Narara Station Upgrade

Landscape Character and Visual Impact Assessment

July 2020

enVisage

NARARA STATION UPGRADE

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

DATE: 29 July 2020

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1 Introduction

1.1 Purpose

Envisage Consulting was commissioned by SNC-Lavalin Atkins on behalf of Transport for New South Wales (TfNSW) to assess the landscape character and visual impacts of the proposed Narara Station Upgrade (the Proposal). This specialist assessment forms part of the Review of Environmental Factors (REF) prepared to assess the impacts of the Proposal, in the considerations for determination under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2 Need for the Proposal

TfNSW is proposing to upgrade Narara Station as part of the NSW Government's Transport Access Program (TAP) which aims to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

Narara Station has been identified for an accessibility upgrade as it does not currently meet key requirements of the *Disability Standards for Accessible Public Transport 2002* (DSAPT) or the *Commonwealth Disability Discrimination Act 1992* (DDA).

The non-compliant pathways, car parking and stairs to the footbridge do not facilitate access for people with reduced mobility, parents or carers with prams, or customers with luggage. The Proposal would provide safe and equitable access to the platforms and car parks, and to the bus and pedestrian network surrounding the station.

The Proposal would improve accessibility of the station in line with the requirements of the DDA and the DSAPT. The upgrades would provide an improved customer experience for existing and future users of the station.

A project description is provided in SECTION 4.

1.3 Report format

The report is set out in the following format:

SECTION 2	Defines the methodology for the assessment
SECTION 3	Describes the Site location
SECTION 4	Describes the Proposal and its main visual changes
SECTION 5	Presents the assessment of landscape character
SECTION 6	Presents the assessment of visual impact
SECTION 7	Describes measures to improve visual outcome
SECTION 8	Presents a summary of key findings and conclusion.

2 Assessment methodology

This section outlines the assessment methodology which is based on the NSW Roads and Maritime Services'[1] *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04*, December 2018 (referred to hereafter as the 'Guideline').

2.1 Assessments

Two assessments are presented in the Guideline to improve design outcomes:

- landscape character assessment - the assessment of impact on the aggregate of an area's built, natural and cultural character or sense of place – which helps determine the overall impact of a project on an area's character and sense of place.
- visual impact assessment - the assessment of impact on views - which helps define the day to day visual effects of a project on people's views.

The method used to measure impact is based on the combination of sensitivity of the existing area or view to change, and magnitude of the Proposal on that area or view. These terms are defined in the Guideline as:

- Sensitivity: refers to the qualities of an area, the number and type of receivers and how sensitive the existing character of the setting is to the proposed nature of change.
- Magnitude: refers to the physical scale of a project, how distant it is and the contrast it presents to the existing condition.

The combination of sensitivity and magnitude provide the rating of the landscape character impact for a project, or visual impact for individual viewpoints (refer TABLE 2-1).

TABLE 2-1: LANDSCAPE CHARACTER AND VISUAL IMPACT RATING MATRIX

		Magnitude			
		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

[1] As of 1 December 2019, Roads and Maritime Services was integrated with TfNSW

Landscape character assessment

The Guideline sets out the tasks for landscape character impact assessment:

1. analyse existing landscape character and its sensitivity
2. identify landscape character zones (if required because of the size or complexity of the project)
3. determine the magnitude of change
4. assess landscape character impact (based on both the sensitivity of the character zone and magnitude of the Proposal in that zone).

The assessment of landscape character impact is provided at SECTION 5.

Visual impact assessment

The Guideline sets out the tasks for visual impact assessment:

1. identify the extent of visibility of the Proposal
2. identify existing viewpoints and their sensitivity to change
3. determine the magnitude of change from each viewpoint
4. assess visual impact (based on a composite of the sensitivity of the view and magnitude of the Proposal in that view).

The assessment of visual impact is provided at SECTION 6.

2.2 Field survey

The site was inspected on 13 May 2020. The inspection included a walk-over of the station precinct and surrounding streets. The day was dry and sunny. An approximate viewshed (the area within which the Proposal would be seen at eye level above ground[2]) was determined on site and potentially sensitive viewpoints identified. Private property was not accessed. Viewpoints were assessed from the nearest publicly accessible location.

2.3 Photography

Photographs included in this report have been taken with a full frame sensor camera and 50mm focal length lens using Global Positioning System (GPS) location data. The 50mm focal length is generally accepted as closest to the view perceived by a human eye. Unless otherwise noted, all photographs within this report were taken by Envisage Consulting on 13 May 2020.

[2] Definition from Guideline p6

3 Site description

3.1 Location

Narara Station is located in the suburb of Narara, within the Central Coast Council (CCC) Local Government Area (LGA). Narara Station is approximately 80 kilometres from Central Station, Sydney, and about four kilometres north of Gosford Station on the Central Coast and Newcastle Line of the Intercity Trains Network. The station consists of platforms either side of the rail lines. The southern platform (Platform 1) provides services south to Sydney Central and the northern platform (Platform 2) provides services north to Newcastle Interchange. The location of the Proposal and its regional context is shown in FIGURE 3-1).

FIGURE 3-1: REGIONAL AND LOCAL SITE CONTEXT[3]

[3] Figure provided by SNC-Lavalin

3.2 Site description

The station lies between Goonak parade to the south and Narara Valley Drive to the north. Narara Station is accessed from the southern side of the rail corridor from the Pacific Highway via Goonak Parade, and from the northern side from Narara Valley Drive. Informal driveways with no kerbs provide vehicular access to commuter carparks on both sides of the rail corridor. A footpath located on the southern side of Narara Valley Drive provides pedestrian access to the northern commuter carpark.

The platforms are accessed directly from each of the adjoining commuter car parks. A reinforced concrete footbridge, with precast concrete steps and pole mounted lights is located towards the eastern end of the platforms, providing a pedestrian link between the two platforms. On each platform there is an open-sided, covered waiting area (platform shelter). There is no station building or toilet facilities.

The commuter car parks currently provide a total formal capacity of 79 car parking spaces, one secure bike locker and one bike rack. There are no existing accessible car parking spaces nor any formal kiss-and-ride areas.

Additional transportation options are located to the north-west of the station along Narara Valley Drive, with northbound and southbound bus stop zones located immediately outside the station.

An image of the northern side of the station is provided in FIGURE 3-2. An image of the southern side of the station is provided in FIGURE 3-3.

