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# Tuggerah Station Upgrade

Landscape and Visual Impact Assessment



## Document Control

Tuggerah Station Upgrade – Landscape and Visual Impact Assessment

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TABLE 1-1 ABBREVIATIONS

Term	Meaning
CCTV	Closed Circuit TV
CPTED	Crime Prevention Through Environmental Design
DCP	Development Control Plan
DDA	<i>Disability Discrimination Act (1992)</i>
DSAPT	Disability Standards for Accessible Public Transport (2002)
LEP	Local Environmental Plan
LSPS	Local Strategic Planning Statement
Tactiles	Tactile ground surface indicators
TfNSW	Transport for New South Wales

TABLE 1-2 DEFINITIONS

Term	Meaning
Reference design	The reference design is the preliminary design presented in the architectural drawings by FutureRail (dated 20/08/2021), which would be refined by the Contractor (should the Proposal proceed) to a design suitable for construction (subject to TfNSW acceptance).
Detailed design	Detailed design broadly refers to the process that the Contractor undertakes (should the Proposal proceed) to refine the reference design to a design suitable for construction (subject to TfNSW acceptance).
Out of hours work	Defined as works <i>outside</i> standard construction hours (i.e. outside of 7am to 6pm Monday to Friday, 8am to 1pm Saturday and no work on Sundays/public holidays).
Sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals.
The Proposal	The construction and operation of the Tuggerah Station Upgrade.

# 1. Introduction

## 1.1. Overview

Tuggerah Station has been identified for inclusion in the Transport for NSW (TfNSW) Transport Access Program (TAP) for an accessibility upgrade, as it currently does not accommodate mobility impaired access to rail services or meet key requirements of the *Disability Standards for Accessible Public Transport (DSAPT)* or the Commonwealth *Disability Discrimination Act 1992 (DDA)*.

IRIS Visual Planning + Design has been engaged by Jacobs to undertake a visual impact assessment of this Proposal.

In summary, the Proposal would include:

- A new pedestrian footbridge with two new lifts and roof structure
- Removal of non-compliant station access ramps, stairs and footpaths
- New roof over station concourse areas
- Improved station entrances, including wider stairs, new ramps, bike racks and landscaping
- Widening and lengthening of platforms and regrading where required
- New shelter over the boarding assistance zone on Platform 2
- Upgraded security and electronic systems
- New DDA compliant toilet facility, master's office, communications room
- Modification of existing infrastructure and relocation of existing utilities to allow for installation of these works.

The proposal design also places a new station pedestrian bridge in a logical location for future extension west across the Pacific Highway and East across the (future) Fast Rail alignment.

## 1.2. Study scope

This visual impact assessment identifies the potential visual impacts of the proposal on views to the station from surrounding areas. The study area for this proposal extends generally from the Pacific Highway to the north and west, the commuter car park and Bryant Drive to the east, Tuggerah Creek to the south.

This assessment is based upon a viewpoint assessment, identifying and assessing views that represent the range of publicly accessible views to the proposal. The potential views from nearby properties will be inferred from these views and site observations. This assessment includes views from surrounding roads, footpaths, commuter car park, bus stops and from within the Tuggerah Station.

The visual assessment begins by identifying the existing landscape features of the site and includes a description of the visual characteristics of the proposal, followed by an individual representative viewpoint assessment.

The representative viewpoint assessment includes a description of the sensitivity and the magnitude of change that would be experienced in each view. These factors are then combined to determine a level of visual impact.

The assessment has identified the impacts of the proposal during the day and night, throughout construction and in operation.

The assessment also considers the urban design and landscape impacts of the proposal in terms of its consistency with relevant TfNSW urban design principles and Central Coast Council documents.

This assessment is based on the Definition Design report (dated August 2021) and architectural drawings prepared by FutureRail (dated 20/08/2021), including general arrangement plans, sections and perspectives, showing features of the Proposal.



### 1.3. Site location

Tuggerah Station is located in the Central Coast Region of New South Wales, within Central Coast Council local government area. The station is served by NSW TrainLink Central Coast and Newcastle line services.

The location of the Proposal in the regional context is shown on Figure 1-1 and the site location is shown in Figure 1-2.



Figure 1 - Tuggerah Aerial Context

FIGURE 1-1 TUGGERAH STATION CONTEXT MAP











 North Not to scale	<b>Key:</b>  Site boundary	 Bus stop  Commuter car park  Kiss and ride zone  Taxi stand
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FIGURE 1-2 SITE LOCALITY MAP



## 2. The Proposal

Transport for NSW proposes to upgrade Tuggerah Station, on the NSW Central Coast, as part of the NSW Government's Transport Access Program, a NSW Government Initiative to provide a better experience for public transport customers by delivering accessible, modern secure and integrated transport infrastructure.

As part of this program, the Tuggerah Station Upgrade (the Proposal) would aim to provide a station precinct that is accessible to those with a disability, limited mobility, parents/carers with prams, and customers with luggage.

The description of the Proposal is based on the reference design and is subject to detailed design.

### 2.1. Proposal components

The Proposal would include the following key elements:

- Construction of a new pedestrian footbridge north of the existing footbridge with new stairs connecting the Pacific Highway, the commuter carpark and the station platforms with canopies for weather protection over the footbridge and all stairs
- Installation of a two-stop lift connecting Platform 1 and the new pedestrian footbridge, and installation of a three-stop lift connecting the Pacific Highway station entrance, Platform 2 and the new pedestrian footbridge
- Removal of the existing non-compliant ramps, stairs and pedestrian footbridge
- Removal of the existing Station Master's office, and construction of a new Station Master's office
- Widening and lengthening of Platforms 1 and 2 to achieve compliant platform widths, improve accessibility and space for station customers and allow for future rolling stock
- Construction of a new family accessible toilet on Platform 1 and a new unisex ambulant toilet on Platform 1

- Interchange upgrade work including provision of new bike parking facilities at the new station entrances, provision of 15 DDA compliant accessible parking spaces to replace 19 existing non-compliant parking spaces in the commuter car park, new accessible footpaths on both eastern and western side of the station, and upgrade to the existing Pacific Highway southbound bus stop to be DSAPT compliant
- Landscaping work including public domain improvements at the station forecourt areas, new lighting, and enhancement of sightlines between Anzac Road and Bryant Drive
- Ancillary work including station power supply upgrade, replacement of existing 11kV and 66kV overhead power lines with underground cables, construction of new equipment room, provision of new or reinstated tactile pavement markings where required and improvements to station communication systems including CCTV and hearing loops.

Figure 2-1 shows the general layout of key elements for the Proposal.

## 2.2. Materials and finishes

Each of the upgraded or new facilities would be constructed from a range of different materials, with a different palette for each architectural element. Subject to detailed design, the Proposal would include the following:

- Lift shafts – concrete and glass with steel and roof sheeting
- Concourse and pedestrian footbridge – concrete base with mesh throw screens, decorative panels and roof
- Platform stairs – concrete with mesh throw screens and canopy
- Platform canopies – steel frame and lightweight and/or glass infill

The design would be submitted to Transport for NSW's Design Review Panel at various stages for comment and advice before being accepted by Transport for NSW.

