Adjacent parcels of land to the south of the station along The Boulevarde are permitted to reach maximum building heights of up to 18 metres. Further south, the maximum building height between Heggie Lane and Hillcrest Street is 11.5 metres. To the north, the built form east of Punchbowl Road along Urunga Parade is permitted to reach maximum heights of 8.5 metres. To the west of Punchbowl Road (within Bankstown LEP area), building heights are capped at 14 metres through to Kelly Street.

Heritage

Punchbowl Station is listed as a heritage item in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register. The station is also in close proximity to the War memorial and street trees, also local heritage assets, located south of the station along Broadway and Hillcrest streets. Where relevant this assessment has considered the '*settings and views of these items*' (Heritage conservation, clause (5.10) of the LEP).

Landuse zoning

Punchbowl's retail centre extends along Highclere Avenue and Punchbowl Road, to the north and south of the station. This precinct is zoned B2 – Local Centre, providing retail and service based shops. Objectives of this zone include: '*To provide*

a range of retail, business, entertainment and community uses' and '*to facilitate and support investment, economic growth and development for active, diverse and well-designed centres*' (Part 2, Land Use Table: Zone B2). Elsewhere, the land surrounding the station and commercial precinct is zoned Low Density Residential (north of the station, within Bankstown LGA) and Medium and High Density Residential to the south of the station (R3 and R4).

Sydenham to Bankstown Urban Renewal Corridor Strategy: Punchbowl Station Precinct, Department of Planning and Environment, 2017

A key aim of this strategy is to '*retain architecture along Punchbowl Road, The Boulevarde and Breust Street that contributes to the character of the area and ensure that new development responds appropriately*' (p.18). It also proposes the following land use and associated built form changes to the LEP, within the immediate surrounds of Punchbowl Station:

North of the station

- Medium-high rise residential development (up to 8 storeys) along Urunga Parade, Rickard and Dudley streets
- Medium (6 storeys) and medium-high rise residential development between Kelly Street and Acacia Avenue
- Investigation of a new pedestrian link over the rail corridor between Broadway and Rickard Street
- Improvements to Warren Reserve (also known as Urunga Reserve).

South of the station

- New urban plaza on Rossmore Avenue, adjacent to Punchbowl Road
- Main street shop top housing (typically 3–5 storeys) along Punchbowl Road and southern side of The Boulevard

- High rise and mixed use development (up to 12 storey) on north side of The Boulevarde, where the shops and car parking are located
- Medium and medium-high rise residential development between Victoria Road and Broadway
- Medium and low rise housing (2–6 storeys) between South Terrace and Myall Street.

13. PUNCHBOWL STATION

Character and components of the project

13.3. Character and components of the project

Construction phase

The following section describes the construction phase for Punchbowl Station:

- Establishment of a worksite including demolition of:
 - Punchbowl Road station concourse and access
 - island platform and platform buildings
 - permanent ways (railway lines, ballast, overhead lines) surrounding central island platform
 - brick public amenity block on The Boulevarde
- Removal of approximately 24 - 40 trees including:
 - on south side of Urunga Parade, between Rosemont Street North and Punchbowl Road, and within Warren Reserve
 - the north side of The Boulevarde, between Arthur Street and Matthews Street
 - northern side of the rail corridor, south of Bruest Place
- Cessation of commercial property leases at the station
- Construction compounds located at:
 - The Boulevarde and The Broadway, southeast of the station
 - Urunga Parade between Punchbowl Road and Rosemont Street North, northeast of the station
 - Within the rail corridor north of the station and south of Bruest Place
- Construction vehicle movement along The Boulevarde and Urunga Parade.

Operation phase

The following section describes the operational phase for Punchbowl Station:

- New straight platforms (approximately 100 metres long) realigned and extending about 70 metres to the northeast of the existing station
- New platform canopies along metro platforms 1 and 2
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- New overhead footbridge between Warren Reserve and The Boulevarde with vertical transport connections to platforms and overhead canopy
- New northern station entry in Warren Reserve including:
 - plaza with new paving and trees
 - bike parking area
 - new pathway through Warren Reserve linking to a new pedestrian crossing on Punchbowl Road
 - accessible pathway to Urunga Parade
 - accessible parking and kiss and ride bays in Urunga Parade
- New southern station entry at The Boulevarde, including:
 - entry plaza between the station and The Boulevarde with new paving and streetscape planting
 - new retail
 - kiss and ride bays, and taxi stand
 - reconfigured and existing bus stops
 - bike parking area
 - reconfigured commuter parking on The Boulevarde
- Existing retail on The Boulevard would be retained

Character and components of the project



- New retaining wall along the rail corridor and Punchbowl Road bridge abutment
- New landscaped open space along southern side of rail corridor
- Services building at Urunga Parade, opposite Rickard Street
- Active transport corridor to the south of the railway corridor
- Closure of Punchbowl Road pedestrian underpass
- Increased rail traffic through platforms 1 and 2.

VIEW TO PUNCHBOWL STATION ENTRY FROM WARREN RESERVE, ARTIST'S IMPRESSION

13. PUNCHBOWL STATION

Sensitivity levels

13.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Punchbowl Station

Punchbowl Station functions as a suburban station and is therefore used by concentrations of residents and provides an important transport hub for the local community. It is also a local heritage item, increasing its sensitivity as a landmark within the local area. The landscape and visual values of Punchbowl Station are therefore of **local sensitivity**.

Warren Reserve

This park is located between Punchbowl Road and the rail corridor, providing a parkland setting to the northern entrance of Punchbowl Station. Mature trees within the park and along the rail embankment provide visual screening of the rail corridor from the park and adjacent residences on Urunga Parade. The park is used by residents and visitors travelling between the station and the northern part of Punchbowl Road commercial precinct. The landscape and visual values of this precinct are of **local sensitivity**.

Punchbowl Road commercial precinct

The commercial precinct of Punchbowl functions as the local 'high street'. The public realm and views within this precinct are of varied character, generally experienced by those living, working or attending schools locally. The landscape and visual values of this precinct are of **local sensitivity**.

Punchbowl residential areas

Residential areas of Punchbowl include a variety of residential buildings, including medium rise flats and apartment buildings, duplexes, townhouses and detached houses. This increased density creates more viewing locations and puts additional pressure on the amenity of local streets and open space. The Punchbowl Boys High School is located adjacent to the corridor and attracts numerous students and staff to this area. The public realm and views within this precinct are of varied character, generally experienced by those living, working or attending schools locally. The landscape and visual values of this precinct are of **neighbourhood sensitivity**.

Sensitivity levels



PUNCHBOWL STATION



WARREN RESERVE

13. PUNCHBOWL STATION

Assessment of landscape impact

13.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Punchbowl Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Punchbowl Station has two entry points, at The Boulevarde to the south and Warren Reserve to the north, near Punchbowl Road. An aerial concourse, with stair and lifts, provides access to the platforms. The station and south entry is concealed behind retail and office buildings along The Boulevarde on its southern side and has poor legibility from the street. A small plaza connects the station to The Boulevarde, and a large car park on RailCorp land lies between the station and The Boulevarde, which lacks pedestrian connections and general amenity.

The rail corridor and Punchbowl Road effectively divide the Punchbowl town centre into four uneven quadrants, with the main retail centre concentrated along The Boulevarde, south of the station. Punchbowl Road is difficult to cross and effectively divides the centre. Punchbowl Road overbridge provides north south connectivity but has steep gradients and an east west pedestrian underpass is narrow and poorly lit. Bus stops for interchange are located on Punchbowl Road, north of the station, and on The Boulevard, south of the station. There are no dedicated kiss and ride bays in the station precinct.

Construction: During the initial stages of construction, the existing station entry from The Boulevarde in the south, would remain open. This would lead to the existing overhead booking office, footbridge, lifts and stairs. The entry from the north in Warren Reserve, however, would be closed. This would reduce access to the station from the north and permeability of this precinct.

Changes to local pedestrian and cycle access would include the closure of the Punchbowl Road pedestrian underpass, adjustments to paths within Warren Reserve, and installation of a new pedestrian crossing at Punchbowl Road, north of the station. These paths would alter patterns of arrival to the station and improve safety throughout the precinct.

To the south, a construction compound would be established for the new station entrance along The Boulevarde, requiring partial closure of the commuter car park. A second compound would be established to the north of the station, between the rail corridor and Urunga Parade, requiring removal of numerous mature trees. The removal of these trees would alter the amenity of the adjacent residential areas.

The introduction of enclosed construction areas would reduce the opportunity for passive surveillance, particularly from areas to the north, including Warren Reserve and the Punchbowl Road overbridge. Removal of the northern station entry would also reduce the perception of safety and surveillance (CPTED) in this area. Once the new footbridge and station entrances have been constructed, the Punchbowl Road station entry building and heritage listed platform buildings would be demolished.

This construction activity, particularly the removal of historic station buildings and adjacent vegetation, would alter the character of the precinct and 'sense of place'. The reduced station entry opportunities and temporary diversions of footpaths would also alter the connectivity and legibility of this station precinct. Overall, it is expected that there would be a considerable reduction in the landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **moderate adverse landscape impact** during construction.

Operation: The functioning of this precinct during operation would be improved. There would be two new station entrances set back from busy Punchbowl Road, with legible

Assessment of landscape impact

station entry points linking into Warren Reserve to the north and retail precinct to the south. A network of accessible footpaths and plazas with new trees and shade structures at the station entrances, concourse and platforms would improve accessibility and provide shade, comfort and amenity in meeting and waiting areas around the station. The northern station entry and interchange plaza would activate the southern edge of Warren Reserve.

The provision and layout of transport interchanges would be improved, including a new bus stop, taxi stand, kiss and ride bays and bike parking area adjacent to the southern station entrance. This plaza would also connect with a new east west active transport corridor, set within a linear open space, to the south of the corridor. A new plaza with planting, bike facilities, and adjacent kiss and ride bays at the northern station entrance would also improve pedestrian amenity, safety (CPTED) and access. These improvements would support the urban renewal opportunities of the precinct.

Furthermore, at night, the additional lighting provided at the station entries and plaza areas would improve the safety and security of the station precinct. In particular, in areas between the station and adjacent interchange on The Boulevard where the station entry would be located on the street, rather than tucked in behind commercial development, safety and legibility would be improved.

Although the removal of existing station platforms, platform buildings and associated entrances would alter the 'sense of place', character and legibility in this location, the new station entrances and overall design would result in a considerable improvement in the overall landscape quality and functionality of this precinct, which is of local sensitivity. This results in a **moderate beneficial landscape impact** during operation.



VIEW EAST ALONG THE PUNCHBOWL STATION PLATFORMS



VIEW TO SOUTHERN STATION ENTRY

13. PUNCHBOWL STATION

Assessment of daytime visual impact

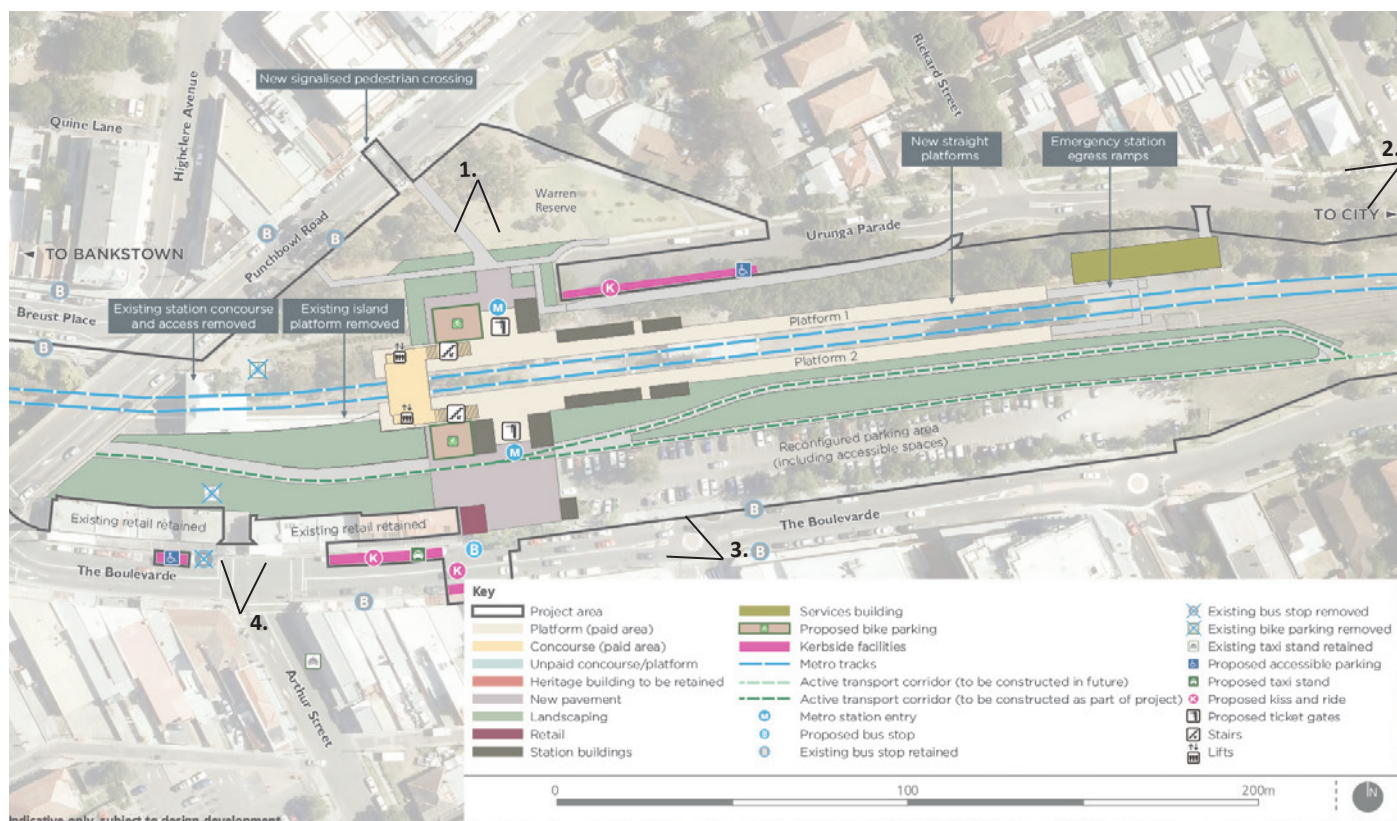


FIGURE 13.1 VIEWPOINT LOCATION PLAN

13.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View south from Warren Reserve
2. View east along Urunga Parade
3. View west along The Boulevard at Matthew Street
4. View north from The Boulevard.

Refer to Figure 13.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Punchbowl Station, identified in the representative viewpoint assessment and fieldwork visit observations.

Viewpoint 1: View south from Warren Reserve

This view across the Warren Reserve in the direction of rail line near Punchbowl Station, shows predominantly vegetation. This vegetation partially screens views to the rail corridor, station and commercial area along Punchbowl Road, which would be in the background of the view. The foreground of this view is characterised by the parkland trees and lawns. Black palisade fencing can be seen along the rail corridor and a gated service entry is the focal point of this view, where there is a gap in the vegetation along the rail corridor. Glimpses to two and three storey residential buildings, located beyond the rail line, can be seen to the southeast of this viewpoint (centre of view).

Construction: The construction compound would be seen within the rail corridor and extending across centre this view. This site would be enclosed by hoarding which would

obstruct views to the rail corridor. Several trees in the park and along the rail corridor would be removed as the construction compound is established. The removal of these trees would open-up views to the commercial areas to the south along The Boulevard, which are likely to be seen rising above the compound. Construction of the northern station entrance, footbridge and concourse would be seen in the centre of the view, rising above the surrounding worksite. Footpaths within Warren Reserve would be removed and realigned. Construction vehicles would be seen accessing this site via Urunga Parade. Overall, the project would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new northern station entry at Warren Reserve would be the focal point in this view, including the station entry plaza with new paving, planting, and bike parking area. The station would create a strong architectural statement, highlighting the station entry. This would include a footbridge with canopies, lift shafts and stairwells. The new platforms would extend across the middle ground of this view, and new kiss and ride bays would be seen in a reconfigured Urunga Parade (left of view). The trees within the park would soften and frame this view, so that the station becomes the prominent central feature of this view. Overall, it is expected that the project would result in a noticeable improvement in the amenity of this view, which is of local sensitivity, resulting in **minor beneficial visual impact** during operation.

