

Safe Accessible Transport program

Bardwell Park – Landscape Character and Visual Impact Assessment

Transport for NSW

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Definitions

Term	Definition
CCTV	Closed-circuit television – a system of surveillance cameras that are connected to a private network, allowing video monitoring and recording of a specific area or location typically for security purposes.
CEMP	Construction Environmental Management Plan
CHMP	Cultural Heritage Management Plan
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DDA	Disability Discrimination Act 1992
DSAPT	Disability Standards for Accessible Public Transport 2002
DPE	Department of Planning and Environment (NSW)
Dwelling	A structure for residential use
EP & A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection Biodiversity Conservation Act 1999
HO	Heritage Overlay
IBRA	Interim Biogeographic Regionalisation for Australia.
km	kilometre
Landscape	Its constituent elements, its character and the way this varies spatially, its geographic extent, its condition, the way the landscape is experienced, and the value attached to it.
LCZ	Landscape Character Zone
LEP	Local Environmental Plan
LGA	Local Government Area
LPPF	Local planning policy framework: Local planning policies are tools used to implement the objectives and strategies of the Municipal Strategic Statement.
LSPS	Local Strategic Planning Statement
m	metre
Magnitude	The apparent size of a proposed modification in the landscape or when viewed from a given viewpoint.
PCT	Plant Community Type: identified using the PCT classification system described in the BioNet Vegetation information system Classification
Private receiver	A privately owned or used viewpoint type
Public viewpoint	A publicly owned or used viewpoint type
REF	Review of Environmental Factors
Study Area	The area designated relevant for assessment of the Proposal
the Proposal	Bardwell Park Station Safe Accessible Transport upgrade
Proposal site	Proposed construction and operational area for the Proposal
Sensitive receiver	Those visual receivers within the Study Area that are likely to view the Proposal from their dwelling, a popular or significant viewing location (such as a lookout).
Transport	Transport for New South Wales
LCVIA	Landscape Character and Visual Impact Assessment: The assessment of the impacts of the Proposal on landscape and visual values.
Viewpoint	Moderate or high sensitivity location from which views to the construction process or components of the Proposal may be possible.
Viewshed	The area visible from a particular viewing location.
Visual amenity	The qualities of a landscape setting that are appreciated and valued by a viewer.
Visual impact	The result of assessing the sensitivity level of a viewer and the modification level of a development.
Visual sensitivity	The degree to which various user groups would respond to change based on their expectation of a particular experience in each setting for example the expectation of a high level of visual amenity in a national park.

Executive Summary

This report, the Landscape Character and Visual Impact Assessment (LCVIA) supports the Bardwell Park Station upgrade (the Proposal) which is being delivered under the Safe Accessible Transport program.

The purpose of this assessment is to consider the factors and inputs related to the construction, operation, and maintenance of the Proposal, and how it will affect the current and future environment in terms of urban design and visual amenity. Additionally, it aims to evaluate and identify opportunities for better integrating the design for users and for the surrounding environment.

The LCVIA considers impacts of the Proposal against both local planning objectives and project design objectives, including:

- Visual amenity
- Urban landscape character, including:
 - Urban form
 - Connectivity and perceptions of safety

This assessment should be read in conjunction with the Review of Environmental Factors (REF), which provides additional information about the background and context of the Proposal. The REF also offers a comprehensive description of the proposed works for the Proposal.

Existing landscape and visual environment

This assessment examines the existing landscape and visual conditions of the Proposal Study Area (both physical and statutory) to establish a baseline against which potential effects of the Proposal can be assessed.

The Study Area has been defined within a radius of 200 metres from the Proposal. This area captures where the Proposal is potentially observable and is more at risk of adverse landscape and visual impacts.

Relevant planning policies and legislation have been reviewed to understand any specific landscape or visual conditions relating to the Study Area, as well as a desktop study to understand the various physical elements that combine to create landscape and visual character.

The Proposal is within an existing transport corridor zoned SP2 Infrastructure – railway corridor, with the station listed on the TAHE Section 170 Heritage and Conservation Register. The Study Area around the station comprises Bardwell Park local centre, public recreation areas to the north along Wolli Creek and low density residential areas to the east and south.

The landscape character zones (LCZ) identified include:

- LCZ 1 Transport corridor
- LCZ 2 Local centre
- LCZ 3 Residential
- LCZ 4 Parks and recreation

There were four viewpoints assessed within the Study Area representative of sensitive visual receivers. These receivers included local centre users, overlooking apartment residents and train commuters.

Summary of findings

During construction, temporary visual impacts will be experienced within a small area, predominantly by train commuters and local centre users; due to demolition, installation and civil works. The site compound within the existing Slade Road car park, will be noticeable to neighbouring residents and Slade Road Reserve users.

There are no long term adverse visual impacts, with low beneficial or neutral visual impacts assessed from surrounding viewpoints. The station upgrade proposes a new entry structure which will be visible within the street and surrounding area, however this is of a scale and form that is commensurate with the existing surrounding built environment. Additionally, the elevated walkway entry provides a contemporary feature that improves station wayfinding and provides a connection between the small local centre village and public transport. These additions not only enhance the station's visual appeal but also create a striking feature within the small local centre.

Views of the heritage station building are experienced by train commuters and overlooking apartment residents. An additional platform canopy and new glazed canopies near to the heritage building, allow for heritage elements to stand out. The larger elevated walkway entry, stairs and lift structures are of contemporary materials and form, which also are visually differential to the heritage building.

Operation impacts to landscape character are limited to low-beneficial impacts to the Transport corridor and local centre (LCZ 1 and LCZ 2). The upgrade improves perceived safety and useability, while also providing an aesthetic uplift which supports urban development and public transport use. The connection between the local centre and train station is strengthened.

The Proposal's long-term effects on the urban landscape and visual aspects result in low beneficial or neutral modifications that seamlessly integrate into the existing urban environment.

Landscape and visual mitigation opportunities

The following mitigation measures are recommended to be considered during the detailed design phase to enhance beneficial impacts and address potential adverse impacts:

- Public art and cultural interpretative elements should be incorporated during detailed design and could be incorporated in perforated screens and solid wall facades.
- Alternative traffic barriers along Hartill-Law Avenue overbridge that provide better pedestrian-scale (height and width) and improved streetscape amenity shall be investigated during detailed design.
- Enhancement of landscape amenity through planting within the local centre shall be considered during detailed design.

1 Introduction

1.1 The Proposal

The NSW Government is improving accessibility at Bardwell Park Station. This Proposal is being delivered as part of the Safe Accessible Transport program by Transport for NSW (Transport) which aims to make public transport safe, inclusive and easy to use for all passengers, especially people with disability, older people, people with prams or luggage and others who may be experiencing mobility problems.

The program will upgrade stations and wharves to achieve Disability Standards for Accessible Public Transport (DSAPT) compliance and improve amenity, access and safety, acknowledging the important role these locations have to the communities they serve.

1.2 Assessment scope

This LCVIA has been prepared to determine the extent of visual, urban and landscape impacts the Proposal may have on the locality, including residential properties and recreational assets. This will inform potential visual mitigation such as re-vegetation and landscaping works that could be carried out around the facility's perimeter to reduce the visual impact on the properties adjacent to the Site.

The LCVIA forms part of the Review of Environmental Factors (REF) which has been prepared having regard to sections 5.5 and 5.7 of the EP&A Act, and section 171 of the EP&A Regulation, to ensure that Transport takes into account to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the Proposal.

Report Objectives

The objectives of this report are to:

- Understand the existing conditions at the Proposal area and assess the potential impacts of the proposed change on the visual amenity of the surrounding area and sensitive residential dwellings
- Identify sensitive receivers and provide a rating as to the visual impact of the Proposal on sensitive receivers
- Undertake an assessment of urban landscape character considering:
 - local planning objectives in relation to urban design, and
 - assess the Proposal against urban design and landscape character objectives.
- Recommend mitigation strategies to be implemented, including use of vegetation or other screening solutions such as finishes and materials where practical.

