

South Batemans Bay Link Road

Landscape character and visual impact
assessment

Transport for NSW | April 2020

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Prepared by (NSW/ACT) Pty Ltd and Transport for NSW

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Executive summary

This landscape character and visual impact assessment has been prepared by Cardno (NSW/ACT) Pty Ltd on behalf of Transport for NSW. For the purposes of these works, Transport for NSW is the proponent and the determining authority under Division 5.1 of the EP&A Act.

The purpose of the assessment is to describe the proposal, to document the likely visual impacts of the proposal on the environment, and to detail mitigation and management measures to be implemented.

The assessment has been carried out in accordance with the following Transport for NSW guidelines:

- Roads and Maritime: *Guidelines for landscape character and visual impact assessment No. EIA-N04 - Version 2.1* December 2018
- *Landscape Design Guidelines*, December 2018
- *Beyond the Pavement*, January 2014.

Thirteen distinct landscape character zones, across the land and water landscape, have been identified as part of this assessment. The sensitivity value for each zone was evaluated and was integral to the assessment of the visual impacts of the proposal.

Visual catchment diagrams have been prepared that indicate land areas within the locality of the site from which the proposal would be visible. Based on these diagrams seven critical viewpoints within a 2 kilometre radius of the construction boundary were identified. In addition to these seven viewpoints, typical recreational views from Batemans Bay north shore, which is up to 5 kilometres from the construction boundary, were also documented. Views towards the site from the north shore have been identified as highly sensitive due to the scenic value and recreational importance to locals and visitors alike.

Due to the occurrence of extensive bushfires in late 2019 to early 2020, impacts of the proposed works on sensitive visual receivers have been considered in the context of three to five years limited bushland recovery and five to fifteen years (near pre-fire conditions) bushland recovery due to the uncertain nature of the natural recovery of the landscape following bushfire.

The 2019/2020 bushfires extensively impacted on the visual quality of the Batemans Bay Link Road construction boundary and its environs. Views to the site from locations within its identified visual catchment have been impacted by the fire. Considering these impacts within the three to five year recovery timeframe, the assessment identified that the proposal would inevitably result in additional impacts on visual quality during construction and post construction. The extent of these additional impacts would be contingent on the timing of the construction process and the speed and nature of recovery of the landscape.

The bushland surrounding the construction boundary is likely to be close to its pre-fire character in the five to fifteen year post fire timeframe. Considering this recovery, identified sensitive viewpoints are expected to have limited intermittent views of the completed road. The associated visual impact on these views is expected to be low and further mitigation is not required.

Street lighting is included as part of the proposal at the intersection of Princes Highway and Glenella Road and at the intersection of Glenella Road and The Ridge Road. This assessment has considered the visual impacts of the proposed lighting on surrounding residents.

The assessment identified that the impacts of the proposal in the context of the bushfires would be moderate and would decrease as the natural landscape recovers over time.

Measures to mitigate the identified impacts of the proposal on visual quality have been included in the concept design and outlined in the detailed design. These measures include:

Concept Design

- Maintaining the road alignment on the existing road reserve within a bushland setting that is relatively well screened from its surrounding environment by vegetation and topography
- Positioning of the proposed new roundabout where it would be largely screened from local views by its surrounding topography.

Detail design

- Retention and protection of existing vegetation

The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. Water quality structures and drainage lines to be designed to avoid existing vegetation where possible.

- Revegetation and screen planting

Preparation of a revegetation plan for the entire construction boundary that details all proposed revegetation and works. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. Other screen planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area is to be used to help screen associated infrastructure where practical, and help minimise the impacts of glare from headlights and street lights on surrounding residents. All batters are to be softly integrated through use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design.

- Integration of earthworks design with existing landform

Features such as rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments would be integrated into the detailed design to avoid sharp transitions at ends. Retaining walls are to be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration is to be given to screen planting below walls and the use of visually recessive materials to minimise the visual dominance of retaining walls.

- Hardscape Materiality

Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected would reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.

The overall conclusion of the assessment is that composite visual impacts of the proposal would be low to moderate. With the outlined mitigation measures in place, it is considered that these impacts would be acceptable.

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1. Introduction

1.1 Proposal identification

Transport for New South Wales (NSW) is proposing to connect the Princes Highway with the existing South Batemans Bay Link Road at Glenella Road (the proposal). The proposal would include a new roundabout on the Princes Highway south of Batemans Bay and a new two-lane road (one lane in each direction) between the roundabout and Heron Road. The proposal would generally follow the current alignment of Glenella Road (formally known as The Ridge Road) between the Heron Road and the Princes Highway to complete the South Batemans Bay Link Road project.

This report supports the environmental assessment for the proposal. The proposal is subject to assessment by a review of environmental factors (REF) under Division 5.1 of *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1.1 Proposal location

The site of the proposal is within the Eurobodalla Local Government Area (LGA) about 2.5 kilometres south of Batemans Bay, adjacent to the Princes Highway, about 300 kilometres south of Sydney and 150 kilometres east of Canberra (Figure 1-1). Batemans Bay is the main commercial centre of the Eurobodalla Shire. The Central Business District (CBD) has a mix of commercial, tourist, recreational and residential land uses. There are further urban residential and future employment lands located along the coastal villages south of Batemans Bay. The area is a popular tourist destination, particularly for Australian Capital Territory (ACT) residents and the Batemans Bay population increases substantially during holiday periods.

1.1.2 Key features of the proposal

Key features of the proposal include:

- A new roundabout on the Princes Highway, including:
 - two southbound lanes through the roundabout
 - a single northbound right turn lane through the roundabout to Glenella Road
 - a northbound bypass lane on the Princes Highway
 - single lane entry and exit to and from the Glenella Road.
- A new two-lane road (one lane in each direction), about one kilometre in length, between the new roundabout on the Princes Highway and Heron Road
- A new T-intersection at the junction of The Ridge Road and Glenella Road
- Utility adjustments including for telecommunication, electrical and water infrastructure
- Earthworks including cuttings, embankments and retaining walls
- Establishment and use of temporary ancillary facilities during construction, including site offices, plant laydown areas, access tracks, stockpile sites, water quality controls and vehicle turning bays
- Drainage and stormwater management infrastructure along the road corridor
- Site rehabilitation and landscaping work.

Street lighting is included as part of the proposal at the intersection of Princes Highway and Glenella Road and at the intersection of Glenella Road and The Ridge Road.

The proposal concept design and location of ancillary facilities are shown in Figure 1-2.

1.1.3 Proposal background

The Princes Highway is an important connection for regional motorists and is a key route for heavy vehicle, commuter and recreational traffic movements. The traffic volume on the Princes Highway just south of Batemans Bay is around 8,800 vehicles per day with 8.3 per cent heavy vehicles and a growth rate of around 1.2 per cent per year. Beach Road is a regional road and a major sub-arterial road through the Batemans Bay CBD linking the Princes Highway, just south of the Batemans Bay Bridge, to the various residential areas and beaches south of the CBD, from Catalina to Surf Beach and further south along George Bass Drive.

In June 2014, the NSW Government announced \$10 million for the South Batemans Bay Link Road project to improve traffic flow through Batemans Bay and support future growth in the region. In early 2019, Eurobodalla Shire Council completed construction of the first stage of the South Batemans Bay Link Road between George Bass Drive and Heron Road, east of the Princes Highway. The completed section of the South Batemans Bay Link Road is known as Glenella Road. As part of these works, the section of The Ridge Road from the Princes Highway to Glenella Road was renamed to Glenella Road. This was undertaken by Council to define the connection of the sub arterial road (Glenella Road) through to the Princes Highway.

In January 2019, the NSW Government announced funding of \$30 million for Transport for NSW to finalise planning and build the connection of the South Batemans Bay Link Road to the Princes Highway.

Transport for NSW proposes to build a link road connection between the Princes Highway and the South Batemans Bay Link Road along the existing alignment of Glenella Road. The proposal would reduce pressure on the existing Beach Road/Princes Highway, ease congestion in the Batemans Bay CBD and accommodate for future traffic growth.

The main objective of the proposal is to provide a safe and efficient connection between the Princes Highway and the South Batemans Bay Link Road.

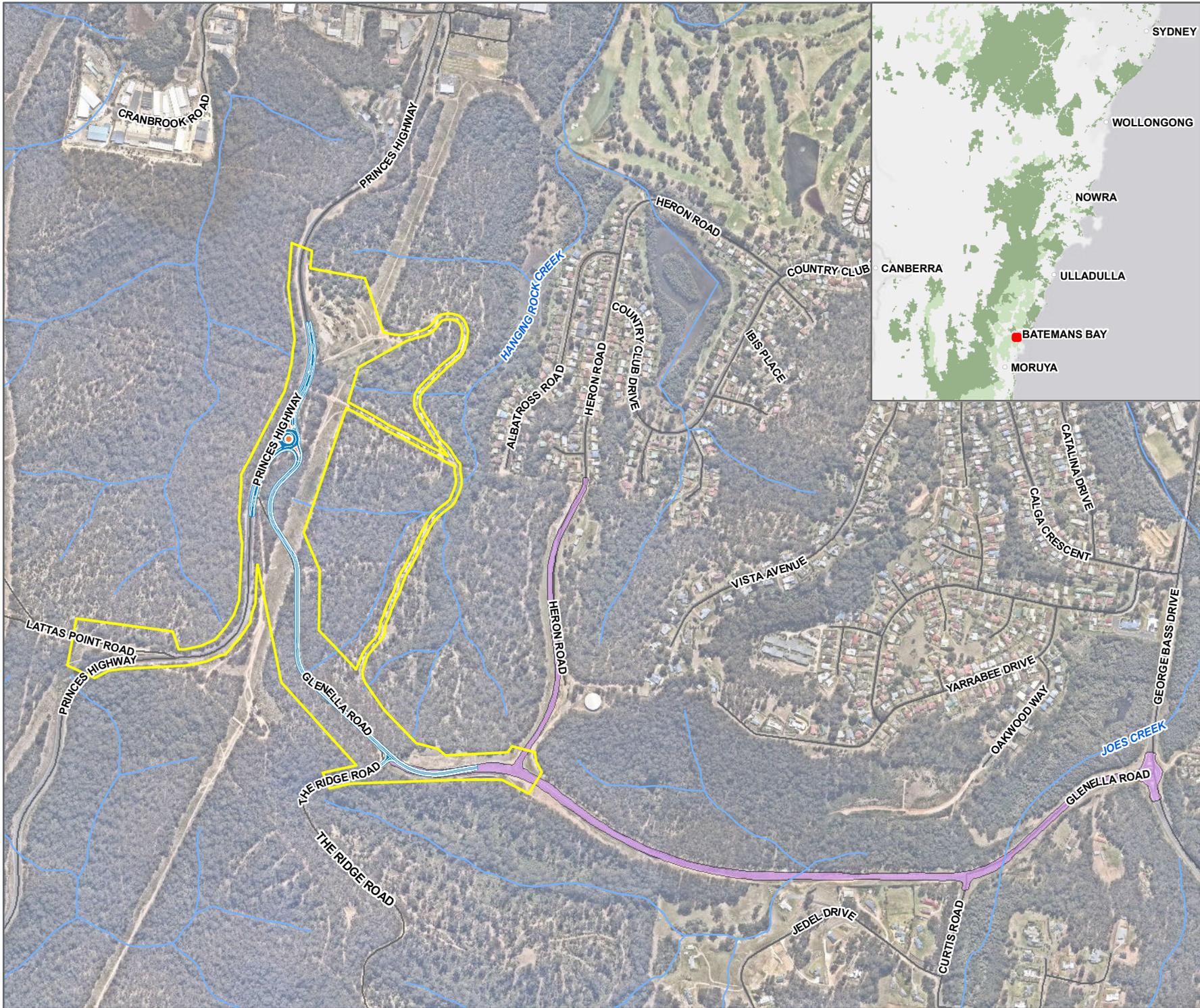
Other objectives of the proposal are to:

- Facilitate land use development in the Batemans Bay CBD and southern coastal villages to support residential property and employment growth
- Increase freight productivity for heavy vehicles accessing the southern coastal villages and the proposed Surf Beach employment lands
- Improve amenity in the Batemans Bay CBD.

1.2 Purpose of the report

This landscape character and visual impact assessment has been prepared by Cardno (NSW/ACT) Pty Ltd on behalf of Transport for NSW. For the purposes of these works, Transport for NSW is the proponent and the determining authority under Division 5.1 of the EP&A Act.

The purpose of the landscape character and visual impact assessment is to describe the proposal, to document the likely visual impacts of the proposal on the environment, and to outline mitigation and management measures to be implemented to limit the proposed impact.



Location of the proposal

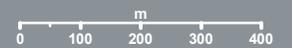
SOUTH BATEMANS BAY LINK ROAD PROJECT

Legend

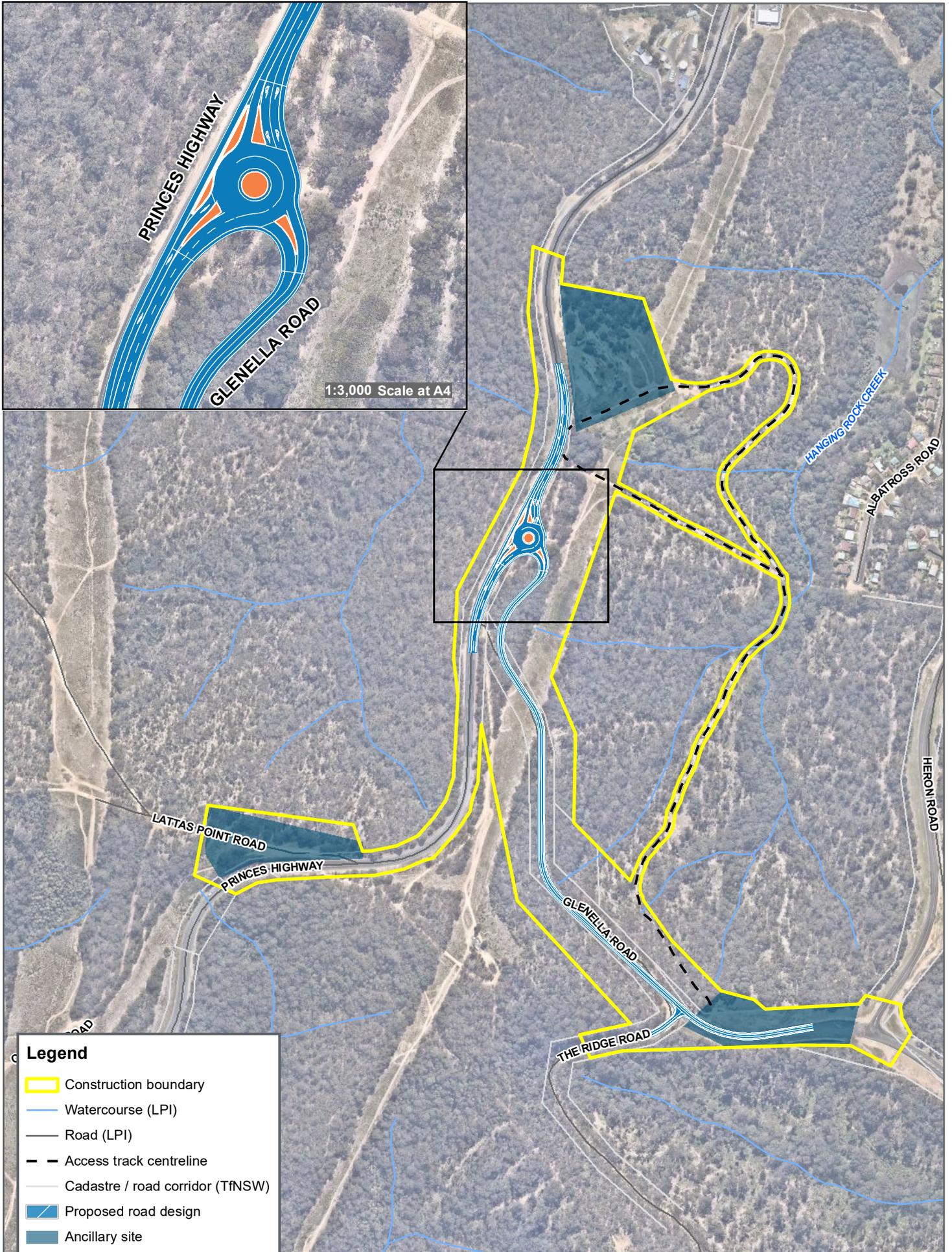
- Construction boundary
- Watercourse (LPI)
- Road (LPI)
- Proposed road design
- State Forest (LPI, 2017)
- NPWS Reserve (LPI, 2017)
- Council completed alignment SBBLR Stage 1

FIGURE 1-1

1:12,500 Scale at A4



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
 Date: 2020-02-25 | Project: 8202006301
 Coordinate System: GDA 1994 MGA Zone 56
 Map: 8202006301-GS-011-LocalContext_A4.mxd_05
 Aerial imagery supplied by Nearmap (September, 2019)



Legend

- Construction boundary
- Watercourse (LPI)
- Road (LPI)
- Access track centreline
- Cadastre / road corridor (TfNSW)
- Proposed road design
- Ancillary site

FIGURE 1-2
 1:8,000 Scale at A4

m

0 50 100 150



The proposal

SOUTH BATEMANS BAY LINK ROAD PROJECT



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
 Date: 2020-02-25 | Project: 8202006301
 Coordinate System: GDA 1994 MGA Zone 56
 Map: 8202006301-GS-012-SitePlan_A4.mxd 05
 Aerial imagery supplied by Neamap (September, 2019)

2. Objectives

This landscape character and visual impact assessment has been carried out as part of the environmental impact assessment for the proposal. The objectives of this assessment are as follows:

- Provide an initial description of the existing conditions and contextual analysis of the proposal and surrounding landscape
- Assess the proposal and its impact on the surrounding landscape character and visual environment
- Develop a mitigation strategy to minimise impacts on visual quality during the construction and operation of the proposal.