Viewpoint 2: View west along Urunga Parade

This view includes mature trees along the rail corridor, Urunga Parade (left of view), on and off street parking and rail corridor service access gates. This mature vegetation encloses the view to the south and characterises this view. Trees to the right of the view on the north side of Urunga Parade balance this streetscape and provide additional screening



1 VIEW SOUTH FROM WARREN RESERVE

to the outlook of adjacent single storey residential properties.

Construction: The vegetation to the south (left of view) would be removed and a worksite established along the rail corridor. The removal of vegetation within this worksite would open-up views to the existing rail corridor and commercial areas to the south on The Boulevard, which would be seen rising above the worksite. The construction of the extended platforms, retaining walls and a new services building, would be seen in and alongside the rail corridor. Works to reconfigure Urunga Parade would include widening to the south to create a kiss and ride zone. Street trees to the north of Urunga Parade would remain (right of view), filtering views to construction activity from adjacent residential properties. In the background of the view, construction of the new station entries, footbridge and concourse may be visible. Overall, the project would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

13. PUNCHBOWL STATION

Assessment of daytime visual impact



2 VIEW WEST ALONG URUNGA PARADE

Operation: The new services building and adjacent retaining wall would be seen in the foreground of this view, to the south of Urunga Parade. Beyond this, the new platforms would be visible, including platform canopies and segregation fencing. The signalling equipment, new catenary structures and overhead wiring would also be seen along the corridor. The new station entries and footbridge may be seen in the background, beyond the platforms. Overall, there would generally be a more developed, open character to this view. It is expected that the project would result in a considerable reduction in visual amenity of this view, which is of neighbourhood visual sensitivity, resulting in **minor adverse visual impact** during operation.

Viewpoint 3: View west along The Boulevard at Matthew Street

The Boulevard (left of view) is lined by a mixture of two and three storey mixed commercial and residential buildings of consistent ages and styles. This consistent building scale and character, some with decorative historic facades and continuous

awnings, contributes to the local character. This continuity is interrupted by the Punchbowl Station commuter car park, rail corridor, rail infrastructure and trains, visible from this location (centre and right). The heritage buildings of the existing station are not visible. Several street trees and car park trees, and the cream coloured single storey toilet block on the northern side of The Boulevard (centre of view), filter views towards commercial buildings and facades beyond. This view terminates in the distance along The Boulevard's busy high street.

Construction: A construction compound would be seen in the middle ground (right of view), enclosed by hoarding, and obstructing views to parts of the rail corridor from this location. The demolition of the brick amenities block would be seen, opening up views to the station platforms. Demolition of the heritage listed platform buildings, platform and permanent way would also be seen. Construction of the new extended platform, platforms buildings, southern station entry and footbridge would be visible from The Boulevard, partially obstructed by intervening commercial buildings. This activity would create a noticeable reduction in the amenity of this view, which is of local sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: In this view, the new southern station entrance would be a prominent new feature in this view, including a spacious plaza with new paving, planting, bike parking area and retail. The footbridge would be seen extending over the rail corridor between the new station entrances, and would include a roof canopy over the station concourse. The platforms would be seen, extending eastward (right of view), with canopies, lighting, platform buildings and segregation fencing. These would be seen beyond the active transport link and planting to the south of the rail corridor. The existing car park would be retained and reconfigured. Overall, it is expected that the project would result in a considerable improvement in the amenity of this view, which is of local sensitivity,

resulting in **moderate beneficial visual impact** during operation.

Viewpoint 4: View north from The Boulevard

This view is directed along the existing pedestrian crossing at The Boulevard, and along the pedestrian access to the station. The path is flanked by retail shops on The Boulevard. In the background of this view, stairs leading to the heritage listed overhead ticketing office and footbridge can be seen. Segregation fencing, platforms, overhead lines and infrastructure and platform canopies can be seen adjacent to the stair.

Construction: The existing commercial buildings along The Boulevard would be retained. The current station entry (centre of view) would be closed and a worksite established along the corridor. Demolition of the station entry building and concourse, stairs to The Boulevard, platforms and platform buildings would be seen in this view. Installation of the active transport link and landscaped open space along the southern side of the track may also be visible. This activity would create a noticeable reduction in the amenity of this view, which is of local sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The rail corridor would be seen in the centre of this view, between The Boulevard commercial buildings. The active transport link would be seen to the south of the rail corridor, consisting of a shared pathway within a landscaped linear open space. Removal of the station entry building and concourse may open views to Punchbowl Road and Warren Reserve. Although the removal and relocation of the station entry would alter the character of this view, the station currently has an understated presence from the street. Overall, it is expected that the project would result in no perceived change in the amenity of this view, which is of local sensitivity, resulting in **negligible visual impact** during operation.



3 VIEW WEST ALONG THE BOULEVARDE AT MATTHEW STREET



4 VIEW NORTH FROM THE BOULEVARDE

13. PUNCHBOWL STATION

Assessment of night-time visual impact

13.7. Assessment of night-time visual impact

The setting of Punchbowl Station is an area of **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor, street lighting along Punchbowl Road and The Boulevarde, and moderately lit surrounding commercial area.

Construction: There would be night works required at this location during construction, namely during the 24 hour possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the rail corridor. However, adjacent areas that may also be affected at night include: the construction compound sites to the southeast (adjacent The Boulevarde and The Broadway) and northeast (at Urunga Parade) of the station, areas within Warren Reserve, and along the rail corridor.

Additional light from any night activity occurring in these locations would be seen from residential properties opposite the construction site in Urunga Parade, The Boulevarde and Punchbowl Road, including several units overlooking the rail corridor. Commercial properties along The Boulevarde and Punchbowl Road may also view night-time works and construction vehicle movement. To the east of the station, the new services building would include some security lighting, increasing the intensity of lighting in this area, near residential properties in Urunga Parade. It is expected that there would be a reduction in amenity in views at night from these locations. Although additional light sources and skyglow would be seen in these areas, this additional lighting would be generally absorbed into the surrounding night scene.

Overall, it is expected that this lighting would create a noticeable reduction in the amenity, resulting in a **minor adverse visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new footbridge and elevated concourse, new northern and southern station entrances, and platforms extending east of the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2. The lighting at the main station building would be generally consistent with the intensity of lighting seen at the existing station. However, the lighting on the station platforms, extending to the southeast of the station, would introduce lighting towards residential areas on Urunga Parade, reducing the amenity of this area at night.

Part of the commuter car park in The Boulevarde would be replaced with a plaza and station entrance with well-lit waiting areas adjacent to the commercial centre of Punchbowl. Although this would increase and extend the lighting beyond the existing station area, it is expected that this lighting would be generally absorbed into the surrounding commercial precinct.

To the north of the station, the new station entrance within Warren Reserve would increase the intensity of lighting in this area, introducing lighting and night-time activity into this area which is currently only moderately lit at night. The introduction of lighting into this park would cause some reduction in amenity for adjacent residential properties on Urunga Parade.

Overall, there would be a noticeable reduction in visual amenity at night from residential areas of Urunga Parade in the vicinity of the station. This is a medium district brightness environment, resulting in a **minor adverse visual impact** at night.

13.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Punchbowl Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 13.1 LANDSCAPE IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Punchbowl Station precinct	Local	Considerable reduction	Moderate adverse	Considerable improvement	Moderate beneficial

TABLE 13.2 DAY TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	View south from Warren Reserve	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial
2	View west along Urunga Parade	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
3	View west along The Boulevard at Matthew Street	Local	Noticeable reduction	Minor adverse	Considerable improvement	Moderate beneficial
4	View north from The Boulevard	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible

TABLE 13.3 NIGHT-TIME VISUAL IMPACT

			Construction		Operation	
No.	Location	Sensitivity	Modification	Impact	Modification	Impact
1	Punchbowl Station precinct	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

14. BANKSTOWN STATION

Existing environment



- 1 CORNER OF NORTH TERRACE /
BANKSTOWN CITY PLAZA
- 2 BANKSTOWN CITY PLAZA STATION
ENTRANCE
- 3 BANKSTOWN CITY PLAZA SOUTH
- 4 NORTH TERRACE
- 5 BANKSTOWN CITY PLAZA NORTH, NEAR
CHAPEL ROAD JUNCTION

14. Bankstown Station

14.1. Existing environment

Bankstown Station is located in the heart of the Bankstown town centre. This precinct includes a mix of heritage character shop fronts and modern mixed use developments and forms a dense urban centre around the station. Bankstown Station has local heritage significance and is on the RailCorp S170 Heritage and Conservation Register. This listing includes heritage buildings on the platform, overhead booking office, footbridge and a former parcels office. The streets of North Terrace, Old Town Centre Plaza and South Terrace enclose the station with access to the station from North Terrace and Bankstown City Plaza.

Extensive public realm works have been undertaken in this precinct including the pedestrianisation of the North Terrace overbridge, which crosses over the western end of the station and runs parallel to the footbridge. High quality plazas and parkland have been established to the north and south of the station and a bus interchange plaza has been established on the south at the Bankstown City Plaza and South Terrace. These plazas include semi-mature trees which filter and frame views. A palm tree, located adjacent to the eastern end entrance portico of the former parcels office, is potentially an original planting from the 1940s. The station buildings can be seen from the North and South terraces; however, they are largely integrated into surrounding commercial development along the Bankstown City Plaza bridge and extending along North Terrace.

14.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed Bankstown Station precinct.

Bankstown Local Environmental Plan, Bankstown City Council, 2015

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

The LEP encourages mixed use residential development in the CBD and development over the station is permitted to reach a maximum building height of up to 32 metres. At the station entrance along Bankstown City plaza, the built form is permitted up to 17 metres. Elsewhere, the built form around the station is generally permitted to reach heights of 35 metres in the CBD area.

Heritage

Bankstown Station is listed as a heritage item in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register. The station is also near the following heritage items: the Bankstown Hotel, Bankstown Parcels Office, a shop at 109 Bankstown City Plaza and the Council Chambers along Chapel Road. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

Land use zoning

The project area is located in the heart of the Bankstown CBD and therefore covered by the B4 – Mixed Use zone. The objectives of this zone include: *'To maintain the role of the Bankstown CBD as a major metropolitan centre'* and *'To provide a mixture of compatible land uses'* (Part 2, Land Use Table: Zone B4). Elsewhere, the land surrounding the station and CBD precinct is zoned R4 –

High Density Residential, with pockets of RE1 – Public Recreation and SP2 – Infrastructure associated with the rail corridor and educational facilities.

Bankstown Development Control Plan, City of Canterbury Council, 2015

Part A1, Section 2 of the DCP specifically applies the Bankstown CBD, including the project area and station precinct. A key aim for the Bankstown CBD is: *'To have development that achieves good urban design in terms of building form, bulk, architectural treatment and visual amenity'* (Part A1, section 1, objective b). The station is defined as a *'principal gateway'* to the CBD (Part A1, section 2, p. 6). The DCP advocates development around the station to be built *'to the street alignment to reinforce the urban character and strengthen the pedestrian amenity and activity at street level'* (Part A1, section 2, p. 6). Streetscape improvement works along Featherstone Street (north of station) are noted as a key opportunity to *'make the station entry more visible and to provide a high quality north–south pedestrian connection'* (Part A1, section 2, p. 6).

Bankstown CBD Local Area Plan, City of Canterbury Council, 2011

Bankstown CBD is defined as a *'major activity and transport hub'* (p. 4) that services the City of Bankstown and the wider West Central Subregion. The Local Area Plan (LAP) sets out the vision for Bankstown CBD to strengthen its role as a Major Centre and to balance the demands for future growth with the need to protect and enhance environmental values. The station lies at the junction of three precincts, including Bankstown City Plaza and the northern and southern CBD core precincts. A key action aim of the LAP is to *'strengthen the image and amenity of the Bankstown CBD'* (p. 40), through public domain and main street improvements. The LAP program of works include *'vista and public domain improvements between the Civic Precinct and*

the railway station' (p. 40). The Bankstown Station is also identified as a key location for *'redevelopment and expansion'* (p. 59).

Sydenham to Bankstown Urban Renewal Corridor Strategy: Bankstown Station Precinct, Department of Planning and Environment, 2017

A key component of this strategy is the provision of a new station square which *'will be the heart of Bankstown Station Precinct'* and *'new development around the station will provide a visual marker'* (p.2) for the precinct. It also proposes the following land use and associated built form changes to the LEP, within the immediate surrounds of Bankstown Station:

North of the station

- High rise residential and mixed use development along North Terrace including over station development (18 to 25 storeys).

South of the station

- Main street shop top housing along Chapel Road South, Bankstown City Plaza and Stuart Lane (opportunity for a new shared zone)
- High rise residential and mixed use development along South Terrace (up to 15 storeys) and along east side of Greenwood Avenue, Meredith Street and north side of Greenfield Parade (up to 12 storeys)
- New pedestrian connection through Bankstown Memorial Park to link the Bankstown CBD to Salt Pan Creek
- New/improved public open space within Griffith Park and surrounding the Arts Centre, including the car park site.

14. BANKSTOWN STATION

Character and components of the project

14.3. Character and components of the project

Construction phase

The following section describes the construction phase for Bankstown Station:

- Temporary closure of commuter car park on North Terrace
- Establishment of worksite including demolition of:
 - the existing island platform (excluding the heritage platform buildings)
 - permanent ways (railway lines, ballast, overhead lines)
 - commuter car park adjacent to the intersection of The Appian Way and North Terrace
- Removal of approximately 40 - 62 trees including:
 - mature fig trees on North Terrace
 - trees between North Terrace car park and rail corridor
 - trees along South Terrace and rail corridor, between Restwell Street and West Terrace
 - trees at proposed services building site in North Terrace
 - trees within the footprint of the construction compounds.
- Construction compounds to be located at:
 - South Terrace, between West Terrace and the North/South Terrace underbridge, east of station
 - North Terrace between the North/South Terrace underbridge and Lady Cutler Avenue, east of the station
- Construction vehicle movement along North Terrace, South Terrace and East Terrace

- Closure of divided bus way between Bankstown Civic Plaza and Restwell Street.

Operation phase

The following section describes the operational phase for Bankstown Station:

- New straight platforms and extending about 200 metres to the east of the existing station platform (across the West Terrace rail bridge)
- Reconfigured eastern end of Sydney Trains platforms
- Glazed platform barriers along the full length of the metro platforms
- New platform lighting, security and passenger interface infrastructure
- Emergency egress ramps and stair between the eastern end of the platform and South Terrace
- New overhead footbridge between North Terrace and South Terrace with vertical transport connections to platforms, and overhead canopy
- New canopy between new and existing station buildings
- New platform canopies along metro platforms 1 and 2, to the east of existing heritage listed platform buildings
- New northern entry plaza, near The Appian Way, with ramped station entry, including:
 - bike parking area adjacent northern station entrance
 - kiss and ride
 - reconfigured and existing bus stop
 - taxi parking
 - existing park and ride

Character and components of the project



- New southern station entry plaza, near from South Terrace and Restwell Street, including:
 - consolidated and existing bus stops
 - bike parking area adjacent to the bus interchange
 - new separated bike path
- New services building in the railway corridor on North Terrace, east of the North/South underbridge
- New tree planting within the northern and southern entry plaza and bus interchange
- The existing Sydney Trains station would be retained, including :
 - heritage listed overhead booking office
 - heritage listed platform buildings
 - heritage listed former parcels office
 - Toilet blocks at each side of the platform
- Increased rail traffic through platforms 1 and 2.