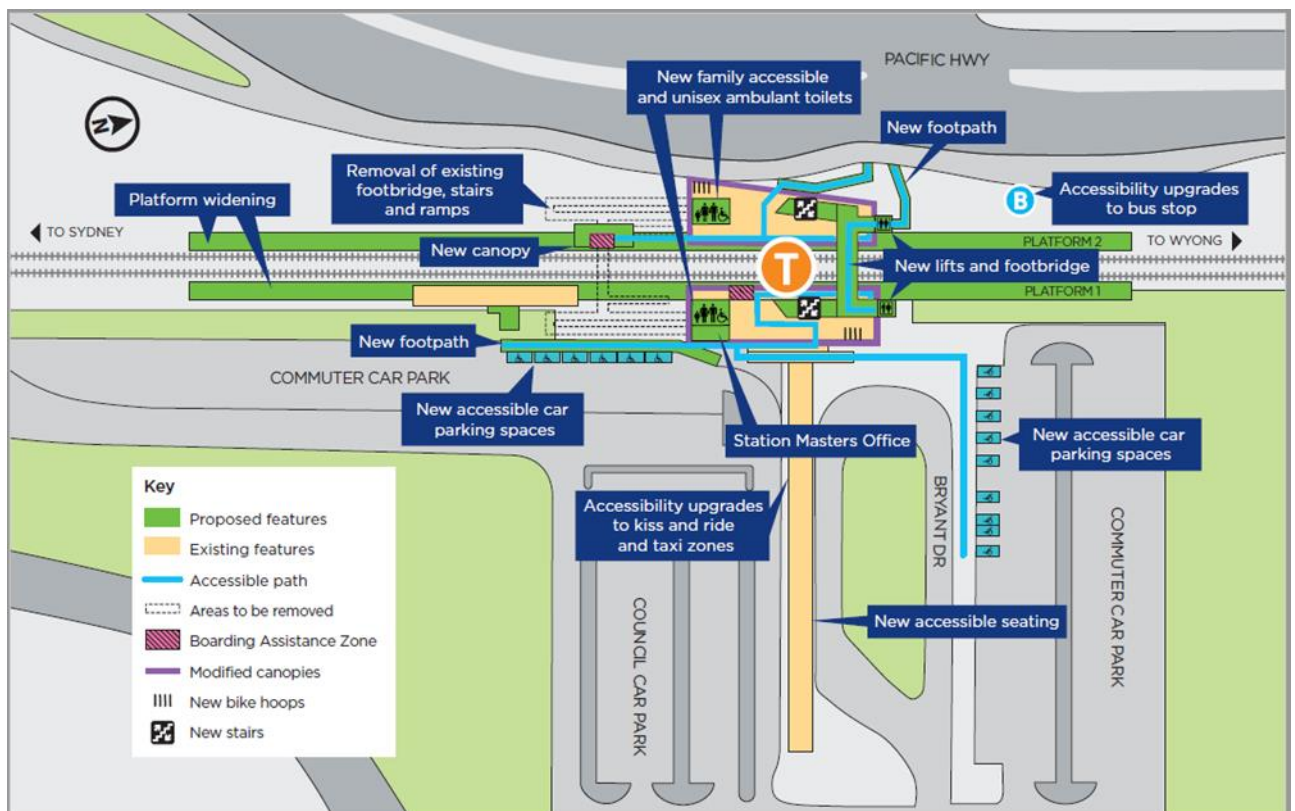


FIGURE 2-1 GENERAL LAYOUT OF THE PROPOSAL (INDICATIVE ONLY, SUBJECT TO DETAILED DESIGN)

## 2.3. Construction

Work required for the Proposal would be undertaken during standard (NSW) Environment Protection Authority (EPA) construction hours, which are as follows:

- 7.00 am to 6.00 pm Monday to Friday
- 8.00 am to 1.00 pm Saturdays
- No work on Sundays or public holidays.

Work would also occur outside standard hours and would include night work and works during routine rail possessions which are scheduled closures that would occur regardless of the Proposal when part of the rail network is temporarily closed and trains are not operating.

Out of hours work is required in some cases to minimise disruptions to customers, pedestrians, motorists and nearby sensitive receivers; and to ensure the safety of railway workers and operational assets.

Out of hours work may also be scheduled outside rail possession periods. Approval from Transport for NSW would be required for any out of hours work and the affected community would be notified as outlined in Transport for NSW's *Construction Noise and Vibration Strategy* (TfNSW, 2019).

Four temporary construction ancillary facilities would be required during the construction period, to accommodate a site office, amenities, laydown and storage area for materials (refer to Figure 2-2). All of the land within the four proposed ancillary facility sites is owned by Transport for NSW.

A brief description of each ancillary facility site is given as follows:

- Pacific Highway South – main ancillary facility, on the western side at the southern end, within the rail corridor. Access would be from the left lane of the Pacific Highway heading south. This area would be used for construction compounds with site sheds
- Pacific Highway North – on the western side, adjacent to the intersection of Anzac Road and the Pacific Highway. Access would be from the left lane of the Pacific Highway heading south. This area would be used for construction plant and equipment and materials laydown only
- Bryant Drive South – on the eastern side, at the southern end of the commuter car park area. Site access would be from Wyong Road via Bryant Drive and through the existing bus interchange. This area would be used for construction compounds with site sheds
- Bryant Drive North – on the eastern side, at the northern end of the commuter car park area. Site access would be from Wyong Road via Bryant Drive and past the existing bus interchange. This area would be used during rail possession weekend periods only.

Subject to approval, construction is expected to commence in early 2022 and take up to around 16 months to complete.

Figure 2-2 shows the location of the construction ancillary facility sites.



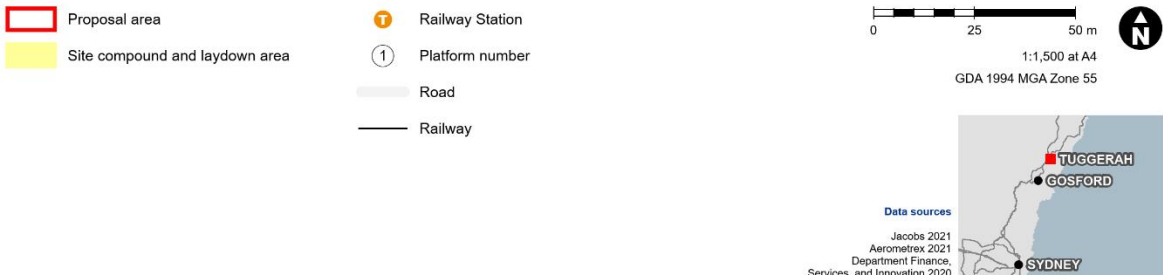


FIGURE 2-2 LOCATION OF CONSTRUCTION ANCILLARY FACILITY SITES



### 3. Planning context

There are several state and local government planning documents which provide guidance as to the landscape and visual values of the site, and desired planning outcomes. These are summarised in Section 3.1.

There are also a number of planned developments within the setting of the site that would influence the landscape features and character of the site. These are also described in Section 3.3.

#### 3.1. Regional planning documents

##### 3.1.1. Central Coast Regional Plan 2036

Tuggerah is identified as a key strategic centre within the region's northern growth corridor, which extends from Tuggerah to Warnervale. The corridor has been recognised as having significant capacity for growth, with efficient access to infrastructure and employment opportunities. Within the corridor, Tuggerah will function as a regionally significant employment area, with plans to revitalise the Tuggerah Town Centre as a major local centre.

The Plan notes Tuggerah's strategic location and aspires to utilise the existing inter-regional links (including rail) to support new activity and employment. Investment into the growth corridor will additionally aim to grow commercial and retail activity within the centre.

##### 3.1.2. Draft Central Coast Regional Plan 2041

A draft update to the regional plan has been prepared. The *Draft Central Coast Regional Plan 2041* identifies Tuggerah as a Regionally Significant Growth Area, within the Tuggerah to Wyong Economic Corridor. Within the corridor, Tuggerah is intended to grow to be a regionally significant mixed use centre, with a range of employment, entertainment and housing choices.

The rail corridor and natural landscape are identified as barriers to east-west connections in Tuggerah, which require investment to overcome and improve pedestrian and active transport options. The Plan refers to Tuggerah's green amenity and capacity for development in close proximity to the rail corridor and

open space and encourages transport-oriented development.

The following urban design principles are provided for Tuggerah growth area:

- Tuggerah to emerge as a regionally significant mixed use centre
- Deliver a multi-nodal town centre focused at the transport interchange
- Facilitate walking and cycling connections between separate quadrants
- Flood mitigation responds to environmental constraints
- Green orientated development and public space along blue and green grid connections
- Create better connections between Tuggerah and Wyong.

Maintaining visual links and providing active connections between Tuggerah and Wyong, and providing a town centre focus to Anzac Road are also listed as priorities for Tuggerah. The structure plan for Tuggerah shows mixed-use investigation areas surrounding the Tuggerah train station.

#### 3.2. Local government planning documents

Tuggerah Station is located in the Central Coast local government area. While the following planning documents do not apply to this Proposal, they contain the planning intent for areas surrounding the station.

Relevant clauses from the Draft Central Coast Local Strategic Planning Statement 2020 (LSPS), Draft Central Coast Local Environmental Plan 2018 (LEP) and Draft Central Coast Development Control Plan 2018 (DCP) are summarised in the following sections. The Draft LEP and DCP have been adopted by Council and the Department of Planning, Infrastructure and Environment (DPIE) has been drafting the legal instrument and liaising with Council to resolve any outstanding issues, which expected to be completed in early 2022. For the purposes of this assessment, these draft instruments provide the most relevant context for the Proposal.

### 3.2.1. Draft Central Coast Local Strategic Planning Statement

The Draft Central Coast LSPS (Central Coast Council, 2020) outlines the vision for land use planning over the next 20 years and is intended to guide future planning decisions.

Tuggerah, including the station, is located within the proposed Tuggerah to Warnervale growth corridor. Transit Oriented Development and improved pedestrian and cycle links around Tuggerah Station are identified as key priorities for this corridor.

### 3.2.2. Draft Central Coast Local Environmental Plan 2018

A key aim of the Draft LEP is to promote a high standard of urban design that responds appropriately to the existing or desired future character of areas (cl.1.2[2h]). It also intends that all development should improve accessibility and the health and wellbeing of residents and visitors (cl.1.2[2i]).

Tuggerah Station and the adjacent commuter car park is zoned SP2 Infrastructure. There are no heritage items or conservation areas within the station or at adjacent sites.