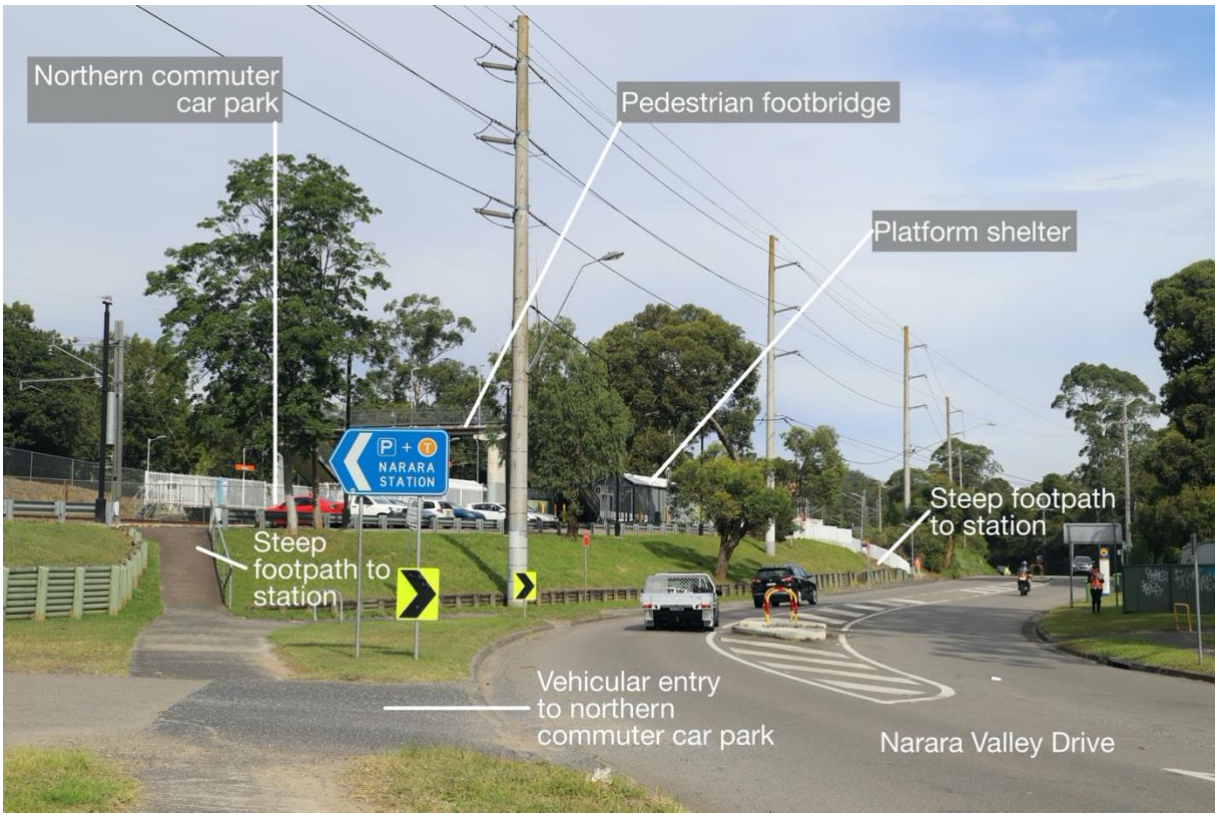

FIGURE 3-2: VIEW OF NORTHERN SIDE OF NARARA STATION

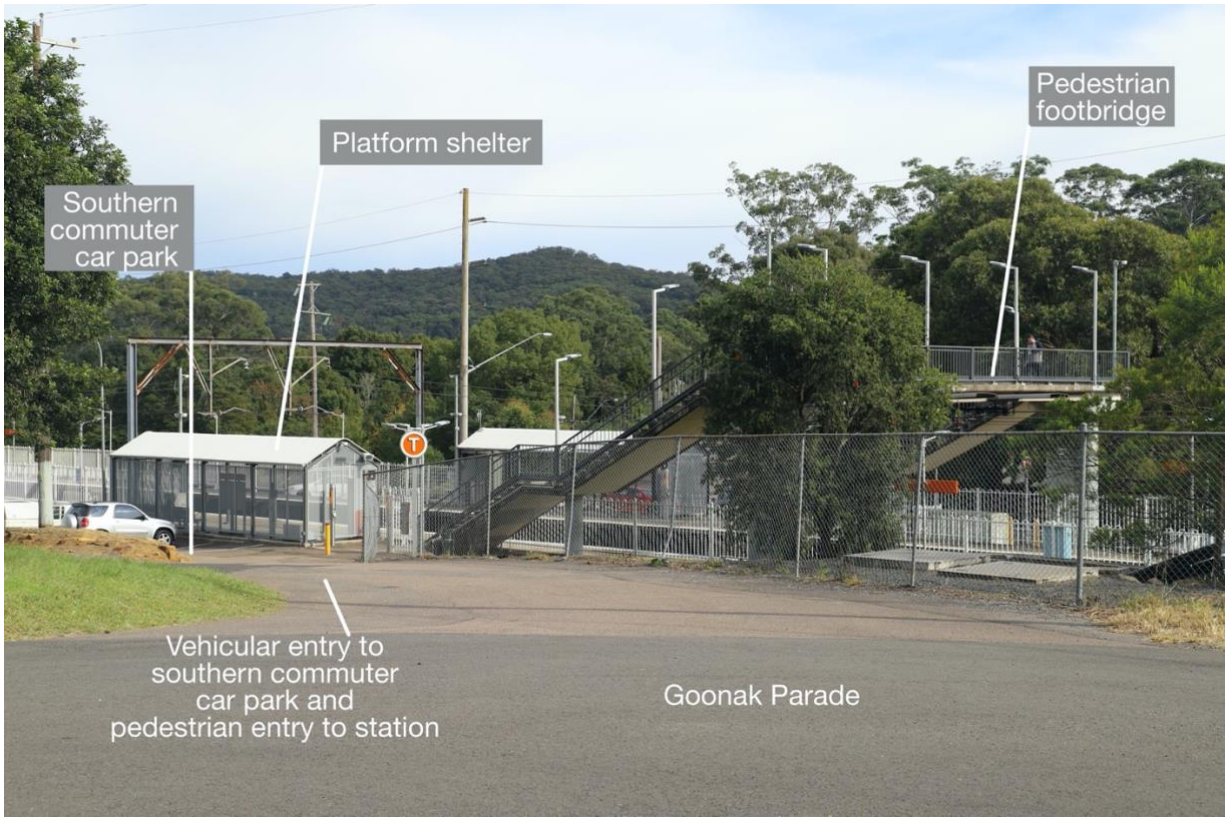

FIGURE 3-3: VIEW OF SOUTHERN SIDE OF NARARA STATION

4 Proposal description

4.1 Proposal area

The Proposal includes upgrades to Narara Station on land owned by RailCorp, with the station facilities maintained by NSW TrainLink. In addition, the Proposal includes some work within the road reserve of Narara Valley Drive, which is on CCC land. This proposed work within the road reserve is to facilitate a new accessible path and pedestrian crossing between the existing bus stops on Narara Valley Drive and the station.

The Proposal area is shown in FIGURE 4-1 and includes:

- the rail corridor around Narara Station (including the platforms, shelters, and footbridge)
- the station commuter car parks either side of the rail corridor
- a proposed construction compound area within the rail corridor, to the south of the southern commuter car park
- the northbound and southbound bus stop on Narara Valley Drive, and the road verge adjacent the northern commuter car park.

FIGURE 4-1: PROPOSAL AREA[4]

[4] Figure provided by SNC-Lavalin Atkin

4.2 Proposal features

The key features of the Proposal are shown in FIGURE 4-2 and summarised as follows:

- Installation of two new lifts (and lift landings) connecting from the existing footbridge to the two commuter car parks and the platforms, with anti-throw and safety screens
- Localised surface regrading in both commuter car parks to provide an accessible parking space and a kiss and ride space within each car park
- a new pedestrian crossing across the northern commuter car park connecting to Narara Valley Drive
- a new path from the station to Narara Valley Drive
- relocation of the existing southbound bus stop on Narara Valley Drive and provision of a formalised pedestrian crossing across Narara Valley Drive
- formalised Boarding Assistance Zones (BAZ) on each platform
- provision of a localised ramp from Platform 1 into the waiting area
- new fencing and bollards
- an entrance upgrade to the southern commuter car park
- ancillary work including electrical upgrades to support new infrastructure, service relocation, opal car reader relocation, drainage works, upgrades to lighting and public address systems, CCTV, wayfinding signage and relocation of bins and furniture.

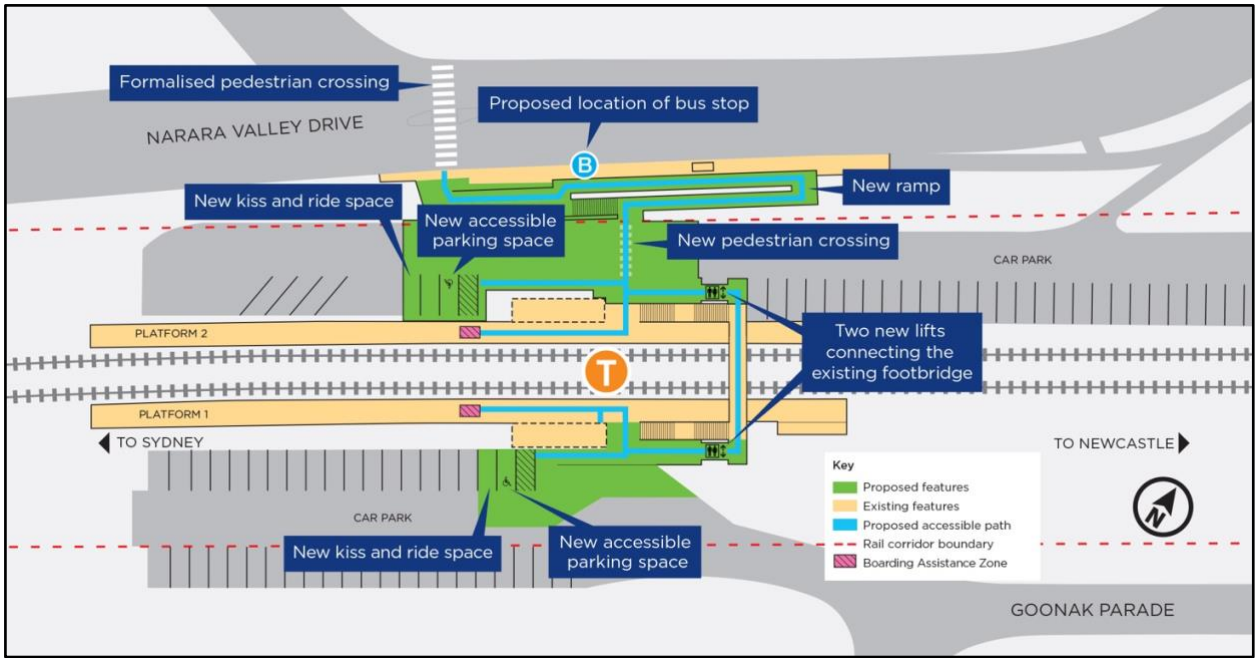

FIGURE 4-2: KEY FEATURES OF THE PROPOSAL[5] *(NOTE: THIS IS INDICATIVE, SUBJECT TO DETAILED DESIGN)*

[5] Figure provided by TfNSW

FIGURE 4-2 shows the general layout of key elements of the Proposal based on the strategic concept design. The design would be further refined during the detailed design phase. An Urban Design Plan (UDP) including a Public Domain Plan (PDP) would also be prepared.