BANKSTOWN STATION, ARTIST'S IMPRESSIONS

14. BANKSTOWN STATION

Sensitivity levels



BANKSTOWN STATION SOUTHERN ENTRY



BANKSTOWN CITY PLAZA, BUS INTERCHANGE

14.4. Sensitivity levels

The following paragraphs summarise the landscape and visual sensitivity of the study area at this site (refer to Table 2.3 for definitions).

Bankstown Station

Bankstown station functions as a suburban station and is therefore used by concentrations of residents, providing an important transport hub for the local community. It is also a local heritage item (in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register), increasing its sensitivity as a visual feature within the local area. The landscape and visual values of Bankstown Station are therefore of **local sensitivity**.

Bankstown commercial precinct

Bankstown Station is located in the heart of the Bankstown CBD. The precinct is highly urbanised with civic, retail and commercial activities generally focused around the station, providing a major activity and transport hub for people living, visiting and working in the City of Bankstown. Built form within the precinct is varied, including a mix of heritage character terrace buildings with ground level shopfronts juxtaposed with modern mixed use high rise developments. The station buildings are local heritage items; however, they are largely enclosed and integrated into surrounding commercial development along the Bankstown City Plaza bridge and extending along North Terrace. The landscape and visual values of this precinct are of **local sensitivity**.

14.5. Assessment of landscape impact

The following section summarises the potential landscape impact of the construction and operation of the Bankstown Station precinct (refer to Table 2.7 for impact levels).

Existing conditions: Bankstown Station is located within the Bankstown CBD. The streets surrounding the station exhibit a vibrant street character, particularly on smaller commercial streets such as Bankstown City Plaza and Chapel Road. The main station entry is located on Bankstown City Plaza. This concourse includes an aerial concourse with lift and stair access to the station platforms. The concourse opens out to a spacious station plaza to the south, with retail frontages, wide footpaths, streetscape planting and limited vehicular movement providing a high level of pedestrian amenity and comfort in the immediate station environment. The heritage listed station buildings can be seen from the North and South terraces; however, they are largely integrated into surrounding commercial development along the Bankstown City Plaza bridge and North Terrace, reducing legibility of the station entry from the west somewhat.

This part of the CBD functions as an important centre of interchange between bus and train services. However, the rail corridor and the South Terrace bus interchange and its associated restricted traffic pattern divide the centre, with limited north-south pedestrian connections. Taxi and kiss and ride bays are located on North Terrace, opposite the station plaza. Commuter parking bays to the north of the station do not have pedestrian access paths.

Construction: The existing station entry on Bankstown City Plaza would remain open during construction, including the overhead booking office, footbridge, concourse, stairs, lifts and platform buildings. Retail buildings, adjacent to station entry extending into North Terrace, on the eastern side

of the overbridge, and the existing bus interchanges on South Terrace, would also remain. To the east of the existing station, construction compounds and a worksite would be established between North and South terraces, and extend east across the North/South Terrace underbridge and about 170 metres. The establishment of these sites would require the removal of numerous trees and vegetation along the corridor. There would also be the temporary closure of open space, commuter car parks and footpaths along both North and South terraces. During this time, there would be impacts on both pedestrian and vehicular movement, as well as visual obstructions in areas of interchange with the existing station and other facilities, reducing the accessibility and legibility of the eastern areas of the precinct.

As the existing station buildings would remain in use, and the works are mainly located along the corridor, and away from the main public realm areas, and bus interchanges, the safety and security of the precinct should remain largely unchanged also.

Overall, it is expected that there would be a noticeable reduction in the landscape quality and functionality of this precinct which is of local sensitivity. This results in a **minor adverse landscape impact** during construction.

Operation: There would be two new metro station entrances on North and South Terrace, with legible station entry points and spacious plazas. Footpaths would be reinstated and new street trees, and canopies over the station concourse and platforms would provide shade, comfort and amenity to meeting and waiting areas.

The provision and layout of transport interchanges would be improved. This would include taxi parking, a kiss and ride zone, and a bike parking area at North Terrace. At South Terrace the bus layover would be reconfigured, a bike parking area provided as well as a connection to sections of the active transport corridor. These features would all

contribute to a well functioning interchange, and improve pedestrian safety (CPTED) and access. The station concourse would provide north-south access across the rail corridor, increasing the permeability of the precinct. These improvements would support future urban renewal within the Bankstown city centre.

The existing heritage buildings of the station would be retained, integrating some of the existing character and 'sense of place' into the new station precinct.

At night, the additional lighting provided at the station entries and plaza areas would improve the safety and security of this precinct, particularly in areas between the station and adjacent interchange and commercial areas.

The new station, streetscape upgrades and improved lighting at night would result in a noticeable improvement in the overall landscape quality and functionality of this precinct, which is of local sensitivity. This would result in a **minor beneficial landscape impact** during operation.

14. BANKSTOWN STATION

Assessment of daytime visual impact

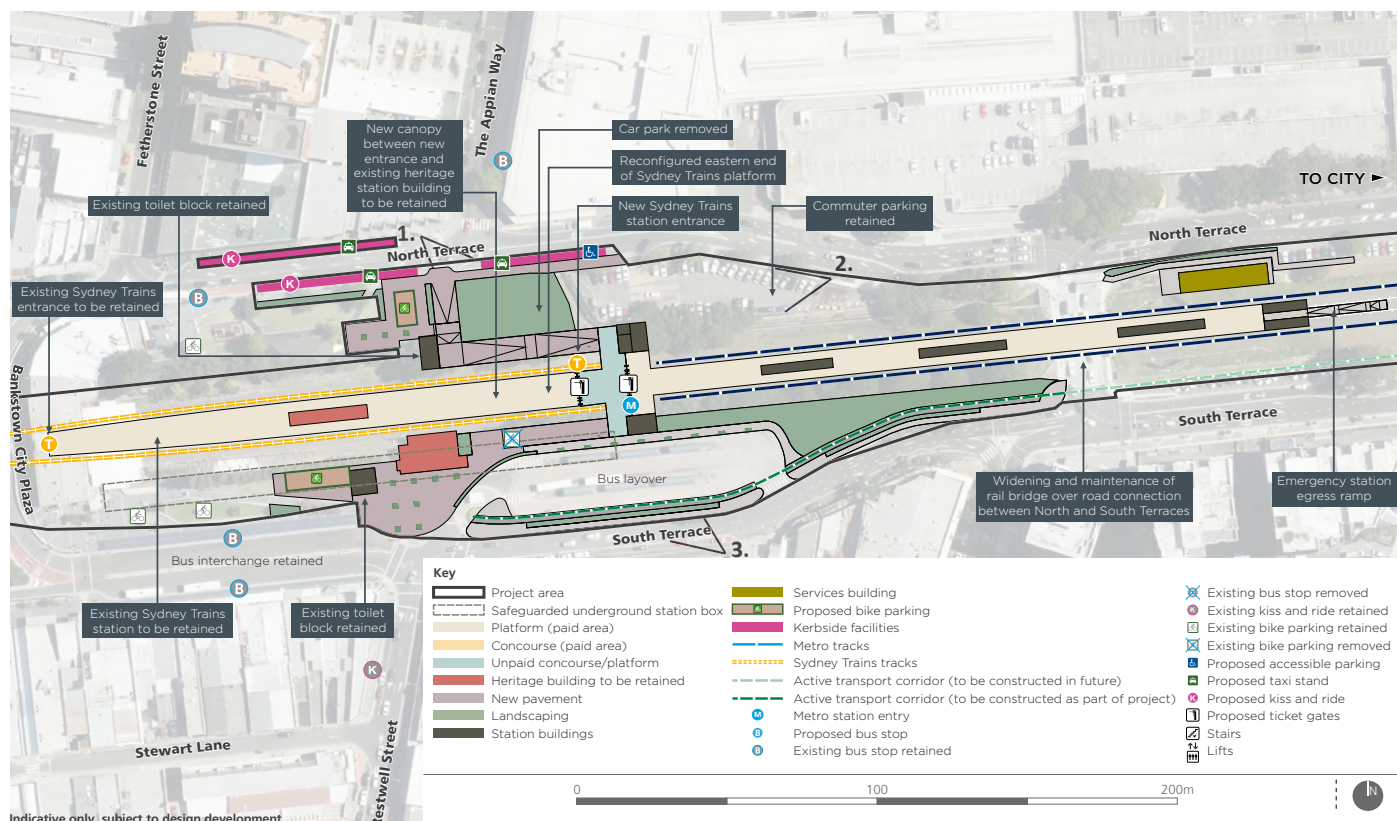


FIGURE 14.1 VIEWPOINT LOCATION PLAN

14.6. Assessment of day time visual impact

The following viewing locations were selected as representative of the range of views to this site:

1. View east along North Terrace
2. View southwest from North Terrace
3. View northeast from South Terrace.

Refer to Figure 14.1 Viewpoint location plan.

The following sections summarise the daytime visual impact of the construction and operation of Bankstown Station, identified in the representative viewpoint assessment and fieldwork visit observations.

Viewpoint 1: View east along North Terrace

This view includes busy North Terrace in the foreground of the view. One and two storey commercial buildings of varying age and character align the northern side of the street (left of view) with high rise development behind the viewpoint. The middle ground of the view includes commuter parking, barrier fencing, a small formal paved plaza area, and adjacent pedestrian crossing.

The view is visually cluttered with numerous signs, banners and lighting elements. Several mature trees can be seen along the rail corridor, filtering views to the south. Some high rise residential buildings on South Terrace can be seen, glimpsed through the trees in the background of the view. Two storey commercial buildings are also seen across the commuter car park, through

intervening vegetation (right of view). A mature Fig tree can be seen in the centre of the view.

Construction: Vehicles accessing this construction compound would be seen on North Terrace. The worksite (right of view) would be bound by hoarding, obstructing views to the rail corridor from this location. The compound would extend from the centre to left of view, and would introduce hoarding close to the viewer. There would also be measures to manage pedestrian and vehicular traffic around the site seen at times. Several trees would be removed from within the reserve and along the rail corridor including the large Fig tree in the centre of this view. The construction associated with the new station buildings and station canopies would be seen above the hoardings. Overall, this activity would create a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: A new station entry plaza would be seen in the centre, middle ground of this view, with the new station footbridge and concourse building seen beyond and to the east (left of view). The station building would be a visually prominent, contemporary architectural structure, including a ramping structure leading from the plaza to a concourse spanning the railway corridor and canopy structure. The scale of the new station architecture is consistent with the adjacent retail frontages on North Terrace and is visually consistent within this urban commercial setting. The large Fig tree would have been removed and a new plaza created opposite the pedestrian crossing. It is expected that the project would result in a noticeable improvement in visual amenity of this view, which is of local visual sensitivity, resulting in **minor beneficial visual impact** during operation.



1 VIEW EAST ALONG NORTH TERRACE

14. BANKSTOWN STATION

Assessment of daytime visual impact

Viewpoint 2: View southwest from North Terrace

This view includes the existing commuter car park in the foreground of the view, bounded by a low post and rail fence on North Terrace and perimeter security fencing along the rail corridor. Vegetation extends along the rail corridor (middle ground centre of view), and screens much of the rail infrastructure. This vegetation, combined with mature eucalypts, located on the south side of the rail corridor, filter views to the bus interchange roof structures, two storey commercial buildings on South Terrace and the multistorey Travelodge Hotel Bankstown, and Bankstown Sports Club, located in the background. Where there are breaks in the vegetation (left of view), the rail corridor ballast, catenary structures and overhead wires can be seen.

Construction: A construction compound would be established on the commuter car park, and be seen unobstructed in the foreground of this view. The compound would be enclosed by hoarding and security fencing and would occupy much of this view. The loss of several trees along the rail corridor would be seen including the large Fig tree in the centre of the view. Construction vehicles would be seen accessing the construction compound via North Terrace, as would devices to facilitate the diversion of pedestrian and vehicular traffic at times. Construction of the new station buildings and roof canopy may be seen, rising above the hoardings. This activity would create a noticeable reduction in the amenity of this view, which is of **local** visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The construction compound would be replaced by a visually prominent station concourse building, highlighting the new station entry. The removal of trees would open-up views to the new station concourse building, plaza and landscaped area along the rail corridor. This view would include the new platforms, extending

across the view, lighting, barrier fencing, signalling equipment, segregation fencing, catenary structures and overhead wiring. The new built form would obstruct any view to the heritage listed former parcels office (on South Terrace), and include canopies extending to the existing station heritage buildings. The scale of the new station architecture is consistent with the adjacent retail frontages on North Terrace, which would be seen in the background of this view, and is visually compatible within this commercial setting. The car park in the foreground would be reinstated and a new pedestrian plaza with a formal avenue of trees would be located in the middle ground of this view. Overall, it is expected that the project would result in a noticeable improvement in visual amenity of this view, which is of local visual sensitivity, resulting in **minor beneficial visual impact** during operation.

Viewpoint 3: View northeast from South Terrace

This view includes the two lanes of South Terrace in the foreground. The heritage listed former parcels office building, located on the northern side of South Terrace, is the focal point of this view, obscured somewhat by small street trees. The existing commuter bus interchange, with large expanses of roadway and vaulted canopy structures (c 1980s), can be seen to the east (right of view), in the middle ground. This interchange is visually enclosed by mature trees to its northern boundary, along the rail corridor. Deciduous street trees along South Terrace, filter views to the bus interchange particularly in summer when they are in full leaf. There are glimpses of commercial buildings on North Terrace visible through the trees, to the east (right of view). This includes high rise development, north of North Terrace, rising above the rail corridor.

Construction: During the initial phases of construction, a construction compound would be located behind the bus interchange structures, in the background of this view.

Assessment of daytime visual impact

This would require the removal of the backdrop of trees. Subsequent phases of construction would require a worksite to be established on the site of the new southern station entry and entry plaza, to the east of the heritage listed former parcels office building, in the centre middle ground of this view. This site would be enclosed by hoarding and security fencing, and require the removal of the stand of tall eucalypts along the rail corridor (centre and right of view) and the large Fig tree behind the heritage building. The construction activity associated with installation of the new station buildings, includes the concourse canopy structure and footbridge, which would be seen rising above the hoardings. Construction vehicles accessing the compound and worksite would be seen along South Terrace, in the foreground of this view. There would also be the diversion of pedestrian and vehicular traffic at times with associated management devices visible along South Terrace. Overall, this activity would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The removal of trees would open-up views to the corridor and a new station concourse building, highlighting the new station entry, which would be seen in the centre, middle ground of this view. Along the corridor, the new platform lighting, barrier fencing, signalling equipment, segregation fencing, catenary structures and overhead wiring would be seen. The scale of the new station architecture would be consistent with the adjacent retail frontages on North Terrace, against which it would be viewed, and is visually appropriate within this commercial setting. The heritage listed Parcels Office would be retained, enhancing the character of the urban setting and limiting views to parts of the station beyond. To the east of this heritage building, a new plaza would be created with trees and furnishings. A new ramped access structure would rise alongside the corridor to the new



2 VIEW SOUTHWEST FROM NORTH TERRACE



3 VIEW NORTHEAST FROM SOUTH TERRACE

14. BANKSTOWN STATION

Assessment of night-time visual impact

station footbridge, creating a visual barrier to the lower platforms adjacent to the station. The bus interchange would be reconfigured but would remain in the current location. Overall, it is expected that the project would result in a noticeable improvement in visual amenity of this view, which is of local visual sensitivity, resulting in a **minor beneficial visual impact** during operation.

14.7. Assessment of night-time visual impact

The setting of Bankstown Station is an area of **E4: High district brightness** (refer to Table 2.5 for definition). This is due to the brightly lit station buildings and platforms, lit trains using the adjacent railway corridor and brightly lit surrounding densely urban, commercial area of Bankstown.