### 3.2.3. Draft Central Coast Development Control Plan 2018

The Draft Central Coast DCP provides further detail to support the provisions in the Draft LEP and aims to promote quality development outcomes in the Central Coast. The following sections are relevant.

#### Character and scenic quality

The provisions in Part 2 (chapter 2.17) aim to maintain the character and scenic quality of an area while considering the desired and likely future character, including consideration of the following character issues:

- Height, size and scale of buildings: compatibility with predominant patterns across the surrounding neighbourhood
- Architectural form, construction and detail: appropriateness to existing scenic quality and streetscape character

- Garden design, including outdoor structures: compatibility with scenic quality and streetscape character
- Street verges: conservation of visually prominent landscape features.

#### Tuggerah Precinct

Part 5 (chapter 5.34) contains location specific development controls for the Tuggerah Precinct, including:

- To encourage a well designed, safe and active public domain which contributes to the well being of the community
- To ensure that the built form defines a spatial hierarchy with a human scale which contributes to the legibility of the centre.

In particular, the DCP has the following objectives for Tuggerah Station:

- Any future redevelopment of the Tuggerah Station should seek to improve facilities for pedestrian movements between the Tuggerah Straight and Lakes Road Area. It is also considered highly desirable for a sensitively designed, multi-level car parking station to be constructed, providing an asset for the use of commuters and visitors to the regional centre.
- Redevelopment of Tuggerah Station would require a Master Plan and would be exempt from generic setbacks applying to development adjoining the Great Northern Railway.

### 3.3.Planned development

There are several projects that are currently being planned and delivered near Tuggerah Station that would alter the character of the station (refer to Figure 3-1), including:

- Faster Rail & Fast Rail, with a station at Tuggerah, east of the existing station
- Bus interchange at a location to be confirmed
- Commuter car park at a location to be confirmed
- Food Innovation Hub in existing IN1 zone, north of the station
- Tuggerah Town Centre Development, west of Tuggerah Station
- Upgrade of Anzac Road, including mixed use development, landscaping, a town square and an active link between Westfield and Tuggerah Station.

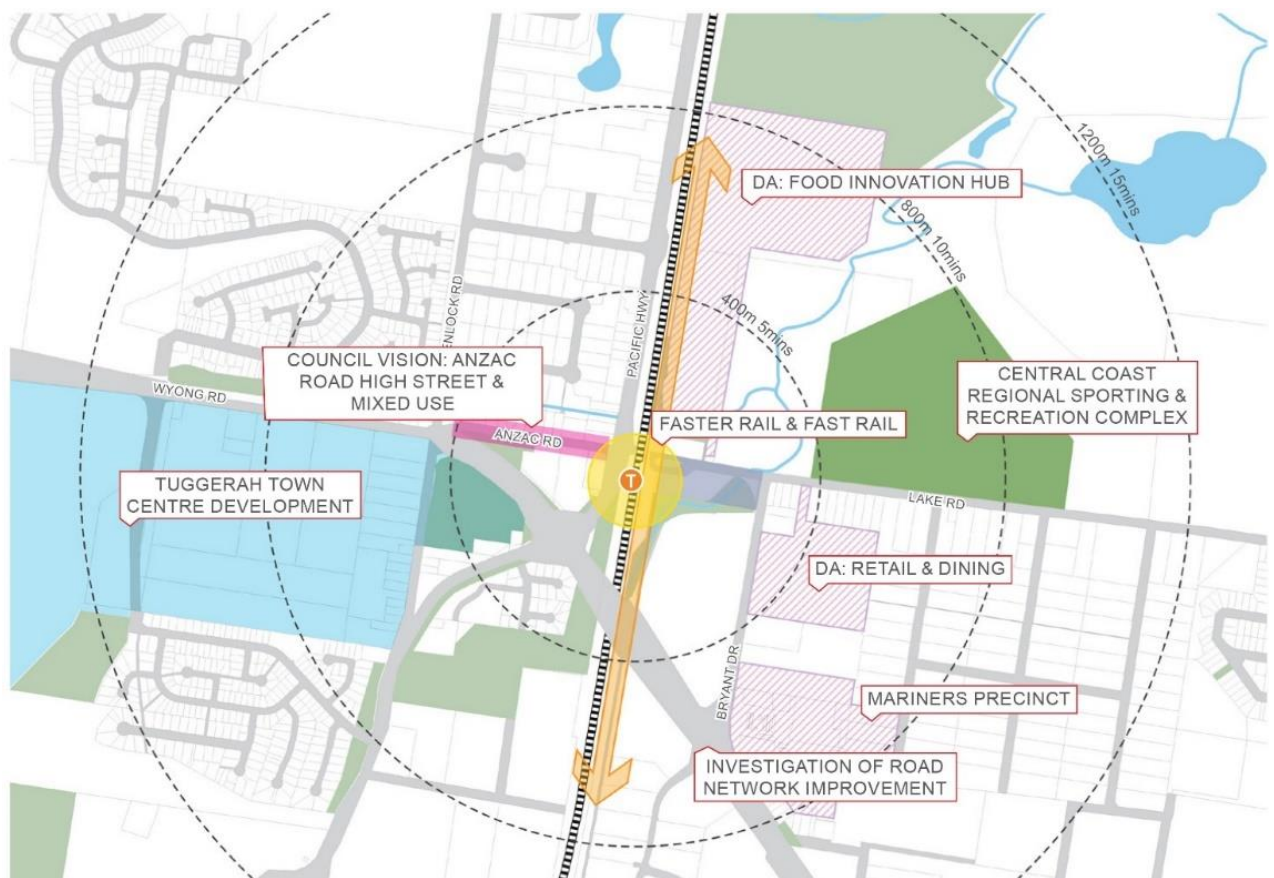


FIGURE 3-1 PROPOSED DEVELOPMENT NEAR TUGGERAH STATION (SOURCE FUTURE RAIL URBAN DESIGN TECHNICAL NOTE)

## 4. Methodology

### 4.1. Guidance for landscape and visual assessment

While there are no specific legislative requirements for the methodology of an assessment such as this in New South Wales, the industry typically refers to the guidance offered by:

- *Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment*, TfNSW (2020) and
- *The Guidance Note for Landscape and Visual Assessment (GNLVA)*, Australian Institute of Landscape Architects Queensland (2018).

The methodology used for this assessment conforms generally with the direction offered by these guidelines.

### 4.2. Approach

This assessment includes a visual impact assessment as well as a landscape and urban design assessment. The method for each of these assessments is described in the following sections of this report.

### 4.3. Visual assessment method

The visual impact assessment has identified potential impacts during construction and operations of the Proposal, day and night.

The process involved the identification of:

- existing conditions
- the relevant planning context
- visual and landscape sensitivity
- magnitude of change
- visual and landscape impact
- mitigation opportunities.

The potential visual impacts have been classified according to the impact significance criteria set out in this methodology.

#### 4.3.1. Identification of existing visual conditions

The key landscape features of the site have been identified, described and located on a plan.

A number of viewpoints have been selected to illustrate the visual influence and character of the site. These views represent publicly accessible viewpoints from a range of locations and viewing situations. Particular attention was paid to views from places where viewers are expected to congregate such as the station platforms, transport interchange, as well as views to and from the adjacent roads and footpaths to capture the types of views that would be appreciated from nearby areas.

#### 4.3.2. Visual sensitivity

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

In order to ensure the assessment of impact is reasonable, the sensitivity of a viewpoint is considered in the broadest context of possible views, from those of national importance through to those which are of neighbourhood importance. For this reason, the following terminology is used to describe the level of visual sensitivity, see Table 4-1.



TABLE 4-1 VISUAL SENSITIVITY LEVELS

Visual sensitivity	Description
National	Heavily experienced view to a national icon, e.g. view to Sydney Opera House from Circular Quay or Lady Macquarie’s Chair, view to Parliament House Canberra along Anzac Parade.
State	Heavily experienced view to a feature or landscape that is iconic to the State, e.g. view along the main avenue in Hyde Park.
Regional	Heavily experienced view to a feature or landscape that is iconic to a major portion of a city or a non-metropolitan region, or an important view from an area of regional open space, e.g. an identified view corridor to a state heritage listed item.
Local	High quality view experienced by concentrations of residents and/or local recreational users, local commercial areas, and/or large numbers of road or rail users, e.g. view from a local park or gathering space, such as Tuggerah Station.
Neighbourhood	Views where visual amenity is not particularly valued by the wider community such as views from local streets and residences.

#### 4.3.3. Magnitude of change

Magnitude describes the extent of change resulting from the Proposal and the compatibility of these new elements with the surrounding landscape. There are some general principles which determine the magnitude of change; these include elements relating to the view itself such as distance, landform, backdrop, and contrast. There are also characteristics of the development itself which are: scale, form and line/alignment. Change can result in an improvement or reduction in visual amenity.