To illustrate the Proposal, an image of the existing southern entry to the station is provided at FIGURE 4-3 and artist's impression of the upgrade (subject to detailed design) from a similar approximate viewpoint, is provided in FIGURE 4-4.

FIGURE 4-3: IMAGE OF EXISTING SOUTHERN ENTRY TO THE STATION

FIGURE 4-4: ARTIST'S IMPRESSION OF THE UPGRADE[6]

[6] Image provided by TfNSW

4.3 Tree removal

All Arbour Solutions have prepared an arboricultural assessment[7] of the Proposal and identified six trees that would be impacted by the scope of works. A plan showing the location of the trees impacted is provided FIGURE 4-5.

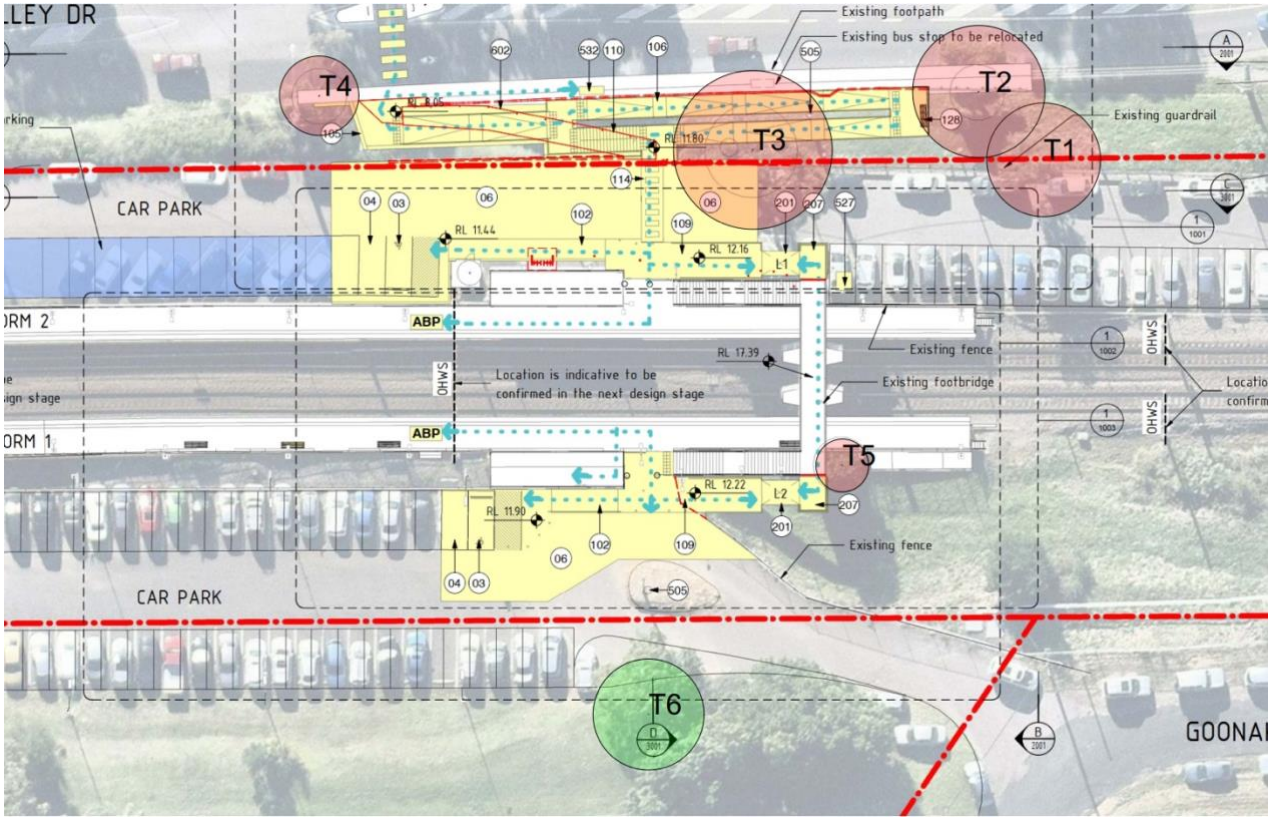

FIGURE 4-5: LOCATION OF TREES IMPACTED BY THE PROPOSAL[8]

Three trees would be removed due to the construction of the pedestrian ramp, southern lift shaft and retaining wall along Narara Valley Drive (labelled T3, T4 and T5). The Proposal has been modified to retain two trees (labelled T1 and T2). Selective pruning would be required to one tree (labelled T6). The characteristics of the trees impacted by the Proposal are detailed in TABLE 4-1. Images of trees T1 to T5 are shown in FIGURE 4-6 to FIGURE 4-9.

TABLE 4-1: TREES IMPACTED BY THE PROPOSAL

Tree	Botanical name (common name)	Height (m)	Spread (m)	To be removed
1	*Eucalyptus elata* (River Peppermint)	10-15	4x4	No (possibly trimmed)
2	*Eucalyptus umbra* (Broad-leafed White Mahogany)	5-10	3x3	No (possibly trimmed)
3	*Eucalyptus umbra* (Broad-leafed White Mahogany)	10-15	5x5	Yes
4	*Eucalyptus umbra* (Broad-leafed White Mahogany)	5-10	2x2	Yes
5	*Callistemon viminalis* (Bottlebrush)	5-10	2x2	Yes
6	*Cinnamomum camphora (*Camphor Laurel)	5-10	4x4	No (would be trimmed)

7 All Arbor Solutions, 16 June 2020, *Arboricultural Impact Assessment*, Narara Railway Station.
8 Base image prepared by All Arbour Solutions

FIGURE 4-6: TREE T1 AND T2

FIGURE 4-8: TREE T4

FIGURE 4-7: TREE T3

FIGURE 4-9: TREE T5

Trees to be removed would be offset in accordance with TfNSW's *Vegetation Offset Guide* (2019), which would greatly enhance the number of trees at the station over time.

4.4 Materials and finishes

Subject to detailed design, the Proposal would include the following materials and finishes:

- lift shafts – concrete (natural grey in colour)
- lift doors, control buttons and indicators – polished stainless steel
- lift glazing – clear glass
- lift canopies over waiting areas – metal sheet roofing (charcoal grey in colour)
- lift ventilation louvres – horizontal storm proof louvre (charcoal grey in colour)
- lift roofs – metal roof sheeting (charcoal grey in colour)
- footbridge landing extensions – concrete base with stainless steel balustrades
- platform regrading – asphalt or concrete (as per existing), materials to match existing and achieve compliance
- footpaths – asphalt or concrete with non-slip textured finish.

4.5 Construction

Timing

Subject to planning approval, construction is expected to commence in late 2020 and take around 12-18 months to complete.

Standard construction hours are anticipated (7.00 am to 6.00 pm Monday to Friday, and 8.00 am to 1.00 pm Saturdays).

Certain works may need to occur outside recommended hours and would include night works and works during routine rail shutdowns. It is estimated that up to four rail shutdowns would be utilised to facilitate construction activities. Lighting would be required for nightworks and during 48 hr rail shutdowns

Out of hours works may also be scheduled outside rail shutdown periods. Approval from TfNSW would be required for any out of hours work and the affected community would be notified.

The station would remain operational throughout the construction period, excluding weekend rail possessions. Construction would be staged to ensure that pedestrians retain continued access.