Construction: There would be night works required at this location during construction, namely during the 24 hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within the station itself, however, adjacent areas that may also be affected at night include the construction compound sites to the east of the Station adjacent to North and South Terrace, including the bus interchange on South Terrace and commuter car park on North Terrace. The extent of construction activity would also extend to the northeast of the station, including a new service building, west of the North/South terrace underbridge, on North Terrace.

Additional light from night activity occurring in these locations would be seen from retail and office buildings in North and South Terrace. However, some apartment blocks near the intersection of South and West Terrace may also view some night-time works and haulage, including several units overlooking the rail corridor. Although additional light sources and skyglow would

be seen in these areas, this additional lighting would be absorbed into the surrounding, brightly lit night scene.

Overall, it is expected that this lighting would create a noticeable reduction in the amenity of views from this area which is a precinct of high district brightness. This would result in a **negligible visual impact** at night.

Operation: The station would be brightly lit at night including additional lighting around the new footbridge and elevated concourse building, new northern and southern station entrances and along the platforms, extending to the southeast of the station. There would also be headlights seen on the additional metro trains using platforms 1 and 2. This lighting would be generally consistent with the intensity of lighting seen at the existing station.

Part of the commuter car park in North Terrace would be replaced with a new station entry and plaza with well-lit waiting areas adjacent to the commercial centre of Bankstown. Although this would increase and extend the lighting beyond the existing station area, it is expected that this lighting would be largely absorbed into the surrounding commercial precinct. To the south of the station, the station entrance and transport interchange in South Terrace would increase the intensity of lighting in this area.

Overall, this lighting would be generally consistent with the surrounding high district brightness environment, resulting in no perceived change in amenity, and a **negligible visual impact** at night.

14.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the Bankstown Station site. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 14.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Bankstown Station Precinct	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial

TABLE 14.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View east along North Terrace	Local	Considerable reduction	Moderate adverse	Noticeable improvement	Minor beneficial
2	View southwest from North Terrace	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial
3	View northeast from South Terrace	Local	Noticeable reduction	Minor adverse	Noticeable improvement	Minor beneficial

TABLE 14.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Bankstown Station Precinct	E4: High district brightness	Noticeable reduction	Negligible	No perceived change	Negligible

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Existing environment



15. Corridor and Ancillary development

15.1. Existing environment

The project area extends through a typical cross section of southwestern Sydney, with a mix of low and medium density residential areas, rail side industry and local commercial town centres built around the stations. The project area interfaces with the light rail at Dulwich Hill and several recreation and open space areas including McNeilly Park in Marrickville, Belmore Sports Ground in Belmore, Tasker Park in Canterbury, Warren Reserve and a WW2 memorial located on rail corridor land at Lakemba.

The topography is undulating, resulting in a series of rail embankments and cuttings, with several points of exposed sandstone rock face and shale rock embankments along the rail corridor, providing local visual features. There are several overbridges, underbridges and two pedestrian overpasses, to allow train, vehicle and pedestrian traffic flows across the existing rail corridor. Elevated crossings provide vantage points, offering views over the rail corridor and surrounding landscape and urban environment.

Vegetation within and adjacent to the existing rail corridor boundary is mature and dense in several locations, screening views from adjacent residential and commercial properties, streets and parkland.

The following summarises the existing conditions of the project area, and surrounding study area, between station precincts.

MARRICKVILLE TO DULWICH HILL

- 1 PATHWAY BETWEEN ALBERMARLE STREET AND SCHOOL PARADE
- 2 VIEW EAST FROM ALBERMARLE STREET RAIL BRIDGE
- 3 VIEW EAST FROM CHALLIS AVENUE
- 4 VIEW WEST FROM CHALLIS AVENUE
- 5 SANDSTONE RAIL CUTTING, EAST OF ALBERMARLE STREET RAIL BRIDGE

Marrickville Station to Dulwich Hill Station

McNeilly Park is located west of Marrickville Station on Warburton Street, adjoining the southern boundary of the metro corridor. This park includes a playground, picnic shelters and large formal lawn areas. The rail corridor is generally at the same level as the park in this area, however, mature vegetation within the park largely filters views to the corridor.

Further west along the corridor, in the vicinity of Marrickville Avenue, the rail corridor is in cutting with a mix of vegetated banks and stone cuttings. In areas where the permanent way is in cutting, the overhead lines and support structures are set low and sit mainly below the line of view.

Most properties back on to the corridor in this section, so that vegetation in private backyards and fences filter views to the corridor. Street trees and vegetation within this corridor also filter views to the corridor along this section. Mature street trees provide an avenue setting to Randall Street and are near the location of the proposed substation and southern rail corridor boundary.

Further west at the Albermarle Street overbridge, the rail corridor is in cutting with the exposed sandstone rock face along the northern rail corridor boundary providing a local visual feature, visible from the bridge. Mature trees line the adjacent streets and corridor, further filtering views and include mature Casuarina trees and large Eucalypt trees along Challis Avenue. These trees are near the rail corridor and provide local amenity and filtering of views to the rail corridor. To the south of the corridor, between Albermarle Street and Kays Avenue East, a narrow linear park runs parallel to the rail corridor. It includes feature planting and a pathway linking west from the overbridge.



Dulwich Hill Station to Hurlstone Park Station

Jack Shanahan Park is located on rail corridor land to the north of the project area and west of the Dulwich Hill Light Rail Stop. The permanent way is elevated through this section and views to the embankments of the corridor can be seen through mature vegetation within the park.

Further to the west, somewhat open views are available from residential properties along The Parade, which runs along the northern boundary of the rail corridor. Properties on Ewart, Floss and Hampton streets back on to the corridor in this section, so that vegetation in private backyards and fences filter views to the corridor. The corridor is set within some shallow cuttings through much of this area. These views are further filtered by existing mature trees.



DULWICH HILL TO HURLSTONE PARK

- 1 VIEW SOUTH FROM JACK SHANAHAN PARK
- 2 VIEW TO THE CORRIDOR AND PROPERTIES ON FLOSS STREET

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Existing environment



Hurlstone Park Station to Canterbury Station

This section of the study area is characterised by elevated residential areas, with a number of pocket parks offering views across the surrounding landscape towards the Cooks River. In some sections, deep sandstone cuttings and mature vegetation along the corridor create local visual interest and allow the corridor to be visually absorbed into the surrounding landscape. There are numerous properties which back onto the corridor in this section, so that vegetation in private backyards and fences filter views to the rail infrastructure.

Sawyer Reserve, on Dunstaffenage Street is a small local park with children's playground, adjoining the northern boundary of the rail corridor. This park offers elevated southeasterly views over the corridor and Foord Avenue rail underbridge (local heritage asset) towards the Cooks River. The park includes several mature trees (mostly Eucalyptus) within the park at the top of the rail cutting, in close proximity to the rail corridor boundary.

Similarly, the Warwick Reserve is located at the intersection of Church and Canberra streets, adjoining the northern boundary of the rail corridor. There are several mature trees (mostly Eucalyptus) within the park at the top of the rail cutting, near the rail corridor boundary. From this vantage point, glimpses to the (former) Canterbury Sugar Mill (State heritage asset) can be seen, as can parkland along the Cooks River. A pedestrian bridge between Church and Hutton streets provides north-south access between this park and parkland along the Cooks River. The rail corridor at this point is in a deep cutting, with the exposed sandstone rock face along the northern rail corridor boundary providing a local visual feature seen particularly from the pedestrian bridge. The northern side of the rail corridor is also adjacent to the Electrical substation no. 275 building (State heritage listed) at the end of Church Street, which adds to the historic character of this area.



HURLSTONE PARK TO CANTERBURY

- 1 SAWYER RESERVE, DUNSTAFFENAGE STREET
- 2 VIEW NORTH TO THE FOORD AVENUE RAIL UNDERBRIDGE
- 3 VIEW TO THE RAIL CORRIDOR FROM WARWICK RESERVE
- 4 VIEW SOUTH FROM CHURCH STREET PEDESTRIAN BRIDGE
- 5 FORMER CANTERBURY SUGAR MILL

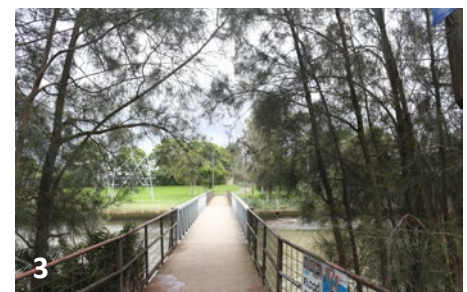
Canterbury Station to Campsie Station

West of Canterbury Station, the corridor crosses the Cooks River with a historic bridge built in 1916 (Canterbury Underbridge). The corridor passes through Tasker Park on embankments extending from the Cooks River Bridge. A pedestrian bridge is aligned parallel to the rail bridge and connects Tasker Park on the northern banks of the River with Charles Street, in the south.

The bridge is visually prominent from the river and Tasker Park, with the embankments mainly vegetated within this area and reducing the visual prominence of the rail corridor itself.

Further to the west, from residential properties along North and South Parade, there are open views across the rail corridor. The corridor is on a small cut and fill through much of this area and some mature trees are scattered along the adjacent streets and surface parking areas.

A pedestrian bridge provides access between North and South Parades, near Campsie Station.



CANTERBURY TO CAMPSIE

- 1 VIEW NORTH ALONG NORTH PARADE
- 2 CANTERBURY UNDERBRIDGE OVER THE COOKS RIVER
- 3 PEDESTRIAN BRIDGE OVER THE COOKS RIVER
- 4 RAIL CORRIDOR THROUGH TASKER PARK
- 5 PEDESTRIAN BRIDGE BETWEEN NORTH AND SOUTH PARADES

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Existing environment



Campsie Station to Belmore Station

West of Campsie station the rail corridor splits. The northern branch contains the Metropolitan Goods Line and continues to the Enfield Intermodal Logistics Centre, while the southern branch contains the T3 Bankstown Line and continues to Belmore station.

West of Campsie Station the T3 Bankstown Line rail corridor descends into cutting, with mainly sloping grassed embankments. From Wilfred Avenue and Lane in the north and Lilian Avenue and Lane to the south, there are unobstructed views across the corridor filtered in places by shrubs and trees.

Further west, the corridor is raised up on an embankment as it passes alongside the Peter Moore Fields and Belmore Sportsground (Canterbury-Bankstown Bulldogs Rugby League Club) and the Terry Lamb Reserve. Club facilities obstruct views to the rail corridor from surrounding residential areas and open space, whilst scattered trees along the corridor and within the park offer some filtering of views, which are more prominent due to the elevated nature of the corridor.

Residential properties to the north of the corridor, on Redman Parade, similarly have open views to the corridor, which is elevated in this section, increasing its visual prominence.

The Belmore Sports Ground and Terry Lamb Reserve are located to the south of the rail corridor, east of the station and are connected to the station via a linear park located along the rail corridor.

CAMPSIE TO BELMORE

- 1 VIEW NORTHEAST FROM BELMORE SPORTSGROUND
- 2 VIEW NORTHEAST FROM WILFRED LANE
- 3 VIEW SOUTHWEST FROM LILIAN STREET
- 4 REDMAN PARADE, BELMORE
- 5 PEDESTRIAN UNDERPASS AT BELMORE SPORTS GROUND

Belmore Station to Lakemba Station

West of Belmore Station, the rail corridor becomes slightly elevated above the surrounding residential areas. Views from esplanade roads including Railway Parade to the north of corridor and The Boulevard and Peel Street to the south of the corridor are filtered by scattered mature trees within the rail corridor and the adjacent road reserve. At the Moreton Street overbridge, views to the corridor open up as the corridor descends again into a shallow cutting and there is less filtering due to fewer adjacent street trees. Mature street trees provide an avenue setting to The Boulevard and are near the proposed location of the substation and southern rail corridor boundary.



BELMORE TO LAKEMBA

- 1 VIEW SOUTHWEST FROM MORETON STREET RAIL BRIDGE
- 2 VIEW NORTHEAST FROM MORETON STREET RAIL BRIDGE
- 3 BELMORE STATION COMMUTER CAR PARK, THE BOULEVARDE
- 4 VIEW NORTHEAST FROM CORNER OF DENNIS STREET / THE BOULEVARDE
- 5 VIEW NORTHEAST ALONG THE BOULEVARDE

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Existing environment



Lakemba Station to Wiley Park Station

Through this short section of the alignment, the corridor is mainly set within densely vegetated cuttings and embankments. This vegetation, which includes numerous mature trees, filters and screens views to the corridor from residential areas along both Railway Parade in the north and The Boulevard to the south. Uniquely along the alignment, Lakemba Station can be seen in views from Wiley Park Station and vice versa.

LAKEMBA TO WILEY PARK

- 1 RAIL CORRIDOR WEST OF LAKEMBA STATION
- 2 RAIL CORRIDOR WEST OF LAKEMBA STATION
- 3 FOOTPATH TO THE NORTH OF RAIL CORRIDOR AT LAKEMBA

Wiley Park Station to Punchbowl Station

To the west of Wiley Park Station, the corridor continues in shallow cuttings and embankments and becoming generally level with the surrounding residential areas at Punchbowl Station. The corridor has sections where the embankments are densely vegetated, however, most of the corridor is open to views from surrounding areas. This vegetation, which includes numerous mature trees, filters and screens views to the corridor from residential areas along both Urunga Parade in the north and The Boulevard to the south and is located both within the rail corridor and the adjacent road reserve.



WILEY PARK TO PUNCHBOWL

- 1 RAIL CORRIDOR EAST OF PUNCHBOWL STATION, URUNGA PARADE, NEAR DUDLEY STREET
- 2 RAIL CORRIDOR EAST OF PUNCHBOWL STATION, THE BOULEVARDE, NEAR ROSEMOUNT STREET SOUTH
- 3 RAIL CORRIDOR EAST OF PUNCHBOWL STATION, THE BOULEVARDE

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Existing environment



Punchbowl Station to Bankstown Station

In this area, the corridor continues on a shallow embankment, becoming level with surrounding residential areas in some places. The corridor runs along the back of residential properties and the Punchbowl Boys High School, reducing the visibility of the corridor.

To the south, the corridor runs parallel to South Terrace, which is a residential esplanade road, extending essentially along the length of the corridor in this area. Views from South Terrace are filtered by mature trees scattered along the rail corridor and within the road reserve. From a slightly elevated position, residential properties along Stansfield Avenue back onto the rail corridor, and have views filtered through garden trees and over rear fences.

Approaching Bankstown there are substantial dense urban activities along the corridor which limit views of the corridor from local streets. The Bankstown Central shopping centre to the north of North Terrace in particular, presents a blank facade and carparking structures.



PUNCHBOWL TO BANKSTOWN

- 1 VIEW WEST FROM PUNCHBOWL ROAD
RAIL BRIDGE TO PUNCHBOWL BOYS HIGH
SCHOOL
- 2 VIEW WEST ALONG SOUTH TERRACE
- 3 VIEW FROM RESIDENTIAL AREA ON
STANSFIELD AVENUE
- 4 DENSE URBAN ACTIVITIES IN BANKSTOWN
AT THE INTERSECTION OF WEST AND
SOUTH TERRACES
- 5 VIEW EAST ALONG NORTH TERRACE TO
THE BANKSTOWN CENTRAL CARPARK

Areas to the west of Bankstown Station

West of Bankstown, the corridor rises to a bridge at Marion Street and is elevated above the surrounding development as it passes Bankstown Arts Centre on Olympic Parade and the adjacent linear parkland on the southern boundary of the rail corridor. In particular, the four mature Fig trees located within the linear park provide a visual and recreational setting for the adjacent Bankstown Arts Centre and a visual buffer to the elevated rail corridor. In this section, there are substantial dense urban activities along the corridor which limit views of the corridor from local streets.

As the corridor turns north, it is set within a lightly vegetated corridor, at the rear of both residential areas and passing alongside a park at Brancourt Avenue. Views to this corridor are mainly filtered through these existing trees. A small park and an existing substation are located to the southwest of the corridor, on Brancourt Avenue.