3. Methodology

The methodology used to undertake the assessment is summarised below:

- Review all background documentation, and supporting material to gain an appreciation of the proposal
- Carry out a site and area inspection (October 15th 2019) to assess the visual character and to gain a full appreciation of the proposal in its setting. During the site visit, levels of visual sensitivity, visual catchments, views and magnitude of change were identified
- Undertake contextual analysis of the existing conditions
- Determine sensitivity levels based on the contextual analysis. To do this, a typical hierarchy of sensitivity was assumed. Residential and recreational areas were considered to have higher sensitivity to change compared to industrial or employment areas. Views from roads were considered to have high sensitivity if they were close to the construction boundary or if the views were on an axis to the site
- Prepare visual catchment diagrams to indicate land within the locality of the site from which the proposal would be visible. The visual catchment was defined either by topographical features, waterscape, built form and/or vegetative screening. Separate visual catchment diagrams were generated at radii of 2kilometres and 5kilometres from the proposal site using Light Detection and Ranging Data (LIDAR) data and Geographical Information System (GIS) technology. The diagrams indicated likely visibility of the proposal site based on 3D information (triangulation data) of the proposed design surfaces provided by Transport for NSW. The visual catchment diagrams were generated based on a development scenario that assumed all vegetation within the construction boundary would be removed during the construction of the road. While the exact number of trees requiring removal for construction purposes is unknown, it is inevitable that some trees would need to be removed in order to construct the proposal. In practice, however, some existing trees may not be removed and their retention would potentially decrease the level of visibility of the proposal from surrounding areas
- Identify representative critical viewpoint locations within the identified visual catchment that may potentially be impacted by the proposal with regard to visual quality. Critical viewpoints within the identified visual catchments have been selected through a process of analysis of the visibility diagrams. These viewpoints are representative of views that would be likely to be subject to changes as a result of the proposal and be sensitive to change as a result of the expectations of viewers
- Assess the potential visual impacts of the proposal with respect to:
 - Viewpoint sensitivity - The capacity of the visual environment to absorb change (as viewed from the agreed critical viewing points)
 - Change magnitude - The amounts of change that would be experienced as a result of the implementation of the proposal (carried out with the aid of annotated photographs prepared from agreed critical viewing points)
 - The visual quality of the changed visual environment in comparison with the environment prior to development.
- Detail mitigation measures to address any unacceptable impacts on views that may result from implementation of the proposal in its current form.

The landscape character and visual impact assessment was undertaken with reference to the following Transport for NSW guidelines:

- Roads and Maritime: *Guidelines for landscape character and visual impact assessment No. EIA-N04 - Version 2.1* December 2018
- *Landscape Design Guidelines*, December 2018
- *Beyond the Pavement*, January 2014.

The 2019/2020 bushfires in NSW have impacted on the visual character of the site and its environs. In the context of the bushfires, the methodology for visual impact assessment has been modified to include following additional tasks:

- A second site and area inspection was carried out on 28th January 2020 to assess changes to the visual environment and landscape character as a result of the fires. During this visit, the previously identified viewpoints locations were re-visited and fresh photographs in the direction of views to the proposal site were taken
- Time referenced visual impact assessment was completed. In order to gain an understanding of the impacts under pre-fire conditions and how the impacts may change in the dynamic conditions as the post fire landscape recovers, the visual impact assessment was carried out in a series of timeframes to mirror likely conditions as the local bushland regenerates during the time of construction and post construction, when the proposal is operational. The potential level of regeneration at each timeframe was informed in consultation with the ecologists working on the project
- Management measures were also outlined in the context of the dynamic post fire visual environment. Measures for revegetation within the identified project site were considered in the context of the surrounding post fire visual environment.

3.1 Limitations and assumptions

The 2019/2020 bushfires have impacted substantially on the visual character of the landscape in the vicinity of the proposed road. Sections 3.1.1 and 3.1.2 outline the assumptions made to allow assessment of the visual impacts of the proposal in the context of these changes to the local landscape, and the limitations of this assessment.

3.1.1 Assumptions

This visual impact assessment has, by necessity, acknowledged that views to the site from locations within its identified visual catchment have been impacted by the 2019/2020 bushfires and has adopted a number of assumptions in order to approximate the changes to visual impacts of the proposal in the context of the bushfires. These assumptions are:

- The landscape character of the fire damaged bushland will return to a condition close to its pre-fire character over time due to natural or assisted regeneration of the bushland vegetation
- Houses that have been destroyed by the fires will be re-built near to or at their original pre-fire locations
- Significant clearing or other changes to the existing bushland to manage future fire risks will not occur
- The construction phase for the proposal would occur between 2021 and 2023
- The proposal would be constructed and operational in the three to five year timeframe.

3.1.2 Limitations

- Rates of rehabilitation of depleted bushland are based on estimates provided in the project Biodiversity Assessment Report (Umwelt 2020)
- The assessment of the proposal includes additional impacts on visual quality as a result of the fires both during construction and post construction. The extent of these additional impacts would however be contingent on the timing of the construction process and the speed and nature of recovery of the landscape, which depends on a number of difficult to predict external factors.

3.2 Assessment of impact

Table 3-1 shows how the level of sensitivity and magnitude are combined to determine the overall level of impact for both the landscape character and visual aspects. This rating matrix has been used to assess the landscape character impact and visual impact of the proposal in this report.

Table 3-1: Landscape character impacts and visual impacts 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
	Negligible	Negligible	Negligible	Negligible	Negligible

Two magnitude of change ratings were recorded for each view (during construction and operation). A precautionary approach to impact assessment has been adopted and the higher of the two ratings has been adopted as an overall impact rating. It should be noted that the ratings are measured relative to each other, rather than being assigned through an absolute scale. Hence the resulting rating is project specific and identifies those views with the highest and lowest impacts.

4. Contextual analysis

Visual impact assessment requires that land in the locality of a project is considered in order to assess the potential impacts of a proposed development on its visual environment. The study area considered includes land within an approximate 4 kilometre radius of the construction boundary.

Results of the analysis of the study area carried out are summarised below.

4.1 Regional context

Batemans Bay is a vibrant seaside town perched at the entrance of the Clyde River, on the southern coastline of New South Wales. It is the main commercial centre of the Eurobodalla Shire and significant future redevelopment is expected within its CBD to support ongoing population growth. The area is a popular tourist destination, particularly for ACT residents, with the Batemans Bay population increasing substantially during holiday periods.

Batemans Bay is located around 273 kilometres south of Sydney and around 148 kilometres east of Canberra. The Princes Highway functions as the primary north-south coastal transport corridor, both for local and regional traffic and provides a critical link between the northern and southern end of town, separated by the Clyde River.

4.2 Landscape context

The landscape surrounding Batemans Bay is of considerable natural beauty and boasts pristine beaches, National Park bushland, wetlands, and the Clyde River. This unspoilt natural environment setting strongly contributes to the overall visual quality and identity of the Batemans Bay urban centre and its environs. The landscape character is described in further detail in Section 5 of this report.

4.3 Urban context

The proposal sits within a bushland setting with no appreciable urban component. In the broader context the proposal site is located to the west of Batemans Bay town centre and its suburban surrounds.

4.4 Urban planning background

Local Environmental Plans in NSW can include specific controls to protect visually sensitive land or critical views. These may include controls connected to land zones or they may be tied to Scenic Protection Zones - lands that have been mapped specifically to facilitate protection of their identified scenic values.

The land within the construction boundary is zoned RU3 – Forestry under the *Eurobodalla Local Environmental Plan, 2013* (ELEP). The objectives of this zone are:

- *To enable development for forestry purposes*
- *To enable other development that is compatible with forestry land uses.*

There are no specific objectives or controls under the RU3 – Forestry Zone that are of relevance to scenic, visual or landscape quality.

There are no mapped Scenic Protection Areas in the ELEP and there are no specific controls or guidelines pertaining to scenic, visual or landscape quality in other planning controls in the Eurobodalla Shire.

4.5 2019/2020 bushfires

During late 2019 and early 2020, Australia experienced a severe bushfire season with fires across several states. New South Wales was one of the largest areas impacted with over 5 million hectares of land burnt across the state.

The proposal site was affected and formed part of the Clyde Mountain/ Moreton/ Currowan fire complex which burned approximately 480,000 hectares of land (as reported on 7 January 2020). The fire resulted in the temporary loss of dense bushland within the construction boundary as well as loss of a number of residences and industrial complexes in the surrounding greater project area. While bushland vegetation is expected to regenerate, the timing of this regeneration will be dependent on a number of factors. Influencing factors would include the interaction of a range of environmental aspects such as fire intensity and particularly the extent of canopy fire, the presence of unburnt vegetation, canopy fire response category, existing seedbank, seasonal rainfall and suitable climate.

The impacts of the fires on the visual environment have modified the methodology of this assessment. These are explained and discussed in Section 3 of this report.

4.6 Heritage

The Aboriginal heritage values found within the construction boundary and nearby areas have been addressed in the heritage report prepared by Kelleher Nightingale Consulting Pty Ltd (2020). No specific concerns have been raised in this report regarding visual impact on these values.

The construction boundary has also been assessed to determine the likelihood for the occurrence of non-Aboriginal heritage sites or objects of significance. This assessment has been undertaken by Austral Archaeology (2020). No specific concerns have been raised in this report regarding visual impact on these values.

5. Landscape character

5.1 Landscape character zones

Several distinct landscape character types have been identified in Batemans Bay, each distinguished by its particular combination of land use, topography and built form.

It is important to identify these landscape character zones as they combine to constitute the overall landscape character of the locality. Each landscape character zone will vary in its sensitivity to levels of change. The level of sensitivity will be integral to the assessment of visual impacts of the proposal. The sensitivity assessment has been based on Road and Maritime's *Environmental Impact Assessment Practice Note - Guidelines for Landscape Character and Visual Impact Assessment No. EIA-N04, Version 2.1 Issue (2018)*.

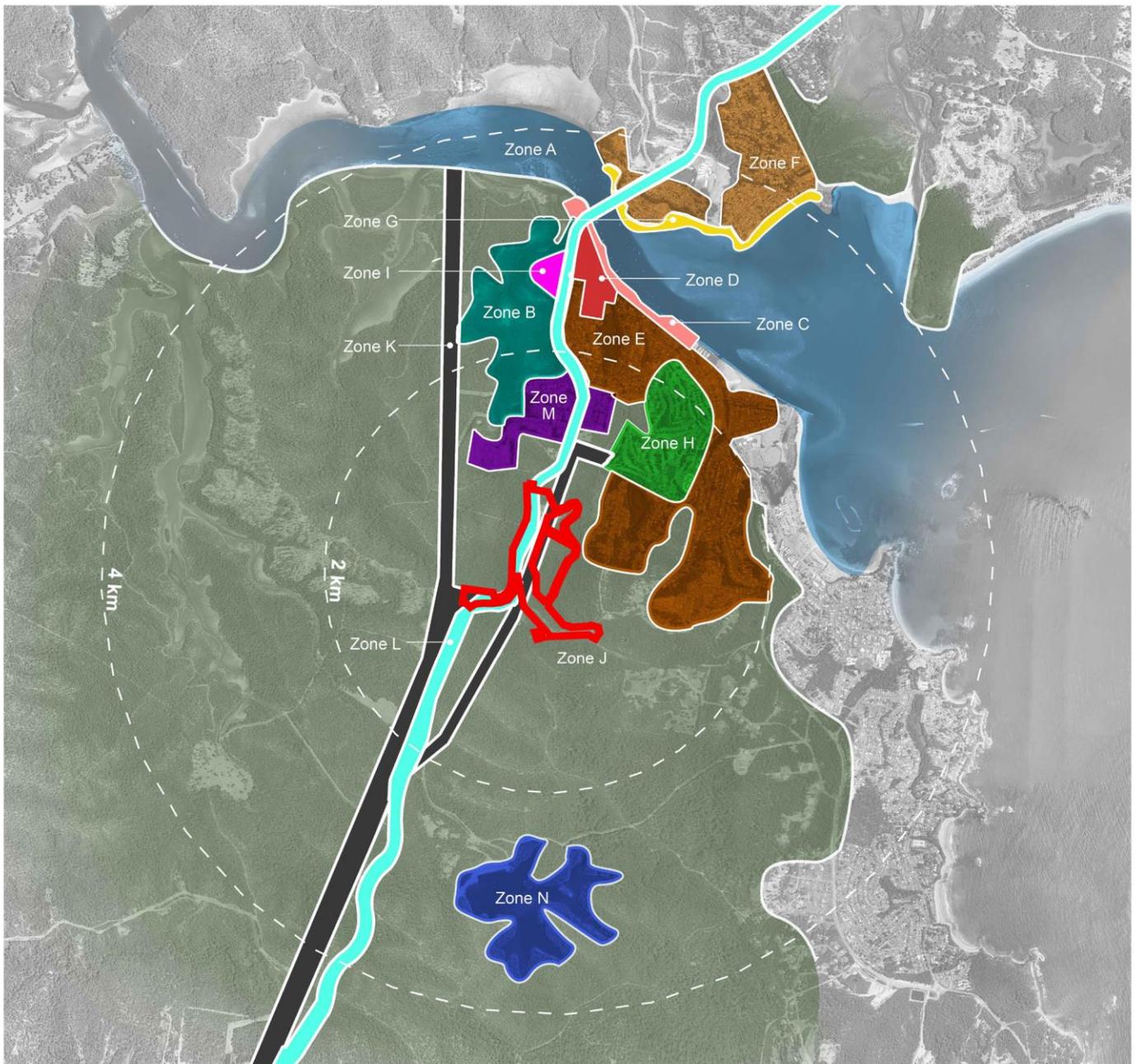
The sensitivity assessment helps to inform the design process, particularly in the identification of impacts and mitigation measures applied during the design phase of a project.

Fourteen distinct landscape character zones, have been identified by this assessment. These zones have been categorised into the following groups:

- General – a zone within the locality of the proposal that does not have direct visibility or exposure to the construction boundary
- Receiver - a zone that has direct visibility or exposure to the construction boundary
- Proposed works - a zone that forms part of the construction boundary.

Each landscape character zone is identified on Figure 5-1 and described in further detail in Table 5-1. Table 5-1 also discusses the sensitivity values for each landscape character zone. The sensitivity value refers to the qualities of a particular landscape character zone, and how sensitive the existing character of the setting is to the proposed change. Photographs of each landscape character zone are included in Appendix A of this report.

To address the impacts of the 2019/2020 bushfires on landscape character a separate description of character has been made for the identified landscape character zones that incorporate existing bushland (refer to Table 5-2).