Site establishment

A temporary construction compound to accommodate a site office, amenities, laydown, and storage area for materials has been proposed within the rail corridor to the south of the southern commuter car park. The area is currently unused rail corridor land (refer FIGURE 4-1).

In addition, temporary laydowns in the rail corridor would also be required during construction and small temporary compounds would also be set up in both the southern and northern commuter car parks, centred around the proposed lift location in order to facilitate construction works. Temporary hoarding and fencing would be setup to restrict access to construction workers.

Tree protection would be installed around vegetation to be retained near the construction zone.

Plant and equipment

Construction access would require traffic control in adjacent streets and the use of a large mobile crane to lift construction materials and equipment to the station. Other large equipment that would be required for the Proposal includes:

- trucks (various types and sizes)
- mobile crane
- generator
- rubber tracked excavators, piling rigs
- concrete pump and truck
- forklift
- lighting tower
- vibratory roller / compaction plate
- elevated work platform, scissor lift
- water cart
- bobcat
- hi-rail plant (elevated work platform/ flatbed/ hiab)

Lights and lighting towers (when in use during night works) would be directed toward the works and away from residents and vegetated areas.

Landscaping

Proposed landscape works include:

- replacement planting as per TfNSW's *Vegetation Offset Guide (2019)*
- an 'entrance upgrade' to the southern commuter car park and southern station entrance (which may include tree planting and fence relocation)
- landscaping of the grassed embankment north of the proposed retaining wall along Narara Valley Drive to improve the northern station entrance.

Rehabilitation

Following construction, all disturbed areas would be rehabilitated. Works include removal of the construction compound, temporary fencing and storage areas, and covering exposed surfaces.

4.6 Proposal elements visible at operation

Once completed, the main Proposal elements visible would be:

- two new lift shafts extending approximately 6m above the floor of the existing footbridge
- two lift landings connecting to the footbridge with anti-throw safety screens
- new retaining wall (approximately 2m high) and switch back ramp associated with the new accessible path from the station to Narara Valley Drive
- the formalised pedestrian crossing across Narara Valley Drive
- new fencing, handrails and bollards.

5 Landscape character assessment

This section describes existing landscape character and its sensitivity, assesses the 'magnitude' of impact of the Proposal on character, and determines a rating of impact on landscape character.

5.1 Existing landscape character

The visual context of the station, and key natural and built features within one kilometre are shown in FIGURE 5-1 and described below.

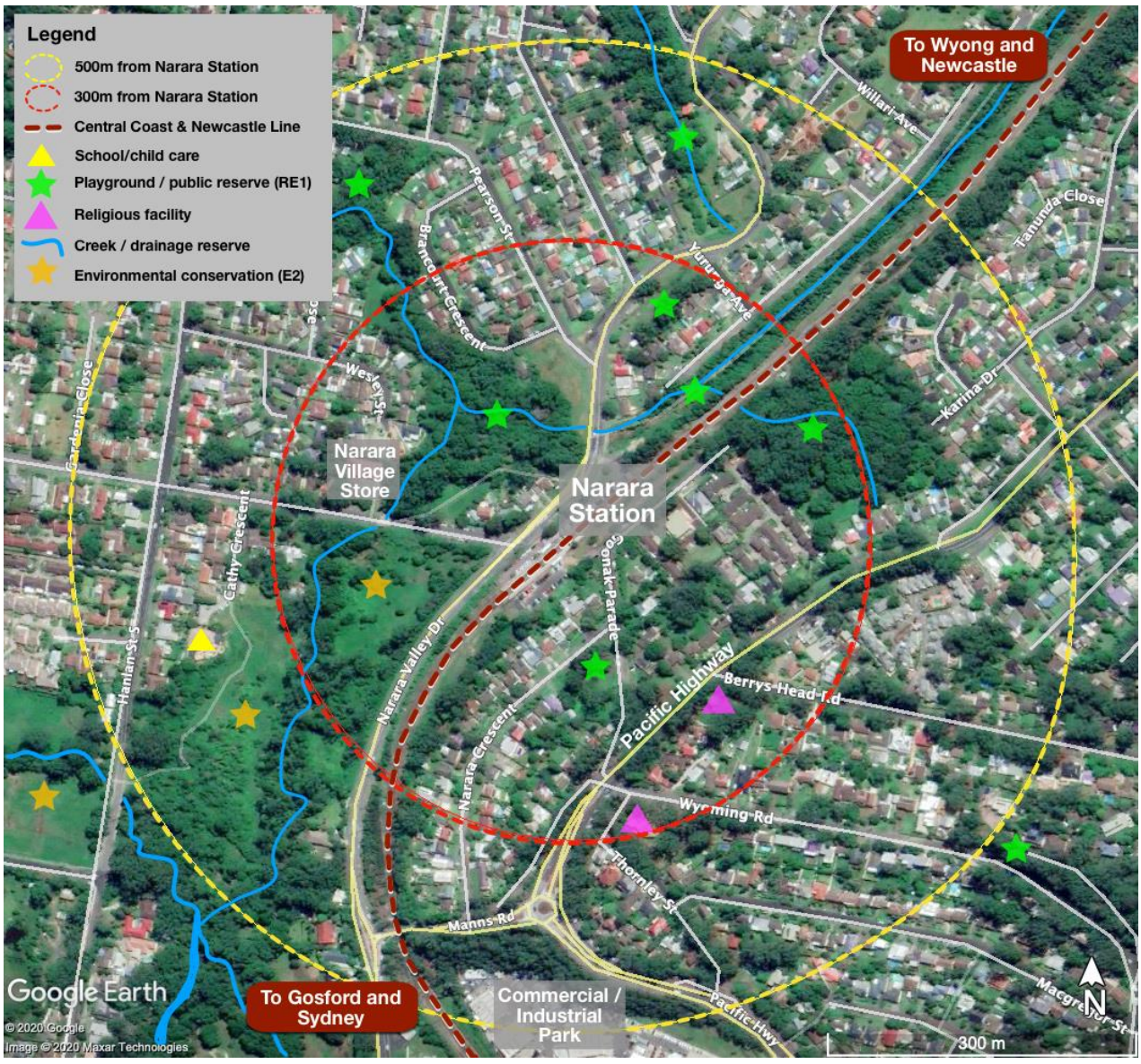

FIGURE 5-1: VISUAL CONTEXT

Landform

The rail corridor is located along the valley floor of the Narara Creek catchment. Land east of the rail corridor is generally quite steep. To the west, land is lower in elevation and generally flat, rising to the densely vegetated ridges of Strickland State Forest (approximately 800m further west).

FIGURE 5-2 shows the vicinity west and north of the station with flat valley floor and vegetated ridges of Strickland State Forest in the background.

FIGURE 5-2: VIEW WEST OF RAIL CORRIDOR

Land use

The station is within a low-density residential area (zoned R2 under *Gosford Local Environment Plan, 2014*). Residences are primarily detached 1-2 storey dwellings. Private properties are generally well vegetated. There are numerous public reserves in the vicinity with dense stands of tall, native trees. Local streets have wide, grassed verges and tall street trees.

FIGURE 5-3 shows the sloping land east of the rail corridor, with tall trees in streets and private property, wide grassed verges and detached dwellings.

FIGURE 5-3: VIEW EAST OF RAIL CORRIDOR

Narara Village Store is approximately 200m west. There are two churches approximately 250m east. A commercial/industrial park is approximately 500m south. The nearest school is Narara Valley High School, almost 1km to the south-west.

There are no known heritage-listed items within the vicinity of the station.

Station setting

The surroundings provide an attractive, leafy setting for the station. At the station, infrastructure is typical of a small, suburban station. FIGURE 5-4 provides images of local landscape character with predominant characteristics of tall trees, sloping land to east, flat land to west, grassed verges and vegetated ridges in the background.

FIGURE 5-4: PHOTOGRAPHS SHOWING LANDSCAPE CHARACTER OF STATION AND VICINITY

5.2 Scenic character (DCP 2013)

Although the Proposal does not formally require consideration of local planning instruments, where possible the design should have some regard to these for consistency with the wider LGA. Therefore, scenic quality and character objectives of CCC were considered in this assessment.