Between Melanie Street and Weigand Avenue, there are a number of medium density residential units, overlooking the rail corridor.



WEST OF BANKSTOWN

- 1 VIEW FROM THE INTERSECTION OF MARION STREET AND GREENWOOD AVENUE
- 2 VIEW FROM THE CARPARK AT MARION STREET
- 3 VIEW TO RAIL CORRIDOR FROM PARKLAND AT BRANCOURT AVENUE
- 4 VIEW TOWARDS THE SUBSTATION FROM WEIGAND AVENUE
- 5 VIEW SOUTH FROM MELANIE STREET ALONG THE RAIL CORRIDOR

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Planning guidance

15.2. Planning guidance

Further to the planning review undertaken in section 3 of this report, the following review identifies specific clauses in the LEP and DCP documents, as well as provisions in strategic and master planning documents, which are relevant to the landscape and visual impact assessment of the proposed ancillary development within the project area.

Inner West Council

Marrickville Local Environmental Plan, Marrickville Council, 2011

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Marrickville Station to Dulwich Hill Station:

Building heights to the north of the rail corridor are permitted to reach maximum building heights of up to 23 metres between Illawarra and Livingstone roads. To the south of the rail corridor, land use transitions into low density residential between McNeilly Park and School Parade, where building heights are capped at 9.5 metres.

Dulwich Hill Station to Hurlstone Park Station:

Adjacent parcels of land to the south of the rail corridor are permitted to reach maximum building heights of 9.5 metres, reflecting the low density residential character between Ewart Street and Floss Street. To the north of the rail corridor, building heights west of Jack Shanahan Park are also capped at 9.5 metres.

Heritage

There are a small number of heritage items located within or adjacent to the rail corridor, between the stations, including the 'Stone house' at 1 Myrtle Street both in Marrickville and the Foord Avenue rail underbridge in Hurlstone Park. The South Dulwich Hill HCA also covers part of the rail corridor to the east of Dulwich Hill Station. Where relevant this assessment has considered the 'settings and views' of these items (Heritage conservation, clause (5.10) of the LEP).

City of Canterbury – Bankstown

Canterbury Local Environmental Plan, City of Canterbury Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Heights of buildings

Hurlstone Park Station to Canterbury Station:

Adjacent parcels of land to the south of the rail corridor are permitted to reach maximum building heights of 8.5 metres, reflecting the low density residential character between Duntroon Street and the Church Street pedestrian bridge. West of this bridge, building heights are permitted to reach between 11.5 to 27 metres, near Canterbury Station. To the north of the rail corridor, building heights west of Foord Avenue are capped at 8.5 metres.

Canterbury Station to Campsie Station:

Adjacent parcels of land to the north and south of the rail corridor are permitted to reach maximum building heights of 11.5 metres, along North and South Parades. Building heights along Nowra Lane and East Parade, north of the rail corridor, are capped at 8.5 metres.

Campsie Station to Belmore Station:

Adjacent parcels of land to the north and south of the rail corridor are permitted to reach maximum building heights of 8.5 metres, reflecting the low density residential character between Loch Street and Sudbury Street to the north, and Carrington Street and Loch Street to the south. To the south of the rail corridor, building heights between Loch Street and Belmore Sportsground are capped at 11.5 metres.

Belmore Station to Lakemba Station:

Adjacent parcels of land to the north and south of the rail corridor are permitted to reach maximum building heights of 8.5 metres, reflecting the low density residential character along Railway Parade (between Cleary Avenue and Quigg Street North) and The Boulevard (between Peel and Dennis streets).

Lakemba Station to Wiley Park Station:

Building heights to the south of the rail corridor along The Boulevarde are permitted to reach between 8.5 and 11.5 metres. Adjacent parcels of land to the north of the rail corridor along Railway Parade are capped at 11.5 metres.

Wiley Park Station to Punchbowl Station:

Building heights to the north and south of the rail corridor along The Boulevarde and Urunga Parade are permitted to reach 8.5 metres. As the corridor nears Punchbowl Station, building heights along The Boulevarde may reach 11.5 metres, between Rosemont Street South and Broadway.

Heritage

The federation rail bridge, Canterbury (Cooks River) Underbridge, at Charles Street, passing over the Cooks River, is identified as a heritage item in both the LEP Environmental heritage list and RailCorp Section 170 Heritage and Conservation Register.

Bankstown Local Environmental Plan, City of Bankstown Council, 2012

In addition to the LEP provisions identified in section 3 of this report, the following applies:

Height of buildings

Punchbowl Station to Bankstown Station:

Building heights to the north of the rail corridor along Stansfield Avenue and Wattle Street, and to the south of the rail corridor along South Terrace are permitted to reach 8.5 metres. West of Stacey Street, as the rail corridor nears Bankstown Station, building heights along North and South Terrace may reach 35 metres.

Heritage

There are no listed heritage items between Punchbowl and Bankstown stations.

Sydenham to Bankstown Urban Renewal Corridor Strategy, Department of Planning and Environment, 2017

Sydenham to Bankstown Urban Renewal Corridor Strategy Items proposed in this strategy are mostly located within the immediate surrounds of each station and listed in sections 6 to 16 of this report. However, a regional cycleway (GreenWay South West project) is proposed for the south side of the rail corridor from Victoria Road in Marrickville, connecting to Marrickville, Dulwich Hill and Hurlstone Park stations, joining up with the Cooks River Cycleway at Canterbury, rejoining the rail corridor at South Parade (in Campsie), along The Boulevarde (in Wiley Park, Lakemba and Punchbowl) and South Terrace (in Punchbowl and Bankstown).

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Character and components of the project

15.3. Character and components of the project

Construction phase

The following section describes the construction phase for the corridor and ancillary development:

- Establishment of a worksite along the corridor, with works including rail corridor widening works, including cuttings, embankments and retaining wall construction earthworks and track formation
- Worksites outside the rail corridor would include sites at:
 - Myrtle Street, Marrickville
 - McNeilly Park, Marrickville
 - West of the Livingstone Road Bridge
 - Garnet Street/The Parade, Dulwich Hill
 - Melford Street/Canberra Street, Hurlstone Park
 - Close Street, Canterbury
- Removal of potentially 13.8ha of vegetation from within the Metro corridor worksite and compounds (0.9 hectares of this considered to be native vegetation).
- Environmental Protection and Biodiversity Conservation Act (EPBC) listed vegetation west of Punchbowl Station will remain.
- Replacement or upgrading of road bridges and underpasses
- Replacement or upgrade of the following footbridges:
 - replacement of the Hutton / Church Street pedestrian footbridge, east of Canterbury Station
 - upgrade of Duke Street pedestrian footbridge, east of Campsie Station

- Drainage works including excavation for underground/ covered flood attenuation basins at:
 - McNeilly Park, Marrickville
 - Between School Parade and Dudley Street, Dulwich Hill
 - Ewart Street, Dulwich Hill
 - Lilian Street, Campsie
- Upgrading of security fencing and gates along the rail corridor (up to 2.4 metres high).
- A power supply route would be installed either by trenching or directional drilling within the road reserve, between the existing Ausgrid Canterbury substation and the proposed Metro Campsie substation.

Operation phase

The following section describes the operational phase for the corridor and ancillary development:

- New metro rail tracks realigned but generally replacing in the same location the existing Sydney train lines, on a ballast formation
- New overhead wiring and support structures
- Segregation fencing, side walls and associated operational infrastructure
- Telecommunications masts (radio antennae, CCTV cameras, telecommunications cabling and equipment enclosures) at approximately 250 metre intervals along the corridor, to an approximate height of 7 metres above the rail line
- Combined services posts, varying in height between 1.4 and 3.4 metres high and located at approximately 200 metre intervals along the corridor

Character and components of the project

- Safety refuges along the Goods line and Sydney Trains side of the track between Belmore Triangle and Marrickville
- Five new traction substations are required to power the metro trains. These would be located at the following locations:
 - Dulwich Hill – southern side of the railway corridor at Dulwich Hill at Randall Street
 - Canterbury – southern side of the railway corridor at Canterbury, north of Hutton Street west of the Melford Street overbridge
 - Campsie – southern side of the railway corridor at Campsie, north of Lilian Street between east of Carrington Street
 - Lakemba – southern side of the railway corridor at Lakemba, north of The Boulevarde at Taylor Street
 - Punchbowl – southern side of the railway corridor at Punchbowl, north of South Terrace at Scott Street.
- The proposed substation buildings would be above ground and positioned within a secure compound within the rail corridor. The compound would include parking areas for employees, and a loading dock for deliveries to the substation and the substation building.
- New noise barriers would be installed in a number of locations along the corridor.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Sensitivity levels

15.4. Sensitivity levels

The following paragraphs identify the landscape and visual sensitivity of different landscapes along the corridor (refer to Table 2.3 for definitions).

Local Parks - McNeilly Park, Tasker Park, Belmore Sports Ground and Terry Lamb Reserve

Several parks attract visitors from the local area, they typically include playground and park equipment, pathways, seating and amenities set amid mature trees and grassy mounds. Used for informal recreation and community events, these parks are used by residents and people working locally and from around the district. The landscape of this area and views from these parks are of **local sensitivity**.

Neighbourhood Parks- Sawyer Reserve, Acton Street, Warwick Reserve

Numerous small community parks and open space providing residents with open space within walking distance to their home. These parks provide space for recreation, views and provide local amenity. The landscape of these parks and reserves and views from these parks are of **neighbourhood sensitivity**.

Heritage Items - Electrical substation no. 275

Several local and State heritage listed items including houses, boiler house, chimney stack, pumping station and substations, for example, are located within and near to the rail corridor. These elements and associated vegetation contribute to the character of the corridor and surrounding areas. This value is separate from the assigned heritage value of these items. The landscape and views of these heritage items are of **local sensitivity**.

Church Street pedestrian bridge

A pedestrian bridge between Church and Hutton streets provides north-south access between parkland and residential areas in the north and parkland along the Cooks River in the south, approximately 200 metres west of Canterbury Station. The rail corridor at this point is in cutting, with the exposed sandstone rock face along the northern rail corridor boundary, providing a local visual feature, seen from the pedestrian bridge. The landscape and views from this bridge are of **neighbourhood sensitivity**.

Rail corridor

Views from the rail corridor are experienced by passengers and rail staff travelling on trains along the T3 Bankstown Line. Elements within this corridor include moving trains, rail track and ballast, catenary structures and overhead lines, rail maintenance facilities and equipment, vegetation along the rail embankments and fencing marking the rail corridor boundary line. In some areas sandstone cuttings are local visual features, contributing to the character of the corridor. Vegetation within the corridor softens views to and from the corridor and is an important resource for local visual amenity. Although the visual and landscape amenity of this corridor is experienced sequentially from a moving train and not particularly valued by users, the views are experienced by large volumes of people, commuting daily to and from the city and Bankstown are therefore of **local sensitivity**.

Esplanade roads and adjacent residential areas - North and South Parade in Campsie, The Boulevard in Wiley Park, Lakemba and Punchbowl, Railway Parade in Belmore and Lakemba, Urunga Parade in Punchbowl, North and South terraces in Punchbowl and Bankstown, and Olympic Parade in Bankstown

In numerous locations along the corridor, roads run parallel to the rail corridor in an esplanade arrangement. The road reserve and rail corridor in some areas form a linear parkland along the rail corridor providing space and area for trees and vegetation to filter views to the corridor from adjacent residential areas. The landscape and views from these areas are of **neighbourhood sensitivity**.

15.5. Assessment of landscape impact

The landscape of the corridor and ancillary development site would be altered by the project. The following section summarises the impact identified by the assessment and fieldwork observations. This includes impact during construction and operation on the following sections of the rail corridor:

1. Marrickville Station to Dulwich Hill Station
2. Dulwich Hill Station to Hurlstone Park Station
3. Hurlstone Park Station to Canterbury Station
4. Canterbury Station to Campsie Station
5. Power supply feeder south of Canterbury
6. Campsie Station to Belmore Station
7. Belmore Station to Lakemba Station
8. Lakemba Station to Wiley Park Station
9. Wiley Park Station to Punchbowl Station
10. Punchbowl Station to Bankstown Station
11. Areas west of Bankstown Station.

The following assessment identifies the potential landscape impact for each of these corridor sections.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of landscape impact

1. Rail corridor - Marrickville Station to Dulwich Hill Station

Existing condition: The corridor includes areas of steep cutting with mature vegetation scattered along the corridor perimeter. Features of this section of the corridor landscape include McNeilly Park to the southwest of Marrickville Station. There is an east west pedestrian or cycle route between Abermarle Street and Kays Avenue East, south of the corridor, and north south pedestrian movement is possible at Livingstone Road, Abermarle Street and Wardell Road.

Construction: Construction compounds and worksites would be established within the corridor and on the southern side of the tracks. This would require the removal of some corridor vegetation. There would be a detention basin constructed in the western part of McNeilly Park, impacting a formal lawn area and some mature trees, however, not impacting the playground. A site would be established for the Dulwich Hill substation on Randall Street would be cleared and may require the removal of some street trees to allow access. The Abermarle Street overbridge would be demolished and rebuilt, temporarily reducing north south accessibility for pedestrians. Works may also require the temporary closure of the existing footpath between Abermarle Street and Kays Avenue East, and a narrow linear park which runs along the southern edge of the rail corridor. Along the south of the corridor there would be services relocations and a detention basin would be excavated near School Street. Overall, it is expected that there would be a considerable reduction in the landscape quality of the corridor between Sydenham and Marrickville, due particularly to impacts on McNeilly Park, the Kays Avenue linear park, trees on Randall Street and the temporary removal of the Abermarle Street overbridge. This section of the rail corridor is of local sensitivity, resulting in a **moderate adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including retaining walls, new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. The impacted areas of McNeilly Park would be reinstated, as would the Kays Avenue linear park and footpaths, restoring accessibility and access to open space. Although areas to the south of the corridor would be reinstated with turf, trees along the corridor would not be reinstated within the corridor resulting in a reduction in overall amenity along this section of the corridor. North south and east west pedestrian connectivity would be restored as Abermarle Street bridge is reinstated. Overall there would be a noticeable reduction in the landscape quality of this corridor as the corridor vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

2. Rail corridor - Dulwich Hill Station to Hurlstone Park Station

Existing condition: The corridor includes areas of embankment and shallow cutting with mature tree scattered along the corridor perimeter. Features of this section of the corridor landscape include Jack Shanahan Park and the Dulwich Hill Light Rail Stop to the northwest of Dulwich Hill Station. North south pedestrian movement is possible at Terrace Road and Garnet Streets. East west movement is via surrounding local streets.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the south of the tracks, and extending to the north on The Parade. This would require the removal of some corridor vegetation and grassed areas. Along the south of the corridor there would be earthworks, services relocations and an attenuation basin would be excavated near

Ewart Street. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Dulwich Hill and Hurlstone Park stations, due particularly to the removal of vegetation and earthworks along the southern area of the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. Areas to the south of the corridor would be reinstated with turf, however, trees along the corridor would not be reinstated resulting in a reduction in overall amenity along this section of the corridor. Overall there would be a noticeable reduction in the landscape quality of this corridor as the corridor vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

3. Rail corridor - Hurlstone Park Station to Canterbury Station

Existing condition: The corridor includes areas of steep cutting and mature vegetation including some large individual gum trees (*eucalyptus species*) along the corridor. Features of this section of the corridor landscape include Sawyer Reserve on Acton Street, Foord Avenue rail underbridge (local heritage asset), Electrical substation no. 275 building (State heritage listed) at the end of Church Street, the former Canterbury Sugar Mill (State heritage asset), Warwick Reserve on Church Street. North south pedestrian movement is possible at Foord and Hurlstone avenues, and via a narrow pedestrian bridge between Church and Hutton streets. East west movement is via surrounding local streets, and along the Cooks River. South of