2 Methodology and Relevant Guidelines

The LCVIA is based on the following best-practice guidelines:

- Guideline for Landscape Character and Visual Assessment - Environmental Impact Assessment Practice Note EIA-NO4, Transport for New South Wales, 2020.
- Guidelines for Landscape and Visual Impact Assessment (third edition), Landscape Institute of Environment Management and Assessment (IEMA), 2013.
- Guidance Note for Landscape and Visual Assessment (June 2018), Australian Institute of Landscape Architects (Queensland chapter).

The assessment considered whether the design made consideration of NSW design guides including:

- Better Placed, Government Architect New South Wales (2023) – an integrated design policy for the built environment in NSW, to promote well designed public places and environments.
- Planning and designing for better places, NSW Government (December 2021) – a planning circular providing advice on respecting and enhancing local character.
- Beyond the Pavement, Transport for NSW (2010) – urban design principles and objectives to guide public realm design.
- Around the Tracks: Urban design for heavy and light rail, Transport, December 2016 – Interim issue

Transport Design Guidance

Transport has developed a suite of documents that provide guidance to project teams on design objectives and principles. These documents are based on evidence and offer best practice examples related to infrastructure projects.

The integration of this guidance is crucial for the successful implementation of the Safe Accessible Transport program. The main guideline provided by Transport for the planning, design, construction, and operation of improvements to heavy and light rail systems in NSW is called "Around the Tracks, 2016." This document outlines eight principles that govern the planning and design of rail infrastructure, as well as the urban design process necessary to achieve safe, efficient, and high-quality outcomes.

The objective of the design upgrade is to improve the access of the station for all sections of the community, including people with a disability, older people, people with prams or luggage, and others who may be experiencing mobility problems. The concept design aims to achieve the following:

- Provide facilities that:
 - Are inviting and safe for customers to use
 - Comply with the Disability Standards for Accessible Public Transport (DSAPT) 2002 to contribute to the Commonwealth Disability Discrimination Act (DDA) targets
 - Are compliant with the current standards of safety, access, and amenity
 - Easily maintained and operated by the Maintainer/Operator.
- Provide safe, accessible paths between transportation mode change locations, accessible parking, passenger boarding points and other key facilities.

2.1 Assessment tasks

The LCVIA report has been undertaken in accordance with the following assessment tasks:

1. Desktop analysis of the existing environment including identifying sensitive locations and receivers, understanding current and future land uses in the area, and determining the value of the built and natural environment through strategic plans, character statements, and aesthetic considerations.
2. Identification of potential key viewpoints that encapsulate potential impacts on key sensitive receptors.

3. Conduct a field survey (13 June 2024) to ground truth desktop findings including key viewpoints, and capture photographs from key viewpoints.
4. Preparation of photomontages based on the concept design to demonstrate the effect of the Proposal assets on key viewpoints.
5. The assessment of visual impacts is assessed on a combination of visual sensitivity and the magnitude of the change, based on industry guidelines as outlined in Section 2.3.
6. Outline the mitigation strategy to manage and minimise adverse visual impacts as a result of the Proposal assets.

2.2 Study Area

This assessment has adopted a study area of 200m radius around the Proposal area. The Study Area is determined by the distance at which it is considered that Proposal components will become either indiscernible to the human eye or will occupy such a small proportion of the visual field of view that impacts could be considered negligible. This distance is related to the scale and height of the Proposal components, intervening topography, buildings or vegetation; and the viewing properties of the typical human eye.

During the site visit, this distance was tested, with the station not discernible any further than adjacent streets.

2.3 Visual Impact Assessment

Following a thorough desktop study, potential viewpoints were identified that represent views of the Proposal from sensitive receivers in the area (Figure 5-1 Viewpoint Locations). Viewpoints are selected to illustrate:

- a range of:
 - receiver types including public and private domain views
 - view-types including elevated, panoramic, and filtered views
 - viewing distance from the Proposal
- consideration of main or protected views in the Study Area.

Some viewpoints were ruled out during the site visit as vegetation, topography or existing buildings screened views toward the Proposal. In this instance, alternative suitable viewpoints were selected out on site.

Sensitivity

Viewer sensitivity is a measure of how critically a change to the existing landscape setting would be regarded based on the land use of the area and the distance from where it is viewed.

Various landscape settings have differing indexes to the relative importance the viewer places on them. For example, individuals would view changes to the visual setting of their residence more critically than changes to the visual setting in which they travel or work.

As such, levels of viewer sensitivity are based on land use because this largely defines a viewer's expectation of what they would typically expect within a particular setting. This approach is consistent with the visual management system (*Landscape Aesthetics – A Handbook for Scenery Management*, United States Department of Agriculture & Forest Service, 1995).

Viewpoint sensitivity is dependent on:

- importance (scenic quality) of the view
- duration of viewer activity
- number of viewers exposed to the Proposal

- nature of the visual receptor (type and volume of sensitive receptors or viewers) experiencing the view.

Table 2-1 describes the sensitivity aspects used in the assessment.

Table 2-1 Viewpoint Sensitivity ratings

Sensitivity	Description
High	<p>Large number of viewers, or those with proprietary interest and prolonged viewing opportunities such as residents and users of attractive and/or well-used recreational facilities.</p> <p>Views from a regionally or locally important location such as a scenic lookout whose interest is specifically focussed on the landscape.</p> <ul style="list-style-type: none"> ■ Residential properties. ■ Users of community facilities and open spaces, where the purpose of that recreation is the enjoyment of the landscape. ■ Key tourist areas.
Moderate	<p>Medium number of residents and moderate numbers of visitors with an interest in their environment.</p> <p>Larger number of travellers with an interest in their surroundings.</p> <ul style="list-style-type: none"> ■ Outdoor workers. ■ Recreational parks within urban environments. ■ Schools and other institutional buildings, and their outdoor areas.
Low	<p>Small number of visitors with a passing interest in their surroundings.</p> <p>Viewers whose interest is not specifically focussed on the landscape.</p> <ul style="list-style-type: none"> ■ Local centre users ■ Indoor workers. ■ Users of main roads or arterial roads. ■ Users of recreational facilities where the purpose of that recreation is not related to the views. ■ Commuters.

Magnitude of change

Magnitude refers to the scale, size and character of the Proposal and its proximity to the viewer and the degree to which its affect has been mitigated. For example, a development situated one kilometre from the viewpoint, will have a much-reduced visual effect than one 100 metres away¹. All elements of the Proposal are to be considered including changes to landform, urban structure, vegetation patterns, as well as the nature scale and density of the Proposal within the landscape.

Magnitude is dependent on:

- Scale, regarding the loss or addition of features in the view and changes in its composition.
- Degree of contrast or integration based on scale and form, height, colour, and texture.
- Nature of view in relation to the Proposal accounting for angle, distance, and extent.
- Mitigation, accounting for its effectiveness at reducing impacts over time.

Table 2-2 below describes the magnitude aspects used in the assessment.

Table 2-2 Viewpoint magnitude ratings

Magnitude	Description
High	The Proposal, or part of it, would become the dominant feature or focal point of the view.
Moderate	The Proposal, or part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor.
Low	The Proposal, or part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view.
Negligible	Only a very small part of the Proposal would be discernible, or it is at such a distance that it would form a barely noticeable feature or element of the view.

¹ Guideline for Landscape Character and Visual Assessment - Environmental Impact Assessment Practice Note EIA-NO4, Transport for New South Wales, 2020. pg9

Overall Impact

With all factors considered, an assessment was made on each landscape character and representative viewpoint against the known extent of the Proposal. Table 2-3 presents the matrix of how the sensitivity and magnitude of impacts combines to provide an impact rating.

By applying the matrix, an assessment of the Proposal may have low, moderate-low, moderate, high-moderate or high impacts, depending on the level of visual modification and viewer sensitivity from the location at which the Proposal can be viewed. Impacts can either be beneficial where the modification improves visual amenity or enhances landscape character, however the introduction of built form within the environment is typically considered to have an adverse effect. Where the Proposal is visible and fits into the surrounding environment and there is no overall improvement of the visual amenity, the impact is considered neutral. If the Proposal is not visible, there is negligible impact. The following Table 2-3 shows how the level of impact is determined through the matrix.