A high magnitude of change would result if the development contrasts strongly with the existing characteristics of the view. A low magnitude of change occurs if there is a high level of integration of form, line, shape, pattern, colour or texture values between the Proposal and the environment in which it is located.

In some circumstances, there may be a visible change to a view which does not alter the amenity of the view, this would be due to the compatibility of the Proposal and capacity of the view to absorb the change. Table 4-2 lists the categories used to describe the magnitude of change.

TABLE 4-2 MAGNITUDE LEVELS

Magnitude	Description
Considerable reduction or improvement in visual amenity	Substantial part of the view is altered.  The Proposal contrasts substantially with surrounding landscape, is not compatible, or substantially detracts from the amenity of the view.  Or the proposal substantially enhances the amenity of the view.
Minor reduction or improvement in visual amenity	Alteration to the view is clearly visible.  The Proposal contrasts somewhat with surrounding landscape, is somewhat compatible or detracts somewhat from the amenity of the view.  Or the proposal somewhat enhances the amenity of the view.
Neutral	Either the view is unchanged or if it is, the change in the view is unlikely to be perceived by viewers, or the Proposal is compatible with the surrounding landscape and causes no reduction in the amenity of the view.

#### 4.3.4. Identifying night time visual impacts

The assessment of night-time impact has been carried out with a similar methodology to the daytime assessment. However, the assessment also draws upon the guidance contained within *AS4282 Control of the obtrusive effects of outdoor lighting* (2019).

AS4282 identifies four main potential effects of lighting, which are, the effects on residents, transport system users, transport signalling systems and astronomical observations. Of relevance to this assessment is the effects of lighting on the visual amenity of residents and transport system users.

AS4282 identifies environmental zones which are useful for categorising night-time landscape settings. The following assessment will use these environmental zones to describe the existing night-time visual condition and assign a sensitivity to these settings.

These zones are:

- A0 / A1: Dark / Intrinsically dark landscapes – national parks, state forests etc.
- A2: Low district brightness areas – rural, small village, or relatively dark urban locations
- A3: Medium district brightness areas – small town centres or urban locations
- A4: High district brightness areas – town/city centres with high levels of night time activity.

Specific features of the lit landscape can be described in terms of:

- sky glow – the brightening of the night sky
- glare – condition of vision in which there is discomfort or a reduction in ability to see
- light spill ('trespass') – light emitted by a lighting installation that falls outside of the design area.

The level of impact on the precinct has been described according to the impact levels that are identified in Table 4-4.

The setting of Tuggerah Station is considered to be an area of **high district brightness (A4)**. At the station

there is lighting associated with the existing station, commuter car park, surrounding street lights and lit pathways. The station is adjacent to the Pacific Highway, a wide, brightly lit road corridor with streetlights and vehicle headlights. Surrounding the station, there are further brightly lit commercial and retail areas with illuminated offices, shopfronts and carparks.

#### 4.3.5. Assigning impact levels

An assessment of visual impact has been made on a range of representative viewpoints. A visual impact level has been determined by combining the sensitivity and magnitude level according to the matrix presented in Table 4-3.

Similarly, a night-time impact has been determined by combining a sensitivity and magnitude level according to the matrix presented in Table 4-4.

#### 4.3.6. Mitigation measures

Following the identification of potential landscape and visual impacts, opportunities for mitigation were identified (to minimise impacts where they were identified). Mitigation measures considered included opportunities to avoid, reduce and/or manage potential adverse impacts during construction and operation of the Proposal.

#### 4.3.7. Photomontages and artists impressions

Photomontages have been prepared to illustrate the massing and scale of the Proposal. This combines the architectural 3D model with a photograph using a 3D model and photo editing techniques to create a photorealistic impression of the Proposal.

The photomontage locations were selected in consultation with TfNSW to illustrate typical views toward the Proposal from publicly accessible locations. The photomontage locations were selected to illustrate the massing and scale of the main components of the Proposal and their setting within the Tuggerah Station precinct.

TABLE 4-3 VISUAL IMPACT LEVELS

		Sensitivity				
		National sensitivity	State Sensitivity	Regional sensitivity	Local sensitivity	Neighbourhood sensitivity
Magnitude of change	Considerable reduction	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
	Minor reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
	Neutral	Negligible	Negligible	Negligible	Negligible	Negligible
	Minor improvement	Very high benefit	High benefit	Moderate benefit	Minor benefit	Negligible
	Considerable improvement	Very high benefit	Very high benefit	High benefit	Moderate benefit	Minor benefit

TABLE 4-4 NIGHT-TIME VISUAL IMPACT LEVELS

		Sensitivity			
		A0/A1: Dark / Intrinsically dark landscapes	A2: Low district brightness	A3: Medium district brightness	A4: High district brightness
Magnitude of change	Considerable reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse
	Minor reduction	High adverse	Moderate adverse	Minor adverse	Negligible
	Neutral	Negligible	Negligible	Negligible	Negligible
	Minor improvement	High beneficial	Moderate beneficial	Minor beneficial	Negligible
	Considerable improvement	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

## 4.4. Urban Design and Landscape assessment method

Consideration of the potential urban design and landscape impacts of the Proposal was undertaken in two steps. These were:

- a response to state and local government urban design considerations, and
- a general urban design and landscape impact assessment.

While the local government planning documents (including the LSPS, DCP and LEP) are not directly relevant to the approval of the Proposal, these documents have been considered in the assessment of impact on urban design and landscape character.

A general assessment of urban design considerations has also been undertaken, based on the themes identified in relevant national and state guidance for urban design. This includes the NSW State Government Architect's Better Placed suite of documents, the Federal Government's National Urban Design Protocol, and best practice urban design principles.

This assessment includes consideration of impacts the project would have on the urban design functionality of the Proposal, including:

- accessibility, legibility and permeability
- direct impacts on trees, open space and public realm areas
- changes to the level of shade and comfort to public areas
- access to sunlight and the effect of overshadowing.



## 5. Assessment of visual impacts

### 5.1. Existing conditions

Tuggerah Station serves a regional catchment on the Central Coast and Newcastle Line, with express services to Sydney CBD and Newcastle.

While Tuggerah Station was originally opened in 1890, the current station was built in the 1990s. The station is accessed via a footbridge, with ramps and stairs connecting to the eastern and western station entrance, at Bryant Drive and the Pacific Highway. The ramp structure to the west of the station is long and bulky with decorative pitched roof structures adding visual clutter.

The station platforms are accessed via the ramping structures of stairs that connect to the footbridge. The station has two platforms, located either side of two tracks. Each platform has a small low set station building with sheltered waiting areas and amenities. The platforms are narrow and include steel fencing securing the rail corridor (refer to Figure 5-1).



FIGURE 5-1 VIEW SOUTH ALONG THE TUGGERAH STATION PLATFORMS

Tuggerah Station is surrounded by a variety of uses including a major sporting and recreational facility to the northeast, retail shopping centres to the southeast and west, and a light industrial area to the northwest. These precincts are separated by existing rail and road corridors which also create barriers for pedestrian and cycle movement between the eastern and western parts of Tuggerah.

The Pacific Highway is directly west of the station and includes a kiss and ride zone adjacent to the station entrance. This section of the highway is a dual carriageway, with 2-3 lanes of traffic in each direction. To the south of the station, the highway rises to a bridge structure over Mardi Creek, towards the Wyong

Road intersection. Existing bus and active transport routes are aligned along the highway. There are bus stops located directly to the west of the station, on the Pacific Highway, and a bus interchange, taxi stand, kiss and ride zone and bike storage facilities to the east of the station, accessed via Wyong Road and Bryant Drive (refer to Figure 5-2).



FIGURE 5-2 TUGGERAH STATION BUS INTERCHANGE



FIGURE 5-3 TUGGERAH STATION EASTERN ENTRANCE AND COMMUTER CAR PARK

There are some blocks of vegetation to the northeast, southeast and southwest of the station, associated with the rail corridor, Tuggerah Creek and Mardi Creek, which provide a leafy setting to the station. A mature tree, located to the west of the station, is a local visual feature, marking the station entry.



FIGURE 5-4 TUGGERAH STATION WESTERN ENTRANCE, THE PACIFIC HIGHWAY














 North Not to scale	<b>Key:</b>	
	 Site boundary  Existing trees and shrubs that screen views to / from the station  Existing trees to be removed	 Pedestrian circulation  Bus stop  Commuter car park  Kiss and ride zone  Taxi stand

FIGURE 5-5 LANDSCAPE AND VISUAL FEATURES OF THE SITE AND SURROUNDS

## 5.2. Assessment of Representative Viewpoints

The following viewpoints were selected to represent the range of views to this Proposal:

- Viewpoint 1: View northeast from the Pacific Highway
- Viewpoint 2: View southeast from the corner of Anzac Road and Pacific Highway
- Viewpoint 3: View south from Platform 2
- Viewpoint 4: View southwest from the bus interchange
- Viewpoint 5: View west from the commuter car park.