1 VIEW NORTHWEST FROM LIVINGSTONE ROAD, BETWEEN MARRICKVILLE AND DULWICH HILL



2 VIEW NORTHEAST EWART STREET AND TERRACE ROAD, BETWEEN DULWICH HILL AND HURLSTONE PARK

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of landscape impact



3 VIEW EAST FROM THE MELFORD STREET BRIDGE, BETWEEN HURLSTONE PARK AND CANTERBURY



4 VIEW WEST ALONG SOUTH PARADE, BETWEEN THE COOKS RIVER AND CAMPSIE STATION

the corridor there is open space along the Cooks River which extend towards Hutton and Close Streets.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the south of the tracks, and extending to the north on Canberra Street. A large worksite would be established between the rail corridor and Close Street, opposite parkland along the Cooks River. These compounds and worksites would require the removal of some corridor vegetation and grassed areas, and particularly some mature Brush Box trees (*Lophostemon confertus*) within the worksite on Close Street. A site would be established for the Canterbury substation on Hutton Street, requiring some trees to be cleared. Along the south of the corridor there would be earthworks, services relocations, and a retaining wall and embankment would be constructed East of Foord Avenue underbridge. Protection and maintenance works on the Church Street Bridge may require temporary access restrictions. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Hurlstone Park and Canterbury, due particularly to the removal of vegetation within the corridor and at the worksite on Close Street. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. Areas to the south of the corridor would be reinstated with turf, however, trees along the corridor would not be reinstated resulting in a reduction in overall amenity along this section of the corridor. The Close Street worksite would be reinstated; however, the Canterbury Substation would remain. Overall there

would be a noticeable reduction in the landscape quality of this corridor, as the removed vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

4. Rail corridor - Canterbury Station to Campsie Station

Existing condition: Features of this section of the corridor landscape include the Cooks River bridge (Charles Street underbridge) and Tasker Park. West of the bridge, the corridor is on a small cut and fill, and mature trees are scattered along adjacent streets and surface parking areas. North south pedestrian movement is possible via Wairora Street near the river and the Duke Street footbridge, between North and South terraces, near Campsie Station in the west. East west movement is via a pedestrian bridge crossing the Cooks River, through Tasker Park and along North and South terraces.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the south of the tracks. These compounds and worksites, and the construction of noise walls, along some sections of the corridor, would require the removal of some vegetation within the corridor and adjacent parking areas. Protection and maintenance works on the Duke Street Footbridge may require temporary north south access restrictions. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Canterbury and Campsie stations, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including noise barriers, new overhead wiring and support

structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. This would include noise barriers along North and South parades. Trees along the corridor would not be reinstated, resulting in a reduction in overall amenity along this section of the corridor. Pedestrian connectivity would be restored. Overall, there would be a noticeable reduction in the landscape quality of this corridor as the removed vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

5. Power supply feeder south of Canterbury

Existing condition: South Parade is a predominantly residential street running south and parallel to the rail corridor. Phillips Avenue runs east from South Parade to Canterbury Road, and forms the southern boundary of Tasker Park, on the Cooks River. These streets include intermittent street trees and have a leafy character. In this location Canterbury Road is a busy five lane road with commercial properties, narrow footpaths and few trees. To the east of Canterbury Road a grid of residential streets including Fore, River, and Spark streets and Mooney Avenue, are generally two lane in width with intermittent street trees and narrow footpaths. Spark Street forms the northern boundary of Earlwood Oval, and the Earlwood Wanderers Football Club. Westfield Street, aligned north south, is flanked by Hughes Park to the west and a wide parklike road verge to the east.

Construction: The substation connection would require temporary works within the road corridor, along South Parade, Phillips Avenue, Canterbury Road, Fore, River and Spark streets, Mooney Avenue and Westfield Street. Works may include some

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of landscape impact



6 VIEW NORTHEAST FROM LOCH STREET,
BETWEEN CAMPSIE AND BELMORE



7 VIEW WEST FROM THE BELMORE ROAD
BRIDGE, BETWEEN BELMORE AND
LAKEMBA

road and footpath closures to accommodate temporary trenching works. Existing street trees within this corridor would be retained where possible. It is expected due to the potential removal of vegetation, and proximity to a number of open spaces, that the project would create a noticeable reduction in the quality of this landscape. This corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be no permanent aboveground project elements along this route during operation. This would result in no perceived reduction in the quality of this landscape, which is of local sensitivity, resulting in a **negligible landscape impact**.

6. Rail corridor - Campsie Station to Belmore Station

Existing condition: West of Campsie Station the T3 Bankstown Line rail corridor descends into cutting, with mainly sloping grassed embankments, and then rises up on an embankment as it continues west. There are scattered trees along the corridor. Landscape features along this section include the Peter Moore Fields and Belmore Sportsground (Canterbury-Bankstown Bulldogs Rugby League Club), and the Terry Lamb Reserve to the south of the corridor. North south pedestrian movement is possible via Loch Street, in the east, and through the Belmore Oval pedestrian access tunnel. East west movement is via local streets and paths leading west from Belmore Park to Belmore Station.

Construction: A site would be established for the Campsie substation off Lilian Street, to the west of Campsie Station. Along the south of the corridor there would be drainage works and services relocations. Construction compounds and worksites would be established within the corridor, in areas to the north and south of the tracks. These compounds and worksites would require the removal of some vegetation within the corridor. There would be corridor widening

and earthworks to form embankments which would extend south to the boundary of the Terry Lamb Reserve. Protection and maintenance works on the Belmore Park Oval pedestrian access tunnel may require temporary closure. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Campsie and Belmore, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. A substation would be located west of Campsie Station and trees along the corridor would not be reinstated, resulting in a reduction in overall amenity along this section of the corridor. Pedestrian connectivity would be restored with the reinstatement of the Belmore Oval pedestrian access tunnel. Overall, there would be a noticeable reduction in the landscape quality of this corridor as the removed vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

7. Rail corridor - Belmore Station to Lakemba Station

Existing condition: West of Belmore Station, the rail corridor becomes slightly elevated above the surrounding residential areas, and moves into a shallow cutting. There are scattered mature trees within the rail corridor and the adjacent road reserve, and mature street trees provide an avenue setting to The Boulevarde. North south pedestrian movement is possible via Moreton Street, and East west movement is via adjacent streets, including Railway Parade and The Boulevarde.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the south of the tracks. These compounds and worksites would require the removal of some vegetation within the corridor, particularly along sections where construction of noise barriers would be required. A large worksite would be established on Bridge Road, west of Belmore Station. Noise barriers would be constructed to the north of the corridor along a large section, west of Belmore Station. A site would be established for the construction of the Lakemba substation, between the rail corridor and The Boulevarde. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Belmore and Lakemba stations, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including noise barriers, new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. The Lakemba Substation would be located within the corridor and trees would not be reinstated, resulting in a reduction in overall amenity along this section of the corridor. Overall, there would be a noticeable reduction in the landscape quality of this corridor as removed vegetation would not be replaced, and the corridor perimeter is reinforced with fencing as a barrier in the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of landscape impact



8 VIEW EAST FROM THE MELFORD STREET BRIDGE, BETWEEN LAKEMBA AND WILEY PARK



9 VIEW WEST ALONG SOUTH PARADE, BETWEEN WILEY PARK AND PUNCHBOWL

8. Rail corridor - Lakemba Station to Wiley Park Station

Existing condition: In this section, the corridor is mainly set within densely vegetated cuttings and embankments, including numerous mature trees. There are no north south pedestrian connections along this short section of corridor, however, east west movement is direct and continuous via The Boulevard, Railway Parade and a local pedestrian connection.

Construction: Construction of the new metro infrastructure would be undertaken along the corridor, including bulk earthworks which would require the removal of some trees along this corridor. It is expected that there would be a noticeable reduction in the landscape quality of the corridor between Canterbury and Campsie stations, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. Trees removed during construction would not be reinstated, resulting in a reduction in overall amenity along the corridor. Overall, there would be a noticeable reduction in the landscape quality of this corridor. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

9. Rail corridor - Wiley Park Station to Punchbowl Station

Existing condition: The corridor is located in shallow cuttings and embankments areas along this corridor. The corridor includes both densely vegetated embankments and scattered are densely vegetated, includes numerous mature trees. There are no north

south pedestrian connections across this section of the corridor, however, east west connectivity is direct via Urunga Parade and The Boulevard.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the north of the tracks. These compounds and worksites would require the removal of some vegetation within the corridor. There would be bulk earthworks required to construct drainage particularly to the east of the section. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Canterbury and Campsie stations, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including noise barriers, new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. The noise barriers would be installed along large sections of the corridor. Trees along the corridor would not be reinstated, resulting in a reduction in overall amenity along this section of the corridor. Overall, there would be a noticeable reduction in the landscape quality of this corridor due to the removal of corridor vegetation and the introduction of noise barriers, reinforcing the corridor as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

10. Rail corridor - Punchbowl Station to Bankstown Station

Existing condition: In this area, the corridor continues on a shallow embankment and becomes level with surrounding residential areas. There are mature trees scattered along the rail corridor and within the road



10 VIEW WEST ALONG NORTH TERRACE,
BETWEEN PUNCHBOWL AND BANKSTOWN

reserve, including some EPBC protected vegetation. There is no cross corridor (east west) pedestrian connections in this section, however, movement parallel to the corridor (north south) is via South Terrace and other local streets.

Construction: Construction compounds and worksites would be established within the corridor and would require some selective clearing of vegetation. The EPBC protected vegetation would be retained. Construction of the Punchbowl Substation would be undertaken, requiring the removal of some mature trees. There would also be tree removal required and works undertaken to install noise barriers along much of the length of this corridor. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor between Canterbury and Campsie stations, due particularly to the removal of vegetation within the corridor. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of landscape impact



11 VIEW EAST FROM WEINGAND AVENUE,
WEST OF BANKSTOWN STATION

Operation: There would be an intensification of rail corridor elements including retaining walls, noise barriers, new overhead wiring and support structures, new signalling equipment telecommunication masts, segregation fencing, and other operational infrastructure, to the north and south of the corridor. Noise barriers would extend along the north of the corridor along the boundary with the Punchbowl Boys High School, and north and south of the corridor between the school and Stacey Street. Whilst there would be some areas of vegetation retained, other areas of vegetation along the corridor would have been removed and not replaced, and there would be a substation located on The Boulevard. These changes would reduce the amenity of this section of the corridor. There would be retaining walls along both the north and south of the corridor in sections to the west between Stacey Street and the Bankstown Station. Overall, there would be a noticeable reduction in the landscape quality of this corridor due to the reduction in vegetation and introduction of built elements, emphasising the corridor as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

11. Rail corridor - Areas west of Bankstown Station

Existing condition: The corridor is elevated on embankment through the Bankstown town centre. As the corridor turns north, it is set within a lightly vegetated corridor, at the rear of both residential areas and schools and passing alongside a park at Brancourt Avenue. Features of this section of the corridor landscape include mature Fig trees adjacent to the Bankstown Arts Centre, areas of EPBC listed vegetation and a park with playground to the west of the corridor on Brancourt Avenue. Cross corridor pedestrian movement is possible via Marion Street and a pedestrian tunnel between Brancourt and Weingand avenues opposite Coleman Avenue.

North south movement along the corridor is possible along Brancourt and Weigand avenues.

Construction: Construction compounds and worksites would be established within the corridor and mainly to the north of the tracks in the Bankstown CBD area. These compounds and worksites would require the removal of some vegetation within the corridor, however, the mature Figs and EPBC protected vegetation would be protected. Protection and maintenance works on the pedestrian tunnel may require temporary closure and reduced east west permeability for pedestrians. Overall, it is expected that there would be a noticeable reduction in the landscape quality of the corridor west of Bankstown Station, due particularly to the removal of vegetation. This section of the rail corridor is of local sensitivity, resulting in a **minor adverse landscape impact** during construction.

Operation: There would be an intensification of rail corridor elements including fences, new signalling equipment, telecommunications masts and combined services posts to the north and south of the corridor. Vegetation removed from along the corridor would not be reinstated, resulting in a reduction in overall amenity along this section of the corridor. Overall, there would be a noticeable reduction in the landscape quality of this corridor as the corridor vegetation would not be replaced and the corridor would be reinforced, with fencing, as a barrier within the landscape. This section of the corridor is of local sensitivity, resulting in a **minor adverse landscape impact**.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact

15.6. Assessment of day time visual impact

The following views were selected as representative of the range of views to this corridor and ancillary works:

1. View northwest in McNeilly Park, Marrickville
2. View west from the Livingstone Road rail bridge, Marrickville
3. View east from Challis Avenue, Dulwich Hill
4. View east from Wardell Road overbridge, Dulwich Hill
5. View north from Foord Avenue, Hurlstone Park
6. View northeast from Sawyer Reserve, Hurlstone Park
7. View west along Hutton Street, Hurlstone Park
8. View south from Church Street Park, Hurlstone Park
9. View northeast from Close Street, Canterbury
10. View east from the Terry Lamb Reserve, Belmore
11. View northeast from The Boulevard, Lakemba
12. View east from South Terrace, Punchbowl
13. View north from the Bankstown Arts Centre courtyard, Bankstown
14. General passenger views from a train.

These views have been selected to include a range of viewing situations and include areas of key impact. Refer to Figure 15.1 -15.6 Viewpoint location plans.

The following sections summarise the daytime visual impact of the construction and operation of the corridor and ancillary development, identified in the representative viewpoint assessment and site visit observations.

Assessment of daytime visual impact



FIGURE 15.1 VIEWPOINT LOCATION PLAN, MARRICKVILLE, DULWICH HILL, HURLSTONE PARK

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



1 VIEW NORTHWEST IN MCNEILLY PARK

Viewpoint 1: View northwest in McNeilly Park, Marrickville

This view is directed along a pathway leading to the playground. The rail corridor, which is generally level with the park at this location, is obscured by trees and shrubs located along the northern boundary of the park. This view is characterised by open lawns and specimen trees.

Construction: Construction of a large attenuation basin along the southern rail corridor boundary, extending approximately 20 metres into the park, would be prominent in this view. This would require removal of an area of lawn and trees within the park and along the rail corridor, opening-up views to the rail corridor. Although this site would be enclosed by security fencing and shade cloth, construction works within the park and within the rail corridor may be seen, such as corridor widening, and the installation of two new metro lines. There would also be construction vehicles accessing the worksite via Warburton Street, a small laneway between terrace houses. This activity would create a considerable reduction in the

amenity of this view, which is of local visual sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The park would be reinstated as the attenuation basin would have been filled in. This would include lawn areas and trees. Filtered by parkland trees, the metro track, segregation fencing, trackside drainage and services, metro trains, overhead wiring and support structures, and operational infrastructure and telecommunication masts would be visible. Overall, the project would be seen, but the park treatment would filter views to the corridor. Overall, there would be a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 2: View west from the Livingstone Road rail bridge, Marrickville

This view, from the northern landing of Livingstone Road rail bridge, includes the rail corridor in the foreground, at the base of a cutting, as the track curves through the South Dulwich Hill Heritage Conservation Area (HCA). This view shows the semi exposed, partly vegetated southern rock face with a cleared, elevated and visually prominent site at the top of the southern rail cutting (on Randall Street). The existing Sydney Trains High Voltage Aerial route can be seen on the top of this cutting, aligned along the corridor. Mature street trees provide an avenue setting to Randall Street and Marrickville Avenue, which flank this view. Views to adjacent residential properties are partially obscured by timber fencing, mature street trees, vegetation along the rail corridor boundary and in adjacent private gardens.