West

Scenic character west of the rail corridor is identified in DCP 2013 as "Scenic Buffer (Floodway)"[9] and described as:

[9] DCP 2013, Part 2 Scenic Quality and Character, Chapter 2.1 Character

Watercourse reserves passing through residential subdivisions … providing visually-prominent backdrops to major roads and residential areas, as well as scenically-distinctive neighbourhood landmarks and backdrops…

East

Scenic character east of the rail corridor is identified in DCP 2013 as "Bungalow Hillsides" [10] and described as:

On gentle to moderate slopes … older subdivisions with a regular pattern of medium-sized lots …shallow swales, wide grassed verges extend into deep front gardens … Occasionally, gardens contain … isolated taller bushland remnants …

Original dwellings are … modestly-scaled single storey timber-framed buildings …Newer houses are brick and tile construction, mostly single storey…

The arterial thoroughfare [the Pacific Highway] *carries a significant and growing volume of … traffic …flanked by tall forest remnants that currently stand close to the roadway and provide scenically-distinctive landmarks ….*

Station

The scenic character of the station is identified in DCP 2013 as "Transit Corridor" [11] and described as:

A broad corridor … flanked by vegetated verges … winding along the valley floors, as well as providing a barrier between neighbouring residential hillsides. … Stations and over-bridges … generally demonstrate poor levels of urban design, consideration of commuter amenity, and they fail to contribute to the identity of valley suburbs.

5.3 Desired character (DCP 2013)

DCP 2013 provides statements of desired character for each scenic character type. These statements provide objectives for future development that emphasise important existing qualities or features that should be protected or enhanced.

The DCP 2013 desired character statement for Narara "Transit Corridor" includes the following[12]:

- *This corridor should remain a primary regional and state transit link, where future infrastructure maintains scenic qualities.*
- *Maintain the informal scenic characters of verges and their surroundings by retaining existing slopes and trees wherever possible or by contouring cuttings and embankments to complement the landscape character of surrounding scenically-distinctive natural backdrops and revegetating cleared areas to recreate indigenous plant communities.*

[10] DCP 2013, Part 2 Scenic Quality and Character, Chapter 2.1 Character
[11] DCP 2013, Part 2 Scenic Quality and Character, Chapter 2.1 Character
[12] DCP 2013, Part 2 Scenic Quality and Character, Chapter 2.1 Character

- *Control noxious or environmental weeds along all road and railway reserves.*
- *Around station buildings, promote high levels of visible activity and safety … adjoining carparks and set-down areas that are shaded by trees and have effective security lighting. Provide sheltered pedestrian access from surrounding streets and carparks to clearly-identified building entrances …*
- *For infrastructure compounds, provide a screen of shady trees wherever space is available.*
- *Along significant pedestrian "desire lines", provide crossings above or below the transit corridor located and designed to minimise visual impact and to blend with natural surroundings, as well as providing safe all-weather and after-hours access.*

The Proposal's compatibility with the desired character identified in DCP 2013 is considered in this report at SECTION 7.

5.4 Sensitivity of character

DCP 2013 identifies the catchment of Narara Creek as a landscape of local significance (Part 2, Chapter 2.2 Scenic Quality). That is, "*it is a landscape which is significant within the locality, but not beyond that level*". The visual components and significance of the landscape are described in DCP 2013 as:

> *The Narara Creek and Ourimbah Creek Landscape Units are an extensive complex of valleys and valley floors with extensive suburban development bounded by naturally vegetated slopes on the east by Berrys Head and Mt Elliot/Coast Open Space System lands and on the west by the northward extension of the Brisbane Water Escarpment. "Fingers" of green extending from the surrounding natural landscapes partly separate the urban areas.*

DCP 2013 has determined the Narara Creek landscape unit:

- has moderate to high absorption capability on lower slopes and mid slopes, and low absorption capability for any development on prominent slopes ridges and the escarpment
- has generally low visual sensitivity on flats and mid slopes to high on prominent slopes, ridges and the escarpment.

Local landscape character is rated in this assessment as having **low** sensitivity to change, as:

- The wider landscape setting of vegetated slopes and tall, mature trees provides an attractive background and scenic resource for the local community.
- The immediate landscape setting (with detached residential dwellings and large number of tall trees interspersed throughout local streets) is valuable, but typical of suburban development in this part of the Central Coast.
- The station is located on lower slopes with a higher capacity to absorb development and within an area of generally lower visual sensitivity.
- The station is not a scenic element within the landscape.

5.5 Magnitude of change to character

Construction

During construction, the Proposal would have a **moderate** magnitude of change on landscape character as:

- Construction would be a prominent feature of the scene and contrast with surrounding scale and character through removal of the tall tree and the appearance of tall, moving cranes, rigs and excavators.
- Construction activities would affect a relatively large proportion of the station and extend into the road reserve.
- The construction period is temporary.

Operation

Following construction, the Proposal would have a **low** magnitude of change on landscape character as:

- The proposed removal of three trees would increase visibility to the station.
- The lift shafts either side of the existing footbridge and new pedestrian access route (including the retaining wall) along Narara Valley Drive, would be recognisable new built elements within the overall scene.
- The new lifts would be the tallest built elements at the station (although only approximately 6m taller than the existing footbridge), and the new retaining wall would be relatively close to travellers using Narara Valley Drive and contrast the previous grassed slope.
- However, the density of trees in the surroundings and predominant landscape characteristics of the vicinity would maintain the distinctive leafy, vegetated character of the local landscape.
- The Proposal would be relatively compatible in scale and form with the existing built character of the station.
- Changes would be confined to a relatively small proportion of the wider scene.
- Trees to be removed would be offset in accordance with TfNSW's *Vegetation Offset Guide (2019)*, which would greatly enhance the number of trees at the station over time.

5.6 Summary of landscape character impact

A summary of assessed impact on landscape character is shown in TABLE 5-1.

TABLE 5-1: ASSESSMENT OF LANDSCAPE CHARACTER IMPACTS

Phase	Sensitivity	Magnitude	Landscape character impact
Construction	Low	Moderate	Moderate-low
Operation	Low	Low	Low

6 Visual impact assessment

This section describes the likely extent of visibility of the Proposal, identifies existing viewpoints and their sensitivity to change, assesses the magnitude of change for each viewpoint, and determines an impact rating.

6.1 Extent of visibility

Within the local landscape of steep slopes and dense vegetation, Narara Station is not readily visible until within close proximity. Visibility is further limited in the vicinity of the station by vegetation in reserves, street trees, buildings and topography. An approximate viewshed is shown in FIGURE 6-1.