LEGEND



	Construction boundary		
	Zone A Clyde River Inlet		Zone F North Shore Residential Area
	Zone B Wetlands		Zone G North Shore Foreshore
	Zone C The Promenade		Zone H Batemans Bay Golf Course
	Zone D Batemans Bay CBD		Zone I Sport Facilities and Public Pools
	Zone E Batemans Bay Residential Area		Zone J Bushland (intact)
			Zone K Easements
			Zone L Major Road Corridors
			Zone M Industrial / Large Scale Commercial
			Zone N Deep Creek Dam

Source: Nearmap
 Projection: GDA 1994 MGA Zone 56

Figure 5-1: Landscape character zones

5.1.1 Landscape character zones pre-fire

Table 5-1: Landscape character zone assessment table – pre-fire

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
<p>Zone A – Clyde River Inlet</p> <p><i>Zone category: Receiver</i></p>	<p>Wide open waterway of high scenic and ecological value.</p>	<p>The Clyde River is used for many water-based recreational activities such as boating, fishing and kayaking. Moored boats are a common sight along the Clyde River Inlet.</p>	<p>Open character with vistas out to sea to the east and towards the Clyde River National Park to the West. The landscaped backdrop of Clyde River National Park to the west is a key feature of this zone.</p>	<p>Batemans Bay Bridge is the most visible and prominent piece of infrastructure over Clyde River. Smaller wharfs and boat ramps are also present in this zone.</p>	<p>High – The Clyde River waterway is a natural visual element of high scenic value. It is a critical contributing element to the local landscape character of Batemans Bay and users of the waterway would have a high expectation that views to and from this zone would remain of high quality.</p>
<p>Zone B – Wetlands</p> <p><i>Zone category: General</i></p>	<p>The intertidal saltmarsh, mangroves and surrounding forests of the wetlands on Mcleods Creek create a high quality natural environment with high scenic and ecological value.</p>	<p>None</p>	<p>The spatial character of the wetlands is subtle and defined by the dense vegetation, mainly the mangroves, which provide an enclosed and intimate setting. Views from within the zone are limited.</p>	<p>None</p>	<p>High – The local wetlands are natural visual elements in the locality. Views to and from the wetlands will be highly sensitive to change.</p>
<p>Zone C – The Promenade</p> <p><i>Zone category: General</i></p>	<p>The Promenade is characterised by manicured open grass spaces, stands of trees, streetscape vegetation and extensive hardscaped areas (carparks and footpaths). A small parkland area which includes shelters, BBQs, benches, rubbish bins and a small playground is located at the far western end of this zone.</p>	<p>The Promenade features a variety of building typologies including residential homes, motels and hotels, retail buildings and food outlets. Near the CBD the buildings are predominantly single storey but towards the western end more double storey buildings are introduced. Picnic shelters, BBQs and an amenities block are also part of the built environment.</p>	<p>Wide open, expansive vistas across the river and out to sea are a prominent feature of this zone. The panoramic views from the promenade include the Batemans Bay Bridge, boats, a small wharf, boat ramp and the dense, forest backdrop beyond.</p>	<p>The promenade is lined with infrastructure including a shared pedestrian and cycle pathway, lighting, extensive car parking, picnic shelters, BBQs and an amenities block.</p>	<p>High – The promenade is a popular destination for locals and visitors alike and a place where people would go specifically to enjoy the view.</p>

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
<p>Zone D - Batemans Bay CBD</p> <p><i>Zone category: General</i></p>	<p>The CBD is a highly modified urban environment. Hardstand areas (car parking, roads and footpaths) dominate the centre. Very little landscaping or greenery is found throughout the centre with the exception of some small street trees and understory planting.</p>	<p>The built environment of this zone includes a variety of building typologies ranging from single to double storey and are mostly retail, tourism or food outlets.</p>	<p>The dominance of cars and a collective mix of buildings through the centre create a spatial character that lacks consistency.</p>	<p>Car parks, street lights, traffic signs, traffic lights, power poles and overhead power lines are highly visible elements of streetscape throughout the CBD. This zone is very car dominated.</p>	<p>High – the CBD, located between the promenade and the residential area to the south, provides a critical function for tourism, hospitality and retail. This zone attracts large numbers of people, especially during the holiday periods. For this reason it is highly sensitive to change.</p>
<p>Zone E – Batemans Bay Residential Area</p> <p><i>Zone category: Receiver</i></p>	<p>The residential streets of this zone are generally characterised by wide roads with no footpaths. Mown, grassed verges of generous widths line both sides of the road. Houses are well set back from the street. Mature street trees are located sporadically along some streets. Private residential gardens offer a mix of native and exotic species.</p>	<p>Single and double story homes offering variety in form and character.</p>	<p>The dense, native forest backdrop to the north, south and west clearly defines the spatial character of this zone. To the north, residences also have direct and filtered views overlooking the Clyde River.</p>	<p>Local roads, power poles, overhead power lines and street signs.</p>	<p>High – due to the residential land use being sensitive to any change of its character.</p>
<p>Zone F – North Shore Residential Area</p> <p><i>Zone category: Receiver</i></p>	<p>Houses are well set back from the street and local roads are generally wide with no footpaths. Extensive mown lawn areas with manicured gardens offer a mix of native and exotic species. Pockets of bushland can be found throughout this zone. Very few street trees are located in this zone.</p>	<p>Single and double story homes offering variety in form and character. The homes appear to be designed and built in ways to capture the views across the river to the south.</p>	<p>The dense, native forest backdrop to the north, east and west clearly defines the spatial character of this zone. To the south residences also have filtered views overlooking the Clyde River towards Batemans Bay CBD.</p>	<p>Local roads, power poles, overhead power lines and street signs. A shared pedestrian and cycle pathway is located along Wharf Road and connects to the North Shore Foreshore.</p>	<p>High – due to the residential land use being sensitive to any change of its character.</p>

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
<p>Zone G – North Shore Foreshore</p> <p><i>Zone category: Receiver</i></p>	<p>The north shore foreshore is characterised by cleared open grass parklands with picnic areas and mature stands of native and exotic trees. Pockets of dense bushland can be found at the eastern end of this zone.</p>	<p>At the far western point of this zone, picnic shelters, BBQs, an amenities block and small playground form the built environment. The waterfront holiday cabins at BIG4 Batemans Bay at Easts Riverside Holiday Park are also a key feature of the built environment.</p>	<p>The flat topography and low elevation of this zone offers open, expansive vistas across the river inlet, out to sea to the east and up the river towards Clyde River National Park to the west. These panoramic views are a prominent feature of this zone. Batemans Bay town and the promenade can be seen across the river. Beyond the CBD, the dense forest backdrop lines the horizon.</p>	<p>Infrastructure is only found at the western end of this zone in the form of a pedestrian pathway, car parking, picnic shelters, BBQs and an amenities block.</p>	<p>High – this zone is considered highly sensitive due to its scenic value and recreational importance to locals and visitors alike. The foreshore is a critical element of the local landscape character of Batemans Bay and users would expect that views to and from the zone would remain of high quality.</p>
<p>Zone H – Batemans Bay Golf Course</p> <p><i>Zone category: Receiver</i></p>	<p>The natural environment of this 27-hole international level golf course is highly modified with extensively manicured grass fairways, putting greens and sand bunkers. Pockets of mature trees are found throughout the golf course. Hanging Rock Creek runs through the centre of the golf course and to the south two man made water basins are located.</p>	<p>Access to the golf course is off Beach Road where there is a large carpark and the expansive Catalina Country Club building which features a golf shop, restaurant, bar, cafe and function centre. Smaller buildings, sheds and driving range cages are found scattered throughout the golf course.</p>	<p>Intimate character with views over the golf green framed by the pockets of mature trees throughout the course. The elevation of the golf course is predominantly low but the dense native forests at a higher elevation to the south can be seen along the horizon as a backdrop.</p>	<p>Limited infrastructure is found throughout the green of the golf course.</p>	<p>Moderate – the golf course is a recreation facility principally used for formalised recreation. However, the nature of golf courses is such that their visual quality is important. Golfers and visitors would have an expectation that existing quality views to and from the course would be protected.</p>
<p>Zone I – Sport Facilities and Public Pools</p> <p><i>Zone category: General</i></p>	<p>Highly modified environment featuring extensive grassed sports fields and open grass areas with stands of mature trees (native and exotic). Some low understory planting in particular around the mini golf and swimming pool complex.</p>	<p>Single storey buildings at the mini golf and swimming pool complex. A double storey club house/function centre building and grand stand structures are found at the Mackay Park sports fields. Several shade sails, shelters and picnic benches near to pool complex also form part of the built environment of this zone.</p>	<p>Open character offering views over the sporting fields and other recreational facilities (mini golf and swimming pool). To the east, the Princes Highway and the edge of the CBD is visible. To the north, south and west, distant vistas of dense native forest can be seen.</p>	<p>A wide variety of infrastructure is found in this zone to service the recreational facilities (sports fields, mini golf and swimming pool complex).</p>	<p>Moderate – As this zone is predominately used for recreation purposes it is less susceptible to change. Users are less likely to visit specifically to enjoy the view.</p>

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
Zone J – Bushland (intact) <i>Zone category: Proposed works</i>	Densely vegetated bushland which creates a natural environment of high visual quality with high scenic and ecological value.	None	Intimate character. Limited views beyond the dense green forest.	None	High – This bushland forms the backdrop of numerous vantage points throughout Batemans Bay and is considered a pristine natural environment. As a result it is highly sensitive to change.
Zone K – Easements <i>Zone category: Proposed works</i>	Minimal natural character due to the cleared open corridor. Dense bushland is present on the verges.	None	Spatially, the easements appear quite dramatically in the landscape as they are cleared, open corridors that slice through the adjacent bushland.	Power poles and overhead power lines.	Low
Zone L – Major road corridors <i>Zone category: Proposed works</i>	Dense bushland verging both sides of the major road corridor which is integral to the visual experience of the road users.	None	The roads generally tend to follow the topography of the land and are enclosed by bushland. The verging bushland has a dominant impact on spatial character of this zone.	Major road corridors consisting of 1-2 lanes in both directions. Crash and safety barriers are located where required for safety reasons.	Moderate
Zone M – Industrial / large scale commercial <i>Zone category: General</i>	This zone is a highly modified urban environment. Grass verges are located on both sides of the wide roads with small pockets of landscaping in front of some of the industrial/commercial buildings. Mature native and exotic trees are located sporadically along some streets. Dense forest forms the backdrop to this zone.	Large scale single and double storey industrial and commercial warehouse-style buildings.	The elevation of this zone is relatively low which results in the spatial character being dominated by the large scale buildings in the foreground. The dense forest backdrop can be seen in most directions.	Power poles, overhead power lines, street signs.	Low – the sensitivity of this character zone is low due to the nature of its land use and the fact that it is already highly modified. It is unlikely users will be significantly impacted by any change to its character.

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
Zone N – Deep Creek Dam <i>Zone category: General</i>	This zone is a large isolated water body covering 320 hectares and has a capacity of 4,900 million litres, which provides an ample water supply to the Northern part of the shire. The dam is surrounded by pristine, dense native bushland. The Eurobodalla Botanic Gardens is less than 1km from Deep Creek Dam.	Deep Creek Dam Pumping Station.	Open character with vistas across the water with views of the native bushland and distant the mountains providing a backdrop.	Carpark with public viewing area as well as mountain bikes and walking tracks around Deep Creek Dam.	High – the sensitivity of this character zone is high due to its scenic and recreational value of the area.

5.1.2 Landscape character zones post-fire

The bushfires have changed the landscape character in the vicinity of the development site within the character zones that include intact bushland. Houses were also lost in the verges to the bushland zones, further impacting on the local landscape character. To address these changes in this assessment, existing landscape character has been described and assessed for sensitivity in pre-fire and post-fire conditions. The character zones that have changed post-fire are:

- Intact bushland and their residential verges (zone J)
- Easements (zone K)
- Major road corridors (zone L)
- The Deep Creek Dam (zone N).

Umwelt (2020) describes how the construction boundary and nearby bushland have been affected by the bushfires and how they are likely to change over time through post fire regeneration. The impacts on the dominant wet sclerophyll forest in the construction boundary are considered here against the following timeframes:

1. Immediately post fire
2. Three to five years post fire
3. Five to fifteen years post fire (full regeneration expected to be achieved within 20 years).

It is important to note that Umwelt (2020) documents that the sheltered gullies typically inhabited by dry rainforest may take longer to regenerate than the above time frames. Dominant Eucalypt species are likely to recover their canopies within ten years, while other fire sensitive species may not regenerate for twenty-fifty years.

Based on these estimates, typical sections have been prepared to illustrate the existing, post-fire and likely regenerating structure of the bushland in the nominated timeframes. The result of this exercise are illustrated below with commentary.



Figure 5-2: Typical diagrammatic cross section illustrating pre-fire conditions of site bushland vegetation (not to scale / not based on topography)

Figure 5-2 illustrates typical bushland vegetation conditions close to the site prior to the 2019/2020 bushfires. Pre-fire vegetation found within the study area includes native grasses, shrubs and trees. Grasses and low shrubs (1 – 5 metres high) typically cover 15 – 40 per cent of the site and include species such as *Rytidosperma longifolia*, *Entolasia stricta*, *Podolobium ilicifolium* and *Platysace lanceolata*. The cover of larger shrubs and small trees (10-20 metres high) is highly variable and depends on past disturbance but is typically 25 – 35 per cent of the site. However, this can be as high as 85 per cent in low-lying sheltered communities. Species classed as shrubs and small trees include *Allocasuarina littoralis* and *Backhousia myrtifolia*, and *Macrozamia communis*. Site cover of large trees (30 – 60 metres or taller) is also highly variable depending on past disturbance and logging history. Typically cover ranges from 15 – 40 per cent throughout the study area but can be as high as 60 per cent in low lying sheltered communities, and as low as 0 per cent in cleared areas. Common large tree species found within the study area include *Corymbia maculate*, *Eucalyptus eugenoides*, *Eucalyptus globoidea*, *Eucalyptus paniculata*, and *Eucalyptus pilularis*.

In essence, the pre-fire forest presented as a typical south coast indigenous bushland environment, dominated by tall (30-60 metres) and mid height (10-20 metres) trees and a variable density of understorey. Disturbance by historical logging and other human activities has varied the integrity of the forest but from a landscape character perspective the study area is generally presented as intact indigenous bushland. With respect to views, the forest provided a relatively dense vegetation cover that screened out views towards the site when in the line of view.

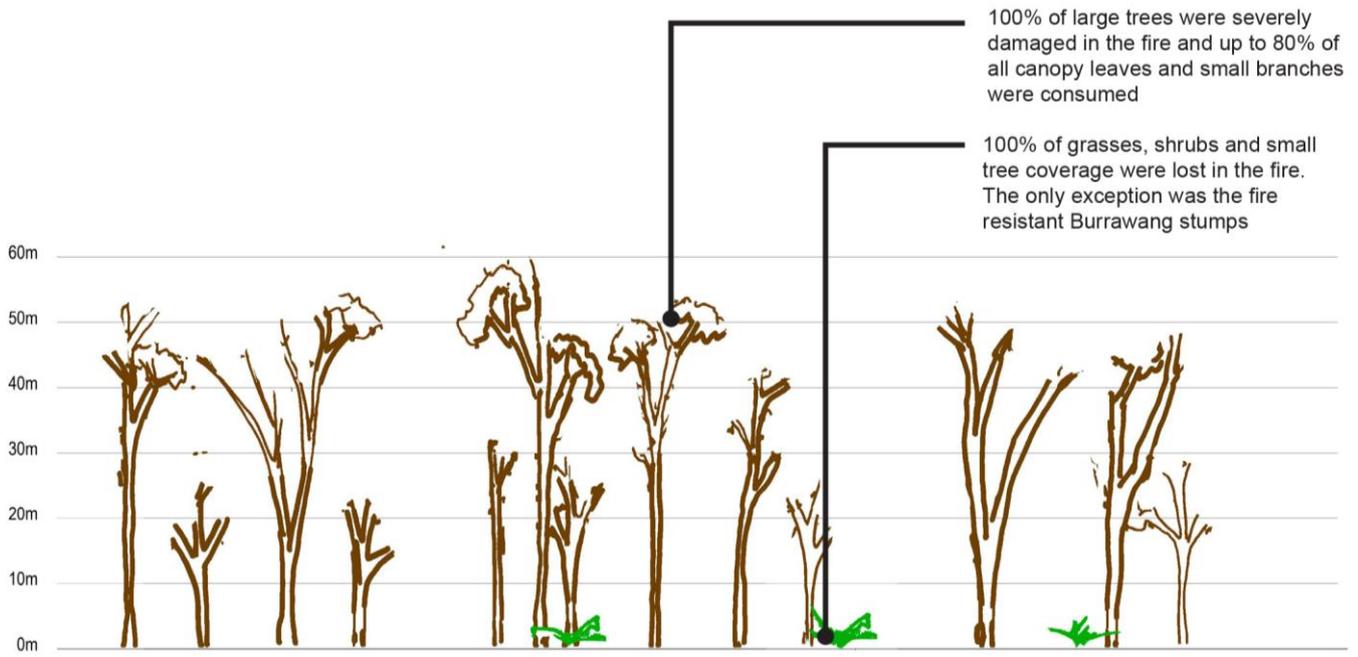


Figure 5-3: Typical diagrammatic cross section illustrating post-fire conditions of site bushland vegetation (not to scale / not based on topography)

The 2019/2020 bushfires had a devastating effect on the vegetation found within the project site and surrounding area (refer to Figure 5-3). Almost 100 per cent of the grasses, shrubs and small tree coverage were lost. The only exception was the fire resistant Burrawang (*Macrozamia communis*) stumps which survived and were already showing leaf buds, three weeks after the fire event. Of the larger trees, 100 per cent of the canopy cover was scorched and up to 80 per cent of canopy leaves and small branches were consumed by the fire in some areas. Burnt canopy cover is visible throughout the site.