Construction: In the middle ground of this view the worksite would be established within the corridor at the top of the cutting. The works would require removal of

vegetation for construction vehicle access, and may include trees both within the rail corridor and on Randall Street. Construction of the Dulwich Hill traction substation would be set back from the corridor and be only partly visible on the worksite. At the base of the cutting, works to upgrade the corridor would be seen unobstructed. These works would include replacement of the track, overhead wiring and support structures, removal of vegetation along the corridor, installation of segregation fencing and relocation of the trackside services. Overall, this activity would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: Part of the Dulwich Hill substation would be seen in this view, located at the top of the cutting. The substation would be set back from the cutting so that intervening vegetation and residential properties on Randall Street would screen the view. The substation would be enclosed by security fencing and include vehicle access extending from Randall Street. In the middle ground of this view, the metro segregation fencing would be aligned along the centre of the corridor. Beyond this fencing, the new metro track, overhead wiring and support structures would be seen within the corridor. Metro telecommunication masts and signalling equipment would also be seen, located at intervals along the corridor, which would be enclosed on both sides by corridor security fencing. The Metropolitan Goods Line and the existing northern boundary treatment (including fencing and trees) would be retained in the foreground. Overall, the project would result in a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in **negligible visual impact** during operation.



2 VIEW WEST FROM THE LIVINGSTONE ROAD RAIL BRIDGE

15. CORRIDOR AND ANCILLARY DEVELOPMENT

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3 VIEW EAST FROM CHALLAIS AVENUE

Viewpoint 3: View east from Challis Avenue, Dulwich Hill

This view is from Challis Avenue, a low density residential street in South Dulwich Hill HCA. In this location, the rail corridor is in cut. The Albermarle Street overbridge and the adjacent, partly vegetated southern cutting characterise this view. Beyond the bridge, mature trees along the rail corridor and within adjacent streets (including mature Casuarina and Eucalyptus trees), filter views to the rail corridor. To the south of the corridor, a narrow linear park between Albermarle Street and Kays Avenue East is visible, including feature planting and a pathway linking west from the overbridge.

Construction: Works to replace of the Albermarle Street overbridge would be prominent in this view, requiring establishment of a worksite and the temporary diversion of traffic to local streets. Other construction activities that would be visible from this location include the demolition works (including removal of the track, overhead wiring and support structures and vegetation along southern

embankment), rail corridor widening works and regrading of the rail cutting, relocation and installation of the trackside services and operational infrastructure, installation of two new metro lines and segregation fencing. This activity would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new Albermarle Street overbridge would be seen unobstructed in this view. This bridge would be widened and include throw protection screens facing the corridor and returning along Albermarle Street. The vegetation within this corridor would have been removed, opening-up views to and from the adjacent residential properties and gardens. At the top of the cutting, adjacent to the existing High Voltage aerial route, and the new metro telecommunication masts and signalling equipment would be seen, located at intervals along the corridor. In the middle ground of this view, viewed over the goods line, the metro segregation fencing would be seen, aligned along the centre of the corridor. Beyond this fencing, the new metro track, overhead wiring and support structures would be seen within the corridor. A corridor access gate would be provided at the end of Kays Avenue, alongside the linear park between Albermarle Street and Kays Avenue East. Despite these changes, the new structures would be visually absorbed into the character of the rail corridor, and vegetated background. Overall, there would not be a perceived change in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 4: View east from Wardell Road overbridge, Dulwich Hill

This view is from footpath on the Wardell Road overbridge, adjacent to Dulwich Hill Station. In this location, the track is in cut so that partly vegetated sandstone cuttings can be seen on both sides of the rail corridor. A

Assessment of daytime visual impact

cleared grass area is visible at the top of the southern cutting, alongside the chain mesh boundary fencing. Beyond this, the rooftops of residences within South Dulwich Hill conservation area are visible along School Parade.

Construction: Construction of a linear attenuation basin would be visible, extending along the southern rail corridor boundary. This would require corridor widening works, the extension of southern rail cutting, and removal of the existing vegetation on this site to create a basin. Works to the Wardell Road overbridge would also be visible, including the construction of a new retaining wall on southern abutment and the erection of throw protection screens on the bridge deck. In the corridor, construction of the metro segregation fencing new metro track, overhead wiring and support structures would be seen. Overall, this activity would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: There would be new throw protection screens on the bridge, which would filter views along the corridor from this location. Beyond this barrier, the attenuation basin would have been covered over and a widened corridor would be seen, enclosed by a sandstone cutting. In the corridor, the metro segregation fencing would be seen aligned along the centre of the corridor, partly obstructing the new metro track, overhead wiring and support structures to the south. The new throw protection screens would alter the foreground of this view, whilst the attenuation basin, and new built elements in the metro rail line corridor, would comprise a large portion of this view and extend the character of the rail corridor. This would create a noticeable reduction in the amenity of this view, which is of local visual sensitivity, resulting in a **minor adverse visual impact** during operation.



4 VIEW EAST FROM WARDELL ROAD OVERBRIDGE

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact

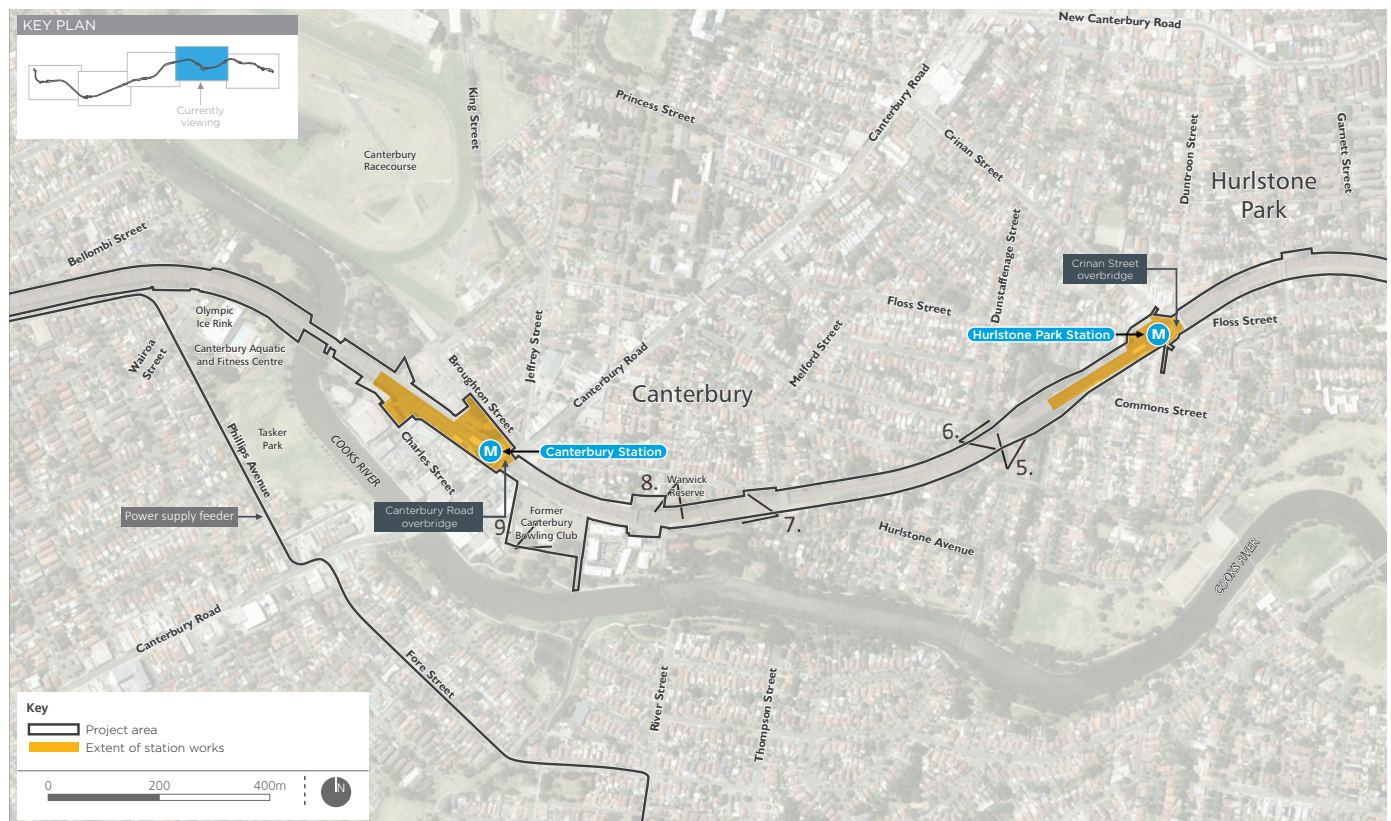


FIGURE 15.2 VIEWPOINT LOCATION PLAN, HURLESTONE PARK, CANTERBURY, CAMPSIE

Viewpoint 5: View north from Foord Avenue, Hurlstone Park

This view is from Foord Avenue, a low density residential street in Hurlstone Park. In this view, the existing permanent way can be seen elevated on vegetated embankments. Foord Avenue passes under the corridor via a heritage listed concrete railway bridge. The existing Sydney Trains High Voltage aerial route can be seen to the north and south of the corridor. Vegetation on the adjacent embankments, and surrounding residential properties obstruct views along the corridor to the east and west.

Construction: Construction activity within the rail corridor would also be visible in the middle ground of the view. The works within the rail corridor would be seen, including removal of the vegetated embankment east of the bridge and construction of a new retaining wall and maintenance access

into the corridor to the north and south of Foord Avenue. Within the corridor activities would include work to the tracks, overhead wiring and support structures, installation and relocation of the trackside services. The worksite would be enclosed by security fencing and shade cloth, and elevated above this residential area. The installation of throw protection screens on the bridge would also be visible. Construction vehicles would be seen accessing this site along Foord Avenue, providing access to the corridor. These activities may also be seen from residences along the rail corridor in Foord and Kier avenues. Although the worksite would be protected by temporary fencing, this activity would contrast with the adjacent residential setting, creating a considerable reduction in the amenity of this view, and views from the adjacent residential areas. This view is of neighbourhood sensitivity, and would result in a **minor adverse visual impact** during construction.

Operation: The rail bridge over Foord Avenue would be upgraded to include new throw protection screens. Trains travelling along the new metro track would be seen crossing the bridge, as would the overhead wiring, support structures, operational infrastructure and telecommunication masts. There would be a new embankment south of the track, including a retaining wall to the east of the bridge extending west of the bridge. The security fencing and access gates on Foord Avenue would allow maintenance access into the rail corridor to the north and south of the bridge. Due to the scale of these changes, and new structures that would be located prominently above the surrounding residential areas, it is expected that there would be a noticeable reduction in the amenity of this view. As this view is of neighbourhood sensitivity, it would result in a **negligible visual impact** during operation.

Viewpoint 6: View northeast from Sawyer Reserve, Hurlstone Park

This view is from Sawyer Reserve, near Kilbride Street, a small local park in Hurlstone Park. At this point the track is in a cutting. This location offers elevated southeasterly, district views through chain mesh fencing over the rail corridor and Foord Avenue rail underbridge (local heritage listed) towards the Cooks River. The park includes several mature trees within the park at the top of the cutting on the rail corridor boundary.

Construction: Works to remove the chainmesh fencing and install new security fencing and services along the top of the northern embankment would be seen to the southwest (right) of this view. To the north, works within the corridor would include vegetation removal, earthworks, upgrading of the track, overhead wiring and support structures, installation of throw protection screens on the Food Avenue bridge, and segregation fencing. This work would be in the middle ground of this view and set below the viewer, so that these elements would not extend above the horizon. This activity would create a noticeable reduction in the amenity



5 VIEW NORTH FROM FOORD AVENUE



6 VIEW NORTHEAST FROM SAWYER RESERVE, HURLSTONE PARK

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



7 VIEW WEST ALONG HUTTON STREET



7A VIEW WEST ALONG HUTTON STREET,
ARTISTS' IMPRESSION

of this view, which is of neighbourhood visual sensitivity, resulting in a **negligible visual impact** during construction.

Operation: The chainmesh fencing at the top of the northern embankment would be upgraded and mature trees within the park would be retained, allowing filtered views to the rail corridor and Foord Avenue bridge. In this view the cleared corridor with segregation fencing, new metro tracks, overhead wiring and support structures, and signalling equipment (southern side of corridor), would be visible. Overall, there would be a noticeable reduction in this view, as although the district views would be partly obstructed by an intensification of rail infrastructure, the view to the corridor is located below the park and somewhat contained by landform. As this is a view of neighbourhood sensitivity, this would result in a **negligible visual impact** during operation.

Viewpoint 7: View west along Hutton Street, Hurlstone Park

This view, from a local street to the south of the rail corridor, includes a verge with scrubby trees and shrubs (mostly *Callistemon species*) to the north of the road and within the (centre of view) rail corridor. Chain link fencing can be seen following the corridor, across this view, with a gate and vehicle entry. In this location, the permanent way is in a cutting and cannot be seen, however, above this the overhead wires and support structures are visible, seen through the fencing. The vegetated sandstone cuttings can be seen in the background of the view and to the north of the corridor. Beyond the corridor, leafy residential areas can be seen on elevated, undulating landform.

Construction: The project worksite would be established on the RailCorp land off Hutton Street in the centre, foreground of this view. The works to construct the substation would be seen, enclosed by security fencing and shade cloth. Works within the corridor, including the relocation of the trackside

services, installation of two new metro lines, security fencing and overhead wires and support structures, would be seen in extending across the view, in the middle ground. Construction vehicles would be seen accessing this site and travelling along Hutton Street. It is expected that this activity would create a considerable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The Canterbury substation and adjacent security fencing and access gates would be seen, in the foreground of this view from Hutton Street. The substation would be a building of a substantial scale, extending approximately 50 metres along the track and obstructing views to the backdrop of residential properties. The metro track, overhead wiring, support structures, operational infrastructure and telecommunication masts would also be visible, beyond the substation. The corridor would be less vegetated and have a more built character as the rail infrastructure is not screened by corridor vegetation. To the north (right of view), obstructing views to residences along Canberra Street and the Church Street Park. Due to the scale of the change within this view, there would be a considerable reduction in the amenity this view. This view is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 8: View south from Church Street Park, Hurlstone Park

This is an elevated view from the park in Church Street, north of the rail corridor. In this location, the permanent way is in a deep cutting so that only the overhead wiring and upper parts of the support structures are visible. The northern rail corridor boundary is defined by chainmesh fencing and mature trees (mostly *Eucalyptus* and *Lophostemon* species) along the top of the cutting. The upper storeys and hipped corrugated iron rooftop of the heritage listed Canterbury



8 VIEW SOUTH FROM CHURCH STREET PARK

Sugar Mill are visible from this location, amid riparian and parkland vegetation.

Construction: Removal of the chainmesh fencing and construction of a services route and new security fencing at the top of the northern embankment would be seen in the middle ground of this view. Some vegetation would be removed to make way for this corridor, and views to the Canterbury Sugar Mill may be partly obstructed. It is likely that construction works within the corridor would not be seen due to the location of this park elevated above the level of the rail line. This activity would create a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during construction.

Operation: Some mature trees would have been removed from the southern perimeter of the park and new security fencing and services would be seen, extending across this middle ground of this view. The removal of these trees would reduce the leafy character of this view, however, the view over the rail corridor to the historic Canterbury Sugar

Mill, and broader district views, would remain and may be more prominent due to the removal of intervening trees. It is expected that there would be a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible adverse visual impact** during operation.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



9 VIEW FROM CLOSE STREET, CANTERBURY



10 VIEW EAST FROM THE TERRY LAMB RESERVE

Viewpoint 9: View northeast from Close Street, Canterbury

Close Street is a local cul-de-sac to the east of Canterbury Road, located between the rail corridor (north of view) and the Cooks River (south of view). Mature street trees (*Lophostemon confertus*) along the north side of Close Street (left of view) filter views to the adjacent Canterbury Theatre Guild Hall and raised sports fields alongside the rail corridor. A linear riverside park is located to the south of Close Street (right of view).