The location of these viewpoints is shown on Figure 5-6, and an assessment of each viewpoint has been summarised on the following pages.



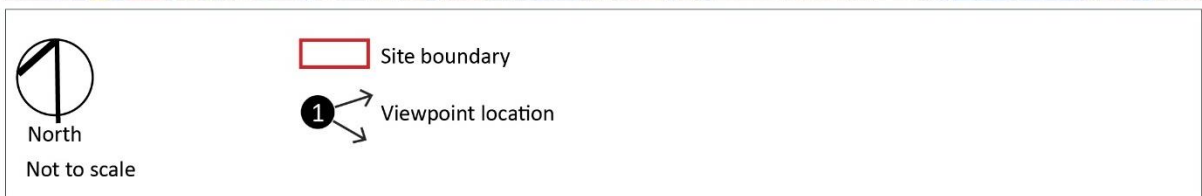
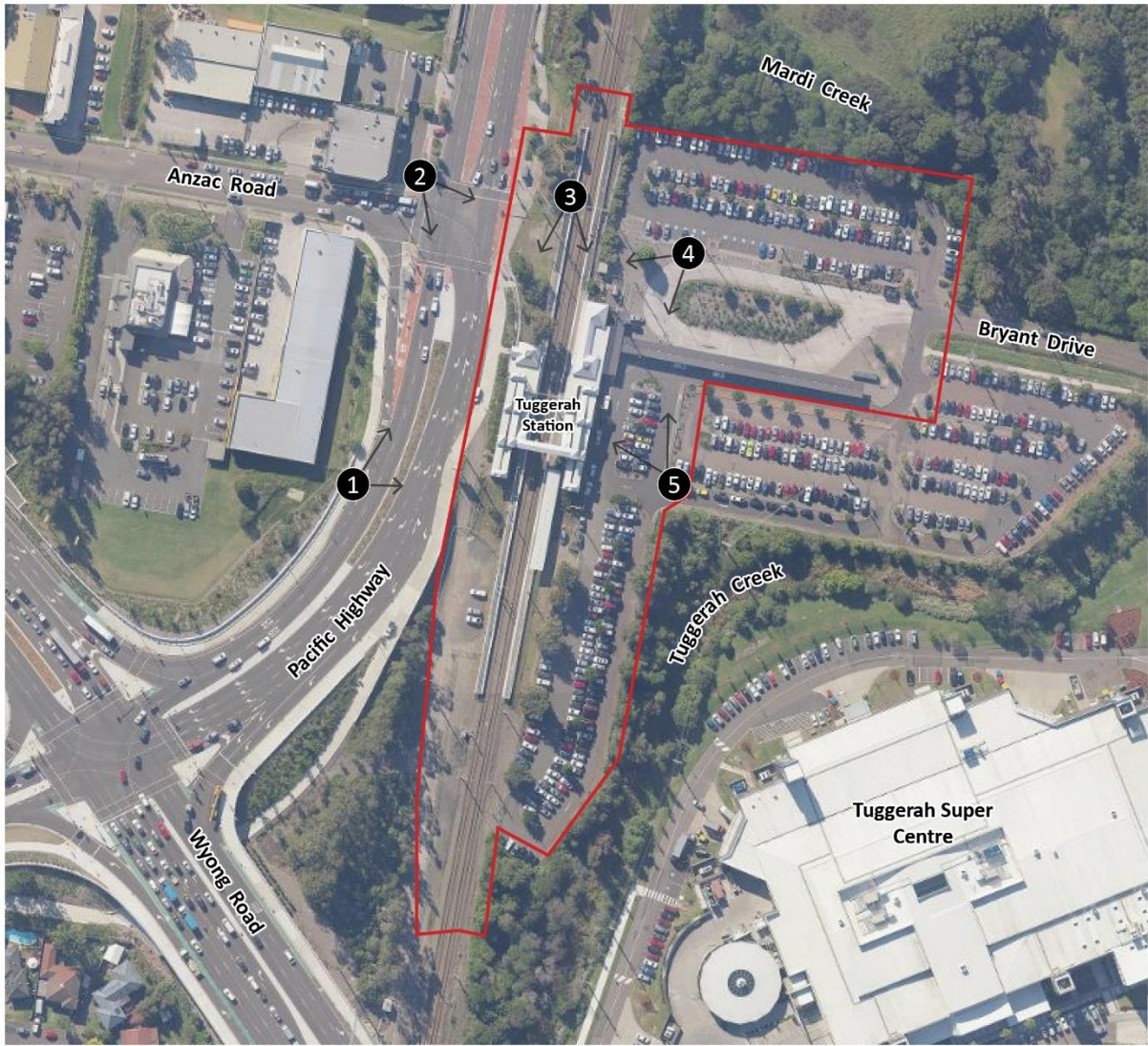


FIGURE 5-6 VIEWPOINT LOCATION PLAN



5.2.1.Viewpoint 1: View northeast from the Pacific Highway



FIGURE 5-7 VIEWPOINT 1: VIEW NORTHEAST FROM THE PACIFIC HIGHWAY



FIGURE 5-8 VIEWPOINT 1: VIEW NORTHEAST FROM THE PACIFIC HIGHWAY, PHOTOMONTAGE SHOWING MASSING AND SCALE

Existing view: This view across the Pacific Highway includes the western side of Tuggerah Station in the middle ground. The station entrance is visible in the centre of view, covered by a small gable roof structure and connected to adjacent footpaths by a set of stairs and ramp. From this entrance, there are further ramp structures and stairs, a footbridge and platforms. The footbridge is a complex structure with multiple stairs, with a variety of rooflines and extensive balustrades, cluttering this view to the station. From this location the station platforms are mostly screened by the station ramp structures and the highway ramp approach to the Wyong Road intersection, rising to the south (right of view), over Tuggerah Creek. The northern end of the station platforms can be seen in the background of this view, slightly raised from the highway level, with trains seen entering and departing Tuggerah Station intermittently. The mature tree beside the station entrance and adjacent planting along the highway soften the view.

Visual sensitivity: This view would be experienced by large numbers of residents and visitors travelling along the Pacific Highway and pedestrians on adjacent footpaths accessing the station and local centre. It is of **local visual sensitivity**.

Visual impact during construction: A construction site would be established in the middle ground of this view, extending alongside the Pacific Highway and across the rail corridor. The main site compound would be located to the southwest of the station (right of view) and would be partly screened by the Pacific Highway ramp structure and vegetation along the southern end of the Tuggerah Station. Vehicles would be seen accessing the compound site in the centre of this view, via an existing access road and gates to the rail corridor. The verge area north of the station entrance, beside the Anzac Road and Pacific Highway intersection (background of view), would also be used as a materials laydown area during construction. Works to demolish the western station entrance, footbridge, stairs and ramping structure; the platform buildings; and the removal of the tree beside the western station entrance and the adjacent group of smaller trees would be seen unobstructed in this view. This would include the use of large equipment including cranes and scaffolding. The station would remain open, with temporary fencing enclosing areas required for construction.

Following the demolition works, construction of the new footbridge including two new lift structures would

be seen on either side and extending over the rail corridor, in the middle and background of this view. This work would rise prominently above the station. There would also be glimpses to construction activity within the station including the construction of a new boarding assistance zone canopy seen at the southern end of Platform 2. There would also be works to construct stairs and upgrade footpaths in the vicinity of the station entry. This work would also include the installation of new landscaped areas.

The construction activity, including use of large-scale machinery, would be prominent in this view. While this work would be seen in the context of a busy road, overall, there would be a considerable reduction in the amenity of this view. This is a view of local sensitivity and there would be a **moderate adverse visual impact**. This impact would be temporary for the duration of construction.

Visual impact during operation: The new footbridge would be a prominent feature in the middle to background of this view, located about 50 metres north of the existing footbridge (left of view). The footbridge would include two glazed lift structures which would rise several storeys above the highway level, one either side of the rail corridor. The lifts would be linked by glazed connections to a bridge extending over the rail corridor that would be enclosed by anti-throw screens. There would be stairs connecting the footbridge to each of the two platforms also enclosed with anti-throw screens. There would be new Station Master's office at the entry and glimpses of the new boarding assistance zone canopy at the southern end of Platform 2.

The station entrance would include a wide set of stairs and a ramp, extending to the existing footpath and kiss and ride zone along the Pacific Highway. There would be a new canopy over the entrance and connecting to the new footbridge and lift. The removal of several trees would reduce the leafy character of the station in this view, however, there would be new landscaped areas provided in the vicinity of the station entrance which would improve the amenity of the streetscape and station entrance over time.

