

Transport for New South Wales 17 Jan 2019 60566003

# Wyee Station Upgrade

Landscape Character & Visual Impact Assessment



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Landscape Character & Visual Impact Assessment

#### Client: Transport for New South Wales

ABN: 18 804 239 602

Prepared by

**AECOM Australia Pty Ltd** Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com ABN 20 093 846 925

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# 1.0 Introduction

## 1.1 Background Information

Transport for NSW (TfNSW) is the government agency responsible for the delivery of major transport infrastructure projects in NSW and is the proponent for the Wyee Station Upgrade (the Proposal).

The Proposal is part of the Transport Access Program which is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

AECOM Australia Pty Ltd (AECOM) has been commissioned by TfNSW to undertake a Landscape Character and Visual Impact Assessment for the construction and operation phases of the proposed Wyee Train Station Upgrade ('the Proposal'). Construction of the Wyee Train Station upgrade is expected to commence in 2019 and take around 12 months to complete.

## 1.2 Scope

The scope of this visual impact assessment is to:

- describe the existing landscape character of the Proposal study area and the visibility of the proposed works at Wyee Train Station
- identify key existing receivers/viewpoints and their sensitivity to the proposed change
- assess landscape character impacts of the Proposal
- assess visual impacts of the Proposal
- recommend management and mitigation strategies to minimise any impacts from the Proposal.

## 1.3 Proposed Works

The Proposal involves an access upgrade of Wyee Station as part of the Transport Access Program which would improve accessibility for customers.

The Proposal would include the following key elements:

- installation of three new lifts to provide improved access to the existing footbridge and island platform
- provision of a kiss and ride car space and an additional accessible parking space for a total of two accessible spaces within the Gorokan Road commuter car park. The disabled space from Wyee Road would be removed as it is non-compliant with applicable accessibility requirements
- replacing the existing ramp with stairs and the construction of a retaining wall to provide improved access to the eastern station entry from Wyee Road
- improved pedestrian crossing point on Wyee Road between the Darlingup Road Council car park and the eastern station entry
- construction of a new accessible path on the eastern side of Wyee Road connecting the existing southbound bus stop on Wyee Road with the improved pedestrian crossing and station entry
- partial removal of the existing footbridge fencing, station fencing and non-compliant ramp to facilitate the new lift
- refurbishment of the existing island platform toilet within the platform building with a new family accessible toilet
- refurbishment of the existing passenger waiting room within the platform building to make it DSAPT compliant

- modification of existing overhead high voltage (HV) (11kV) electrical cabling and signal cabling to facilitate service connections to new lifts. Overhead bundled cables would be used for the 11kV electrical cabling, however there is the potential need for underground works and
- ancillary works including adjustment to lighting, electrical upgrades, improvement to station communications systems (including CCTV cameras), hearing loops, wayfinding signage and installation of tactile ground surface indicators (TGSIs) as required.

This report should be read in conjunction with Chapter 3 of the Wyee Station Upgrade Review of Environmental Factors (AECOM 2018), which provides a detailed description of the Proposal and its associated works.

# 2.0 Methodology

This visual impact assessment has been undertaken in accordance with the Roads and Maritime Services (RMS) *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment* (RMS 2013). This method is widely accepted by NSW Government agencies and is considered relevant to this Proposal in that it addresses changes to corridor infrastructure within the urban setting.

In accordance with these guidelines, the following assessments have been carried out:

- assessment of existing landscape character and visual environment
- assessment of landscape character and visual impacts
- recommendation of mitigation measures.

#### 2.1 Sensitivity and Magnitude

An impact grading matrix (refer to Table 1) is used to assess both landscape and visual impact, and examines sensitivity and magnitude to give a combined impact rating of between negligible and high.

#### 2.1.1 Sensitivity

The sensitivity of the landscape is assessed based upon the extent to which it can accept change of a particular type and scale without adverse impacts on its character. Sensitivity varies according to the type of development and nature of the landscape, including:

- inherent landscape value, e.g. its condition, perceptual qualities and cultural importance
- the likely congruency of the proposed changes, i.e. the extent to which the proposal may fit or be 'visually absorbed' into the landscape, e.g. in relation to line, colour, form, texture, scale, etc.