The post-fire forest, although dramatically depleted, still provides some level of visual screen via the presence of remaining burnt tree trunks and the lattice of branches in the canopy. The landscape character has, of course, also changed with all of the fire affected bushland being depleted.



Figure 5-4: Typical diagrammatic cross section illustrating expected level of bushland regeneration in three to five years (not to scale / not based on topography)

As discussed by Umwelt (2020), subject to rainfall levels, vegetation regrowth will be substantial over the three to five year timeframe (refer to Figure 5-4). It is expected 100 per cent of the grass and most shrub vegetation will naturally regenerate and shrub cover is likely to exceed that occurring prior to the fire as a result of fire ephemeral species. Some canopy restoration of surviving trees may be seen in this timeframe, however, it is expected that high levels of re-sprouting will take much longer.

In a three to five year timeframe, the bushland is likely to present as a regenerating understory, possibly of higher density than in pre-fire conditions, with a depleted upper storey / canopy showing some level of re-generation. The forest will provide some screening but the upper canopy is unlikely to provide the level of screening of the pre-fire community within this three to five year timeframe.



Figure 5-5: Typical diagrammatic cross section illustrating expected level of natural regeneration of bushland vegetation on site in five to fifteen years (not to scale / not based on topography)

According to Umwelt (2020), although highly dependent on the level of rainfall, it is expected that within five to fifteen years the majority of the small tree species will naturally regenerate. In some cases, cover is likely to exceed pre-fire cover due to the presence of longer-lived ephemeral understory trees. The intensity of the fires makes it hard to accurately predict the level of regeneration of the large tree species but due to the dominance of epicormic resprouting species, it is likely that between 90 per cent and 100 per cent of the canopy will recover (refer to Figure 5-5). The timeframe of this will be highly influenced by the amount of rainfall, however regeneration of the canopy is likely to occur within ten years.

The landscape of the bushland is likely to be close to its pre-fire character in the five to fifteen years, therefore, in that timeframe it is expected that the upper canopy will have recovered enough to provide a high level of screening and present as a dense bushland backdrop.

While it is expected that much of the canopy regeneration will occur within the five to fifteen years timeframe, it is expected that the bushland will be fully regenerated and restored to its pre-fire character by the 20 year mark based on structure and species composition.

Table 5-2 provides a summary description of the bushfire impacted landscape character zones based on the above sections and descriptions. Note: only zones that were directly affected by the fire are included in this table and include: Zone J, K L and N.

Table 5-2: Landscape character zone assessment table – immediately post-fire

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
<p>Zone J – Intact bushland and their residential verges</p> <p><i>Zone category: Proposed works</i></p>	<p>The natural character of the intact bushland zone has been dramatically depleted by bushfire damage. The natural character will be restored over time through regeneration, as illustrated in the commentary provided in Section 5.1.2 of this report.</p> <p>Three - five year timeframe: Estimates informed by Umwelt (2020) are that the bushland environment will begin to regenerate immediately, will have a close to intact understorey in the three to five year timeframe.</p> <p>Five to fifteen year timeframe: In five to fifteen years it is expected the bushland environment will mostly return to its intact pre-fire natural character.</p>	Not applicable	Depleted spatial character post fire with increased visual permeability due to loss of upper and mid storey canopies and ground level vegetation. Spatial character will revert to close to pre-fire conditions over time as described under Natural environment.	Not applicable	<p>High - declining to moderate post fire and returning to high as the bushland regenerates.</p> <p>Viewers would be substantially affected by the impacts of the fires on landscape character but it can be assumed that their impressions would be tempered by a generally held understanding that the bushland will regenerate.</p>
<p>Zone K – Easements</p> <p><i>Zone category: Proposed works</i></p>	<p>The easements have been impacted by the fires in that the bushland vegetation that borders them has been impacted. Despite this, the natural environment of the easements will not be impacted as it would not be experienced by viewers.</p>	Not applicable	The spatial character of the roads zone will be depleted and rehabilitated similarly to the spatial environment of Zone J (Bushland).	Not applicable	Low

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
<p>Zone L – Major road corridors</p> <p><i>Zone category: Proposed works</i></p>	<p>The roads have been impacted by the fires in that the bushland vegetation that borders them has been impacted. This is of relevance in that the verging bushland is integral to the visual experience of the traveller on the road. In this regard, the natural environment of the road corridors has been changed by the fires and will be restored in a similar manner to the bushland zone.</p> <p>Three - five year timeframe: Estimates informed by Umwelt (2020) are that the bushland environment will begin to regenerate immediately, will have a close to intact understorey in the three to five year timeframe.</p> <p>Five to fifteen year timeframe: In five to fifteen years it is expected the bushland environment will mostly return to its intact pre-fire natural character.</p>	Not applicable	The spatial character of the roads zone will be depleted and rehabilitated similarly to the spatial environment of Zone J (Bushland).	Roads were not substantially impacted by the fires and their character is essentially similar to pre-fire conditions.	Moderate

Zone	Natural environment	Built environment	Spatial character	Infrastructure	Sensitivity
Zone N – Deep Creek Dam <i>Zone category: General</i>	<p>Deep Creek Dam and its environs were also severely impacted by the bushfires. The natural visual environment was impacted similarly to the environment in Zone J (intact bushland) and it is expected to be restored over time as the vegetation community regenerates, also similarly to Zone J.</p> <p>Three - five year timeframe: Estimates informed by Umwelt (2020) are that the bushland environment will begin to regenerate immediately, will have a close to intact understorey in the three to five year timeframe.</p> <p>Five to fifteen year timeframe: In five to fifteen years it is expected the bushland environment will mostly return to its intact pre-fire natural character.</p>	Not applicable	Similar to Zone J	Not applicable	High - Similar to Zone J

6. Landscape character impact assessment

The following impact assessment is based on the concept design and has been conducted in accordance with Road and Maritime's *Environmental Impact Assessment Practice Note - Guidelines for Landscape Character and Visual Impact Assessment No. EIA-N04, Version 2.1 Issue (2018)*.

The landscape character impact is based on a combination of factors, including the area's built, natural and cultural character. In this regard, it is measured by the combination of the area's sensitivity and the magnitude of change (scale, character and distance) that would result from the implementation of the proposal. The level of sensitivity and magnitude of change for each zone are combined to achieve an overall level of impact of the proposal on landscape character. Assessments of each landscape character zone have been categorised as Negligible, Low, Moderate or High.

Table 6-1 is the assessment of the impacts of the proposal for each zone assuming pre-fire conditions.

Again, in order to account for the impacts of the 2019/2020 bushfires, a separate assessment of the impacts of the proposal on the post-fire landscape character has been carried out for the character zones that incorporate bushland (refer to Table 6-2).

Table 6-1: Landscape character impact assessment table – pre fire

Landscape Character Zone	Sensitivity Level	Magnitude Of Change	Landscape Character Impact
Zone A – Clyde River Inlet <i>Zone category: Receiver</i>	High – the Clyde River waterway is a natural visual element of high scenic value. It is a critical contributing element to the local landscape character of Batemans Bay and users of the waterway would have a high expectation that views to and from the waterway would remain of high quality.	Negligible – the recreational value, character, sense of place and functionality of the waterway in this zone would be undisturbed as a result of the proposal. Therefore, the magnitude of change for this zone is negligible.	Negligible – due to the distance from the project site no impact identified as a result of the proposal.
Zone B – Wetlands <i>Zone category: General</i>	High – the local wetlands are natural visual elements in the locality. Views to and from the wetlands will be highly sensitive to change.	Negligible – the project has no interface with this zone therefore minimal or no impact would be caused as a result of the proposal. This zone is located approximately 2-3km north further limiting any potential visual impacts.	Negligible – no impact identified as a result of the proposal.
Zone C – The Promenade <i>Zone category: General</i>	High – the promenade is a destination and a place where visitors would go specifically to enjoy the view. The promenade has been designed to capture the high quality surrounding vistas. For this reason it is highly sensitive to change.	Negligible – the overall character and sense of place of this zone would be unaffected as a result of the proposal.	Negligible – no impact identified as a result of the proposal.
Zone D - Batemans Bay CBD <i>Zone category: General</i>	High – the CBD provides a critical function for tourism, hospitality and retail and attracts large numbers of people, especially during the holiday periods. For this reason it is highly sensitive to change.	Negligible – the proposal may enhance the connectivity into town, however the zone would not change in character or the way it functions. Therefore, the overall sense of place of this zone would be unaffected as a result of the proposal. As a result the magnitude of change for this zone is negligible.	Negligible – no impact identified as a result of the proposal. The improved connectivity in to town is seen as a positive development.

Landscape Character Zone	Sensitivity Level	Magnitude Of Change	Landscape Character Impact
<p>Zone E – Batemans Bay Residential Area</p> <p><i>Zone category: Receiver</i></p>	<p>High – due to the residential land use being sensitive to any change of its character.</p>	<p>Low – the removal of some vegetation within the construction boundary would result in the site being more visible for some residences in this zone, however, the overall character and sense of place of the residential area would be marginally affected at most. This results in a low magnitude of change rating.</p>	<p>Moderate – due to the removed vegetation a number of residences in this zone would have their panoramic views affected, influencing the sense of place in a small way. For most of this zone, however, the proposal would have a limited impact.</p>
<p>Zone F – North Shore Residential Area</p> <p><i>Zone category: Receiver</i></p>	<p>High – due to the residential land use being sensitive to any change of its character.</p>	<p>Negligible – the removal of some vegetation within the construction boundary may result in the site being more visible from this zone, however, the overall character and sense of place of this zone would be unaffected as a result.</p>	<p>Negligible – due to the distance from the project site no impact identified as a result of the proposal.</p>
<p>Zone G – North Shore Foreshore</p> <p><i>Zone category: Receiver</i></p>	<p>High – this zone is considered highly sensitive due to its scenic value and recreational importance to locals and visitors alike. The foreshore is a critical contributing element to the local landscape character of Batemans Bay and users would expect that views to and from the zone would remain of high quality.</p>	<p>Negligible – the removal of some vegetation within the construction boundary may result in the site being more visible from this zone, however, the overall character and sense of place of this zone would be unaffected as a result.</p>	<p>Negligible – due to the distance from the project site no impact identified as a result of the proposal.</p>
<p>Zone H – Batemans Bay Golf Course</p> <p><i>Zone category: Receiver</i></p>	<p>Moderate – As this zone is predominately used for recreation purposes it is less susceptible to change. Users are less likely to visit specifically to enjoy the view. Part of the experience of visiting a golf course is to enjoy visual character and quality so to this extent, the zone has been assessed as moderately sensitive to change.</p>	<p>Negligible – the removal of some vegetation within the construction boundary may result in the site being more visible from this zone, however the overall character, sense of place, and functionality of this zone would be unaffected.</p>	<p>Negligible – no noteworthy impact on this zone has been identified as a result of the proposal.</p>
<p>Zone I – Sport Facilities and Public Pools</p> <p><i>Zone category: General</i></p>	<p>Moderate – As this zone is predominately used for recreation purposes it is less susceptible to change. Users are less likely to visit specifically to enjoy the view.</p>	<p>Negligible – the project is located approximately 3km north of this zone and has no interface with it, therefore no impact has been identified as a result of the proposal</p>	<p>Negligible – no impact identified as a result of the proposal.</p>
<p>Zone J – Bushland (intact)</p> <p><i>Zone category: Proposed works</i></p>	<p>High – This bushland forms the backdrop of numerous vantage points throughout Batemans Bay and is considered a pristine natural environment. As a result it is highly sensitive to change.</p>	<p>Low – the proposal site falls within this zone and the removal of some vegetation would adversely impact the natural quality of that specific area. However, due to the vast size of this zone the impacts would be very isolated. This means the proposal would have little or no impact on the character and sense of place as a whole. As a result the overall magnitude of change for this zone is low.</p>	<p>Moderate – the integrity of the bushland that falls within the project site is likely to be impacted as a result of the proposal.</p>

Landscape Character Zone	Sensitivity Level	Magnitude Of Change	Landscape Character Impact
Zone K – Easements <i>Zone category: Proposed works</i>	Low – this zone is made up of places that would not be regularly visited for their landscape quality.	Low – the overall character and sense of place of this zone is unlikely to be significantly impacted as a result of the proposal.	Low - minimal impact identified as a result of the proposal.
Zone L – Major road corridors <i>Zone category: Proposed works</i>	Moderate - users of the road would have some expectations regarding visual quality and these would not be expected to change as a result of the bushfire affected and regenerating landscape	Low – the overall character and sense of place of this zone is unlikely to be significantly impacted as a result of the proposal.	Moderate-low - minimal impact identified as a result of the proposal.
Zone M – Industrial / large scale commercial <i>Zone category: General</i>	Low – the sensitivity of this character zone is low due to the nature of its land use and the fact that it is already highly modified. It is unlikely users would be significantly impacted by any change to its character.	Negligible – because of the distance from the proposal, no predicted impacts have been identified.	Negligible – no impact identified as a result of the proposal.
Zone N – Deep Creek Dam <i>Zone category: General</i>	High – the sensitivity of this character zone is high due to its scenic and recreational value of the area.	Negligible – due to the isolation of this zone no predicted impacts have been identified.	Negligible – no impact identified as a result of the proposal.

Impacts on landscape character in post-fire conditions have been assessed for the four zones identified as changed due to impacts of the fire event (Zones J, K, L and N). For these zones, commentary on the likely impacts of the development has been made in the context of the potential changing character of the zones over time. This commentary has been informed by Umwelt (2020) (as detailed in Section 5.1.2).

Table 6-2: Landscape character impact assessment table – post-fire

Landscape Character Zone	Sensitivity Level – post-fire	Magnitude Of Change – post-fire	Landscape Character Impact – post-fire
<p>Zone J – Intact bushland and their residential verges</p> <p><i>Zone category: Proposed works</i></p>	<p>High – the post-fire bushland, although depleted due to fire impacts, would remain highly sensitive to further change due to perceptions that further change would slow the return of the bushland to its original state through regeneration.</p>	<p>Low – for the same reasons outlined in the pre-fire impact assessment at Figure 6-1, the impacts of the proposed road on the very broad bushland landscape would be low. As the landscape returns to its pre-fire state over time, the impact would be further decreased.</p>	<p>Moderate – the proposal would constitute a new built element in the highly sensitive bushland landscape. As the proposal would constitute a small element in the vast regenerating bushland landscape, its impact on the character of the bushland zone is considered to be moderate.</p>
<p>Zone K – Easements</p> <p><i>Zone category: Proposed works</i></p>	<p>Low– Transmission easements post fire would remain low in sensitivity to change. They are not places that would be regularly visited and their post-fire landscape quality would essentially remain unchanged.</p>	<p>Low – the magnitude of change caused by the proposal in the post fire / regenerating environment would not change in comparison to pre-fire conditions.</p>	<p>Low – impacts on the post fire / regenerating landscape character of this zone would remain low.</p>
<p>Zone L –Major road corridors</p> <p><i>Zone category: Proposed works</i></p>	<p>Moderate - Road corridors post fire would retain a moderate sensitivity level to change. Users of the road would have some expectations regarding visual quality and these would not be expected to change as a result of the bushfire affected and regenerating landscape.</p>	<p>Low – the magnitude of change caused by the proposal in the post fire / regenerating environment would not change in comparison to pre-fire conditions.</p>	<p>Low – impacts on the post fire / regenerating landscape character of this zone would remain low.</p>
<p>Zone N – Deep Creek Dam</p> <p><i>Zone category: General</i></p>	<p>High - the Deep Creek Dam landscape character has been significantly impacted by the bushfires. As with the bushland zone, however, the zone would remain highly sensitive to changes in its character.</p>	<p>Negligible – the proposal would not be visible from the Deep Creek Dam Zone and the magnitude of change would consequently be negligible.</p>	<p>Negligible – notwithstanding the high sensitivity to change of the Deep Creek Dam zone, the proposal would not be visible from the zone so its post fire character impact would be negligible.</p>

6.1 Summary of landscape character impacts

Table 6-3 below summarises the landscape character impacts assessed for each landscape character zone pre-fire. The identified impacts are predominately in the negligible category with only Zones E, J, K and L being rated as low to moderate.