Table 2-3 Visual Impact Rating Matrix²

		Magnitude of Impact			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
	Low	Moderate	Moderate-Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

2.4 Assumptions and Limitations

This report is subject to the following limitations:

- The LCVIA has been prepared based on the concept design (Aurecon, July 2023), with detailed design development not captured in this assessment. The most relevant concept design packages include:
 - Architectural Package
 - Landscape Package
 - Urban Design Plan – Bardwell Park Station, Spackman Mossop Michaels rev D
- Photomontages are based on the Architectural concept design which illustrates the nature and extent of the Proposal.
- All viewpoints have been photographed from publicly accessible locations to demonstrate and reflect as closely as possible; the potential visual impacts likely to be from a sample of sensitive receivers such as residents.
- Access to sensitive viewpoints on private land, such as residences, were not undertaken for this LCVIA, however, impacts from private properties were considered in the assessment.
- The methodology adopted for this visual impact assessment assumes that if the works would not be seen, there is no impact.
- For the purpose of the assessment, unobstructed viewpoints from publicly accessible locations have been used as a worst-case scenario of potential visual impacts.
- The impact assessment is focused on the current land uses and zoning.

² Guideline for Landscape Character and Visual Assessment - Environmental Impact Assessment Practice Note EIA-NO4, Transport for New South Wales, 2020

2.5 Photomontages

A photomontage is a technique whereby an image of the proposed development is produced using an existing photograph, overlaid with a render of the key Proposal elements, to provide an indicative representation of the scheme. The process entails inserting a computer-generated model of the Proposal into a photograph taken from a geographically referenced viewpoint, using existing elements of a known size, location, and scale to suitably locate the digital representation within the photograph. Objects, such as buildings in the existing view have been modelled to create a reference point to match in the photos.

Rendered photomontages are indicative of the Proposal at Day 1 of operation, based on the baseline concept design and do not indicate any potential changes through detailed design or design mitigation measures.

The following steps were taken to produce the photomontages.

- Viewpoints were selected based on representation of different angles and from different visual receivers towards the Proposal.
- Each selected viewpoint is then re-created 'virtually' in software using 3d design models and reviewed to ensure the view is 'viable'. This document is then used as a 'shoot plan' for site photography capture.
- On site, photography is taken matching the viewpoints locations and orientation selected. A DSLR Canon 7D camera and 17mm lens (27.5mm full frame sensor equivalent) is used to capture the base imagery.
- Using the site photography as a base image each 'virtual' camera is then positioned, in software, using existing survey features to precisely register the 3d design into view.
- 3d federated design models received June 2024 are then rendered with basic materials, and lighting.
- Finally, Adobe Photoshop is used to overlay the 3d rendered design on top of the base image. Final adjustments are 'painted' to occlude design details in front or behind existing structures. Each 'artists impressions' is saved as a JPG uncropped and free of distortion.

Selected viewpoint photomontages

The viewpoints selected to produce photomontages are based on those views that are likely to have the highest adverse effects to the most sensitive visual receivers. For the purpose of this assessment, photomontages were produced for three of the four viewpoints including:

- BP01 - representative of local shoppers
- BP02 - representative of residential receivers
- BP04 - representative of ceremonial site (War memorial)

3 Existing Environment

3.1 Location

The Proposal is situated along Hartill-Law Avenue in Bardwell Park, approximately 12 kilometres south of Sydney's CBD. Bardwell Park is part of the St George area and falls within the Bayside Council Local Government Area (LGA).

The area's major centre is Earlwood, which resides approximately 600 metres to the north of the site and connects to Bardwell Park via Fauna Street and Hartill-Law Avenue. There are several schools, preschools and churches that utilise Bardwell Park Station given their proximity to the Earlwood local area. The site is in a low-density residential area, producing a strong suburban character.

To the north of the site is the Earlwood Bardwell Park RSL club along with a car park that is shared with the rail corridor. The Wolli Creek Regional Park is located directly behind the RSL. To the north-east of the site sits Girrahween Park. To the south of the site are various local shops and businesses. Beyond the local centre to the south is low density residential housing.

The station is on the East Hills line and is served by the Sydney Trains T8 Airport and South line services via a single island platform. The station is also served by two bus services operated by Transdev NSW including route 473 and 491 along Hartill-Law Avenue.

3.2 Strategic Planning Context

A number of existing National/Commonwealth, State, Regional and Local strategic planning legislation and policies relevant to landscape and visual aspects of the Proposal area are discussed in below.

National level

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) - The Proposal is located within the Cumberland subregion of the Sydney Basin Biogeographic. The EPBC Act lists a number of threatened flora and fauna and ecological communities that need to be protected within this subregion.

State level - New South Wales

Environmental Planning and Assessment Act 1979 (EP&A Act) - The EP&A Act sets out the NSW planning framework, including the management, conservation, and development of land. The EP&A Act is aimed at ensuring that development is both economical and ecologically sustainable by providing for State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs) to be made.

Local planning policy analysis

A number of local planning documents apply to the Proposal which contain aims and objectives for the protection of landscape and scenic values. Table 3-1 provides a summary of how the Proposal has responded to the most relevant landscape and urban design considerations in the Bayside Local Environmental Plan 2021 (LEP), the Bayside Development Control Plan 2022 (DCP) and the Bayside Local Strategic Planning Statement 2020 (LSPS).

Whilst the requirements of the local government planning documents are not strictly applicable to the Proposal, the requirements of these planning documents have been used as a guide.

Table 3-1 Local Plans

Provisions	Objectives	Relevance to the study
Bayside Council LEP 2021		
1.2 Aims of Plan	(b) to protect, conserve and enhance Aboriginal cultural heritage and the environmental, cultural, scenic, built and landscape heritage of Bayside.	In views from adjacent residences the Proposal would be seen in the context of the existing station and separated from residences by adjacent streets, reducing the potential for an adverse visual impact.

Provisions	Objectives	Relevance to the study
	(e) to create a liveable urban place through the application of design excellence in all elements of the built environment and public domain.	The design is in accordance with Transport's Urban Design Plan objectives (refer section 2 Transport Design Guidance).
	(g) to encourage walking, cycling and use of public transport through appropriate intensification of development densities surrounding transport nodes	The Proposal supports the aim through improved station accessibility.
4.3 Height of buildings	(a) to ensure that building height is consistent with the desired future character of an area,	The height of the Proposal, including the lifts and canopies, would not exceed the height of the existing station platform building rooflines. The proposed canopy structure along Platform 1/2 would also match the pitch of the existing platform building awning.
	(b) to minimise visual impact of new development, disruption of views, loss of privacy and loss of solar access to existing development,	The proposed canopy structures would include some clear glazing, allowing exposure to the sky and sunlight, and would also permit views to the heritage character and architectural detailing of the existing station platform buildings.
	(c) to nominate heights that will provide an appropriate transition in built form and land use intensity.	The new lifts would be located away from, and therefore not overshadow, the existing station platform buildings. The proposed canopy structures would include some clear glazing, allowing exposure to the sky and sunlight, and would also permit views to the heritage character and architectural detailing of the existing station platform building.
5.10 Heritage conservation	(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views	The heritage character station buildings would be retained. While new lifts would be contemporary in style, they would be set below the roofline and positioned away from the heritage buildings. The use of glazing around the lift shaft and transparent canopies would also result in a lightweight appearance, ensuring they are not visually dominant structures. See the Statement of Heritage Impact (SoHI) for further assessment in this regard.
Bayside DCP 2022		
2.5 Aims and objectives	<ul style="list-style-type: none"> ■ To ensure development respects desired existing and future local character as identified in this Plan; ■ To ensure development respects and contributes to Bayside's distinct landscape and scenic features; 	<p>Bardwell Park does not have a desired future character established within the DCP.</p> <p>Landscape features within Bardwell Park relate to Wollie Creek Regional Park, due to its natural environment within an urban setting. The Proposal has no physical impact on this area.</p>
3.4.4 European Heritage Items	<p>O1: Maintain the heritage significance and integrity of heritage items and group heritage items.</p> <p>O2: Ensure new work is sympathetic and provides for the long-term conservation of the heritage item.</p> <p>O3: New development to support ongoing care, maintenance, use and re- use of heritage items.</p> <p>O4: Ensure that important elements and features of a heritage item are not obscured or destroyed by alterations and additions</p>	C1. Any development application for works to a heritage item must be accompanied by a Heritage Impact Statement as required by the Bayside Local Environmental Plan 2021. A SoHI has been prepared to inform the REF assessment.
Bayside LSPS 2020		
Economic	Bardwell Park local centre – a focal point for the neighbourhood, providing access to goods and services, community infrastructure and transport in close proximity to where they live	The Proposal supports economic goals with improved local centre and transport connections.
Housing the city	Department of Planning, Industry and Environment requested Council to investigate new opportunities for residential growth at Bardwell Park.	The Proposal has no bearing on development opportunities.
12. Delivering an integrated land use and a 30-minute city.	12.6. Advocate for increased bus routes and frequency of services to those centres and suburbs that are less well serviced and provide more east west links.	Proposal supports the planning priority through upgrades to the rail station and bus stop facilities, encouraging public transport use.