The sensitivity of visual receivers and views are dependent on the:

- location and context of the viewpoint
- expectations and activity of the receiver
- number of the receivers
- importance of the view
- sensitivity of the receivers, which may include:
  - users participating in outdoor passive recreational pursuits
  - communities where the development results in changes in the landscape setting or valued views enjoyed by the community
  - occupiers of residences with views affected by the Proposal.

#### 2.1.2 Magnitude

The magnitude of change affecting a landscape or visual receiver depends on factors such as the nature, scale and duration of the particular change that is expected to occur. In the landscape, the magnitude of change would depend on factors such as the extent of the loss, change or addition of a feature, or changes in the backdrop, or outlook from a landscape that affect its character. The impact on a view would depend on factors such as the extent of visibility, degree of obstruction of existing features, degree of contrast with the existing view, angle of view, duration of view and distance from the Proposal.

		HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
	HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
SENSITIVITY	MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
SE	NOT	MODERATE	MODERATE - LOW	LOW	NEGLIGIBLE
	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

#### Table 1 Landscape character and visual impact grading matrix

MAGNITUDE

## 2.2 Visual Envelope Mapping

The likely visibility of the Proposal, once operational, from surrounding areas has been broadly mapped to define a visual envelope. This provides an indication of which parts of the Proposal are likely to be viewed from surrounding land uses. The mapping typically shows 'worst case', i.e. some receivers may only see the roofline of the new lifts and canopies, while other receivers may view a more substantial part of the Proposal.

## 2.3 Photography

A photograph of Wyee Station from each of the nominated receiver locations has been used to assist in the analysis process.

A photomontage was then prepared to illustrate the likely visual changes from a key viewpoint and is included in Section 5.2. This image is used to demonstrate a particular view of the Proposal in its wider setting, at the view level of a pedestrian. The viewpoint location was chosen due to its proximity to the station and the anticipated high frequency of people viewing the proposal from this location, including while travelling in a vehicle. The materials and finishes used are indicative only and would be further investigated during detailed design.

To prepare the photomontage, a 3D model of the Proposal was developed and confirmed against survey information, architectural plans, elevations and sections from 2D concept design drawings. The viewpoint location was selected and photographed during a site visit on Monday 8 October, 2017. Image matching was undertaken using reference points common to the 3D model and physical features in the photograph. The model was then rendered with the photograph and edits to the foreground elements made as necessary.

# 3.0 Contextual Analysis

## 3.1 Existing Environment

Wyee Station is located in the suburb of Wyee around 35 kilometres south-west of Newcastle and 115 kilometres north of the Sydney Central Business District (CBD) and Wyee Station is serviced by the Central Coast & Newcastle.

The suburb of Wyee is located in the City of Lake Macquarie Local Government Area (LGA). The suburb is largely forested with a small residential corridor along Wyee Road and Hue Hue Road and limited commercial / industrial uses. The rail line largely follows Wyee Road and bisects the suburb (refer to Figure 1).

Under the *Lake Macquarie Local Environmental Plan* (Lake Macquarie LEP) 2014, the station is located within an area zoned SP2 - Railway Corridor while areas surrounding the station are zoned:

- RU2 Rural Landscape to the east
- R3 Medium Density Residential to the west
- E4 Environmental Living to the north, and
- R2 Low Density Residential to the south.

There are two commuter car parks, one each on the western and eastern sides of the station. Gorokan Road commuter car park is located on the western side and is operated and maintained by Sydney Trains, while the Darlingup Road Council car park is located on the eastern side and is operated and maintained by Lake Macquarie Council.

A scattering of trees align the eastern side of the rail corridor along Wyee Road directly adjacent to the station, which provide some minor screening of the railway from residential areas and road users. A dense vegetation buffer on the western side is located to the south of the station and provides a relatively solid visual screen of the station for road users travelling north along Gorokan Road.

## 3.2 Existing Station Description

Originally constructed in 1892, Wyee Station consisted of an island platform with a up and down track, two sidings (additional low-speed track sections adjacent to the main line) located on the west side of the station to service a cement works and a third siding on the east side of the station. The sidings were removed in the early 2000s as the cement works were no longer operational.

The platform building is a rectangular brick building with an open gabled roof of corrugated iron. It contains a Customer Information Window, waiting room, toilet, store room and station master's area.