Construction: A worksite would be established to the north, between the street and rail corridor (left of view). Haulage traffic and deliveries would be seen traveling along Close Street from this location. The Canterbury Theatre Guild Hall would remain, however, trees within the site would be removed, including Street trees along Close Street. This would open up views to the worksite and the corridor widening works to the north (left of view). The riverside park to the south of Close Street (right of view) would be unaffected. This activity would create a considerable reduction in the amenity of this view which is of local sensitivity, resulting in a **moderate adverse visual impact** during construction.

Operation: The worksite would be reinstated, however the leafy quality of this view would have been lost, and views to the new metro permanent way, trains and segregation fencing would be visible in the background of the view. Overall there would be a noticeable reduction in the amenity of this view, which is of local sensitivity, resulting in a **minor adverse visual impact** during operation.

Viewpoint 10: View east from the Terry Lamb Reserve, Belmore

This view shows the existing rail corridor where it forms the northern boundary of the Terry Lamb Reserve, near the Cotter entrance to the Belmore Sportsground. In this location, the rail corridor can be seen, elevated on embankment as it passes the low-lying sports fields and parkland. The embankments of the

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rail corridor, track, trains, overhead wiring and support structures, and existing Sydney Trains High Voltage aerial route can be seen in the middle ground of this view and filtered by mature trees and buildings within the park.

Construction: Construction works to widen the rail corridor to the south would be visible in the middle ground of this view, requiring some earthworks and removal of vegetation on the existing southern batter of the embankment. Other construction activities that would be visible from this location include reconstruction of the permanent way, installation of overhead wiring and support structures, relocation and installation of the trackside services, signalling and drainage. New security fencing would be constructed along the corridor boundary. The level of construction activity and proximity to local pathways, sport fields and parkland would

create a noticeable reduction in the amenity of this view, which is of local sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new southern embankment and security fencing, at the foot of the batter, would be located in the middle ground of this view. The metro tracks would be seen, elevated above the adjacent sport fields and parkland, allowing clear views to the permanent way, trains, overhead wiring and support structures, signalling and telecommunication masts. These new structures would be visually absorbed into the character of the rail corridor so that there would be no perceived change in the amenity this view. This view is of local sensitivity, resulting in a **negligible visual impact** during operation.

FIGURE 15.3 VIEWPOINT LOCATION PLAN, CAMPSIE AND BELMORE

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



FIGURE 15.4 VIEWPOINT LOCATION PLAN, BELMORE, LAKEMBA, WILEY PARK

this view. This view is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 11: View northeast from The Boulevard, Lakemba

This view is characterised by a streetscape of established street trees along a wide residential boulevard. Adjacent residences (right of view) are set behind avenue street trees, paved footpaths, garden fences and gates, which contribute to the residential character of the view. These properties overlook the rail corridor, filtered through these street trees. Power lines on the verge and crossing the road add some clutter to this view. To the north, the permanent way can be seen raised on ballast, visible through the perimeter corridor security fencing. Trees

Construction: A construction worksite would be established in the centre, middle ground of this view, behind the existing street trees and existing chainmesh security fencing, on the north side of The Boulevarde. This site would be enclosed by shade cloth, however, above the site, works to construct the substation would be seen rising above. To the east and west of this site, works within the rail corridor would also be seen, including works to construct the metro tracks, overhead wiring and support structures, relocation and installation of the trackside services, signalling and telecommunication masts, and drainage. It is expected that the site fencing and shade cloth would screen views to this work somewhat. Construction vehicle movement and site access would be seen on The Boulevarde, in the foreground of this view. Due to the scale and extent of works that would be seen within this view, there would be a considerable reduction in the amenity of this view. This view is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new metro track would be installed in the same location and grade as the existing track, and would generally be level with The Boulevarde streetscape. However, there would be some additional infrastructure adding to the developed character of this corridor such as the signalling and telecommunications masts. The Lakemba substation would be consistent in height with surrounding residential development, and views would be filtered through existing street trees. Overall, it is considered that there would be a considerable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during operation.



11 VIEW NORTHEAST FROM THE BOULEVARDE



11A VIEW NORTHEAST FROM THE BOULEVARDE, ARTIST'S IMPRESSION

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



FIGURE 15.5 VIEWPOINT LOCATION PLAN, WILEY PARK, PUNCHBOWL, BANKSTOWN

Viewpoint 12: View east from Scott Street, Punchbowl

From this location, the rail corridor can be seen across The Boulevard, raised on an embankment, and filtered by mature street trees (*Eucalyptus species*). These trees filter views to the rail corridor including the permanent way, overhead wires and support structures and corridor security fencing. The view is framed by low-set residential properties, and glimpses to residential areas to the north of the rail corridor can be seen in the background.

Construction: A construction worksite would be established in the centre, middle ground of this view, requiring the removal of several street trees and existing chainmesh security fencing on the north side of The Boulevard. This site would be enclosed by shade cloth, however, above the site, works to construct the substation would be seen. To the east

and west of this site, works within the rail corridor would also be seen, including works to construct the metro tracks, overhead wiring and support structures, relocation and installation of the trackside services, signalling and telecommunication masts, and drainage. It is expected that the site fencing and shade cloth would screen views to this work somewhat. Construction vehicle movement and site access would be seen on The Boulevard, in the middle ground of this view. Due to the scale and extent of works that would be seen, there would be a considerable reduction in the amenity of this view. This view is of neighbourhood sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The new metro track would be installed in the same location, however, there would be some additional infrastructure adding to the developed character of this corridor such as the signalling and telecommunications masts. The Punchbowl Substation would be a consistent height with surrounding development and obstruct views to the corridor. Overall, it is considered that there would be a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 13: View north from the Bankstown Arts Centre courtyard, Bankstown

Buildings of the Bankstown Arts Centre frame this view north towards the rail corridor. A grassed embankment rises steeply to the rail corridor. Mature Fig trees (*Ficus hillii*) can be seen, filtering the corridor. The upper levels of contemporary high rise office buildings and rear of the three level Marion Street Car park can be seen in the background, beyond these trees.

Construction: The mature Fig trees and grassed batter along the southern side of the track would be retained. Construction activities within the rail corridor would be visible from this location, including



12 VIEW EAST FROM SCOTT STREET



12A VIEW EAST FROM SCOTT STREET, ARTIST'S IMPRESSION

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Assessment of daytime visual impact



13 VIEW NORTH FROM THE BANKSTOWN ARTS CENTRE COURTYARD

construction of the metro tracks, overhead wiring and support structures, relocation and installation of the trackside services, signalling and telecommunication masts, and corridor security fencing. The combined screening of site fencing and shade cloth, as well as the large Fig trees would mostly obscure these works. Overall, there would be a noticeable reduction in the amenity of this view, which is of local sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: The mature Fig trees and grassed embankment which characterise this view would be retained. The existing track and adjacent security fencing would be replaced by metro track and security fencing at the top of the embankment. The metro track would be elevated from the adjacent arts centre, allowing clear views between the Fig tree trunks to the metro track and trains, overhead wiring and support structures, signalling and telecommunication masts. Despite these changes, the new structures would be consistent with the character of the rail corridor. There would be no perceived change in the amenity this view, which is of local sensitivity, resulting in a **negligible visual impact** during operation.

Viewpoint 14: General passenger views from a train

Views from the rail corridor are currently experienced by passengers and rail staff travelling on trains along the T3 Bankstown Line. These views include moving trains, rail track and ballast, catenary structures and overhead lines, rail maintenance facilities and equipment, vegetation along the rail embankments and fencing. In some areas sandstone cuttings are local visual features, contributing to the character of the corridor. Vegetation within the corridor softens views to and from the corridor and is an important resource for local visual amenity.

Construction: During construction there would be reduced access to these views as train services are interrupted for construction activity. However, when the trains are

operating, passengers would experience views to intermittent construction activity, particularly at stations and the substation sites. Site fencing and shade cloth would mostly obscure these works. Overall, there would be a noticeable reduction in the amenity of views from trains, which are of local sensitivity, resulting in a **minor adverse visual impact** during construction.

Operation: During operation views from the rail corridor would be more open due to the removal of vegetation along the corridor. The corridor would also include additional segregation and security fencing, overhead wiring and support structures, signalling and telecommunication masts. Although these elements would be consistent with the character of the existing rail corridor, there would be an increase in the rail infrastructure visible. The removal of trees would open up views to the surrounding suburban and urban landscapes. At stations, there would be fewer heritage buildings and sandstone cuttings seen from the corridor, creating a more contemporary character. Overall, there would be a noticeable reduction in the amenity of views from the rail corridor, which are of local sensitivity, resulting in a **minor adverse visual impact** during operation.

15.7. Assessment of night-time visual impact

The setting of the rail corridor and ancillary works is **E3: Medium district brightness** (refer to Table 2.5 for definition). This is due to the surrounding commercial and residential areas and lit trains using the railway corridor. There is a small section of the corridor through Bankstown where the rail corridor is in a setting of **E4: High district brightness**, due to the increased urban density of this town centre.

Construction: There would be night works required along the rail corridor during construction, namely during the 24-hours possession periods, including 24-hour construction vehicle access via local streets. Much of the night works would occur within

the rail corridor, however, adjacent areas that may also be affected by night works include the adjacent worksites and construction compound sites. It is expected that there would be a reduction in amenity for views at night from adjacent properties during these times, however any additional light sources and skyglow would be seen in the context of a high and moderately well-lit setting, and would generally be absorbed into the surrounding night scene. Overall, it is expected that this lighting would create a noticeable reduction in the amenity. This would result in a **minor adverse visual impact** in areas of E3: Medium district brightness, and a **negligible visual impact** in areas of E4: High district brightness.

Operation: The rail corridor would not be lit at night, however the headlights and internal lighting of a more frequent Metro train service, would be seen along the alignment. The substations would require some lighting for security. However, this would be generally consistent with the surrounding areas of high and moderate district brightness. Overall, there would be a noticeable reduction in visual amenity at night from adjacent residential and commercial areas due primarily to the increase in train activity along the corridor. This would result in a **minor adverse visual impact** in areas of E3: Medium district brightness environment, along the railway corridor between Sydenham Station and Punchbowl, and a **negligible visual impact** through areas of E4: High district brightness in Bankstown.

15. CORRIDOR AND ANCILLARY DEVELOPMENT

Summary of impact

15.8. Summary of impact

The following tables summarise the potential landscape and visual impacts of the project. Measures proposed to mitigate these impacts are contained in section 16 of this report.

TABLE 15.1 LANDSCAPE IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Rail corridor –Marrickville Station to Dulwich Hill Station	Local	Considerable reduction	Moderate adverse	Noticeable reduction	Minor adverse
2	Rail corridor –Dulwich Hill Station to Hurlstone Park Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
3	Rail corridor –Hurlstone Park Station to Canterbury Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
4	Rail corridor –Canterbury Station to Campsie Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
5	Power supply feeder south of Canterbury	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible
6	Rail corridor –Campsie Station to Belmore Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
7	Rail corridor –Belmore Station to Lakemba Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
8	Rail corridor –Lakemba Station to Wiley Park Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
9	Rail corridor –Wiley Park Station to Punchbowl Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
10	Rail corridor –Punchbowl Station to Bankstown Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
11	Rail corridor –Areas west of Bankstown Station	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

Summary of impact

TABLE 15.2 DAY TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	View northwest in McNeilly Park, Marrickville	Local	Considerable reduction	Moderate adverse	Noticeable reduction	Minor adverse
2	View west from the Livingstone Road rail bridge, Marrickville	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
3	View east from Challis Avenue, Dulwich Hill	Neighbourhood	Considerable reduction	Minor adverse	No perceived change	Negligible
4	View east from Wardell Road overbridge, Dulwich Hill	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
5	View north from Foord Avenue, Hurlstone Park	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
6	View northeast from Sawyer Reserve, Hurlstone Park	Neighbourhood	Noticeable reduction	Negligible	Noticeable reduction	Negligible
7	View west along Hutton Street, Hurlstone Park	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
8	View south from Church Street Park, Hurlstone Park	Neighbourhood	Noticeable reduction	Negligible	Noticeable reduction	Negligible
9	View northeast from Close Street, Canterbury	Local	Considerable reduction	Moderate adverse	Noticeable reduction	Minor adverse
10	View east from the Terry Lamb Reserve, Belmore	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible
11	View northeast from The Boulevarde, Lakemba	Neighbourhood	Considerable reduction	Minor adverse	Considerable reduction	Minor adverse
12	View east from Scott Street, Punchbowl	Neighbourhood	Considerable reduction	Minor adverse	Noticeable reduction	Negligible
13	View north from the Bankstown Arts Centre courtyard	Local	Noticeable reduction	Minor adverse	No perceived change	Negligible
14	General passenger views from a train	Local	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse

TABLE 15.3 NIGHT-TIME VISUAL IMPACT

No.	Location	Sensitivity	Construction		Operation	
			Modification	Impact	Modification	Impact
1	Rail corridor (excluding Bankstown)	E3: Medium district brightness	Noticeable reduction	Minor adverse	Noticeable reduction	Minor adverse
2	Rail corridor through Bankstown	E4: High district brightness	Noticeable reduction	Negligible	Noticeable reduction	Negligible

16. MITIGATION MEASURES

Mitigation Measures during construction

16. Mitigation measures

This section identifies recommended mitigation measures which would avoid, reduce and manage the identified potential adverse operational and construction landscape and visual impact. Mitigation measures would ultimately form part of the Operational Environmental Management Plan and Construction Environmental Management Plan.

TABLE 16.1 MITIGATION MEASURES - CONSTRUCTION

Mitigation measure		Applicable Location (s)
LVC1	Where feasible and reasonable, the elements within worksites and construction compounds would be located to minimise visual impact, for example materials and machinery would be stored behind fencing.	All sites
LVC2	Existing trees to be retained would be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties.	All sites
LVC3	Opportunities for the retention and protection of existing street trees and trees within the corridor would be identified during detailed construction planning.	All sites
LVC4	Lighting of worksites and construction compounds would be oriented to minimise glare and light spill impact on adjacent receivers.	All sites
LVC5	The design and maintenance of construction compound hoardings would aim to minimise visual amenity and landscape character impact.	All sites
LVC6	Public art opportunities would be considered on temporary hoarding, particularly around station precincts.	All sites
LVC7	Offensive graffiti would be removed promptly.	All sites
LVC8	Visual mitigation (LVC1-7) would be implemented as soon as feasible and reasonable after the commencement of construction, and remain for the duration of the construction period.	All sites

Mitigation measures during operation

TABLE 16.2 MITIGATION MEASURES - OPERATION

ID	Mitigation measure	Applicable Location (s)
LVO1	Cut off and direct light fittings (or similar technologies) would be used to minimise glare and light spill onto private property.	All stations
LVO2	Opportunities to retain and protect existing vegetation, particularly where it provides screening to neighbouring properties, would be defined during detailed design and construction planning, with the aim of minimising the potential impacts on screening vegetation and street trees that contribute to landscape character.	Corridor and Ancillary development
LVO3	Semi-mature trees should be provided to replace the large eucalypt trees to be removed on Railway Parade.	Lakemba Station
LVO4	Removed trees should be replaced in accordance with TfNSW and relevant Council standards.	All stations
LVO5	Where feasible and reasonable a consistent urban design approach would be undertaken including the treatment of fencing, signalling equipment, overhead lines, lighting and other corridor infrastructure including the use of a coordinated colour palette and graffiti management treatments.	Corridor and Ancillary development
LVO6	The architectural treatment of substations would minimise visual amenity impact and reflect local landscape character.	Corridor and Ancillary development
LVO7	The selection of materials and colours for noise barriers would aim to minimise their visual prominence.	All sites
LVO8	The use of transparent panels in noise barriers should be considered where views to local landscape features and district views would be obstructed.	Corridor and Ancillary development
LVO9	Prepare and implement a Public Art Management Plan which meets the requirements of the Sydney Metro Public Art Strategy.	All sites

17. REFERENCES

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SYDENHAM TO BANKSTOWN

ENVIRONMENTAL IMPACT STATEMENT

> Technical Paper 7 – Landscape and visual impact assessment