Table 6-3: Landscape character assessment summary table – pre-fire

Landscape Character Zone	Sensitivity Level	Magnitude Of Change	Landscape Character Impact
Zone A – Clyde River Inlet <i>Zone category: Receiver</i>	High	Negligible	Negligible
Zone B – Wetlands <i>Zone category: General</i>	High	Negligible	Negligible
Zone C – The Promenade <i>Zone category: General</i>	High	Negligible	Negligible
Zone D – Batemans Bay CBD <i>Zone category: General</i>	High	Negligible	Negligible
Zone E – Batemans Bay Residential Area <i>Zone category: Receiver</i>	High	Low	Moderate
Zone F – North Shore Residential Area <i>Zone category: Receiver</i>	High	Negligible	Negligible
Zone G – North Shore Foreshore <i>Zone category: Receiver</i>	High	Negligible	Negligible
Zone H – Batemans Bay Golf Course <i>Zone category: Receiver</i>	Moderate	Negligible	Negligible
Zone I – Sport Facilities and Public Pools <i>Zone category: General</i>	Moderate	Negligible	Negligible
Zone J – Bushland (intact) <i>Zone category: Proposed works</i>	High	Low	Moderate
Zone K – Easements <i>Zone category: Proposed works</i>	Low	Low	Low
Zone L - Major road corridors <i>Zone category: Proposed works</i>	Moderate	Low	Moderate-Low
Zone M – Industrial / large scale commercial <i>Zone category: General</i>	Low	Negligible	Negligible
Zone N – Deep Creek Dam <i>Zone category: General</i>	High	Negligible	Negligible

Table 6-4 below summarises the landscape character impacts assessed for each landscape character zone post-fire. Only zones that were directly affected by the fire are included in this table and include: Zone J, K L and N. The identified impacts for these zones range from negligible to moderate.

Table 6-4: Landscape character assessment summary table – post-fire

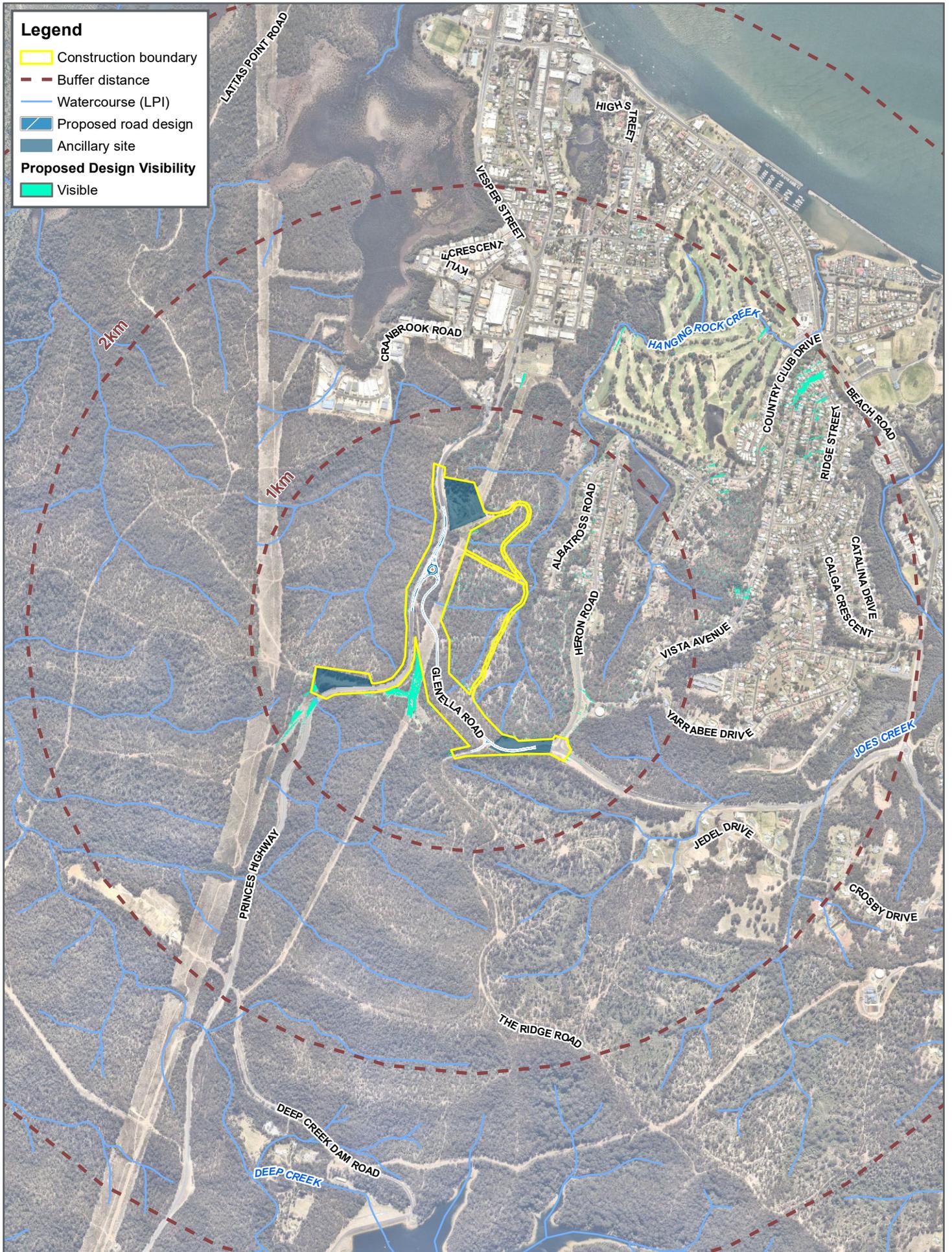
Landscape Character Zone	Sensitivity Level	Magnitude Of Change	Landscape Character Impact
Zone J – Intact bushland and their residential verges <i>Zone category: Proposed works</i>	High	Low	Moderate
Zone K – Easements & major road corridors <i>Zone category: Proposed works</i>	Low	Low	Low
Zone L – Major road corridors <i>Zone category: Proposed works</i>	Moderate	Low	Low
Zone N – Deep Creek Dam <i>Zone category: General</i>	High	Negligible	Negligible

7. Visual impact

In order to assess the visual impact of the proposal visual catchment diagrams have been prepared which indicate land within the locality of the site from which the proposal would be visible. The visual catchment diagrams shown in Figures 7-1 and 7-2 have been prepared on the assumption that all trees within the construction boundary would be removed during the construction phase. Note that the visual catchment diagrams are based on pre-fire conditions as this was the only data available at the time of the assessment. While the visual catchment diagrams do not reflect post-fire conditions the overall visibility of the site would have increased as a result of the fires.

As illustrated in Figures 7-1, with all trees within the construction boundary at a 2 kilometre radius removed, the proposal would be visible from more of the residential area to the northeast of the study area, in particular small areas along Vista Avenue, Ridge Street, Riverview Cres, and Country Club Drive. From the Batemans Bay Golf Course there are a few small locations around the perimeter of the site that the proposal would be visible from. Visibility of the proposal to the north would be very minor with only a small amount of the proposal visible from the Clyde Mitsubishi carpark and Batemans Bay Cemetery, which are just over 1 kilometre away.

As illustrated in Figures 7-2, to the south, the proposal would be visible from the high point of the easement as well as the Princes Highway near the corner of Lattas Point Road. At a 5 kilometre radius, with all trees removed from within the construction boundary, the proposal would be significantly more visible from the north shore foreshore and from a large area on the water at the entrance to the Clyde River. The proposal would also be visible from a few small pockets of the north shore residential area, in particular around Penthouse Place, Kings Highway, and Berrima Parade.



Legend

- Construction boundary
- Buffer distance
- Watercourse (LPI)
- Proposed road design
- Ancillary site
- Proposed Design Visibility**
- Visible



FIGURE 7-1
 1:22,000 Scale at A4
 0 200 400 600
 m

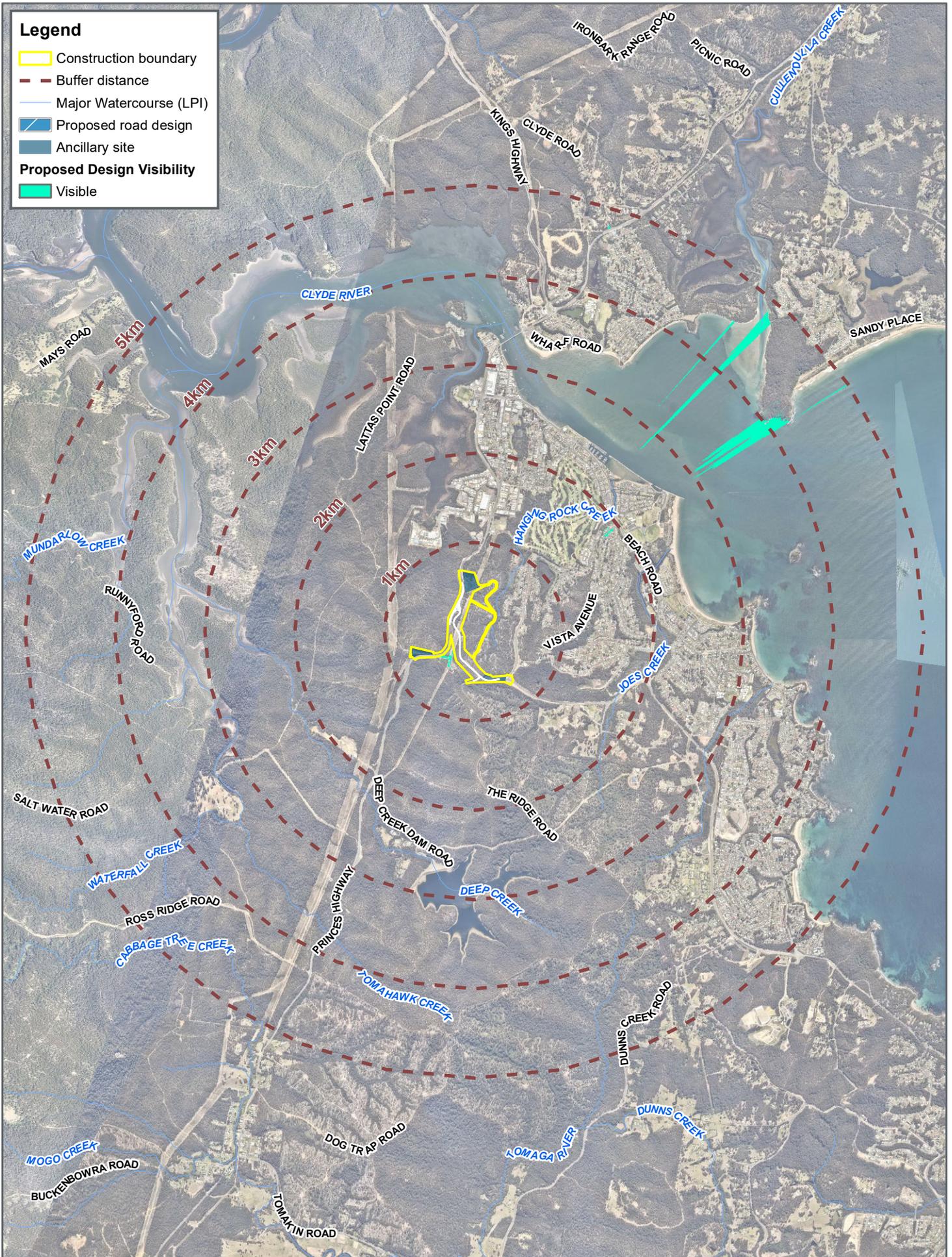
**Proposed conditions
 visibility analysis 2km**
 SOUTH BATEMANS BAY LINK ROAD PROJECT



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
 Date: 2020-03-31 | Project: 8202006301
 Coordinate System: GDA 1994 MGA Zone 56
 Map: 8202006301-GS-016-VIS_ProposedVis2km.mxd 04
 Aerial imagery supplied by Nearmap (September, 2019)

Legend

-  Construction boundary
-  Buffer distance
-  Major Watercourse (LPI)
-  Proposed road design
-  Ancillary site
- Proposed Design Visibility**
-  Visible



1:55,000 Scale at A4



Existing conditions visibility analysis 5km

SOUTH BATEMANS BAY LINK ROAD PROJECT



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
Date: 2020-01-23 | Project: 8202006301
Coordinate System: GDA 1994 MGA Zone 56
Map: 8202006301-GS-013-VIS_ExistingVis5km.mxd 02
Aerial imagery supplied by Nearmap (September, 2019)

7.1 Critical viewpoints

The visual catchment diagrams have identified locations from which the construction site and potentially the completed road would be visible. Critical viewpoints have been selected from within the visual catchment in order to characterise a representative sample of locations where the proposal would be substantially visible. In this regards, the selected viewpoints are representative of typical views towards the proposal site from open space, residential areas, recognised lookouts, and major roads.

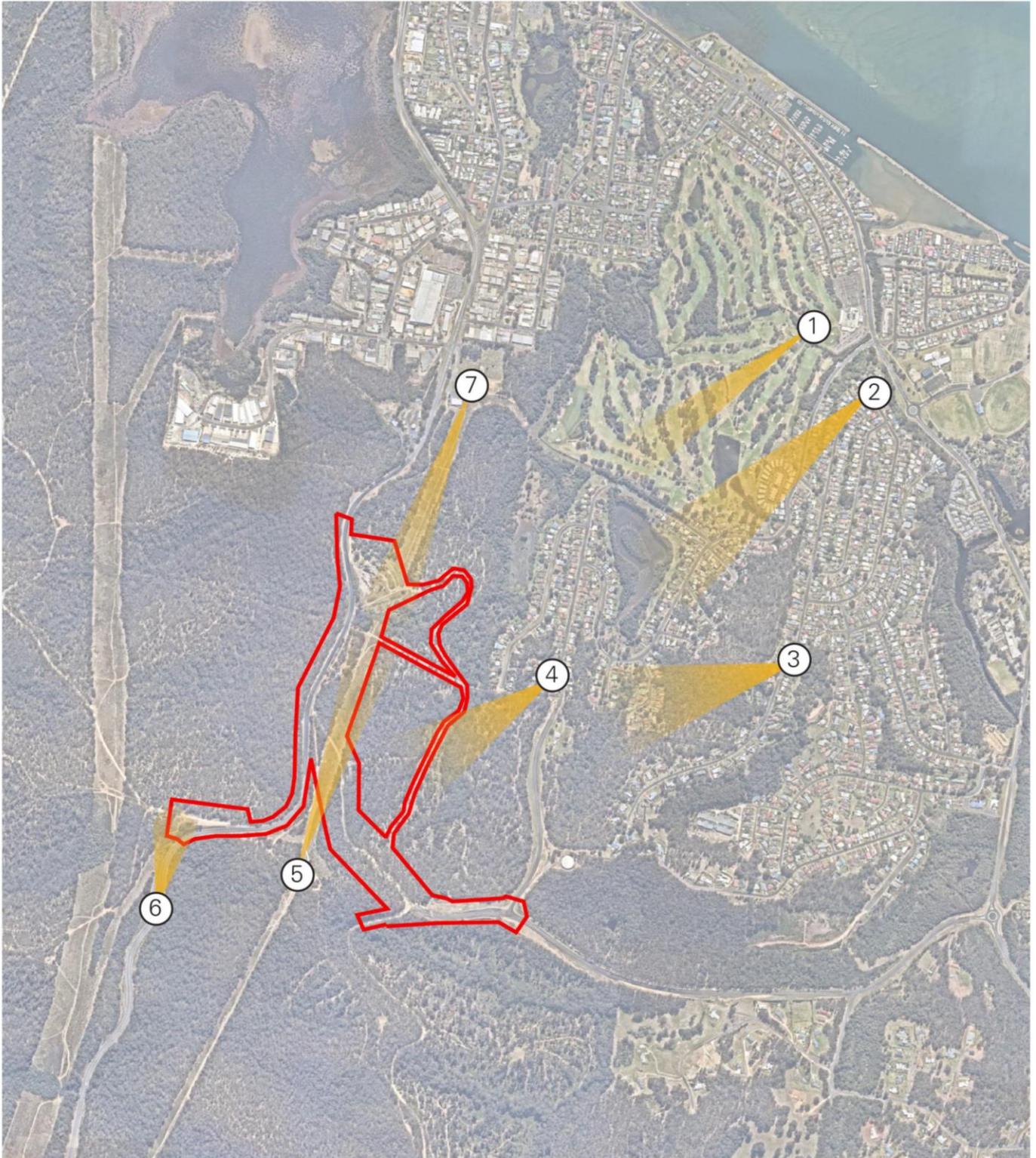
Seven viewpoints within a 2 kilometre radius were selected through the use of viewshed analysis and in consultation with Transport for NSW. These viewpoints are listed below and are identified on Figure 7-3.