3.3 Landscape and visual context

3.3.1 Land zoning

The Proposal is located on land zoned as SP2 Railway (Infrastructure) within the Bayside LEP. The following are the objectives of land zones (as detailed in Part 2 of the LEP) within and surrounding the Proposal that are relevant to urban design and visual amenity.

- SP2: Infrastructure objectives:
 - To provide for infrastructure and related uses.
 - To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- E1 (Local Centre) - including the Earlwood Bardwell Park RSL Club, a post office, local shops and food outlets.
 - To provide a range of retail, business and community uses that serve the needs of people who live in, work in or visit the area.
 - To enable residential development that contributes to a vibrant and active local centre and is consistent with the Council's strategic planning for residential development in the area.
 - To ensure the scale of development is compatible with the existing streetscape and does not adversely impact on residential amenity.
 - To ensure built form and land uses are commensurate with the level of accessibility, to and from the centre, by public transport, walking and cycling.
 - To create lively town centres with pedestrian focused public domain activated by adjacent building uses and landscape elements.
- RE1 (Public Recreation) - Wolli Creek Regional Park north of the railway line and Slate Road Reserve to the south-west.
 - To enable land to be used for public open space or recreational purposes.
 - To provide a range of recreational settings and activities and compatible land uses.
 - To protect and enhance the natural environment for recreational purposes.

3.3.2 Heritage

Bardwell Park Station, including the platform, station building, entry steps structure and overbridge is of local heritage significance for its historical and aesthetic value as listed on the TAHE Section 170 Heritage and Conservation register (#4801896). Constructed during the Great Depression as an unemployment relief project, the station serves as a major public work and as a transport hub for Bardwell Park since 1931.

The austere 1930s railway building features simple Art Deco detailing and fine brick workmanship, reflecting the impact of the Great Depression on NSW railway construction projects. It is a representation of the cohesive collection of 10 East Hills line railway stations from Turrella to East Hills.

Heritage design principles have been developed for the Proposal which inform the detailing, materiality, colour choices of all new elements introduced to the station and maintaining sightlines where possible. Further details regarding potential design mitigation are detailed in the Statement of Heritage Impact (SOHI, Artefact Heritage and Environment, July 2024).

There are two local heritage items within a 200 metre vicinity of the station, including:

- Wolli Creek Valley (Bayside Local Environmental Plan #I389)

- adjacent to the north of the site with no physical impacts to the park.
- Hillsdon's Nursery sandstone cottage (Bayside Local Environmental Plan #179)³
 - is located approximately 175 metres southwest of the site, away from both physical and visual effects.

3.3.3 Vegetation

The site is within the Cumberland subregion of the Sydney Basin Biogeographic area.

Eucalyptus forest and woodland are the dominant vegetation communities in the Sydney bioregion occupying more than 50 per cent of the area with 26 per cent of the bioregion modified (including for intensive and agricultural uses) and six per cent covered by heath.⁴

There are remnants of Sydney Coastal Sandstone Foreshore Forest which stand in some of the park and reserves. Streetscape planting within the area is mainly native species.

Wolli Creek Regional Park is a highly vegetated area, to the north of the station, comprising mainly native trees and understory vegetation, with exotic grassed areas. The park is actively preserving native vegetation through weed removal and native planting (Wolli Creek Preservation Society).

The Earlwood Bardwell Park RSL War memorial to the north of the station, has exotic formal planted trees lining the memorial wall and surrounding the memorial area (Figure 3-1).

To the south of the site, there are only a few trees that appear to border the fence of the rail corridor, and further southwest, there are additional trees that extend into the Slate Road Reserve (Figure 3-2).



Figure 3-1 Exotic trees framing the War memorial parallel to the rail corridor



Figure 3-2 Native trees along rail corridor to the south

3.3.4 Visual context

The visual character of the surrounding area is of a highly modified urban environment including the rail corridor traversing east to west, Earlwood Bardwell Parks RSL club to the north and local shops and apartments in the south.

The rail corridor is below the level of the surrounding urban area, with retaining walls and high noise walls intervening between apartment buildings to the south (Figure 3-5 and Figure 3-6). Infrastructure associated with rail contributes to the setting, including overhead gantries and wires, the central platform between four sets of rail tracks, light poles, occasional bench seats and the brick station building. There is also an overhead electrical line to the north, parallel to the rail.

³ Heritage Design Report - Bardwell Park Railway Station Group. Transport for NSW.

⁴ Bioregional Assessments: Terrestrial species and communities. Australian Government

The RSL is adjacent to the north of the site and consists of a two-storey building, memorial and vast surface carpark (where the western end contains commuter car parking spaces). Formal planting borders the memorial (Figure 3-3).

Wolli Creek Regional Park (Figure 3-7), is situated north of the rail corridor for approximately 4.5 kilometres and provides a passive recreational path and an undulating green outlook for both rail passengers and the surrounding residential houses.

Slade Road Reserve is located further south of the site, along with a secondary carpark (Figure 3-8). The reserve is mainly dominated by trees.

Shop-top houses along Hartill-Law Avenue, located to the south of the site, are one to two storey high (Figure 3-4).

Due to the sunken elevation of the station platform, bordering trees and built-up elements, views towards the site are limited from the surrounding area.



Figure 3-3 Bardwell Station within cutting and War memorial to the foreground-right



Figure 3-4 Hartill-Law Ave shops looking south



Figure 3-5 View looking down to station from Hartill-Law Ave overbridge

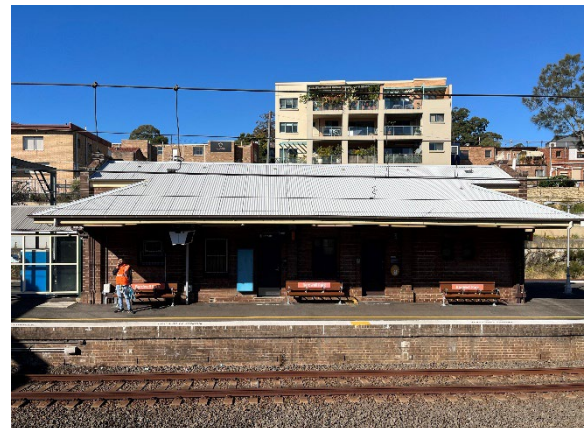


Figure 3-6 Bardwell Station with apartments behind to the south.