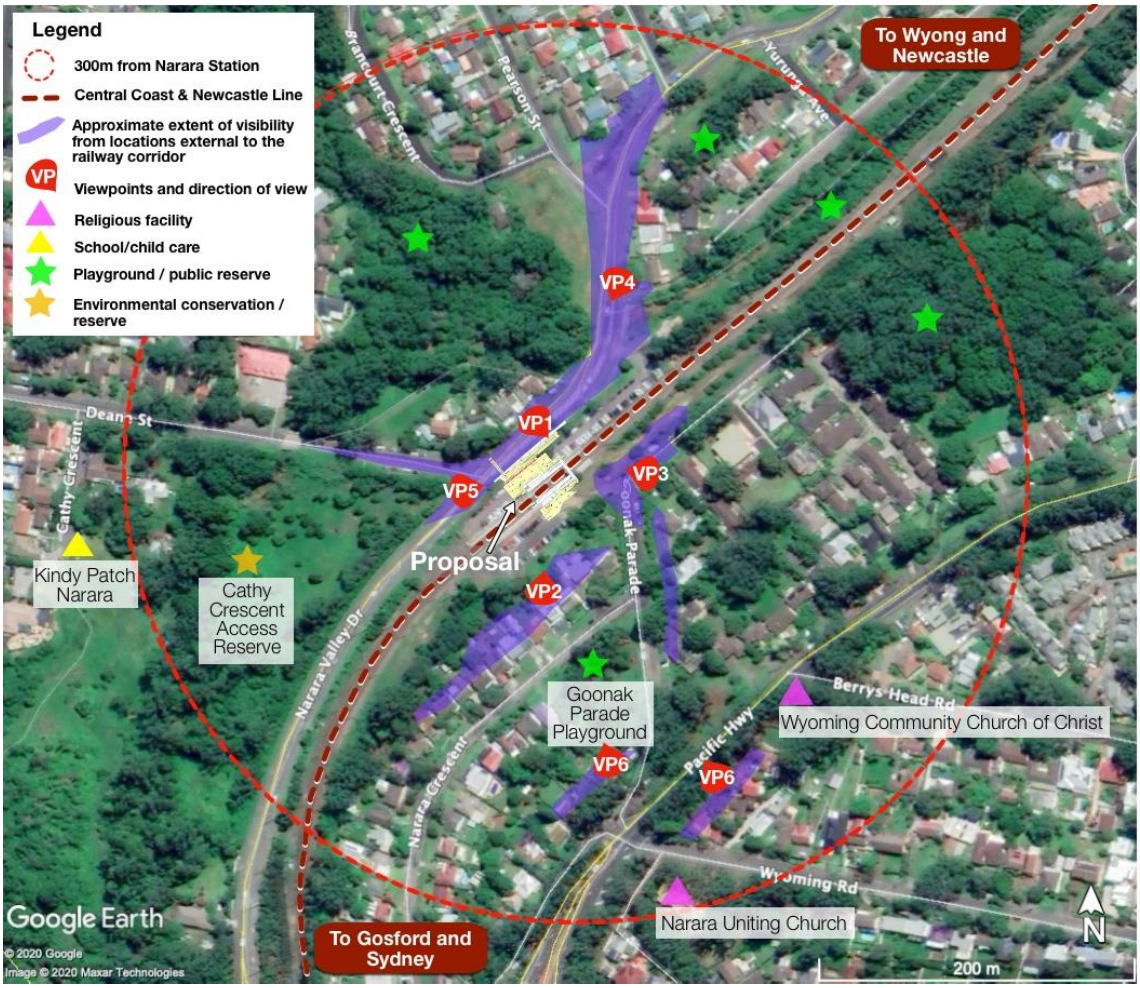

FIGURE 6-1: APPROXIMATE VIEWSHED AND VIEWPOINTS IDENTIFIED FOR ASSESSMENT

6.2 Assessed viewpoints

The nearest sensitive viewpoints (VPs) are residences opposite the rail corridor to the north-west (along Narara Valley Drive) and south (along Narara Crescent). Views are also available from some nearby local roads, residences slightly further from the station.

Six viewpoints (VPs) have been identified for assessment. They are listed by distance from the Proposal and are shown at FIGURE 6-1:

- VP1: Narara Valley Drive (north-west)
- VP2: Narara Crescent (south)
- VP3: Goonak Parade (east)
- VP4: Narara Valley Drive (north)
- VP5: Deanne Street (west)
- VP6: Pacific Highway (south).

The viewpoints are described and assessed in TABLE 6-1 to TABLE 6-6.

TABLE 6-1: VP1 – NARARA VALLEY DRIVE (NORTH-WEST)

Viewpoint characteristics	Opposite the northern station entrance on Narara Valley Drive are three residences. North of the residences is a large reserve.
Existing View	An existing view toward the site (taken approximately 10m north-east of the residences near a public footpath through the reserve) is shown FIGURE 6-2.
Sensitivity	The sensitivity of the view toward the Site is rated as **moderate** as: ▪ The station is visually prominent from the front yards of the three residences. ▪ The station and commuter car park are elevated approximately 1-3m above the level of Narara Valley Drive and the residences, and viewers are in close proximity (private property is approximately 25m from the northern commuter car park). ▪ The grassed embankment, large tree (T3), and vegetation in the background provide some amenity. ▪ The viewpoint also provides temporary, public views for the relatively small number of pedestrians accessing the adjacent reserve and road users accessing Narara Valley Drive.
Proposed view	A photomontage of the Proposal from this viewpoint (independently prepared by Base 3D) is shown at FIGURE 6-3. Please note that T1 and T2 are not included in the image in order to illustrate the proposed changes to the station. However, both trees would be retained, and would partially screen the Proposal from this viewpoint.
Magnitude of change	The magnitude of change during construction is rated as **moderate** as: ▪ Views of the construction site and construction activities (featuring tall mobile equipment and truck movement) would be unavoidable and occur within very close proximity (approximately 15m from private property boundaries). ▪ Construction would be the dominant feature and contrast in scale and character. ▪ There may be up to four 48hr occurrences of nightwork during which lights would be in operation. However, lights would be directed toward the works and away from residents. ▪ Construction would be temporary.
	The magnitude of change at operation is rated as **moderate** as: ▪ Removal of T3 and trimming of T1 and T2 would increase the extent of station in view. ▪ The new retaining wall and ramp to the station from Narara Valley Drive would replace the grassed embankment opposite the residences with a concrete wall (approximately 2m high) and introduce elevated pedestrian movement to the view. ▪ The lift shafts would be new taller built elements in the view, although would be generally compatible in form and scale with the existing station. ▪ Planned landscaping of the embankment (to the north of the retaining wall) would soften and help integrate the new built elements and improve the visual amenity of the station over time.
Impact level	CONSTRUCTION: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate** level of impact during construction.
	OPERATION: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate** level of impact.

FIGURE 6-2: VP1 - EXISTING VIEW

FIGURE 6-3: VP1 – PROPOSED VIEW POST-CONSTRUCTION

TABLE 6-2: VP2 – NARARA CRESCENT (SOUTH)

Viewpoint characteristics	South of the Proposal area, residential properties adjoin the rail corridor. The residences are elevated slightly above the commuter carpark and station, and some residences have an upper level.
Existing view	This private viewpoint was assessed from the nearest publicly accessible location within the rail corridor near the residential boundary. An existing view (taken approximately 50m south of the footbridge) is shown FIGURE 6-4.  **FIGURE 6-4: VP2 - EXISTING VIEW**
Sensitivity	The sensitivity of the view toward the Site is rated as **moderate**: ▪ The viewpoint provides opportunity for private views from a small number (approximately eight) of residential backyards and upper levels. ▪ Private viewers are in close proximity (the closest yard is approximately 50m from the footbridge). ▪ The Site has moderate visual prominence (although it is close, views toward the station are been partially screened by fences and planting within private yards).
Magnitude of change	The magnitude of change during construction is rated as **moderate** as: ▪ The construction compound would be in close proximity (approximately 10-15m) from residential boundaries, however, would be largely screened by existing vegetation. ▪ Construction activities at the footbridge, within the southern commuter car park and platforms would be visible. They would be viewed from an elevated position. ▪ There may be up to four 48hr occurrences of nightwork during which lights would be in operation. However, lights would be directed toward the works and away from residents. ▪ Construction would be temporary.
	The magnitude of change at operation is rated as **low** as: ▪ Removal of T5 (tall shrub at the southern end of the footbridge) and trimming to T6 would increase exposure of the station for some residents, and increase extent of built elements in view. ▪ Some residents would see both lift shafts. The lift shafts would have a backdrop of dense tall vegetation (viewed from the more elevated position of the residences – the position of the image at FIGURE 6-4 is lower in elevation than the actual viewpoint). ▪ The lift shafts would be generally compatible in form and scale with the existing station.
Impact level	CONSTRUCTION: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate l**evel of impact during construction.
	OPERATION: The moderate sensitivity ranking, combined with the low magnitude of change, leads to an overall **moderate-low** level of impact.

TABLE 6-3: VP3 – GOONAK PARADE (EAST)

Viewpoint characteristics	Goonak Parade, east of the station, provides access from the Pacific Highway to the commuter car park and residences. There are several elevated residences on the southern side of Goonak Parade (between the Pacific Highway and the station), and residences at a similar level to the station at the northern end of Goonak Parade, opposite the rail corridor,
Existing View	This private viewpoint was assessed from the nearest publicly accessible location (within the road reserve near the closest Goonak Parade residence). An existing view (taken approximately 55m east of the footbridge) is shown FIGURE 6-5.  **FIGURE 6-5: VP3 - EXISTING VIEW**
Sensitivity	The sensitivity of the view toward the Proposal area is rated as **low**: ▪ The viewpoint provides limited private views from (possibly two) single-storey dwellings opposite the rail corridor and from (up to five) residences on the southern side of Goonak Parade with elevated (upper level) verandahs. ▪ Views are limited by vegetation within the road reserve and private property, and the lower elevation of the station. ▪ The Site is close; however, the station is unlikely to be a prominent feature. Where views are available, the view would likely focus on the vegetated ridge in the background.
Magnitude of change	The magnitude of change during construction is rated as **low** as: ▪ Construction activity would be partially screened by vegetation if viewed from residences or viewed temporarily while travelling along Goonak Parade. ▪ Construction would be temporary.
	The magnitude of change at operation is rated as **low** as: ▪ Removal of T5 (tall shrub at the southern end of the footbridge) would increase exposure of the footbridge and the extent of the station in view. ▪ Both lift shafts would be visible and would appear lower in height than vegetation in the background. ▪ The lift shafts would be generally compatible in form and scale with the existing station.
Impact level	CONSTRUCTION: The low sensitivity ranking, combined with the low magnitude of change, leads to leads to an overall **low** level of impact.
	OPERATION: The low sensitivity ranking, combined with the low magnitude of change, leads to leads to an overall **low** level of impact.