Overall, the simplified forms of the footbridge and partial transparency of the materials would result in less visual clutter in this view. The proposed structure would also have a reduced footprint, allowing further views to the station platforms and across the rail corridor. This would result in a minor improvement to

the amenity of this view, which is of local visual sensitivity, and a **minor beneficial visual impact**.

### 5.2.2.Viewpoint 2: View southeast from the corner of Anzac Road and the Pacific Highway



FIGURE 5-9 VIEWPOINT 2: VIEW SOUTHEAST FROM CORNER OF ANZAC ROAD AND PACIFIC HIGHWAY



FIGURE 5-10 VIEWPOINT 2: VIEW SOUTHEAST FROM CORNER OF ANZAC ROAD AND PACIFIC HIGHWAY, ARTISTS IMPRESSION BASED ON PHOTOMONTAGE (SUBJECT TO DETAIL DESIGN)



Existing view: This view across the intersection of Anzac Road and the Pacific Highway shows the Tuggerah Station in the centre of view. The station includes a covered entrance with stairs and a ramp leading up to the station platforms from the highway level. The switch back ramps of the footbridge are visible beyond the station entry structure and include a series of gable and hipped roof structures, matching the station entrance, creating a visually complex roofline. The northern end of the station platforms can be seen to the north (left of view), slightly raised up from street level, where trains would be seen intermittently passing through the station.

The existing trees beside the station entrance provide some screening of the station and station platform buildings and visually soften the middle ground of this view. The mature vegetation along Mardi Creek and beside the highway provide a leafy backdrop to this view (right of view).

Visual sensitivity: This view would be experienced by a large number of local residents and visitors accessing Tuggerah Station and travelling along this section of Anzac Road and the Pacific Highway. It is of **local visual sensitivity**.

Visual impact during construction: A construction site, enclosed by temporary fencing, would be established along the eastern side of the Pacific Highway in the middle ground of this view. The verge area beside this intersection (left of view), would be used as a materials laydown area during construction. Construction vehicles would be seen in the background of view, accessing the main site compound from the Pacific Highway, via an existing access road.

Works to demolish the western station entrance, footbridge, stairs, ramping structures and several existing mature trees would be seen prominently in this view. Following this, two new lift structures and a new bridge would be constructed over the rail corridor in the centre of this view, about 50 metres north of the existing footbridge and closer to this viewing location. This work would include the use of large-scale equipment including cranes and be prominent in this view.

There would be a new station entry, including a stair and ramp access between the platform level and

existing footpaths. The station would remain open, and trains would continue to be seen entering and departing the station during construction. The kiss and ride zone and bus stop along the Pacific Highway, alongside the station, would also be maintained during construction.

Due to the scale and extent of the construction activity, including the removal of several mature trees, there would be a considerable reduction in the amenity of this view. This is a view of local sensitivity and there would be a **moderate adverse visual impact**. This impact would be temporary for the duration of construction.

Visual impact during operation: The new footbridge and lift structures would be prominent features in the centre of this view. The new footbridge would be generally aligned with the southern pedestrian crossing at the Anzac Road and Pacific Highway intersection, closer to this viewer. The top of the footbridge would rise about 10 metres above the existing road level, with the lift shafts rising slightly higher. The footbridge would include glazing and anti-throw screens, providing some transparency to this structure.

The entrance would include a wider set of stairs and ramp, linking to the existing footpath and kiss and ride zone along the Pacific Highway. A new canopy structure would extend over the station entrance and concourse and extend to the lift landing. A set of stairs and overhead canopy would also extend south from the footbridge, along the platform, to the station entrance.

While the scale of this structure would be larger and more prominent in this view, it would mark the entry to the station. The simplified form of the footbridge and partial transparency of the materials would result in less visual clutter. While the loss of the mature trees would reduce the amenity of this view initially, new landscape treatments would provide a new landscape setting for the station entry over time.

Overall, there would be a minor improvement to the amenity of this view, which is of local visual sensitivity, and a **minor beneficial visual impact**.

### 5.2.3. Viewpoint 3: View south from Platform 2



FIGURE 5-11 VIEWPOINT 3: VIEW SOUTH FROM PLATFORM 2

Existing view: This view is from the northern end of Platform 2 shows the narrow platforms either side of the centrally aligned two tracks. The low-set amenity building on Platform 1 is visible in the middle ground of this view, set back from the platform edge (left of view). The footbridge is visible in the background, comprising a simple steel structure extending over the rail corridor, with covered stairs and ramps linking to each platform. From this location, views to the commuter car park (left of view) are screened by intervening vegetation and the existing station building. The Pacific Highway can be seen to the west (right of view), through the existing steel fencing. There are several mature trees between the station and the highway (right of view) which partly screen the existing footbridge and whose leafy canopy rises above the station. There are several transmission lines alongside and crossing the station over the rail masts and catenary wires.

Visual sensitivity: This view would be experienced by commuters using Tuggerah Station and is an entry point for the town and region. It is of **local visual sensitivity**.

Visual impact during construction: A construction site would be established to the west of this view, between the platform and the Pacific Highway (right of view), and across part of the commuter carpark north of Bryant Drive (left of view). The site would be enclosed by temporary site fencing and there would be material laydown. A construction site would be established within the station, to the south of this view, in the middle to background.

Works to demolish the station buildings, footbridge, stairs and ramping structures would be seen within the station in the background of this view. This would be followed by construction of the new lifts and footbridge over the rail corridor in the middle ground and closer to the viewer. Works to regrade, resurface and widen the platforms and install new security fencing along the platforms would also be seen in close proximity to customers from the platforms.

This work would be prominent including use of large-scale machinery to install the lifts and footbridge. Overall, there would be a considerable reduction in the amenity of this view, which is of local sensitivity, resulting in a **moderate adverse visual impact**. This



impact would be temporary for the duration of construction.

Visual impact during operation: From this location, the two rectangular shaped lift structures and connecting footbridge would be prominent, rising above the rail corridor and platforms in the middle ground. The top of the footbridge would rise several storeys above the platforms, and the stairs would be seen extending away from the viewer to the south. The footbridge would be enclosed in mesh anti-throw screens and the upper portion of the lift shaft would incorporate glazing, visually lightening these structures somewhat.

The platforms would be widened and resurfaced, with new security fencing. The new station concourse buildings would be glimpsed beyond the footbridge at the station entrance (left of view). New areas of landscaping along the Pacific Highway and at the station entrances would refresh and contribute to the improvement of the visual appearance of the station.

Overall, while the new lifts and footbridge would be taller structures than the former footbridge, and more prominent in this view, this structure would be a simpler structure than the existing footbridge. As this view has the capacity to absorb further infrastructure, there would be a neutral change to the amenity of this view, which is of local visual sensitivity, and a **negligible visual impact**.

#### 5.2.4. Viewpoint 4: View southwest from the bus interchange



FIGURE 5-12 VIEWPOINT 4: VIEW SOUTHWEST FROM THE BUS INTERCHANGE

Existing view: This view shows the eastern side of Tuggerah Station from the bus interchange. The bus turning circle is visible in the foreground, beyond this is the bus waiting area, covered by an awning (centre and left of view). The park and ride, kiss and ride zone and taxi stand are visible beyond the bus interchange in the middle to background (centre of view). The Tuggerah eastern station entrance is located to the west of the bus interchange (left of view). This entry consists of a low-set building, accessed via stairs and ramps. Beyond this and in the middle to background (centre of view) the footbridge can be seen rising above the station. The large ramping structure includes several pitched roof structures, and is enclosed by throw screens and balustrades.

To the north of the station entry are several services including a signalling and communications enclosure (right of view) and overhead posts and wires. From this location, the station entry buildings and vegetation, screen views to the station platforms beyond.

Visual sensitivity: This view would be experienced by commuters and visitors using bus interchange and

Tuggerah Station and is a point of arrival for the town and region. This view is of **local visual sensitivity**.

Visual impact during construction: A construction site would be established in the middle and background of this view, extending north and south along the rail corridor. The footbridge, stairs and ramping structure and part of the station entry building would be demolished. Several existing trees would be removed, including the mature gum tree to the west (right of view). The area beside this enclosure, extending along the rail corridor would be used as a laydown area during construction. The station would remain open, with temporary fencing enclosing areas under use and diverting pedestrian traffic during construction.

Two new lift structures with a connecting footbridge would be constructed within the rail corridor, in the middle ground and closer to this viewer. From this location, the new lift construction would be prominent, with the use of large-scale equipment including cranes.

Due to the scale and extent of the construction activity, there would be a considerable reduction in the amenity of this view, which is of local sensitivity,

resulting in a **moderate adverse visual impact**. This impact would be temporary for the duration of construction.

Visual impact during operation: The new lift structures and connecting footbridge would be prominent features in the middle ground of this view. The footbridge would be located about 50 metres north of the former footbridge, bringing it closer to the transport interchange and station entry, seen in the middle ground of this view.