Figure 3-7 View from overbridge towards Wolli Creek Regional Park



Figure 3-8 View looking north-east towards Slade Road Reserve carpark

3.4 Urban landscape character

There are four identified LCZs within the Study Area as described below and shown in Figure 3-9, including:

- LCZ 1 Transport corridor (zoned SP2 - Infrastructure)
- LCZ 2 Local centre (zoned E1 – Local centre)
- LCZ 3 Residential (zoned R2 – Low density residential)
- LCZ 4 Parks and recreation (zoned RE1- Public recreation and C1- National Parks and Nature Reserves)



Project No: P522314 Map Author: Virgil Robinson Date: 9/07/2024 Revision: 0

- Proposal area
- Site compound
- Study area
- T Train station
- + Railway

~~~~~ Watercourse

#### NSW Land Zoning

- B2 - Local Centre
- C1 - National Parks and Nature Reserves
- E1 - Local Centre
- R2 - Low Density Residential

- R4 - High Density Residential
- RE1 - Public Recreation
- SP2 - Infrastructure
- UL - Unzoned Land
- W1 - Natural Waterways

#### Urban Landscape Character

- LCZ 1 - Transport corridor
- LCZ 2 - Local centre
- LCZ 3 - Residential
- LCZ 4 - Parks & recreation



Source: Aurecon, TINSW, NSW Spatial Services (DCS), ESRI



1:4,500 @ A4  
0 50 100 m

Projection: GDA2020 MGA Zone 56

### Safe Accessible Transport program - Bardwell Park Landscape and Visual Impact Assessment

Figure 3-9: Landscape character zones



## LCZ 1 - Transport corridor

The rail station and rail line is lower than the surrounding built environment and accessed by stairs from the overbridge at Hartill-Law Avenue. The station is not readily visible from the surrounding area.

The heritage significant station building is a small brick building central to the platform (see Figure 3-10). The rail overbridge piers are also of brick construction (not part of the heritage listing, see Figure 3-11).

The rail line connects commuters between the city and Macarthur Station, Campbelltown (T8 route: Airport & South Line), and connection to 11 bus routes, with bus stops along Hartill-Law Avenue adjacent local centre shops (LCZ 2).

Additional facilities associated with the station include a commuter car park (the western end of the RSL car park), toilets, taxi rank, kiss and ride parking bay. Security fencing and noise walls adjacent residential lots are along the top of the rail embankment. Safety screens and vehicle barriers are located on both sides of the overbridge, which has a narrow pedestrian path to both sides.

To the north of the railway corridor, Wolli Creek Regional Park provides landscape amenity in this highly modified environment (LCZ 4).



Figure 3-10 View looking towards station building on platform



Figure 3-11 Hartill-Law Avenue overbridge and stairway to station platform

## LCZ 2 - Local centre

Located along Hartill-Law Avenue and Slade Road, the local centre (B1) comprises shops and businesses to service the community of Bardwell Park. It is made up of one and two storey brick buildings with ground level shops. Some of these shops have offices and potential residential dwellings to the top floor (see Figure 3-12).

The Earlwood Bardwell Parks RSL club and memorial (Figure 3-13) is part of the local centre, though is separated from the rest of the local centre by the rail corridor and Hartill-Law Avenue. The club is a two-storey building with gym, offices and a bar. The War memorial is adjacent the club, with a red-brick memorial wall along the top of the rail embankment. Formal planting surrounds the memorial and there are flag poles and monuments.



Figure 3-12 Shops along Hartill-Law Ave, towards station in middleground



Figure 3-13 War memorial

### LCZ 3 - Residential

Several three to four storey apartment blocks are adjacent to the southern side of the rail corridor along Progress Lane (zoned in B1) and Slade Road. Apartments along Progress Lane have clear views across the station, as well as Wolli Creek Regional Park.

All other residential dwellings in the Study Area are made up of single and double storey houses on individual lots. The dominant style of the houses is typically red-brick.

The apartment residents are influenced by the proximity of the rail corridor and stations location. They benefit from convenient access to the station, but they also experience noise from passing trains and have partial views overlooking the rail corridor.

The houses are located in a leafy suburban area, with undulating topography which provides a variety of outlooks. It is near to large open space areas including Wolli Creek (LCZ 4), in close proximity (4.5 kilometres east) of the airport and approximately 10 kilometres southwest of the CBD.



Figure 3-14 Apartments southwest of the station



Figure 3-15 Houses on Slade Road

### LCZ 4 - Parks and recreation

Parks for recreation within the Study Area include Slade Road Reserve and Wolli Creek Regional Park.

#### Slade Road Reserve (zoned RE1)

The reserve is located 50 metres to the southwest of the station between the rail corridor and Slade Road. It is a local reserve with a circular perimeter path and framed by planted non-indigenous trees and groundcover planting. It has a central grassed area with some scattered native trees, for informal recreation and a small playground to the northeast end, closest to the car park. The reserve provides a local informal recreational space and landscape amenity. It is likely to be influenced (mostly noise) by adjacent passing trains and vehicles.

### Wolli Creek Regional Park (zoned RE1 and C1)

The park is situated north of the rail corridor and is approximately 4.5 kilometres in length, following Wolli Creek from Bexley Road to where the creek converges with the Cook River to the east. Girrahween Park is a narrow strip of bushland within the Regional Park located to the northeast of the station. It is a narrow strip of bushland from 120 metres to 250 metres in width. It is mostly covered in native bushland and home for birds, bats and invertebrates. It is a unique preserved conservation space, surrounding by residential and some industrial development and provides an undulating green outlook for both rail passengers and the surrounding residential houses.

Informal walking tracks (not paved) traverse through the park and connect with some of the residential streets to the north. The creek is the low point, with slopes rising to the north and south. See Figure 3-16 and Figure 3-17.



**Figure 3-16 Wolli Creek regional park** (Image: NSW government)



**Figure 3-17 Wolli Creek** (Source: Voren O'Brien, Public domain, via Wikimedia Common)



## 4 Proposal design

The assessment of impacts is based on the concept design (July 2023) (Architectural Package 14.04.2023 and Landscape Package 14.04.2023), Urban Design Plan – Bardwell Park Station (Spackman Mossop Michaels rev D 14.04.2023), as demonstrated in Figure 4-1 and based on the bulk and scale of key assets.

The upgrade works includes the following.

- construction of an elevated walkway at the existing station entrance from Hartill-Law Avenue to provide access to the platform via a new lift and new stairs
- upgrades to station access and interchange facilities on Hartill-Law Avenue, including:
  - relocation and upgrades to the bus stops
  - a new pedestrian crossing
  - one accessible parking space
  - one accessible kiss and ride space
  - additional bicycle parking
  - upgrade of existing footpaths from the upgraded bus stops, new accessible parking and kiss and ride spaces to the station entry
- modification to the existing station building to include a new family accessible toilet, a new unisex ambulant toilet and a new staff toilet
- provision of canopies at the Boarding Assistance Zone (BAZ) locations including new bench seats
- regrading and resurfacing of the platform and installation of tactile ground surface indicators (tactiles/TGSIs)
- ancillary works including station power supply upgrades, relocation of utilities, kerb and gutter adjustments, handrails and fencing, relocation of platform seating, additional Opal card readers, improvement to station communication systems (including CCTV cameras), landscaping and wayfinding signage
- placemaking enhancements that consider the war memorial and Connecting to Country.

### 4.1.1 Materials and finishes

Subject to detailed design, the Proposal would include the following:

- lift shafts – concrete with dark grey aluminium panels, stainless steel cladding and glass
- elevated walkway – concrete base with lightweight screens and metal roof sheeting
- platform stairs – concrete with lightweight screens and steel canopy
- platform canopies – steel frame and glazed panels.

In addition to the above, the mitigating impacts to the heritage character of the station would be considered in the detailed design, and may include:

- reuse of heritage fabric
- use of sympathetic materials and colour schemes
- redesign of the new platform canopies to minimise potential impacts to the station building.

Indicative photomontages of the Proposal are shown in Figure 4-2 and Figure 4-3.

## 4.2 Construction and site establishment

Subject to planning approval, construction is expected to commence in early 2025 and would take around 18 months to complete. Construction stages and activities are often concurrent, with timeframes subject to detailed design and final construction methodology.

During construction there are approximately six rail shutdown periods proposed to undertake some of the works. Access to the station would be maintained during the upgrade, including the installation of temporary stairs on the eastern side of Hartill-Law Avenue, when the existing stairs are removed. The design and staging of the temporary access would be determined during the detailed design phase of the Proposal.

A temporary site compound would be required to accommodate a site office, amenities, laydown and storage area for materials and plant and equipment and the like. The site compound is proposed to be in the western side of the car park on Slade Road which would require temporary removal of up to 16 parking spaces for the duration of construction. The station platform would also be used as a temporary laydown area and for potential spoil storage for the duration of construction.

The station upgrade works will require removal or demolition of the following existing assets:

- removal of the existing stairs linking Hartill-Law Avenue overbridge to the platform
- removal of non-heritage fabric canopies from existing platform building.
- removal of two trees to the south of the station adjacent to the rail embankment and shops

The construction of the new station entry would involve:

- new elevated walkway with canopy and protection and anti-throw screens