TABLE 6-4: VP4 – NARARA VALLEY DRIVE (NORTH)

Viewpoint characteristics	Approximately 130m north along Narara Valley Drive are several residences. Between the homes and the rail corridor is a pedestrian pathway connecting to Koninderie Parade. Narara Valley Drive is the main through road providing north/south access west of the station. The station and commuter car park are elevated (approximately 1-3m) above the level of Narara Valley Drive.
Existing View	The existing view (taken approximately 110m north of the footbridge) is shown FIGURE 6-6.  **FIGURE 6-6: VP4 - EXISTING VIEW**
Sensitivity	The sensitivity of the view toward the Proposal area is rated as **low** as: ▪ The viewpoint provides opportunity for prolonged, private views from one Narara Valley Drive residence; and temporary, public views for a moderate number of road users travelling south along Narara Valley Drive, pedestrians/cyclists using the path to Koninderie Parade, and customers accessing the commuter car park. ▪ The private viewpoint is in moderate proximity and the Proposal Site occupies a relatively small proportion of the available view.
Magnitude of change	The magnitude of change during construction is rated as **moderate** as: ▪ Construction activity would be a dominate feature of the scene and directly in the line-of-sight of travellers on Narara Valley Drive. ▪ From private residences, activities would be partially screened by vegetation, be more in the background and appear less dominant. ▪ Movement of tall equipment and trucks would contrast in scale and character ▪ Construction would be temporary.
	The magnitude of change at operation is rated as **low** as: ▪ Removal of T3 (tall tree near the footbridge) and proposed tree trimming is likely to increase exposure of the footbridge and the station. ▪ The two proposed lifts would be visible; however, tall vegetation in the background would appear behind and above the southern lift shafts and the northern lift shaft would be partially concealed by existing vegetation to be retained in the foreground. ▪ The new pedestrian ramp along the embankment would be in view, however, would be relatively compatible with the existing form of the landscape.
Impact level	CONSTRUCTION: The low sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate-low** level of impact during construction.
	OPERATION: The low sensitivity ranking, combined with the low magnitude of change, leads to an overall **low** level of impact.

TABLE 6-5: VP5 – DEANNE STREET (WEST)

Viewpoint characteristics	Approximately 65m west, Deanne Street intersects Narara Valley Drive. Deanne Street is a local road providing access to residences, a church and a few local businesses. The station and commuter car park are elevated (approximately 2-3m) above the viewpoint.
Existing View	An existing view (taken approximately 70m west of the station at the intersection of Deaane Street and Narara Valley Drive) is shown FIGURE 6-7.  **FIGURE 6-7: VP5 - EXISTING VIEW**
Sensitivity	The sensitivity of the view toward the Proposal area is rated as **low** as: ▪ The viewpoint provides temporary, public views for road users travelling north along Narara Valley Drive and Deanne Street road users travelling east. (There are no residences with views from this location). ▪ The site occupies a moderate proportion of the available view; however, the extent of station seen is limited by vegetation.
Magnitude of change	The magnitude of change during construction is rated as **moderate** as: ▪ Travellers heading north along Narara Valley Drive would travel alongside the construction zone. Travellers heading east along Deanne Street would be in direct line-of-sight of the construction zone ▪ Construction activity would be a close and dominate feature of the scene. ▪ Construction is temporary.
	The magnitude of change at operation is rated as **low** as: ▪ Removal of T3 (tall tree near the footbridge) would increase exposure of the footbridge. Removal of T4 (tree within Narara Valley Drive footpath) would increase exposure of the commuter car park and platform. ▪ The northern lift shaft would be a new visible feature in the view. The lift shaft would be lower in height than vegetation in the background, and it would be generally compatible in form and scale with the existing station. ▪ The new pedestrian ramp along the embankment would reduce the extent of grass visible. However, the pathway would be relatively similar in scale and form to the existing landscape. ▪ Planned landscaping of the embankment (to the north of the retaining wall) would soften and help integrate the new built elements and improve the visual amenity of the station over time.
Impact level	CONSTRUCTION: The low sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate-low** level of impact during construction.
	OPERATION: The low sensitivity ranking, combined with the low magnitude of change, leads to an overall **low** level of impact.

TABLE 6-6: VP6 – PACIFIC HIGHWAY (SOUTH)

Viewpoint characteristics	Approximately 200m south-east, several elevated residences line the Pacific Highway. There is a public reserve opposite the homes.
Existing View	This private viewpoint was assessed from the nearest (safest) publicly accessible location - within the public reserve adjacent (west) of the Pacific Highway. An existing view (taken approximately 185m south-west of the station) is shown FIGURE 6-7. Although small, the station platform, fencing, lights and sign are visible.  **FIGURE 6-8: VP6 - EXISTING VIEW**
Sensitivity	The sensitivity of the view toward the Proposal area is rated as **low** as: ▪ Prolonged, private views are potentially available from the front or rear verandah of approximately five elevated residences. ▪ The site occupies a very small proportion of the available view. ▪ The station is mostly screened by trees. Only bright and tall features are visible against the dark green background (such as the station sign and light poles).
Magnitude of change	The magnitude of change during construction is rated as **low** as: ▪ Tall construction activity may be seen extending above surrounding vegetation. ▪ Construction is temporary.
	The magnitude of change at operation is rated as **negligible** as: ▪ A proportion of the Proposal in view would be consistent with the existing. ▪ The lift shafts would be partially screened by existing trees.
Impact level	CONSTRUCTION: The low sensitivity ranking, combined with the low magnitude of change, leads to an overall **low** level of impact during construction.
	OPERATION: The low sensitivity ranking, combined with the negligible magnitude of change, leads to an overall **negligible** level of impact.

6.3 Summary of visual impact to identified viewpoints

The Proposal's assessed impact to identified viewpoints is summarised in TABLE 6-7 and TABLE 6-8.

TABLE 6-7: ASSESSMENT OF VISUAL IMPACTS TO VIEWPOINTS – CONSTRUCTION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: Narara Valley Drive (north-west)	Moderate	Moderate	Moderate
VP2: Narara Crescent (south)	Moderate	Moderate	Moderate
VP3: Goonak Parade (east)	Low	Low	Low
VP4: Narara Valley Drive (north)	Low	Moderate	Moderate-low
VP5: Deanne Street (west)	Low	Moderate	Moderate-low
VP6: Pacific Highway (south)	Low	Low	Low

TABLE 6-8: ASSESSMENT OF VISUAL IMPACTS TO VIEWPOINTS – OPERATION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: Narara Valley Drive (north-west)	Moderate	Moderate	Moderate
VP2: Narara Crescent (south)	Moderate	Low	Moderate-low
VP3: Goonak Parade (east)	Low	Low	Low
VP4: Narara Valley Drive (north)	Low	Low	Low
VP5: Deanne Street (west)	Low	Low	Low
VP6: Pacific Highway (south)	Low	Negligible	Negligible

7 Mitigation

This section describes the positive design measures of the Proposal and additional measures that are recommended to improve the visual outcome.

7.1 Positive visual attributes of the Proposal

The Proposal has incorporated a number of positive characteristics which would reduce its potential landscape character and visual impacts. These include:

- The largest Proposal elements (the two lift shafts) would occupy a relatively small space.
- The grey-based colours selected for the lift shafts would complement the existing built elements at the station.
- The main construction compound would be located behind vegetation and screened from the nearest residential properties.
- Unnecessary loss or damage to vegetation would be avoided by protecting trees prior to construction.
- An entrance upgrade to the southern commuter car park and southern station entry, with the aim of creating an attractive and inviting station.
- All lighting would be designed and installed in accordance with the requirements of *AS4282 Control of the Obtrusive Effects of Outdoor Lighting*.
- Any existing and future graffiti would be removed in accordance with TfNSW's standard requirements.
- A Public Domain Plan and an Urban Design Plan would be prepared which includes replacement planting to address vegetation removed during construction.
- Trees to be removed would be offset in accordance with Transport for NSW (2019) *Vegetation Offset Guide*, which would greatly enhance the number of trees at the station over time.
- Weeds at the station would be actively removed and disposed in accordance with *TfNSW's Weed Management and Disposal Guide*.