1. Catalina Country Club Golf Course (near hole number 19, looking southwest towards site)
2. Northern end of Vista Avenue (from the street, outside house #2, looking southwest towards site)
3. Southern end of Vista Ave (from the street, outside house #111, looking west / southwest towards site)
4. Gannet Place (outside house #7, looking west / southwest towards site)
5. Easement lookout (looking north over site)
6. Princes Highway (north bound - adjacent to southern site works area)
7. Clyde Mitsubishi / Batemans Bay Cemetery (looking south along easement towards site).

A summary of construction and operation impacts are provided in Section 7.3 and 7.4 respectively, with each selected viewpoint being assessed with photos in Section 7.4. Two photos from each viewpoint are provided. The first photo includes a key map and indicates the approximate portion of the proposal (denoted in orange shade) visible from this view. The second photograph is the actual view (existing). Comparing the two photos assists in understand how the proposal would visually impact the view.

In addition to the seven viewpoints listed above, typical views (up to 5 kilometres radius) from recreational areas on Batemans Bay north shore have also been photographically documented to allow the visual impact from these areas to be qualitatively assessed. Views towards the site from the north shore have been identified as highly sensitive due to the scenic value and recreational importance of this zone. The general area the representative photographs were taken from are identified on Figure 7-4.

All photographs used for the visual impact assessment were taken after the 2019/2020 bushfires on 28th January 2020.



LEGEND

- Construction boundary
- ▶ Approximate viewshaft from view point
- ① View point location and ID

0 200 400 600 800 1000m

SCALE 1:10000

Source: Nearmap
Projection: GDA 1994 MGA Zone 56

Figure 7-3: Selected viewpoints plan (within 2km radius)



LEGEND

- Construction boundary
- Typical view locality (5km radius)

0 5000 10000 15000 20000m

SCALE: 1:20000

Source: Nearmap

Projection: GDA 1994 MGA Zone 56

Figure 7-4: Typical recreational area views from Batemans Bay north shore (up to 5km radius)

7.2 Impacts during construction

Assuming that construction of the proposal occurs over a one to two year period, beginning approximately two years from the date of this report, it is likely that the landscape would be in a state of recovery from the impacts of the 2019/2020 bushfires during the construction period. However, due to the scale and intensity of the fires it is not clear how long the landscape recovery will take, how extensive (whether it will be uniform or whether some areas will recover quicker than others) and how complete the recovery to its original condition will be. In this regard, Umwelt (2020) has identified a possibility that not all of the original plant species may recover.

In this unusual context, in order to assess the impacts of the proposal during construction two scenarios have been adopted in an attempt to assess the impacts of the proposal during the construction period.

- Scenario A – *assuming no or little regeneration of the bushland during the construction period*
- Scenario B – *assuming an evolving visual environment as the depleted bushland regenerates over the two to three year timeframe of the construction period.*

The above two scenarios have been illustrated from viewpoints 2, 3 and 4 in topographically accurate sections. Refer to Figures 7-5, 7-6 and 7-7 for scenario A; and Figures 7-8, 7-9 and 7-10 for scenario B.

The sections illustrate that in both scenario A and B, the upper canopy of vegetation would be the main screening element in close to moderate distant views to the construction site. From viewpoint 2, there is an existing tract of bushland between the viewpoint and the construction site that has not been impacted by the fires. The sections illustrate that this intact bushland would substantially screen views towards the construction site from this viewpoint regardless of the level of regeneration of the fire affected bushland. Viewpoints 3 and 4, however, do not benefit from undamaged bushland in the line of view to the construction boundary and thus have direct views to the construction site in the post-fire condition. The condition of the upper canopy would have substantial influence on the level of visibility of the construction site in these views.

Umwelt (2020) identified that regeneration over the construction period is likely to be concentrated on the lower storey with minimal new growth likely in the upper canopy. The cross-sections prepared indicate that, with little regeneration of the bushland at canopy level, the visibility of the proposal during construction from the selected close viewpoints is likely to be similar in both scenarios. This analysis is, of course, based on assumptions regarding the natural recovery process of the depleted bushland. In reality, contingent on the start and finish time for construction of the road, the visual impacts would vary even during the construction phase due to the recovery processes happening in parallel with construction. On this basis, it is reasonable to assume that the visual impacts of the project would decrease over time as the upper and lower strata of the bushland regenerates.

The sectional information in Figures 7-5 to 7-10 indicates that in close views to the proposal, the screening effects of the fire damaged bushland would be substantially depleted.

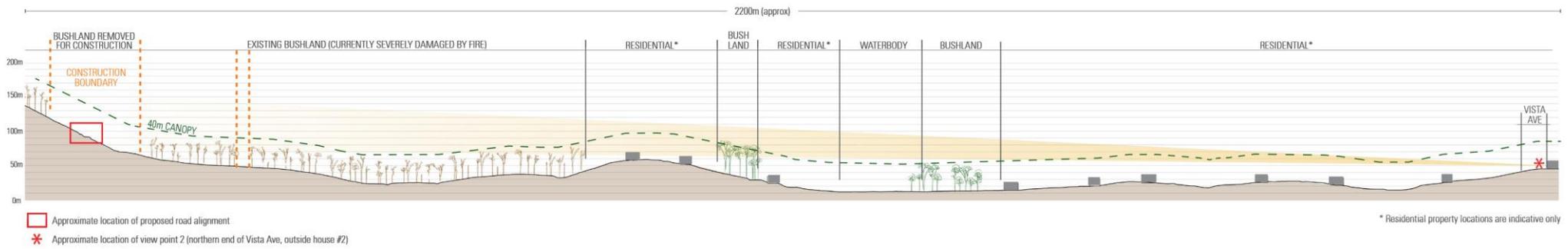


Figure 7-5: View point 2 – cross section illustrating scenario A which shows little or no post fire regeneration of the bushland during the construction period

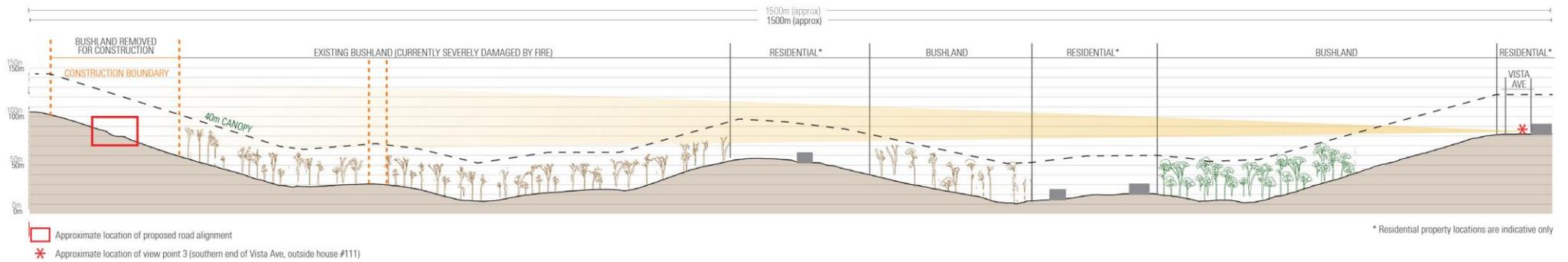


Figure 7-6: View point 3 – cross section illustrating scenario A which shows little or no post fire regeneration of the bushland during the construction period

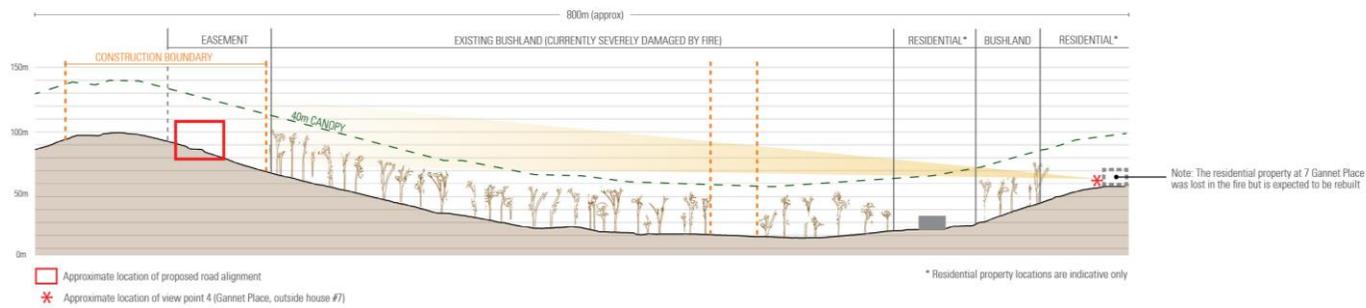


Figure 7-7: View point 4 – cross section illustrating scenario A which shows little or no post fire regeneration of the bushland during the construction period

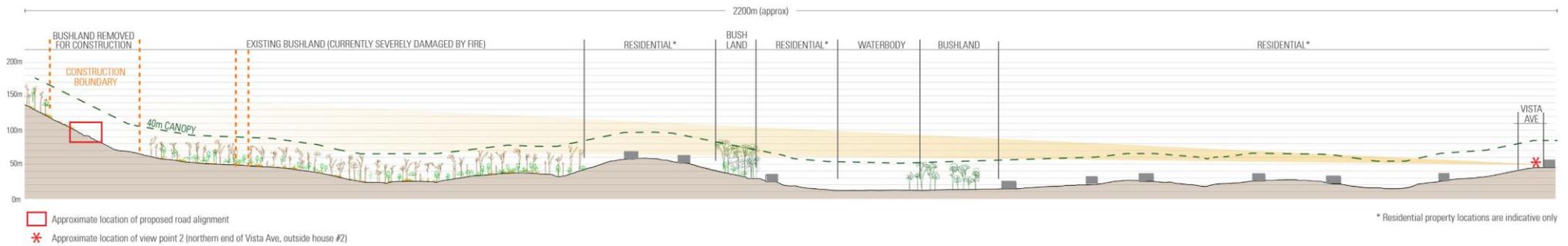


Figure 7-8: View point 2 – cross section illustrating scenario B which shows a landscape with some levels of bushland regeneration over the two to three year construction period

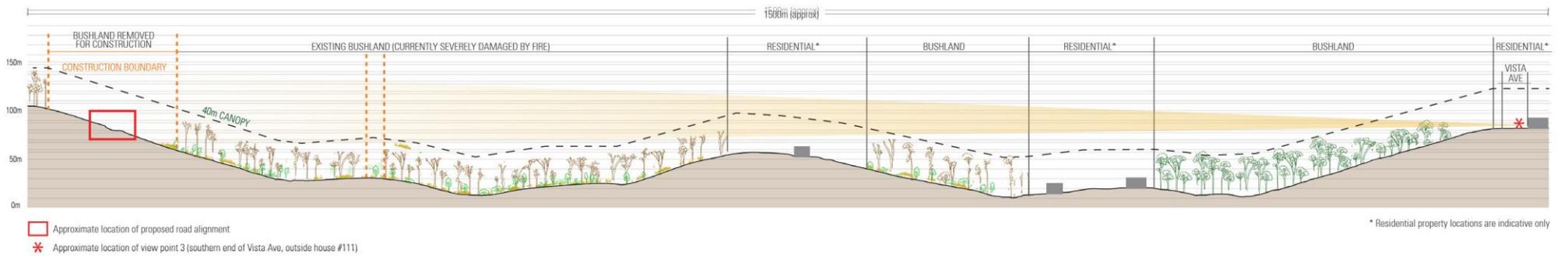


Figure 7-9: View point 3 – cross section illustrating scenario B which shows a landscape with some levels of bushland regeneration over the two to three year construction period

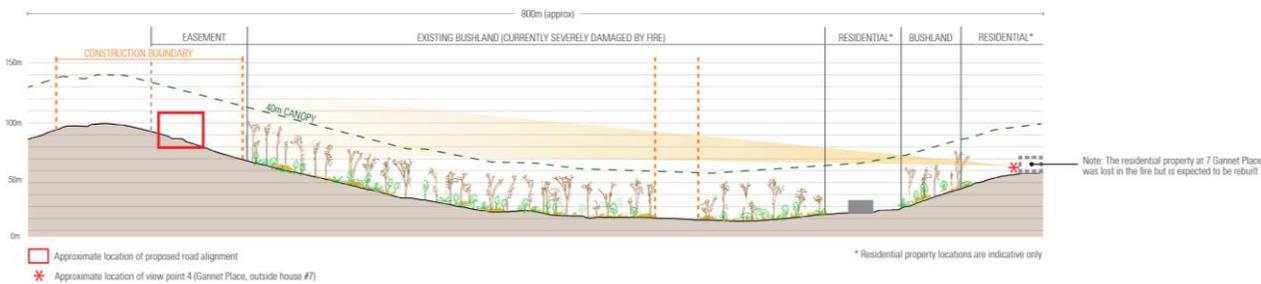


Figure 7-10: View point 4 – cross section illustrating scenario B which shows a landscape with some levels of bushland regeneration over the two to three year construction period

7.3 Impacts post construction (operational)

The viewpoints from residential areas (viewpoints 2, 3 and 4) have been identified as having moderate visual impact post construction (during the operation of the proposal). This is partly due to the current degraded state of the bushland surrounding the site as a result of the fires but also due to the level of visibility of the proposal and its verges in the pre-fire landscape. Using the scenarios generated by the typical cross sections of expected vegetation regeneration in Section 5.1.2, real topography-based cross sections have been prepared along view lines to the development site from viewpoints 2, 3, and 4 to illustrate how the visual impact is likely to reduce over time as the bushland regenerates and the canopy recovers. Post-construction cross sections have been produced for the following two timeframes:

- Three - five years post-fire
- Five – fifteen years post-fire.

7.3.1 Three – five years post-fire event (One – three years post-construction)

As explained in Section 5.1.2, it is expected that in three to five years after the 2019/2020 fires, although still dramatically depleted, the regenerating bushland would provide some level of visual screen via the presence of remaining tree trunks and the lattice of branches in the canopy. Figures 7-11, 7-12 and 7-13 are topographically correct cross sections from viewpoints 2, 3 and 4. These graphically demonstrate vegetation cover and extent generated out of the estimates of the levels of regrowth that are likely to have occurred in the bushland over the three – five year post fire timeframe.

The sections indicate that regenerating bushland vegetation at three – five years post fire would be in the order of 40 metres in height but that the density of the vegetation and canopy cover would remain less than the pre-fire conditions. The screening properties of the vegetation in the three – five year timeframe would be significantly less than pre-fire conditions and the proposed Glenella Road would be expected to be somewhat more visible in these views in comparison to pre-fire conditions.

Notwithstanding this, the photos from viewpoints 2, 3 and 4 (Figures 7-19 to 7-24) illustrate that, post construction, the proposal would be a small component of these views and the regenerated bushland would remain the dominant visual element. On this basis, our opinion is that the proposal and associated infrastructure would have a moderate impact on these close views.