The lift structures would incorporate glazed panels and the footbridge would include perforated anti-throw screens, providing some transparency and lightness to the appearance of the footbridge.

This structure would have simple roofline and an overall simplified form with stairs and lift rather than switch backing ramps. The new eastern entrance

would include a wider set of stairs and ramp, providing a more spacious entry to the station. A new canopy structure would cover the station entrance and extend to the lift landing.

There would be new planting and paving at the station entry that would refresh and improve the visual appearance of the station and entrance.

While the new footbridge would be taller, and more prominent in the view from this location, it would have a simplified form and this view has the capacity to absorb a structure of this scale without detracting from the character of the station. Overall, there would be a neutral change to the amenity of this view, which is of local visual sensitivity, and a **negligible visual impact** during operation.

5.2.5. Viewpoint 5: View west from the commuter car park



FIGURE 5-13 VIEWPOINT 5: VIEW WEST FROM TUGGERAH STATION COMMUTER CAR PARK



FIGURE 5-14 VIEWPOINT 5: VIEW SOUTHWEST FROM TUGGERAH STATION BUS INTERCHANGE, PHOTOMONTAGE SHOWING MASSING AND SCALE

Existing view: This view across the commuter car park includes the eastern station entrance in the centre middle ground of the view. The station entrance is raised up from the level of the carpark with a ramp and stairs leading to an entry building. The is a pitched roof and several canopy structures at the entry. A canopy extends east from the station entry towards the bus interchange, taxi stand and kiss and ride zone, which can be seen in the middle ground of this view (right of view). There are some trees along the rail corridor to the north of the station which form a leafy backdrop (right of view).

The ramping structures of the existing footbridge is visible to the south of the station entry (left of view). These ramps are long and visually bulky, including concrete ramps and supporting pillars, steel balustrades and anti-throw screens, a varied roof line creating a cluttered and visually heavy structure. From this location the existing ramp structure and station buildings mostly screen the station platforms from view.

Visual sensitivity: This view would be experienced by large number of commuters and visitors using Tuggerah Station. The station is an entry point to the town and region. This view is of **local visual sensitivity**.

Visual impact during construction: A construction site would be established in the middle ground of this view, extending north and south along the rail corridor. Within this area there would be both demolition and construction work.

Works to demolish the existing footbridge and ramping structure would be seen to the south of the station entry (left of view). The removal of this building would open up views to the station platforms where there would be widening, lengthening and resurfacing works. The installation of the boarding assistance zone canopy, at the southern end of Platform 2, may also be seen from this location (left and out of view).

There would be construction in the foreground, within the commuter car park, to reconfigure the car parks. The existing car park trees would be protected and retained during construction.

There would also be work at the existing station entry building, to demolish part of this building and construct a new Station Master's building and entry. This entry would include a roof structure, wide set of

stairs and access ramp. Beyond the station entry, in the middle to background of this view, the new footbridge would be constructed. This would include large scale construction activity including the use of cranes to construct the lifts and stairs extending across the rail corridor.

An area of the existing commuter car park to the northeast of the station and to the north of the Bryant Drive (right of view) would be used as a laydown area for a short duration during construction.

While this construction activity would be seen in the context of a commuter car park, including parked and moving vehicles, the character of the view would be transformed by construction activity. Overall, due to the scale and extent of construction activity that would be seen, there would be a considerable reduction in the amenity of this view. As this is a view of local sensitivity there would be a **moderate adverse visual impact** during construction. This impact would be temporary for the duration of construction.

Visual impact during operation: In the foreground of this view the car parking bays would be reconfigured, and the existing trees would remain. To the west (left and out of this view) the view would be opened up to the station platforms where the existing footbridge and ramps were removed. This would include a glimpse to the new Boarding Assistance canopy on Platform 2.

In the centre of this view the eastern station entrance would include a new Station Master's building and wider set of stairs and ramp, providing a more spacious entry to the station. A new canopy structure would extend over the station entrance and link with the lift landing. New paving at the station concourse and entrance would also refresh and improving the visual appearance of the station.

The new footbridge would be located about 50 metres north of the former footbridge, visible behind the station entry from this location. The footbridge would rise prominently above the station and have a simpler form than the existing footbridge. This new footbridge would incorporate anti-throw screens on the stairs and glazed panels in the lift shafts, to provide some transparency and visual lightness to the appearance of this structure. There would be



some new planting along the rail corridor, improving the appearance of the station in this area.

As this view has the capacity to absorb a structure of this scale without detracting from the character of the station, there would be a neutral change to the amenity of this view, which is of local visual sensitivity, and a **negligible visual impact** during operation.

### 5.3. Summary of visual impacts

The following summarises the findings of this viewpoint assessment.

During construction, there would be **moderate adverse visual impacts** experienced in views from the station platforms and on approaches to the station from nearby footpaths along the Pacific Highway and at the commuter carpark and bus interchange. This is due to the scale and extent of the works that would be seen at the station, including the station entrances, and along the station platforms.

These impacts would be temporary, for the duration of construction only, and represent the times of

greatest visual change during the construction program. During operation, there would be a **minor beneficial visual impact** experienced in views from the west of the station including from the Pacific Highway. Several mature trees that are seen from this area would be removed and replaced with new areas of landscape that would improve the amenity over time. The simplified architectural form of the footbridge and partial transparency of the materials would result in less visual clutter. The increased scale of the footbridge would mark the entry to the station and improve the presence of the station from this major route and the wider town centre.

From areas within the station and to the east, including the bus interchange and commuter carpark, there would be **negligible visual impacts**. These views the new footbridge would be taller and more prominent, however, it would have a simplified form. These views have the capacity to absorb a structure of this scale without detracting from the character of the station.

The following table (Table 5-1) summarises the impacts identified in the viewpoint assessment.

TABLE 5-1 SUMMARY OF VIEWPOINT ASSESSMENT

	Viewpoint number and location	Sensitivity	Construction		Operation	
			Magnitude	Visual impact	Magnitude	Visual impact
1	View northeast from the Pacific Highway	Local	Considerable reduction	Moderate adverse	Minor improvement	Minor beneficial
2	View southeast from the corner of Anzac Road and Pacific Highway	Local	Considerable reduction	Moderate adverse	Minor improvement	Minor beneficial
3	View west from Platform 2	Local	Considerable reduction	Moderate adverse	Neutral	Negligible
4	View southwest from the bus interchange	Local	Considerable reduction	Moderate adverse	Neutral	Negligible
5	View west from the commuter car park	Local	Considerable reduction	Moderate adverse	Neutral	Negligible

## 5.4. Views at night

Existing conditions: Areas in the vicinity of the Tuggerah Station, including the Proposal site, are considered to be of **medium district brightness (A3)**. This is due to the combination of surrounding land uses, which includes moderate to high existing light levels. This includes the brightly lit station, the commuter car park, and the Pacific Highway where there are both fixed lights and headlights from moving cars and train vehicles. There are lower light levels in the surrounding retail and commercial areas, parks and reserves.

Visual impact during construction: The work areas and construction compounds would be lit at night for security. It is unlikely that these areas would be used on an ongoing basis for construction activity during evening hours (other than for specific activities or where works are undertaken during possession periods).

Generally, the character of the construction works at the station concourse, platforms and construction compound areas at night would be absorbed into the surrounding brightly lit environment of the station and partially enclosed by the existing vegetation and structures (including highway onramps and viaduct structures) which surround the station.

There may be some lighting visible from nearby roads, footpaths, car parks and retail properties which overlook the site, such as near the Pacific Highway and Anzac Road intersection.

Overall, the works would result in a neutral change in the amenity of views at night and a **negligible visual impact** during construction.

Visual impact during operation: During operation, the station would continue to be brightly lit for security and safe use at night (as is currently experienced). The new footbridge would bring lighting to a higher level and further north but remain within the vicinity of the existing station. This additional lighting would be seen in the context of the existing station, commuter car park and streetlights along the Pacific Highway.

Overall, there is unlikely to be any noticeable additional sky glow above the site due to the new built form. There are no private residences located in the vicinity of the site and therefore there would not be any direct light spill (trespass) onto neighbouring residential properties. This is also the case for the nearby retail and commercial areas which are separated from the station by existing vegetation.

The final design of lighting for the station would ensure that it is consistent with the requirements of the Australian Standards for the control of obtrusive lighting effects. Generally, the character of the proposed station upgrade at night would be absorbed into the surrounding brightly lit environment.

Overall, there would be a **neutral change** to the amenity of views at night, resulting in a **negligible visual impact** at night during operation.

## 6. Assessment of urban design and landscape character

### 6.1. Response to state and local urban design and landscape character considerations

Whilst the requirements of the local government planning documents (including the LSPS, LEP and DCP) are not applicable to this assessment, the requirements of these planning instruments have been used as a guide to ensure locally appropriate urban design outcomes are achieved.