Wyee Station is a suburban customer station, with a catchment area consisting of the surrounding residential areas. There is a small local centre located approximately 500 metres to the north of the station which provides basic amenities. Major town centres are Morisset (approximately eight kilometres to the north) and Blue Haven (approximately three kilometres to the south). Wyee Public School is located approximately 550 metres to the north. Recreational areas are located both north and south of the station. Entry to the station is from Gorokan Road to the west and Wyee Road to the east (refer to Figure 1). The station platform is currently accessed by the existing footbridge via stairs from both entries.

Wyee Station consists of an island platform (Platform 1 and 2) with a single track in each direction serving the Central Coast & Newcastle Line (Main Northern Line). Both directions have between two and five services during the AM and PM peak (AM - 6:00 to 8:00, PM - 16:00 to 18:30), respectively.

## 3.3 Landscape Character Zones

Landscape character zones (LCZ) were determined primarily by land use, as these were considered to be the strongest defining landscape character elements in the area. Four dominant LCZs have been identified surrounding the Proposal, comprising:

- commercial LCZ
- residential LCZ
- bushland / riparian LCZ
- rail corridor LCZ

Figure 2 presents the extents of these LCZs.

6

7

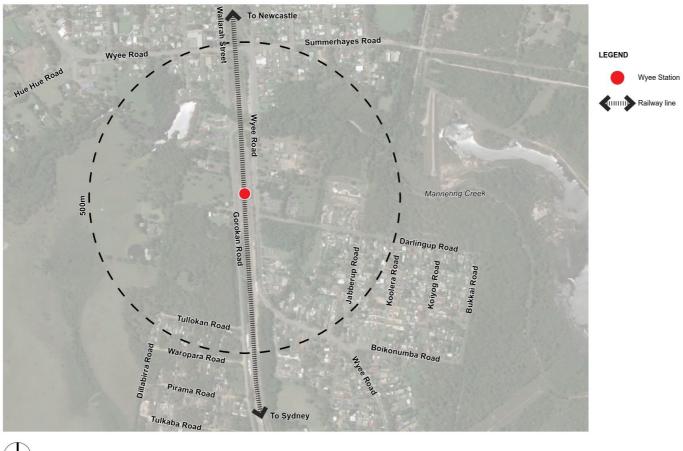




Figure 1 Wyee Train Station site location and local context

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#### Figure 2 Wyee Train Station LCZs

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# 4.0 Landscape Character Impact Assessment

An assessment of the landscape character impacts from the construction and operation of the Proposal on the four dominant LCZs has been undertaken to determine the potential changes to the character of the landscape.

## 4.1 Commercial Landscape Character Zone

## 4.1.1 Existing Situation

Commercial development is dispersed across Wyee without a defined or centralised commercial hub. Commercial development primarily consists of a convenience store, nursery, petrol station and a number of small business enterprises. The built form is inconsistent in architectural style and quality and is generally dominated by off-street parking along street frontages. Although some trees are present, there is no formal street tree planting or landscaping. The area is visually dominated by advertising signage, road infrastructure and car parking.



Figure 3 View to east from Wyee Road of commercial development fronting Wyee Road (captured October 2018)

## 4.1.2 Landscape Character Impact Assessment

Overall, the Proposal would have a limited impact on this LCZ. Apart from the petrol station, the commercial LCZ is visually isolated from the changes from the Proposal due to the surrounding built form. Noticeable changes that would be visible from the petrol station will be the three lift shafts. Potential impacts during construction would comprise the movement of construction vehicles along Wyee Road.

The sensitivity is considered **low** as the changes to the Proposal fall outside this LCZ and separated by the residential LCZ. The magnitude of change due to the Proposal is **low**.

The overall rating for this LCZ is low

## 4.2 Residential Landscape Character Zone

#### 4.2.1 Existing Situation

The residential LCZ is defined by low density housing in a predominantly flat landscape surrounded by bushland. The bushland character is intertwined with mature, local native trees found in the streets and residential lots. The residential development is dispersed into distinct zones, separated by creeks, bushland and the rail corridor. Each zone has unique characteristics, e.g. the zone to the south west of the station has unsealed roads and heavily vegetated blocks with older housing stock, compared with houses to the east of the station with a more open street frontage and more modern build.