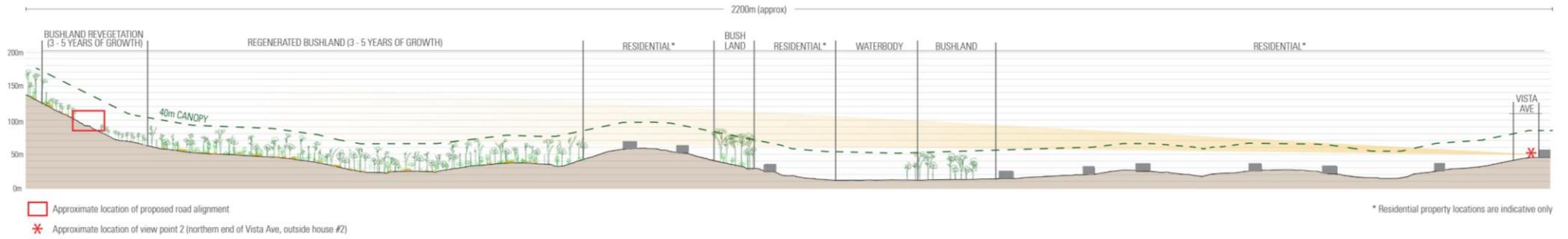


Figure 7-11: View point 2 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Three - five years post fire)

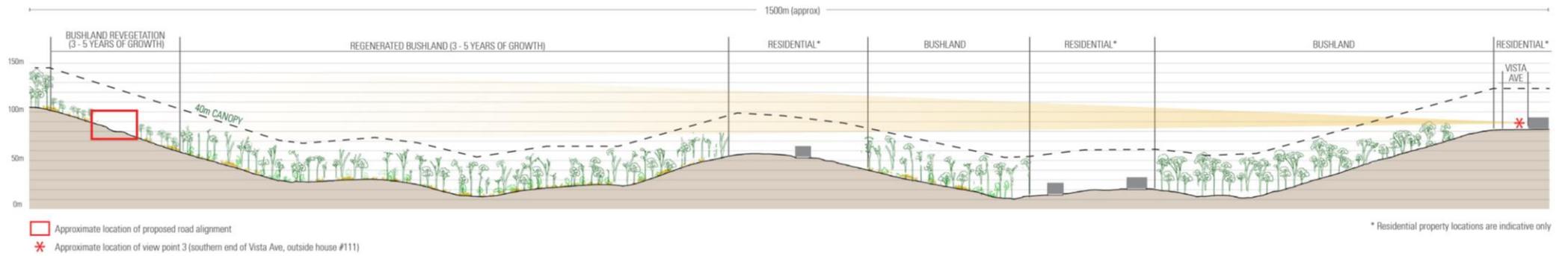


Figure 7-12: View point 3 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Three - five years post fire)

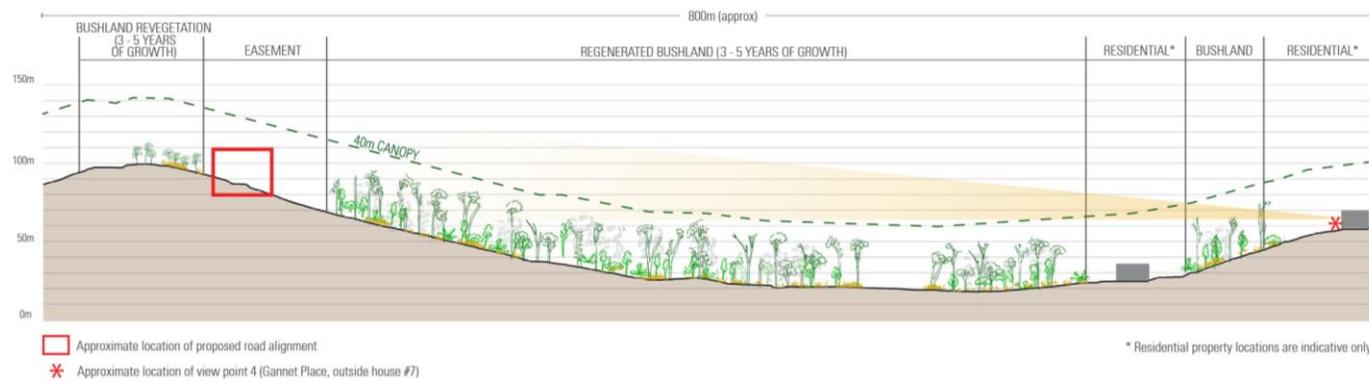


Figure 7-13: View point 4 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Three - five years post fire)

7.3.2 Five – fifteen years post fire (Three – thirteen years post construction)

The bushland surrounding the proposal site is likely to be close to its pre-fire character in the five to fifteen year post fire timeframe. At this time, 90 to 100 per cent of the canopy is expected to recover which would result in the bushland being close to its pre-fire condition and would provide a high level of visual screening. Topographically accurate sections from viewpoints 2, 3 and 4 at Figures 7-14, 7-15 and 7-16 indicate that the proposal would essentially be completely screened from close views in this timeframe. In reality, however, as illustrated in the photographs from these viewpoints (Figures 7-19 to 7-24), the proposal is likely to be intermittently visible, even in the context of a completely regenerated bushland. In this context, our opinion is that the visual impact of the proposal on these views would be low in the ten – fifteen year post-fire timeframe.

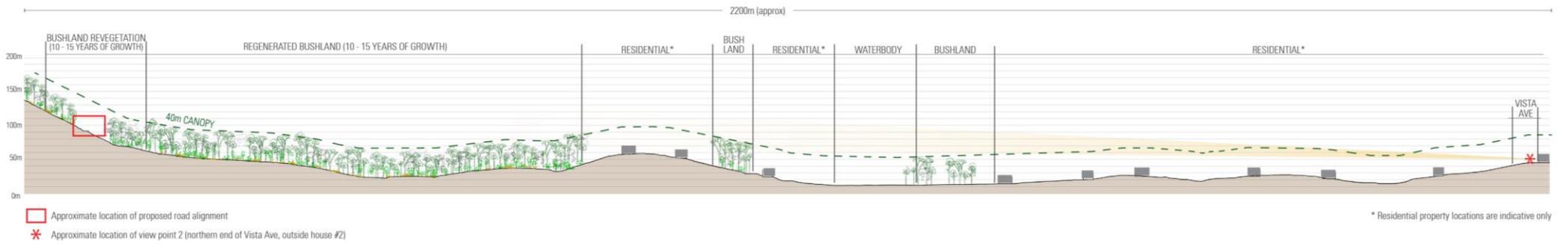


Figure 7-14: View point 2 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Five to fifteen years post fire)

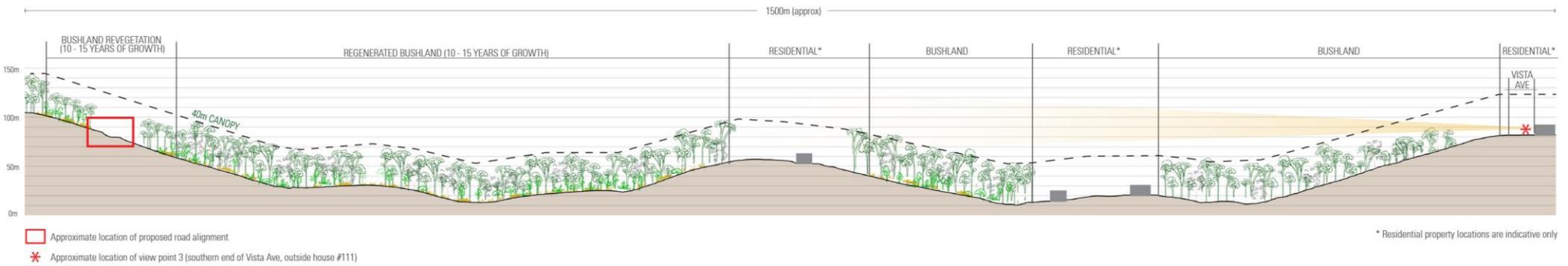


Figure 7-15: View point 3 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Five to fifteen years post fire)

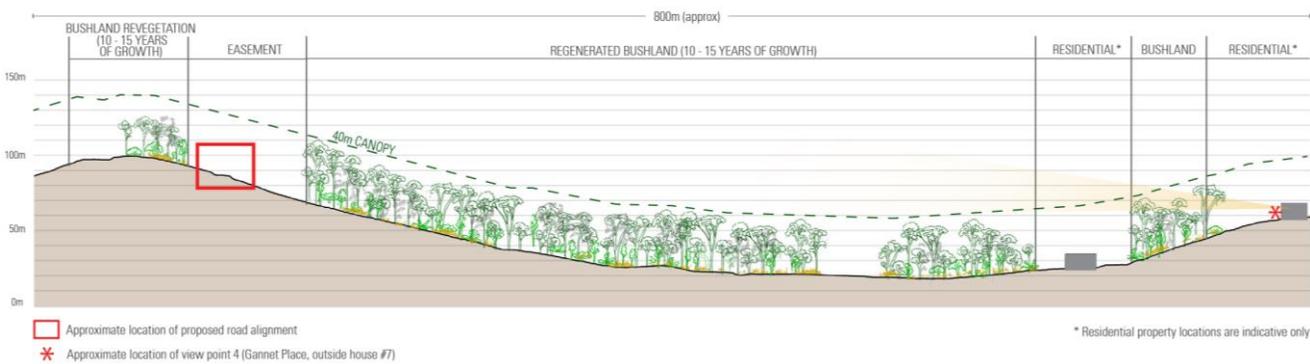


Figure 7-16: View point 4 – cross section illustrating expected vegetation regeneration and visibility of site during operation (Five to fifteen years post fire)

7.4 Viewpoint visual impact assessment

The following viewpoint impact assessment is based on the 20 per cent concept design and has been conducted in accordance with Road and Maritime's *Environmental Impact Assessment Practice Note - Guidelines for Landscape Character and Visual Impact Assessment No. EIA-N04, Version 2.1 Issue (2018)*.

The visual impact of the proposal has been assessed from each identified viewpoint as a composite of the sensitivity of the viewing location to change (visual sensitivity assessment) and the assessed magnitude of the change (change magnitude assessment). The magnitude of change has been assessed against two stages of the proposal, as described above in Section 7.2 and 7.3:

1. During construction - during the construction of the road (immediately post fires and two to three years post fires)
2. Post construction (operation) -- post construction (three to five years post fires and Five to fifteen years post fires).

This information has been presented as commentary for each identified viewpoint and as an overall assessment of the visual impact of the proposal has been provided. Mitigation measures to address the identified visual impacts have been identified for consideration during the design development process.

The different viewpoints have been categorised as follows:

- Close views – at distances up to 1 kilometre from the construction boundary
- Medium distant views – at distances between 1 kilometres and 2 kilometres from the construction boundary
- Distant views – representative views from locations up to 5 kilometres from the construction boundary.

7.4.1 Viewpoint 1 - Catalina Country Golf Club

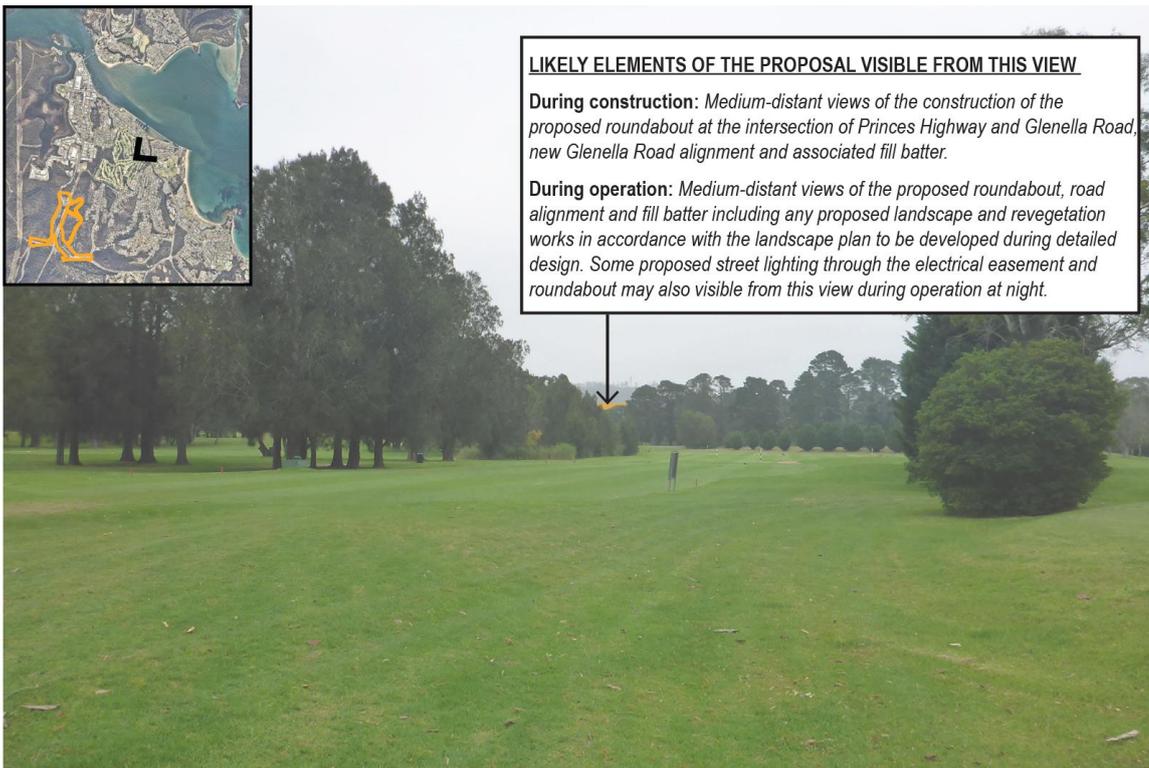


Figure 7-17: View point 1 – approximate portion of the proposal visible from this view (denoted in orange shade)

Note: *the approximate portion of the proposal visible shown in Fig 7-17 is indicative only.*



Figure 7-18: View point 1 – actual view

Table 7-1: View point 1 assessment table

Viewpoint 1 - Catalina Country Club Golf Course	
Category of view	Medium distant view (1km to 2kms from the construction boundary)
Description	A flat open grass space broken up by pockets of mature trees. Viewpoint photo is taken from the green near hole number 19 looking southwest towards the construction boundary.
Element of the project visible (during construction)	Medium-distant views of the construction of the proposed roundabout at the intersection of Princes Highway and Glenella Road, new Glenella Road alignment and associated fill batter.
Element of the project visible (operation)	Medium-distant views of the proposed roundabout, road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. Some proposed street lighting through the electrical easement and roundabout may also be visible from this view during operation at night.
Category of viewer	Recreational (golfers using the golf course) and guests of the onsite restaurant/bar/function centre
Nature of Impact	Adverse
Sensitivity of view	Low - due to the recreational nature of the site it is less susceptible to change. The surrounding view may contribute to the users' overall experience, however, it is unlikely to be the specific reason they visit this location.
Magnitude of change (during construction)	Negligible - the visual presence of the proposal during construction is very minor due to its distance to the viewer and the large, mature trees and vegetation in the foreground providing green buffering.
Magnitude of change (operation)	Negligible – same rating as during construction.
Mitigation measures	<p>For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. All batters are to be softly integrated through use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design. 3. <u>Integration of earthworks design with existing landform</u> The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible.

Viewpoint 1 - Catalina Country Club Golf Course

	<p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered Negligible . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Negligible . This rating is based on the approach indicated in Table 3.1.