Table 6-1 provides a summary of how the Proposal has responded to these considerations.

TABLE 6-1 RESPONSES TO URBAN DESIGN AND LANDSCAPE CHARACTER CONSIDERATIONS

Consideration	Response
<b>Central Coast LEP 2018</b>	
Promote a high standard of urban design that responds appropriately to the existing or desired future character of areas (cl.1.2[2h]).	The proposed location of the new footbridge aligned with Anzac Road and Lake Road would be an improved urban design outcome, improving east west connectivity between these activity areas. The scale of the proposed station footbridge would improve legibility within the station precinct.
Promote design principles in all development to improve accessibility, health and wellbeing of residents and visitors (cl.1.2[2i]).	Landscape treatments would improve the character of streetscape adjacent to the station through improvements to the station entrances, removal of some transmission line infrastructure and reconfiguration of carparking areas to accommodate accessible parking spaces. This upgrade would include more spacious station entries with new lifts, new paving, balustrades, furniture, signage, lighting and planting.
	Removing and replacing the ramping structure with a new footbridge and lifts would also improve the visual and architectural character of the station as well as improve accessibility to the station and across the rail corridor.
<b>Central Coast DCP 2018</b>	
<b>Character and scenic quality</b> (chapter 2.17)	
Height, size and scale of buildings: compatibility with predominant patterns across the surrounding neighbourhood	Although the new footbridge and lift structures would be taller than the existing footbridge and ramp structures, the Proposal would be in scale and proportion with the station and role as local landmark in Tuggerah town centre. Similarly, the new platform canopies and concourse canopy would be of a similar scale and height to the former station concourse canopy.
Architectural form, construction and detail: appropriateness to existing scenic quality and streetscape character	The new lifts and footbridge would have a simple, contemporary style, appropriate to the character of the areas surrounding the station. The structure would be simpler in form and there would be glazing incorporated into the lifts, which would provide some visual lightness to these larger structures, improving the quality of the architectural form in views from the

Consideration	Response
	streetscape. Removal of the existing footbridge, which is visually heavy, cluttered with decorative detail and obstructs views across the rail corridor, would improve the streetscape character.
Garden design, including outdoor structures: compatibility with scenic quality and streetscape character	The Proposal would include additional areas of planting along both sides of the station, improving the character of the station and streetscape.
<b>Tuggerah Precinct</b> (chapter 5.34)	
To encourage a well designed, safe and active public domain which contributes to the well being of the community	The Proposal would provide a well designed, safe and active public domain by including seating, shade, weather protection, landscaping. There would be well lit meeting and waiting areas with natural surveillance and secure bike parking. Both station entries would be refreshed, including slightly widened entrances and public realm improvements such as new paving, planting and furniture.
To ensure that the built form defines a spatial hierarchy with a human scale which contributes to the legibility of the centre	The Proposal built form would be designed for pedestrian use and the station entries would be of human scale. The station entrances would be articulated by the built form and supported by wayfinding signage, clearly visible from the public domain, improving pedestrian movement, spatial hierarchy and legibility of the station. Widening the station entries would also create direct, defined, continuous and safe pedestrian links and visual connections through the station.
<p>Any future redevelopment of the Tuggerah Station should seek to improve facilities for pedestrian movements between the Tuggerah Straight and Lakes Road Area.</p> <p>It is also considered highly desirable for a sensitively designed, multi-level car parking station to be constructed, providing an asset for the use of commuters and visitors to the regional centre.</p>	<p>The new footbridge would be located to the north of the existing footbridge and align with the intersection of Anzac Road and the Pacific Highway and also with the bus interchange at Bryant Drive which connects to Lake Road in the east. This footbridge would improve cross corridor accessibility and improve the directness of the east west pedestrian route between the commercial centre around Anzac Road and the Lakes Road area.</p> <p>The existing commuter car parking at Tuggerah Station would be retained and improved by the provision of additional accessible car parking spaces. A multi-level car park does not form part of this Proposal, however, this project would not constrain any future proposal for such a project.</p>



## 6.2. Urban design and landscape character impacts

The following contains a summary of the potential urban design and landscape character impacts of this Proposal.

### Urban design and landscape character impacts during construction:

During construction there would be areas of the station and surrounding areas required to support construction activity. This would include areas within the station and also four site compound and laydown areas around the site. This would include a compound located in the rail corridor at the south western end of the station, where there would be project offices and other amenities. There would also be compound sites to the northeast and northwest of the station, which would be used for laydown and crane works. Site fencing and traffic barriers would be used at these construction and compound sites to separate commuter vehicles and pedestrians from worksite activities. Some car parking spaces would be closed temporarily during construction.

Some vegetation removal would be required within the station, including several mature trees beside the Pacific Highway and Anzac Road intersection. However, there would not be any trees removed to accommodate the compound sites.

While the station would remain open during construction, there would be temporary pedestrian access arrangements and footpath diversions would potentially reduce the legibility and accessibility of the station.

The multiple construction sites around the station would reduce the amenity and comfort for pedestrians approaching the station from the east and west, particularly during the civil works and installation of the footbridge, stairs and lifts, due to the use of large-scale machinery.

Overall, there would be a temporary, considerable reduction in the landscape and urban design functionality of the station precinct during construction. This precinct is of local sensitivity and there would be a **moderate adverse landscape impact**.

### Urban Design and landscape character impacts during operation:

During operation, there would be improvements to the accessibility of the station precinct with the introduction of a new footbridge with lifts, upgrades to the footpaths and station entrances, and improvements to the platform width and surface, and upgrade of facilities along the platform, including boarding assistance zones. The location of the new footbridge, aligned with the intersection of the Pacific Highway and Anzac Road, would improve the directness of the east west cross corridor route.

The Proposal would improve the legibility within the station precinct due to the location and the increased visual prominence of the station entries and footbridge. The reduced complexity and location of the footbridge would open up views to the station platforms from the adjacent footpaths and commuter carpark.

The upgraded station entry plazas, with the removal of the bulky ramping structures and introduction of new paving, furniture and signage, would also improve the appearance and accessibility of the station. The new entry spaces would be wider and create a visually appropriate address for the station from the Pacific Highway and commuter car park.

Within the station, there would be a new covered waiting area along each platform, providing sun and rain protection for customers at the station. New planting at the station entrances would also contribute to restoring the level of shade and leafy character of the station.

Overall, there would be a noticeable improvement to the urban design functionality and landscape character of the station precinct. The station is of local sensitivity and this would result in a **minor beneficial landscape impact** during operation.

## 7. Mitigation of impacts

The following mitigation measures would be implemented to further reduce and manage the visual and landscape character impacts of the Proposal:

- An Urban and Landscape Design Plan (ULDP) would be prepared by the Contractor, in consultation with Central Coast Council, and submitted to Transport for NSW for endorsement by the Precincts and Urban Design team, prior to finalisation of the detailed design. The ULDP, at a minimum, would address the following:
  - The appropriateness of the proposed design with respect to the existing surrounding landscape, built form, behaviours and use-patterns (including consideration of Crime Prevention Through Environmental Design principles). This is to include but not be limited to:
    - site analysis
    - vision and objectives for the infrastructure
    - strategies that apply to ISC approved guidelines in accordance with Urb-1 (IS Rating Tool V 1.2)
  - Connectivity with surrounding local and regional movement networks including street networks, other transport modes and active transport networks. Existing and proposed paths of travel for pedestrians and bicycles should be shown
  - Integration with surrounding local and regional open space and or landscape networks. Existing and proposed open space infrastructure/landscape elements should be shown
  - Integration with surrounding streetscape including street trees, entries, vehicle cross overs etc
  - Integration with surrounding built form (existing or desired future) including building height, scale, bulk, massing and land-use
  - Design detail that is sensitive to the amenity and character of heritage items located within or adjacent to the Proposal.

- All permanent lighting would be designed and installed in accordance with the requirements of standards relevant to *AS 1158 Road Lighting* and *AS 4282 Controlling the Obtrusive Effects of Outdoor Lighting*.
- The detailed design of the Proposal would comply with Crime Prevention Through Environmental Design principles.
- Worksite compounds would be screened with shade cloth (or similar material, where necessary) to minimise visual impacts from key viewing locations.
- Temporary hoardings, barriers, traffic management and signage would be removed when no longer required.
- During construction, graffiti would be removed in accordance with Transport for NSW's Standard Requirements.

In addition, the following mitigation measures should be considered:

- Temporary access arrangements should be well signed and provide a visually legible route for pedestrians
- Site equipment and facilities should be consolidated to maximise the area of useable public realm and maintain pedestrian access across the road bridge where possible.
- Trees retained within and adjacent to construction sites should be managed in accordance with *AS4970 Protection of trees on development sites*.

## 8. References

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