There is no formal street tree planting, however, large native trees and front yard gardens dominate the streetscape scene for most of the character zone. Houses fronting Wyee Road generally have a large setback from the road edge and privacy screen planting that contributes to the visual amenity of the area. Houses along Gorokan Road to the south of the station are not visible from the street due to dense vegetation.



Figure 4 Typical street view (Darlingup Road looking east) of residential area east of Wyee Station (captured October 2018)

#### 4.2.2 Landscape Character Impact Assessment

The Proposal would have a series of impacts on the character of this LCZ, as follows:

- a temporary construction compound would likely be located on the north eastern side of the station directly adjacent to Gorokan Road within the grassed area. Temporary storage/laydown areas may also be required on the island platforms
- typical visual impacts would include the presence of temporary fencing and hoarding, road barriers, cranes, signage, scaffolding, temporary amenities
- the change would be limited to the edge between where the rail corridor and residential LCZ converge with the Proposal. The Proposal would introduce new elements and built forms in the visual environment including the three new lifts, upgraded station entry stairs, footpaths and car parking. The lift shafts would be approximately fifteen metres in height from Wyee Road ground level, twelve metres in height from the Gorokan Road ground level and extend six metres higher than the existing footbridge level; making them the most visible features of the Proposal. The three lift shafts would be visible from some surrounding areas within the residential LCZ

• car parks, footpaths, low retaining walls and steps associated with the station entrances would be visible from areas directly adjacent to the station in the residential LCZ.

The sensitivity of the landscape is rated as **low**, as the land use pattern of the residential areas and scale of the corridor have the capacity to readily accommodate the type of change envisaged. The existing character of the railway corridor limits the impact of changes to the adjoining LCZs.

The magnitude of change is rated as **low**, as this comprises a relatively minor change in the landscape character. The change would in most cases be only visible in the area immediately adjacent to the Proposal and the change in the adjoining LCZ is in keeping with the existing character and use. The addition of contemporary architectural elements, a consistent pallet of materials and finishes and defined edges to Wyee and Gorokan Road frontages in a well-integrated manner would improve the aesthetics of the station precinct.

The overall sensitivity of change for this LCZ is **low**. The upgrade works are relatively minimal and would be more noticeable as a landscape character impact in the short term, creating a greater level of impact during construction.

The overall rating for this LCZ is  $\boldsymbol{\mathsf{low}}$ 

## 4.3 Bushland / Riparian Landscape Character Zone

#### 4.3.1 Existing Situation

Wyee contains considerable areas of remnant bushland which is generally located in low lying flat terrain, associated with riparian corridors and flood prone land. A large tract of bushland on gently sloping elevated land is situated on the western side of the rail corridor directly adjacent to Gorokan Road. The fringes of the bushland are commonly weed infested and combine to create a dense vegetated screen with limited views into the bushland areas. The bushland and associated tall mature trees are a dominant feature of Wyee and help to characterise the suburb.



Figure 5 Bushland opposite residential area on the eastern side of the rail corridor (captured October 2018)

#### 4.3.2 Landscape Character Impact Assessment

The value of this LCZ is considered **high** given it is a defining characteristic of Wyee and the bushland is part of a wider environmental corridor. The bushland in the immediate vicinity of the Proposal is generally not publicly accessible or used by the community, but it can be assumed the local residents place a high value on the amenity the bushland provides and would have a close connection to it. However, overall the Proposal would have a **low** impact on this LCZ due to the fact that no removal of bushland, or construction work, are to be conducted in the area.

The sensitivity of change is considered **low** as the landscape character has the capacity to absorb the extent of changes proposed. The existing character of the railway corridor within the context of the bushland limits the impact of changes to this LCZ on the broader surrounding landscape.

The magnitude of change is rated as **low**, as this comprises a relatively minor change in the landscape character.

The overall rating for this LCZ is **low**.

#### 4.4 Rail Corridor Landscape Character Zone

#### 4.4.1 Existing Situation

The railway line is a highly contained, linear LCZ approximately 50 metres wide. The corridor comprises a distinct unit which traverses the landscape, with the railway line and platform sitting above the surrounding ground plane, apart for a section in the north where it is crossed by Wyee Road via a bridge. Features of Wyee Train Station include the existing footbridge, island platform and one storey platform building.