- 17-person lift from the new station entry to the platform
- new stairs to the platform from the station entry, including canopy and protection and anti-throw screens.
- modifications to the station building and platform to improve accessibility
- ancillary works including utility services, signage and wayfinding and station furniture
- Connection With Country initiatives are proposed to the elevated walkway entry facade.

## Proposed key features of Bardwell Park Station upgrade



### KEY

- |                                                                                                                                                      |                                                                                                                  |                                                                                                                    |                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Proposed features        |  New stairs                   |  Bicycle hoops                  |  Bus stop |
| <span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Existing features        |  New lifts and landings       |  Accessible kiss and ride space |  Taxi     |
| <span style="background-color: #FF00FF; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Boarding Assistance Zone |  Accessible water refill      |  Accessible parking space       |                                                                                                |
| <span style="border-bottom: 2px dashed blue; display: inline-block; width: 20px;"></span> Accessible path of travel                                  |  New family accessible toilet |                                                                                                                    |                                                                                                |

\*Transport is exploring alternative ways to connect the accessible kiss and ride to the station

Figure 4-1 Key features of the Proposal





Figure 4-2 Concept design artist impression of station entrance- indicative only, subject to detailed design



Figure 4-3 Concept design artist impression of view from train - indicative only, subject to detailed design

# 5 Visual Impact Assessment

## 5.1 Key Viewpoints

A total of four viewpoints have been identified within the Study Area, as listed in Table 5-1 and shown in Figure 5-1. The viewpoints were selected based upon a two-stage process involving a preliminary desktop study and a site visit.

The desktop study included an assessment of potential sensitive viewpoints including public open space and private properties within the Study Area. The site visit was undertaken Aurecon on 13 June 2024 during which the representative viewpoints were confirmed and an assessment was made of each potential representative viewpoint against the known extent of the Proposal. An illustrative photomontage was produced for three of the viewpoints, demonstrating the most noticeable impacts from the most sensitive receivers.

Viewpoints were selected based on topography, vegetation and existing infrastructure around the Proposal where the key assets would be visible.

There were some viewpoints investigated during the site visit, that were ruled out of the visual assessment due to the station not being visible. These viewpoints included the below:

- Residential house to the east at Powys Avenue – screen by rail corridor solid fencing
- Bray Wetlands Track to the northwest – station views predominantly screened by intervening trees
- Slade Road Reserve to the west - station views predominantly screened by intervening trees

**Table 5-1: Key Viewpoints**

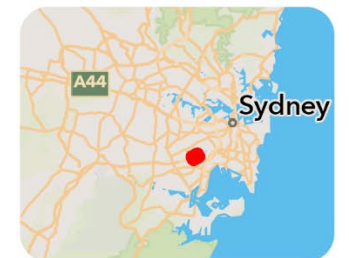
| Viewpoint | Location                                                      | Visual receivers |
|-----------|---------------------------------------------------------------|------------------|
| BP01      | 15 Hartill-Law Avenue - medical practice to east side of road | Local shoppers   |
| BP02      | Progress Lane - representative of apartments at 46 Slade Road | Residential      |
| BP03      | RSL entrance and memorial, 18 Hartill-Law Avenue              | Memorial site    |
| BP04      | Station platform west end                                     | Train commuters  |



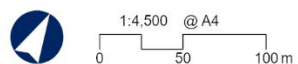


Project No: P522314 Map Author: Virgil Robinson Date: 9/07/2024 Revision: 0

- Proposal area
- Site compound
- Study area
- T Train station
- + Railway
- ~ Watercourse
- Viewpoint locations



Source: Aurecon, TINSW, NSW Spatial Services (DCS), ESRI



Projection: GDA2020 MGA Zone 56

## Safe Accessible Transport program - Bardwell Park Landscape and Visual Impact Assessment

**Figure 5-1: Viewpoint locations**



BP01

**Location: 15 Hartill-Law Avenue – southeast of rail station**

Proposal: 20 m to the northwest

View experienced by local shoppers

**Existing Setting**

The viewpoint is representative of the views from visitors within the local centre. The view is from the southeast side of Hartill-Law Ave, outside the medical clinic, looking towards the rail overbridge and station entrance (see Figure 5-2). The entrance is not a feature to the west side of the bridge, demarked by the orange 'T' (for Train) sign, with stairs down to the station platform, accessed from the narrow pedestrian path behind traffic barriers. The overbridge has high visually permeable safety screens. The RSL building is visible to the other side of the bridge, and houses between trees on a low hill to the middleground. This is a highly modified environment, with a few shops to either side of the two-way road (positioned behind the viewpoint), with bus stops and car park spaces allocated to the sides.

**Sensitivity**

Low – local centre users

**Magnitude of change**

**Construction**

Construction works will be undertaken within the local centre including pavement/kerb works, and a retaining wall to support a new paved area for bike storage on the west side of the road. Installation of the elevated walkway, lifts and stairs will also be highly noticeable. Temporary stair access to the platform is proposed to the east side of the road, to enable platform access during works. The works will be in foreground views and have temporary effects on access for users. The visual modification during construction for local centre users is considered high.

**Operational (day 1)**

See Figure 5-3 BP01 Proposal at day 1 of operation (photomontage).

The upgrades introduce a new urban structure within the foreground view, with the station elevated walkway entry, lifts and stairs. The scale and form of the structure does not contrast with the existing environment in form or scale, including the RSL building behind. Platform upgrades are not visible from this view.

Upgrades to the local centre provides a visual uplift to the streetscape, including a new pedestrian crossing, bike parking, bus stops, kiss and ride and paving. The level of visual modification is considered low – beneficial.

**Key mitigation measures**

- Upgrade existing traffic barriers to improve pedestrian scale (height and width) and improved streetscape amenity.
- Investigate space within streetscape works to provide landscape amenity through planting.

**Visual impact ratings**

**Construction**

Low sensitivity + high adverse magnitude of change = **moderate adverse visual impact**

**Operational (year 1)**

Low sensitivity + low beneficial magnitude of change = **low beneficial visual impact**



Figure 5-2 BP01 viewpoint looking northwest towards the station entrance from Hartill-Law Avenue



Figure 5-3 BP01 Proposal at day 1 of operation (photomontage) – indicative only, subject to detailed design

BP02

**Location: Progress Lane**

Proposal: 20 m to the north

View experienced by residents within apartment buildings

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Existing Setting</b>        | <p>The viewpoint is representative of the view experienced by apartment residents overlooking the rail corridor from Progress Lane. Along Progress Lane there are three apartment buildings (46, 54 Slade Road and 60-69 Progress Lane) up to three-storeys with balconies and windows facing north, towards the rail corridor. Bardwell Park Station is in the foreground view within a cutting, with the RSL building behind. The foreground view is of a highly modified environment, set below the horizon line.</p> <p>The elevated views from apartments, provide partial views over Wolli Creek Regional Park in the background and houses surrounded by bushland, as visible in Figure 5-4.</p>                                   |
| <b>Sensitivity</b>             | Moderate – representative of residents in apartments overlooking station                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Magnitude of change</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Construction</b>            | The works are in the foreground of the viewpoint. Construction activity will be noticeable including the use of a crane for the proposed station elevated walkway entry and lift installation. The visual modification is experienced temporarily by a low number of residents and is considered moderate adverse.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Operational (year 1)</b>    | <p>See Figure 5-5 BP02 Proposal at day 1 of operation (photomontage).</p> <p>The elevated walkway, lifts and stairs will be visible in within the foreground view. The scale and form of the structure is not contrasting to the existing environment, including the surrounding rail infrastructure and the RSL building to the north (left of image). There would be an additional shelter on the platform, further to the left of the image, however this is commensurate in scale and associated with existing rail infrastructure. The height of station structures would not obscure views of the regional park, as experienced from apartments on Progress Lane. The level of visual modification is considered low – neutral.</p> |
| <b>Key mitigation measures</b> | No mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Visual impact ratings</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Construction</b>            | Moderate sensitivity + moderate magnitude of change = <b>moderate adverse visual impact</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Operational (year 1)</b>    | Moderate sensitivity + low magnitude of change = <b>moderate-low visual impact (neutral)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |





Figure 5-4 BP02 viewpoint looking north towards the station entrance from Progress Lane



Figure 5-5 BP02 Proposal at day 1 of operation (photomontage) – indicative only, subject to detailed design