7.2 Additional measures

In addition, the following measures are recommended to improve the visual outcome are:

1. To improve customer experience and amenity:
    a) Advise Council of the planned upgrade and the potential opportunities for them to undertake tree planting in conjunction with

Council improvement projects to improve landscape character, amenity and shade (in line with DCP 2013 objectives).

b) Ideally (possibly organised in conjunction with Council) incorporate tree planting with proposed landscaping (in consideration of CPTED and overhead utilities) near the station entrances.

c) Landscape the embankment (to the north of the proposed retaining wall opposite VP1) to improve the outlook for residents, enhance the northern station entrance and create an inviting customer experience.

2. Reduce visual clutter:

a) Minimise new fencing.

b) New fencing should be a darker colour such as the steel grey of the existing footbridge (do not paint Proposal components white unless there is a safety or functional requirement to do so as it is generally the most conspicuous colour).

c) Colour ancillary elements within the rail corridor a dark colour to reduce their visibility and/or screen ancillary elements if possible.

3. Improve privacy for adjoining residents:

a) Include within proposed replacement planting, screen planting along the southern boundary with adjoining residents to increase their privacy and screen views to the station (in consultation with residents).

7.3 Desired future character

By incorporating the existing and proposed additional design measures, the Proposal would address many aspects of the desired future character for the rail corridor specified within *DCP 2013*. A summary of desired character and how the Proposal addresses each aspect, is addressed in TABLE 7-1:

TABLE 7-1: DCP 2013 DESIRED CHARACTER FOR NARARA TRANSIT CORRIDOR

Desired character for Narara "Transit Corridor" identified within DCP 2013	How addressed by the Proposal
This corridor should remain a primary regional and state transit link, where future infrastructure maintains scenic qualities.	The Proposal maintains the role of the station within the regional and state transit link. Proposed infrastructure does not reduce scenic qualities of the setting.
Maintain the informal scenic characters of verges and their surroundings by retaining existing slopes and trees wherever possible or by contouring cuttings and embankments to complement the landscape character of surrounding scenically-distinctive natural backdrops and revegetating cleared areas to recreate indigenous plant communities.	Although the Proposal requires removal of a large existing tree from the verge and two smaller trees/shrubs, trees to be removed would be offset in accordance with Transport for NSW (2019) *Vegetation Offset Guide*, which would greatly enhance the number of trees at the station over time. The proposed walkway from Narara Valley Drive to the commuter car park is contoured to

Desired character for Narara "Transit Corridor" identified within DCP 2013	How addressed by the Proposal
	complement the landscape. The natural scenic backdrop would not be affected by the Proposal.
Control noxious or environmental weeds along all road and railway reserves.	Weeds at the station would be actively removed and disposed in accordance with *TfNSW's Weed Management and Disposal Guide*.
Around station buildings, promote high levels of visible activity and safety … adjoining carparks and set-down areas that are shaded by trees and have effective security lighting. Provide sheltered pedestrian access from surrounding streets and carparks to clearly identified building entrances along footpaths and verandahs …	The area of, and around, the station has been designed in accordance with CPTED[13] principles. CCTV cameras and security lighting is proposed. Entrances will be clear with good visual access. There are existing shelters at each platform.
For infrastructure compounds, provide a screen of shady trees wherever space is available.	The main construction compound has been located within the rail corridor, behind screening vegetation.
Along significant pedestrian "desire lines", provide crossings above or below the transit corridor located and designed to minimise visual impact and to blend with natural surroundings, as well as providing safe all-weather and after-hours access.	The Proposal has been designed to provide all-access crossing above the transit corridor. It has been incorporated with the existing footbridge to minimise visual impact. The footbridge does not cater for all-weather access.

[13] Crime Prevention Through Environmental Design

8 Key findings and conclusion

The Proposal would improve accessibility at Narara Station by installing two lifts to the existing footbridge, a Boarding Assistance Zone (BAZ) on the platform, accessible footpaths, lift landings, accessible parking space. The lifts would be the most significant addition. They would be approximately 6m taller than the floor of the existing footbridge and be comprised of rendered pre-cast concrete with glazing. Three trees would be removed.

Two assessments were conducted to determine the level of visual impact of the Proposal: impact on landscape character and impact to viewpoints.

Impact on landscape character

The local landscape is characterised by dense stands of tall trees (along drainage lines, within streets and private properties); steep, sloping land to the east; flat, valley floor to the west; wide, grassed verges; and vegetated ridges in the background. The surroundings provide a natural and attractive, leafy setting for the station. The character of the local catchment has been identified in *Gosford Development Control Plan 2013* as being of local significance.

During construction, local character would be temporarily affected by the introduction of large, moving equipment, and tree removal. Following construction, the station would be more exposed, and its prominence would increase. The lift shafts and new pedestrian access would be recognisable new elements, although confined to a relatively small proportion of the wider scene. The predominant landscape characteristics of the surroundings would not be affected. A summary of impact to landscape character is provided in TABLE 8-1.

TABLE 8-1: SUMMARY OF LANDSCAPE CHARACTER IMPACTS

Phase	Sensitivity	Magnitude	Landscape character impact
Construction	Low	Moderate	Moderate-low
Operation	Low	Low	Low

Impact to views

Six viewpoints were identified for assessment within the limited visual catchment of the Proposal area. The most sensitive viewpoints are from residences opposite the station on Narara Valley Drive (north-west of the rail corridor) and Narara Crescent (south of the rail corridor).

During the temporary construction period, tall mobile equipment and construction activities would be very close to some residences (within approximately 25m of VP1 and VP2), and views of construction activity would be prominent and unavoidable. Views of construction activity would be less prominent from viewpoints located further from the construction zone. The assessed impact of the Proposal on views during construction is summarised in TABLE 8-2.

TABLE 8-2: ASSESSMENT OF IMPACTS TO VIEWPOINTS – CONSTRUCTION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: Narara Valley Drive (north-west)	Moderate	Moderate	Moderate
VP2: Narara Crescent (south)	Moderate	Moderate	Moderate
VP3: Goonak Parade (east)	Low	Low	Low
VP4: Narara Valley Drive (north)	Low	Moderate	Moderate-low
VP5: Deanne Street (west)	Low	Moderate	Moderate-low
VP6: Pacific Highway (south)	Low	Low	Low

Following construction, the station would appear more open and exposed to view (due to tree removal). For VP1 residents opposite the station, the proposed new features (such as the retaining wall, ramped path and northern lift shaft) would result in the station being more prominent in the view. From other viewpoints, the proposed new elements would be less prominent, and seen against a backdrop of dense tall vegetation. The assessed impact of the Proposal on views is summarised in TABLE 8-3.

TABLE 8-3: ASSESSMENT OF IMPACTS TO VIEWPOINTS – OPERATION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: Narara Valley Drive (north-west)	Moderate	Moderate	Moderate
VP2: Narara Crescent (south)	Moderate	Low	Moderate-low
VP3: Goonak Parade (east)	Low	Low	Low
VP4: Narara Valley Drive (north)	Low	Low	Low
VP5: Deanne Street (west)	Low	Low	Low
VP6: Pacific Highway (south)	Low	Negligible	Negligible

Conclusion

The Proposal would result in temporary adverse visual impacts during construction. The proposed loss of three trees and introduction of new built elements would initially result in increased prominence of the station. However, the proposed elements (the largest of which are the lift shafts and retaining wall/pathway on the embankment) would be generally compatible in form and scale with the existing station.

Over time, replacement trees (to offset trees removed), landscaping of the embankment, and station entrance upgrades, would reduce impacts and contribute to the desired future character of the local area. The Proposal would occupy a relatively small proportion of the wider view and distinctive local character would be retained.

9 References

All Arbor Solutions, 16 June 2020, *Arboricultural Impact Assessment, Narara Railway Station.*

Aurecon (14 December 2018), *TAP 3 Narara Station – Scoping Design Report,* Revision 2

Gosford Development Control Plan 2013

Gosford Local Environmental Plan 2014

Landscape Institute Technical Guidance Note 06/19 (17 September 2019) *Visual Representation of Development Proposals*

Roads and Maritime Services (December 2018) *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04*

Transport for NSW (23 August 2019) *Vegetation Offset Guide*

Transport for NSW (23 August 2019) *Weed Management and Disposal Guide*

Transport for NSW (22 July 2019) *Vegetation Management (Protection and Removal) Guideline*