Prominent visual elements of Wyee Train Station include the existing footbridge, platform building, ramps, steel barrier fencing, light poles and associated overhead wires

South of the station the corridor is aligned with a mix of native and exotic vegetation creating a visual screen. The station and the area to the north is more visible due to the lack of vegetation allowing views across and through the corridor. Wide road verges and large expanses of managed grass with open views combine to create a perceived wider corridor.



Figure 6 Rail corridor looking to the north from the pedestrian footbridge (captured October 2018)

#### 4.4.2 Landscape Character Impact Assessment

The Proposal would have a similar series of impacts on the character of this LCZ as that listed in the Residential LCZ. The impacts would be most noticeable during construction as station users would be temporarily inconvenienced by diversions and use of temporary facilities. The value of this LCZ is considered **low** as it is primarily focussed on function and operations rather than a strong attachment to the place.

The sensitivity of the landscape is rated as **low**, as the land use pattern and scale of the corridor have the capacity to accommodate the type of change envisaged and limits the impact of changes to this LCZ on the broader surrounding landscape.

The magnitude of change is rated as **low**, as this comprises a relatively minor change in the landscape character. The change would in most cases be only visible in the area immediately adjacent to the Proposal and the change is in keeping with the existing character and use.

The overall rating for this LCZ is **low.** 

# 5.0 Visual Impact Assessment

## 5.1 Visual Envelope Mapping

The Proposal would introduce new elements and built forms in the visual environment including three new lifts, upgraded stairs and walkways, and upgraded car parking.

The potential visibility of the Proposal from the surrounding area is shown in Figure 7. The visual envelope extends in a north to south orientation following the main view corridor of Wyee Road and Gorokan Road. Views in the east-west orientation are relatively narrow and limited to Darlingup Road.

Associated upgrade works to the footpaths and station access steps would only be visible in the immediate vicinity of these works which would be undertaken along Wyee Road and Gorokan Road.

The viewshed beyond the Proposal is generally limited due to both bushland vegetation and topography that provide visual screening, resulting in generally restricted visibility from many areas. The residential interface with the railway line is setback and screened by vegetation and landscaping on private properties and along the rail corridor edge.

## 5.2 Visual Impact Assessment

Eight viewpoint locations have been identified that are representative of the visual receivers for assessment of potential impacts on views as a result of the Proposal, as shown in Figure 8. These are:

- 1. Darlingup Road (east) this viewpoint assesses the impact of the proposal on residents along Darlingup Road to the east of the station
- 2. Wyee Road commuter car park this viewpoint assesses the visual impact on commuters entering the station from the car park
- 3. Wyee Road (north) this viewpoint assesses the visual impact on residents and road users approaching the station from the north
- 4. Gorokan Road (north) this viewpoint assesses the visual impact on residents and road users approaching the station from the north
- 5. Darlingup Road (west) this viewpoint assesses the impact of changes on residents along Darlingup Road to the west of the station
- 6. Wyee Road (south) this viewpoint assesses the visual impact on residents and road users approaching the station from the south
- 7. Wyee Road and Summerhayes Road intersection this viewpoint assesses the impact of changes road users travelling from the north and exiting the petrol station
- 8. Wyee Road and Gorokan Road (north) intersection this viewpoint assesses the visual impact on residents, road users and pedestrian approaching the station from the north.