BP03

**Location: Earlwood Bardwell Park Returned Services League (RSL)**

Proposal 20 m to the south

View experienced by visitors and occasional ceremonies

**Existing Setting**

The RSL at 18 Hartill-Law Avenue, is a two-storey building with limited views towards the rail corridor and function room views on the other side of the building. The war memorial is located against the rail corridor boundary, with a tan-brown brick wall approximately 2 metres high, screening the corridor and providing a key memorial element with plaques attached, as shown in Figure 5-6. Deciduous (*Prunus ssp.*) trees are located to the front of the wall. Manicured hedging lines the back of the narrow space along with plated flowers, adjacent the driveway which provides access to the car park. Only the top of the heritage station building is visible.

Above the wall, the surrounding urban environment is noticeable, including Hartill-Law Avenue overbridge, local centre buildings, station stairs and apartments opposite. The scene is within a highly modified environment with limited visual amenity.

**Sensitivity**

Moderate – representative of RSL patrons and occasional ceremonial users, adjacent rail corridor and car park driveway

**Magnitude of change**

**Construction**

The works are close to the viewpoint and would be viewed clearly, however would be partially screened by the existing brick wall. Construction activity would be noticeable including use of a crane for station entry and lift installation. The visual modification would be experienced temporarily by visitors and is considered moderate adverse.

**Operational (year 1)**

See Figure 5-7 BP03 Proposal at day 1 of operation (photomontage).

The introduction of the elevated walkway entry, lift shaft and stairs would be noticeable elements in the viewpoint at the war memorial, visible above the existing brick wall. The station structure does not contrast from the existing urban form visible within the local centre, though is of a contemporary aesthetic with use of glass, steel and aluminium. The low visual modification is not considered adverse or beneficial, without introduction of improved visual amenity and the aesthetic of subjective appreciation.

**Key mitigation measures**

No mitigation

**Visual impact ratings**

**Construction**

Moderate sensitivity + moderate adverse magnitude of change = **Moderate adverse visual impact**

**Operational (year 1)**

Moderate sensitivity + low magnitude of change = **Moderate-low visual impact (neutral)**





Figure 5-6 BP03 existing view from RSL looking south towards the station



Figure 5-7 BP03 Proposal at day 1 of operation (photomontage) – indicative only, subject to detailed design

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Existing Setting</b>        | <p>The existing station (Figure 5-8) comprises a central platform within a cutting which is lower than the surrounding area. The station environment is dominant, framed by surrounding buildings. Embankments to the edge of the corridor are retained, with some areas of vegetation growing on the sandstone cutting. Noise walls are located to the south (right of image), to the top of embankments to rear of residential apartments. Security fencing is also to the top of the embankments.</p> <p>Ancillary infrastructure within the rail corridor includes gantries, overhead lines and platform lighting. The heritage station building is located centrally to the platform, of brick construction, with wide attached canopy reaching almost to the edge of the platform.</p> <p>The Hartill-Law Avenue overbridge spans the corridor in the middleground, with brick piers evident and safety screens barely perceptible.</p> <p>To the north (left of image) the RSL building is partially visible above low vegetation, a wall and trees. Buildings to the south are visible above noise walls and contribute to the urban character. Bushland, part of Wolli Creek Regional Park, is noticeable in the background of the view.</p> |
| <b>Sensitivity</b>             | Low - commuters temporarily waiting on platform                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Magnitude of change</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Construction</b>            | <p>Demolition will comprise removal of small canopies over station building doors and removal of the existing stairs. Temporary access stairs would be constructed to continue to provide access to the station platforms.</p> <p>Work including installation of new canopies, elevated walkway entry with stairs and a lift, and platform resurfacing, will be experienced in foreground views for short durations while waiting /disembarking from trains. A works area/compound comprising equipment would be located on the platform, surrounded by hoarding. The site compound would be partially visible within Slade Road Reserve to the south. The magnitude of change is considered high.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Operational (year 1)</b>    | <p>The station upgrades that will be noticeable in foreground views include new canopies, which are in alignment with existing station canopies but differentiated through use of glazed roofing and steel construction. The station entrance will be noticeable in the background behind the station building, being taller and constructed by contemporary materials, including use of aluminium cladding, steel and glass. Other changes on the station platform include new bench seats, accessible water refill, additional Opal card readers and wayfinding signage. The magnitude of change is considered low – neutral, as there is no improved visual amenity. Refer Figure 4-3 Concept design artist impression of view from train.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Key mitigation measures</b> | <p>Public art and cultural interpretative elements should be incorporated in the detailed design phase and could be incorporated in perforated screens and solid wall facades that form part of the station elevated walkway.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Visual impact ratings</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Construction</b>            | Low sensitivity + high adverse magnitude of change = <b>moderate adverse visual impact</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Operational (year 1)</b>    | Low sensitivity + low magnitude of change = <b>low visual impact (neutral)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |





Figure 5-8 BP04 viewpoint from station platform, looking east towards Hartill-Law Ave overbridge

## 5.2 Visual Impact Assessment Summary

The four viewpoint assessment ratings are summarised in the below table, for construction and operational visual impacts.

Table 5-2 Summary of visual impacts

|                                    |                      |  | Construction        |                         | Operational         |                               |
|------------------------------------|----------------------|--|---------------------|-------------------------|---------------------|-------------------------------|
| Viewpoint number and location      | Receiver sensitivity |  | Magnitude of Change | Visual impact           | Magnitude of Change | Visual impact                 |
| BP01 Hartill-Law Ave local centre  | Low                  |  | High adverse        | <b>Moderate adverse</b> | Low beneficial      | <b>Low beneficial</b>         |
| BP02 Progress Lane apartments      | Moderate             |  | Moderate adverse    | <b>Moderate adverse</b> | Low                 | <b>Moderate-low (neutral)</b> |
| BP03 RSL entrance and war memorial | Moderate             |  | Moderate adverse    | <b>Moderate adverse</b> | Low                 | <b>Moderate-low (neutral)</b> |
| BP04 Station platform - west       | Low                  |  | High adverse        | <b>Moderate adverse</b> | Low                 | <b>Low (neutral)</b>          |

In addition to the above assessed viewpoints, it is acknowledged that the proposed site compound is located within an existing car park, near to the entrance of Slade Road Reserve. The compound would comprise sheds, equipment and construction vehicles, enclosed within an area by site hoarding. There would also be a noticeable increase in activity. The construction compound would be visible to Slade Road Reserve playground users and residents within adjacent apartments. This would be experienced during construction, with no long-term visual impacts as the car park would be returned to pre-existing condition in consultation with the local council. The level of temporary visual modification is considered moderate for receivers of moderate sensitivity (low number of users within an urban area), and therefore a **moderate adverse visual impact during construction**.

## 6 Urban landscape character assessment

The assessment of landscape and urban character impacts considers impacts of the Proposal against both local planning objectives and project design objectives, including:

- Landscape character
- Urban form
- Heritage conservation
- Connectivity and perceptions of safety

The impacts are assessed during the construction phase and day one of operation.

### 6.1 Construction

#### Landscape character

The majority of the works will occur within the transport corridor (LCZ 1), with the exception of a temporary construction compound within an existing carpark adjacent Slade Road Reserve (LCZ 4) and apartments on Progress Lane (LCZ 3). This compound would not affect the access to the park or apartments, however, would be noticeable due to the temporary presence of sheds and equipment and the like. As the proposed compound is within an existing car park, the contrast in use and physical character is negligible.

#### Urban form

During construction a temporary access stair would be provided to the east of Hartill-Law Ave overbridge to the platform. Works to pavements and parking are within the local centre and are likely to temporarily affect the amenity of users, including path access.

#### Heritage conservation

Works are proposed within the Bardwell Park Station TAHE Section 170 listing (includes the platform, station building, entry steps structure and overbridge). The canopies attached to the station building and stair structure would be removed. Proposed modern additions to the station include a canopy attached to its eastern elevation and new stairs and railings on the overbridge. Recommended heritage conservation measures mitigate adverse impacts to LCZ 1. This includes physically separating the new canopies from the station building which would assist in preserving the station building's heritage character, and the replacement stairs being located in a similar position to the existing.