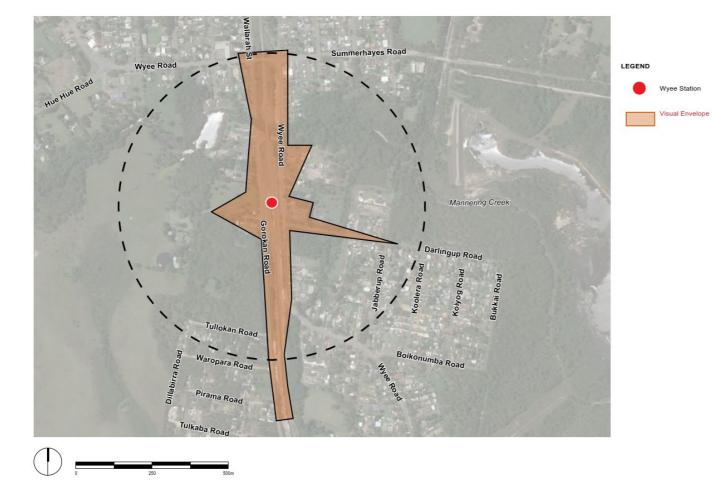
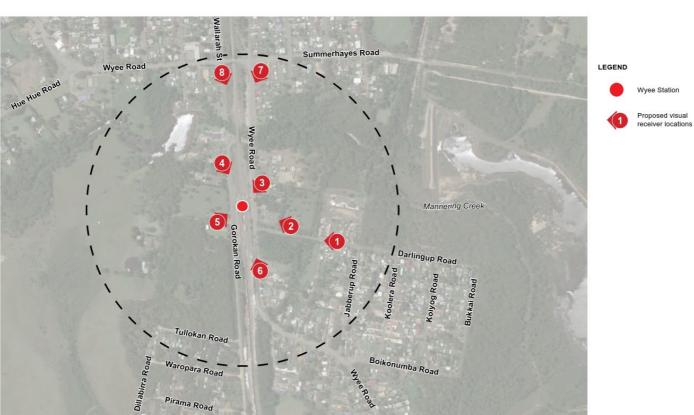


Figure 7 Visual envelope map showing potential visually affected areas



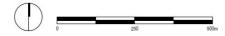


Figure 8 Visual impact assessment viewpoint locations

Tulkaba Road

#### 5.2.1 Construction Visual Impacts

The construction of the Proposal would include the following activities:

- establishment of site compound (erect fencing, tree protection zones, site offices, amenities and plant/material storage areas)
- establishment of temporary facilities as required (e.g. temporary pedestrian access to station, temporary toilets)
- removal of vegetation
- services relocation
- platform modification, including piling and foundations for lift shafts
- construction of lift shafts, stairs and fencing
- installation of lifts
- installation of fixtures, lighting, signage and CCTV cameras for the station areas
- upgrade of car parking
- installation of wayfinding signage
- electrical and power supply upgrade works
- replanting/landscaping, fencing adjustments and bollards.

Subject to approval, construction of the Proposal is expected to commence in early 2019 and take around 12 months to complete. The construction methodology would be further developed during detailed design of the Proposal in consultation with TfNSW.

The temporary construction compound (refer to Figure 9) north of the Proposal will be highly visible from Gorokan Road and users of the station. Views from Wyee Road, Gorokan Road and immediately adjacent residents will primarily focus on the construction of the new lift shafts and upgraded access paths and stairs.

Night works would be required for a number of activities, however would be temporary and used for operational, safety and security purposes. Lighting would be placed to minimise light spill onto the adjoining residential areas along Gorokan Road and Wyee Road.

The overall visual impact of the construction of the Proposal is considered to be low, given that construction activities would be temporary.



Figure 9 Proposed works areas and construction compound locations

#### 5.2.2 Operational Visual Impacts

Table 2 provides an assessment of the visual sensitivity and magnitude of each viewpoint location (as identified in Figure 8) during the operation of the Proposal. A photomontage showing the changes in view as a result of the Proposal is provided for one key viewpoint along Wyee Road (viewpoint location 3).

Table 2 Visual impact assess
------------------------------

Viewpoint location	Sensitivity	Magnitude	Rating
1. Darlingup Road (east)	<b>Low</b> - views from residential receivers would be indirect and limited to the immediate road corridor.	<b>Low</b> - the Proposal would generally be expected to have low levels of visibility from this location, with the possibility of the upper sections of the lift shafts visible through tree canopy.	Low
2. Wyee Road commuter car park	<b>Moderate</b> - as pedestrian and station user views would be direct and in close proximity to the Proposal.	<b>Moderate</b> views towards Wyee Train Station are partially screened by existing trees along Wyee Road frontage. The car park is set down lower than Wyee Road and the station, further obscuring the view. The lift shafts and associated access upgrades would be the most visible elements from this location.	Moderate
3. Wyee Road (north)	<b>Moderate</b> - road users and a small number of residents would have direct and immediate views towards Wyee Train Station.	<b>Moderate</b> - views from this location would be detailed and include key built elements such as the lifts and upgraded paths and access stairs along Wyee Road.	Moderate
4. Gorokan Road (north)	Moderate - road users and a small number of residents would have direct and immediate views towards Wyee Train Station. Church users and pedestrians would have direct and immediate views towards the station; however the church is setback considerably from the road edge and visitation is expected to be periodic, mostly weekends.	<b>Moderate</b> - views from this location would be detailed and include key built elements such as the lifts, car park and upgraded paths and access stairs along Gorokan Road.	Moderate
5. Darlingup Road (west)	Low - direct views are limited to two residential receivers and road users travelling north along Gorokan Road.	<b>Moderate</b> - views from this location would be detailed and include key built elements such as the lifts and upgraded paths and access stairs along Gorokan Road.	Moderate- Low

Viewpoint location	Sensitivity	Magnitude	Rating
6. Wyee Road (south)	<b>Low</b> - as it is expected that a low number of residents and road users travelling north would have direct views towards the Proposal. Views towards the station would be partially screened by roadside vegetation.	<b>Low</b> - the Proposal would generally be expected to have low levels of visibility from this location, with only the upper portions of the lift shafts visible.	Low
7. Wyee Road and Summerhayes Road	<b>Low</b> - pedestrian and road user views would be indirect and seen from a distance.	<b>Low</b> - the Proposal would generally be expected to have low levels of visibility from this location, with only the top of lifts visible in the distance.	Low
8. Wyee Road and Gorokan Road (north) intersection	<b>Low</b> - pedestrian and road user views would be indirect and seen from a distance.	<b>Low</b> - the Proposal would generally be expected to have low levels of visibility from this location, with only the top of lifts visible in the distance.	Low

This visual impact assessment has determined that the Proposal would have a **Low** visual impact on the majority of people living and travelling through the landscape of Wyee Train Station.

The consideration and application of mitigation measures outlined in Section 6.0 will assist to minimise the potential visual impacts of the Proposal.



Figure 10 Viewpoint location 3 – existing view looking south along Wyee Road to Wyee Train Station



Figure 11 Viewpoint location 3 – Photomontage 1 - proposed view looking south along Wyee Road to Wyee Train Station

# 6.0 Mitigation Measures

Mitigation measures would be implemented to minimise the level of visual impact during the design development, construction and operation phases of the Proposal.

## 6.1 Design Development

The following general mitigation measures are recommended to minimise visual impacts during the design development process:

- consider the use non-reflective materials for facades and finishes
- use a consistent palette of materials and finishes in the paths, steps and walls that are complementary to the existing elements
- remove and replace the existing white, pool-type barrier fence and replace with a fence that is
  neutral in colour and finish and is of similar detail to the balustrade on the pedestrian footbridge
  and steps.
- design of new elements to achieve an architectural character that is complementary to existing elements rather than contrasting
- investigate opportunities to include public art within the new lift structures (e.g. pattern cast into the concrete)
- lighting placed to minimise upward spread of light. Care should be taken when selecting luminaires to ensure that light spill and glare are kept to a minimum
- limit disturbance of vegetation to the minimum amount necessary to construct the Proposal to maintain screening of views
- provide tree planting within car parks to minimise views from surrounding receivers
- provide low plants along Wyee Road frontage particularly in front of the proposed walls and steps.
- consider measures to limit or deter graffiti.

## 6.2 Construction

The following mitigation measures are recommended to minimise visual impacts as a result of construction:

- establish TPZs around trees to be retained. Tree protection would be undertaken in line with AS 4970-2009 Protection of Trees on Development Sites and would include exclusion fencing of TPZs
- provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts on key view points during construction. Hoardings and site fencing would be removed following construction completion
- provide cut-off or directed lighting to be used with and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised.

## 6.3 Operation

The following mitigation measures are recommended to minimise visual impacts during operation:

- ongoing maintenance and repair of constructed elements
- removal of graffiti in accordance with Sydney Trains maintenance requirements
- long term maintenance and replacement of tree planting and landscaping to maintain visual filtering and the framing of views to the station, and to maintain adjoining streetscape amenity.

# 7.0 References

AECOM, 2018 Wyee Station Upgrade Review of Environmental Factors

Roads and Maritime, 2013, *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment*, Sydney