#### Connectivity and perceptions of safety

Pedestrian access to the station and public transport facilities is retained during construction, through temporary access stairs to the station platforms to the east side of the overbridge on Hartill-Law Avenue. There may be some short pedestrian and traffic diversions temporarily required. A construction management plan would incorporate safety and surveillance; therefore perceptions of safety would not be reduced for any of the character zones.

#### Summary of construction impacts

Overall, there would be a temporary reduction in the urban landscape functionality of the station precinct during construction. See Table 6-1 for a summary of the potential construction impacts.

The Transport Corridor (LCZ 1) would be subject to a temporary high magnitude of change resulting in a moderate adverse urban landscape impact. The changes would have a high impact on the pedestrian connectivity and amenity within a limited area of the local centre (LCZ 2). The site compound adjacent Slade



Road Reserve would have temporary moderate-low impacts to Slade Road Reserve (LCZ 4) and negligible urban landscape character impacts to the residential zone (LCZ 3).

## 6.2 Operational

### Landscape character

There would be minimum impacts to the landscape and urban character zones, with the Proposal upgrading existing public transport elements in a highly modified environment.

In response to landscape objectives, the design plan includes:

- incorporation of new paving and public transport parking connections to the south of the station, including an accessible kiss and ride space, an accessible parking space and bike parking area and relocation of bus stops; specifically designed to uplift the look and safe access of the local centre.
- limited impact on local vegetation, noting there are two trees proposed to be removed from the rail embankment on Hartill-Law Ave.

The Proposal aligns with the objective of respecting existing local character. Overall, the Proposal seeks to carefully consider landscape character and urban design principles to create a harmonious and connected environment that respects the local context and heritage.

### Urban form

The Proposal upgrades existing public transport facilities and there are limited changes to the existing layout; responding to design objectives including:

- Layout: The upgrade is within an area of existing rail and public transport activity, with minor changes to the location of facilities.
- Height requirements: The design meets the height of building requirements with lifts and canopies not exceeding the height of local centre buildings.
- Retained daylighting: The new transparent canopy, separation of the canopies from existing structures, and gaps between proposed new canopies would help to retain daylight on the platform.

### Heritage conservation

The Proposal responds to heritage design guidelines, ensuring that any historical or cultural aspects of the area are appropriately considered and incorporated into the design. This helps preserve the landscape character and urban design integrity, demonstrated through the following:

- Preserved heritage building: The Proposal ensures the preservation of the heritage station building, with separate canopies that align with the building's form.
- Lightweight appearance: The addition of glazing around the lift shaft and transparent canopies creates a lightweight appearance, preventing visual dominance.
- Retained high amenity elements: The design retains high amenity features such as landscape, trees, and heritage character elements intact.
- Enhancement of Heritage Station: The Proposal would preserve and enhance the heritage station by using modern materials such as steel and glass to differentiate new glazed canopies and a contemporary entrance from the heritage elements. These additions not only enhance the station's visual appeal but also create a striking feature within the small local centre.

### Connectivity and perceptions of safety

- Lighting: Areas around the station such as the station entry are generally lit at night. Increased lighting, a sheltered visible waiting area within the elevated walkway entry, and CCTV will have a beneficial impact on perceptions of safety for night-time users.

- Surveillance: two trees to the southwest side of Hartill-Law Ave will be removed which will enhance sightlines between the local centre and the station entrance.
- Urban growth and renewal: By improving the station's access and installing a new lift shaft, the design aims to contribute to increased public transport patronage and accessibility for all. This is expected to bring greater value to the local centre and contribute to its overall improvement and development.
- Wayfinding: the introduction of the feature station entrance at street level provides clear wayfinding of the station. Through re-paving and a new pedestrian crossing, the connection between the station, bus connections and accessible kiss and ride space within the local centre; are defined.

## Summary of operational impacts

Overall, there would be improvements to the landscape and urban functionality of the station precinct (LCZ 1) and the local centre (LCZ 2). The upgrade would provide a visual uplift to the local centre and improved connectivity with the station. There are negligible impacts to the urban and landscape character of the residential zone (LCZ 3) and nearby parks and recreation (LCZ 4), with these zones having no direct changes.

### 6.2.1 Summary of urban landscape character impacts

The urban landscape character assessment ratings are summarised in the below table, for construction and operational impacts.

**Table 6-1 Summary of urban landscape impacts**

| Landscape Character Zones |                      |          | Construction        |                            | Operational         |                            |
|---------------------------|----------------------|----------|---------------------|----------------------------|---------------------|----------------------------|
|                           |                      |          | Magnitude of Change | Urban and landscape impact | Magnitude of Change | Urban and landscape impact |
| LCZ 1                     | Transport corridor   | Low      | High                | <b>Moderate adverse</b>    | Low beneficial      | <b>Low beneficial</b>      |
| LCZ 2                     | Local centre         | Low      | High                | <b>Moderate adverse</b>    | Low beneficial      | <b>Low beneficial</b>      |
| LCZ 3                     | Residential          | Moderate | Negligible          | <b>Negligible</b>          | Negligible          | <b>Negligible</b>          |
| LCZ 4                     | Parks and recreation | High     | Low                 | <b>Moderate adverse</b>    | Negligible          | <b>Negligible</b>          |

# 7 Summary and recommendations

## 7.1 Landscape and visual mitigation

### Construction

Construction impacts are difficult to avoid, with mitigation covered by the construction environmental management plan (CEMP). The key urban design, landscape and visual elements to consider during construction to manage adverse impacts include:

- Maintain pedestrian, cycling and vehicular connections between urban areas and public amenity areas to promote a healthy, cohesive and well-connected local community.
- Consolidate construction elements within a compound and provide screening of compound from public areas.
- Consider public art and or heritage information on site hoarding to provide connection to works for the community.
- Minimise impact on sensitive receivers such as residential properties and local businesses through careful consideration of interface between station and work zones.
- Limit tree removal and maximise protection of existing trees, tree root and landscaped zones.

### Operational

There are no long term adverse visual or landscape character impacts resulting from the Proposal. The following recommended mitigation measures provide further beneficial impacts.

- Public art and cultural interpretative elements should be incorporated during detailed design and could be incorporated in perforated screens and solid wall facades.
- Alternative traffic barriers along Hartill-Law Avenue overbridge that provide better pedestrian-scale (height and width) and improved streetscape amenity shall be investigated during detailed design.
- Enhancement of landscape amenity through planting within the local centre shall be considered during detailed design.

## 7.2 Conclusion

There are limited sensitive receivers within the Bardwell Park Station Study Area, with the Proposal occurring in a confined location, already influenced by train and road traffic and in a highly modified environment.

During construction, moderate adverse visual impacts would be experienced temporarily by adjacent residents, local centre users, occasional war memorial visitors and train commuters. The construction works would be visible within foreground views of these visual receivers. The works would also have temporary moderate adverse impact on the landscape and urban character of the Transport corridor (LCZ 1), Local Centre (LCZ 2) and Parks and Slade Road Reserve (LCZ 4). These urban and visual impacts can be managed by measures stipulated within the CEMP.

Once constructed, the Proposal would have a low beneficial or negligible effect on the current landscape character, urban, and visual surroundings. Enhancements to the paving and public transport facilities in the local centre contribute to the improvement of the streetscape. The newly designed station entrance and concourse introduce a contemporary structure within the rail corridor, creating a distinct entrance that serves as a prominent focal point visible from both the street and the rail corridor. Furthermore, this upgrade facilitates enhanced connectivity with the local centre, enhances visual surveillance, and contributes to a

sense of safety. The preservation of the heritage station building, as seen from the platform, is ensured, while the surrounding new glazed-roof canopies enhance the contrast against the heritage elements.

In considering the overall potential impacts and proposed mitigation measures outlined in this LCVIA, the Proposal has **no long term significant adverse effect on the environment** including urban and landscape character; or visual amenity.

There is no further mitigation sought to reduce adverse effects, only measures to be considered within the detailed design to provide further beneficial impacts.



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