7.4.2 Viewpoint 2 - Northern end of Vista Avenue



Figure 7-19: View point 2 - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: *the approximate portion of the proposal visible shown in Fig 7-19 is indicative only.*



Figure 7-20: View point 2 – actual view

Table 7-2: View point 2 assessment table

Viewpoint 2 - Vista Avenue (northern end)	
Category of view	Medium distant view (1km to 2kms from the construction boundary)
Description	Residential street. Corner of Vista Avenue and Ridge Street. Viewpoint photo is taken from the centre of the street outside house #2 looking southwest towards the proposal site.
Element of the project visible (during construction)	Medium-distant views of the temporary ancillary facilities at the old sawmill site, construction of the proposed roundabout at intersection of Princes Highway and Glenella Road, new Glenella Road alignment and associated fill batter.
Element of the project visible (operation)	Medium-distant views of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. The proposed street lighting through the electrical easement and roundabout would also likely be visible at night.
Category of viewer	Residents and visitors of local residents.
Nature of Impact	Adverse
Sensitivity of view	High - due to residents enjoying high quality bushland views, especially from private residential properties. Any changes to these view will be highly sensitive.
Magnitude of change (during construction)	Moderate – existing trees in the foreground that were unaffected by the fires soften and screen a large portion of the proposal from this location. However, the degraded state of the bushland in-between this location and the construction boundary, combined with the removal of existing trees within the construction boundary for construction purposes, results in a moderate rating.
Magnitude of change (operation)	Low – during operation it is expected the surrounding bushland would have sufficiently regenerated and recovered to near pre-fire state, therefore, it would assist in further screening the proposal from this location. Any associated planting as part of the design would also assist in screening the proposal site. Consequently, during operation, it is expected this view would be less susceptible to change as result of the proposal, hence the low rating.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation of the proposal in this location. For this view point the following visual mitigation measures include::</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. Other screen planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area is to be used to help screen associated infrastructure where practical, and help minimise the impacts of glare from

Viewpoint 2 - Vista Avenue (northern end)

	<p>headlights and street lights on surrounding residents. All batters are to be softly integrated through the use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design.</p> <p>3. <u>Integration of earthworks design with existing landform</u></p> <p>The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.</p> <p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered High-Moderate . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Moderate . This rating is based on the approach indicated in Table 3.1.

7.4.3 Viewpoint 3 - Southern end of Vista Avenue

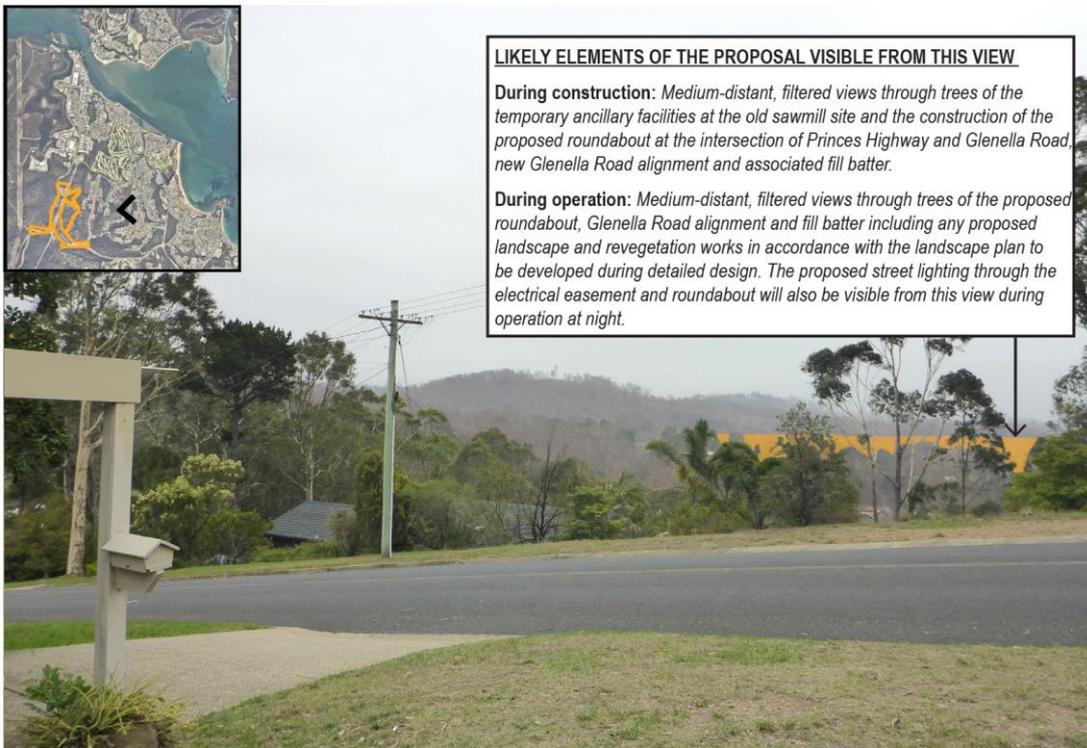


Figure 7-21: View point 3 – approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-21 is indicative only.



Figure 7-22: View point 3 – actual view

Table 7-3: View point 3 assessment table

Viewpoint 3 - Vista Avenue (southern end)	
Category of view	Medium distant view (1km to 2kms from the construction boundary).
Description	Residential street. Viewpoint photo is taken from the driveway of house #111 looking west / southwest towards site.
Element of the project visible (during construction)	Medium-distant, filtered views through trees of the temporary ancillary facilities at the old sawmill site and the construction of the proposed roundabout at the intersection of Princes Highway and Glenella Road, new Glenella Road alignment and associated fill batter.
Element of the project visible (operation)	Medium-distant, filtered views through trees of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. The proposed street lighting through the electrical easement and roundabout would also be visible from this view during operation at night.
Category of viewer	Residents, visitors of local residents
Nature of Impact	Adverse
Sensitivity of view	High - due to residents enjoying high quality bushland views, especially from their private residential properties. Any changes to these view will be highly sensitive.
Magnitude of change (during construction)	Moderate – existing trees in the foreground that were unaffected by the fires soften and screen much of the proposal from this location. However, the post-fire degraded state of the surrounding bushland makes the view from this location more susceptible to change during construction. The removal of existing trees within the construction boundary for construction purposes also contributes to the moderate rating.
Magnitude of change (operation)	Low – during operation it is expected the surrounding bushland would have sufficiently regenerated and recovered to near pre-fire state, therefore, it would assist in screening much of the proposed development from this location. Any associated planting as part of the design would also assist in screening the proposal from this location. Consequently, during operation, it is expected this view would be less susceptible to change as result of the proposal, hence the low rating.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation of the proposal in this location. For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. Any proposed water quality structures and drainage lines are to be designed to avoid existing vegetation where possible. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. Photomontages produced during detailed design would aid in determining the best location for

Viewpoint 3 - Vista Avenue (southern end)

	<p>planting of trees to provide appropriate visual screening for residents in this area. Other screen planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area is to be used to help screen associated infrastructure where practical, and help minimise the impacts of glare from headlights and street lights on surrounding residents. All batters are to be softly integrated through use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design</p> <p>3. <u>Integration of earthworks design with existing landform</u></p> <p>The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.</p> <p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered High-Moderate . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Moderate . This rating is based on the approach indicated in Table 3.1.

7.4.4 Viewpoint 4 – Gannet Place

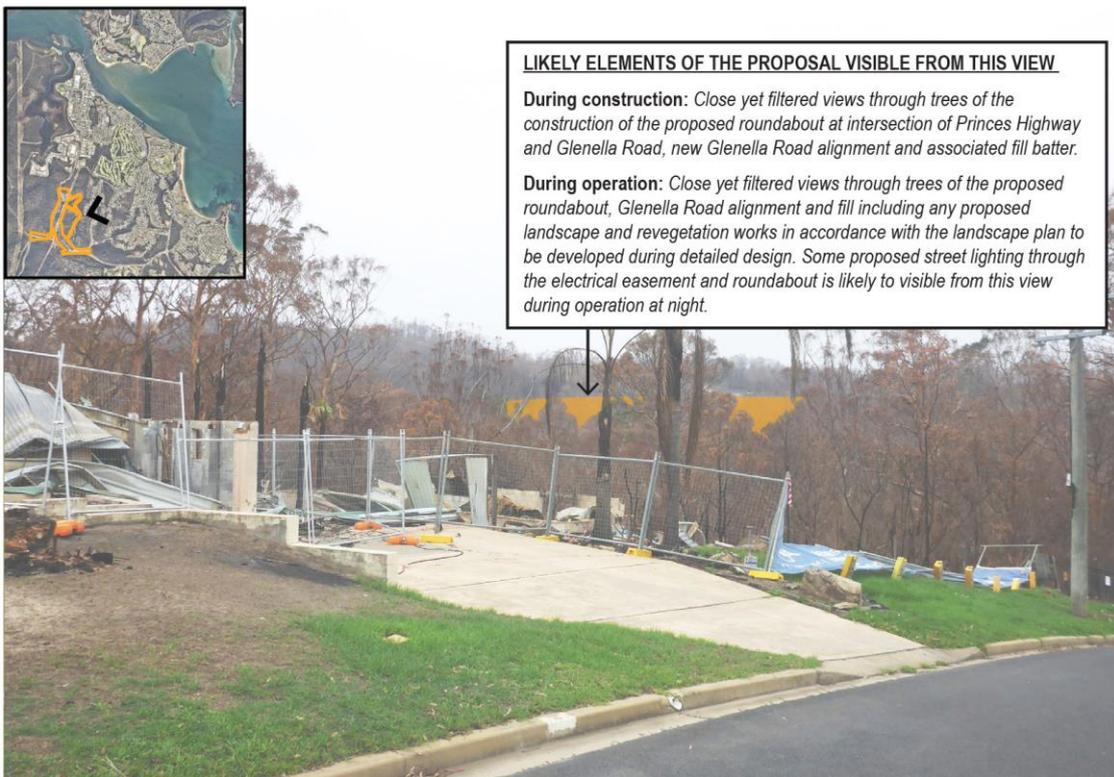


Figure 7-23: View point 4 - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-23 is indicative only.



Figure 7-24: View point 4 - actual view

Table 7-4: View point 4 assessment table

Viewpoint 4 – Gannet Place	
Category of view	Close view (up to 1km from the construction boundary)
Description	Residential street. Viewpoint photo is taken from the street outside house #7 looking west / southwest towards site.
Element of the project visible (during construction)	Close yet filtered views through trees of the construction of the proposed roundabout at intersection of Princes Highway and Glenella Road, new Glenella Road alignment and associated fill batter.
Element of the project visible (operation)	Close yet filtered views through trees of the proposed roundabout, Glenella Road alignment and fill including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. Some proposed street lighting through the electrical easement and roundabout is likely to be visible from this view during operation at night.
Category of viewer	Residents, visitors of local residents
Nature of Impact	Adverse
Sensitivity of view	High - due to residents enjoying high quality bushland views, especially from their private residential properties. Any changes to these view will be highly sensitive.
Magnitude of change (during construction)	Moderate – during construction the post-fire degraded state of the surrounding bushland makes the view from this location more susceptible to change. The removal of existing trees within the construction boundary for construction purposes adds to this moderate rating.
Magnitude of change (operation)	Low – during operation it is expected the surrounding bushland would have sufficiently regenerated and recovered to near pre-fire state, therefore, it would assist in screening much of the proposed development from this location. Any associated planting as part of the design would also assist in screening the proposal site from this location. Consequently, during operation, it is expected this view would be less susceptible to change as result of the proposal, hence the low rating.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation of the proposal in this location due to the close proximity and moderate magnitude of change rating. For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. Other screen planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area is to be used to help screen associated infrastructure where practical, and help minimise the impacts of glare from headlights and street lights on surrounding residents. All batters are to be softly integrated through use of vegetation where possible. Species to be

Viewpoint 4 – Gannet Place

	<p>used would be determined in consultation with council during detailed design.</p> <p>3. <u>Integration of earthworks design with existing landform</u></p> <p>The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.</p> <p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered High-Moderate . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Moderate . This rating is based on the approach indicated in Table 3.1.

7.4.5 Viewpoint 5 – Easement lookout

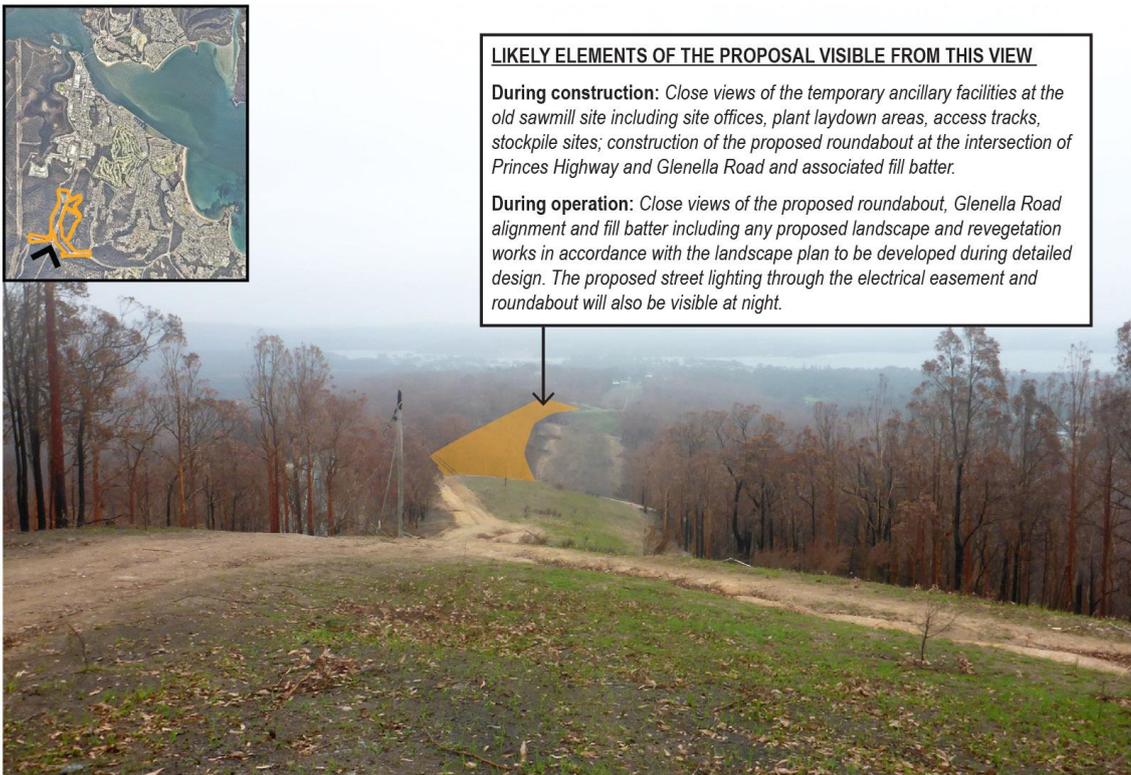


Figure 7-25: View point 5 - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-25 is indicative only.



Figure 7-26: Viewpoint 5 – actual view

Table 7-5: View point 5 assessment table

Viewpoint 5 – High point of easement	
Category of view	Close view (up to 1km from the construction boundary)
Description	High point of easement at the lookout. Mature bushland borders both sides of the cleared easement. Viewpoint photo is taken looking north towards site.
Element of the project visible (during construction)	Close views of the temporary ancillary facilities at the old sawmill site including site offices, plant laydown areas, access tracks, stockpile sites; construction of the proposed roundabout at the intersection of Princes Highway and Glenella Road and associated fill batter.
Element of the project visible (operation)	Close views of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. The proposed street lighting through the electrical easement and roundabout would also be visible at night.
Category of viewer	Visitors of the lookout – locals and visitors alike.
Nature of Impact	Adverse
Sensitivity of view	Moderate – users of this site (the lookout) would visit specifically for the high quality, panoramic views on offer looking north towards Batemans Bay and over the Clyde River. However, the lookout is poorly signposted and difficult to access (4WD is required), hence the moderate sensitivity.
Magnitude of change (during construction)	High – the photos indicate that there would be a substantial change to views towards the proposal site from this location. The unavoidable removal of a large stand of existing trees to construct the roundabout would dramatically change the middle ground composition of the view from this location.
Magnitude of change (operation)	Moderate - during operation the regenerated bushland and associated landscaping works and mitigation measures would assist in softening and screening the proposal from this location.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation of the proposal in this location due to the close proximity and high magnitude of change rating. For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. This is particularly important at the western end of the proposal where the new roundabout is proposed at the intersection of Princes Highway and Glenella Road. This portion of the proposal would be highly visible from this view, therefore, retaining prominent trees where possible on either side of the electrical easement would aid in visual mitigation. Any proposed water quality structures and drainage lines visible from this view are to be designed to avoid existing vegetation where possible. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Due to the nature of the electrical easement no revegetation works can be proposed within this section of the proposal, however, new tree plantings and screen vegetation within the construction boundary outside of the easement would assist in

Viewpoint 5 – High point of easement

	<p>screening the proposal and associated infrastructure from this view. All batters are to be softly integrated through use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design.</p> <p>3. <u>Integration of earthworks design with existing landform</u></p> <p>The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.</p> <p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered High-Moderate . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Moderate . This rating is based on the approach indicated in Table 3.1.

7.4.6 Viewpoint 6 – Princes Highway (north bound, adjacent to the southern site works area)

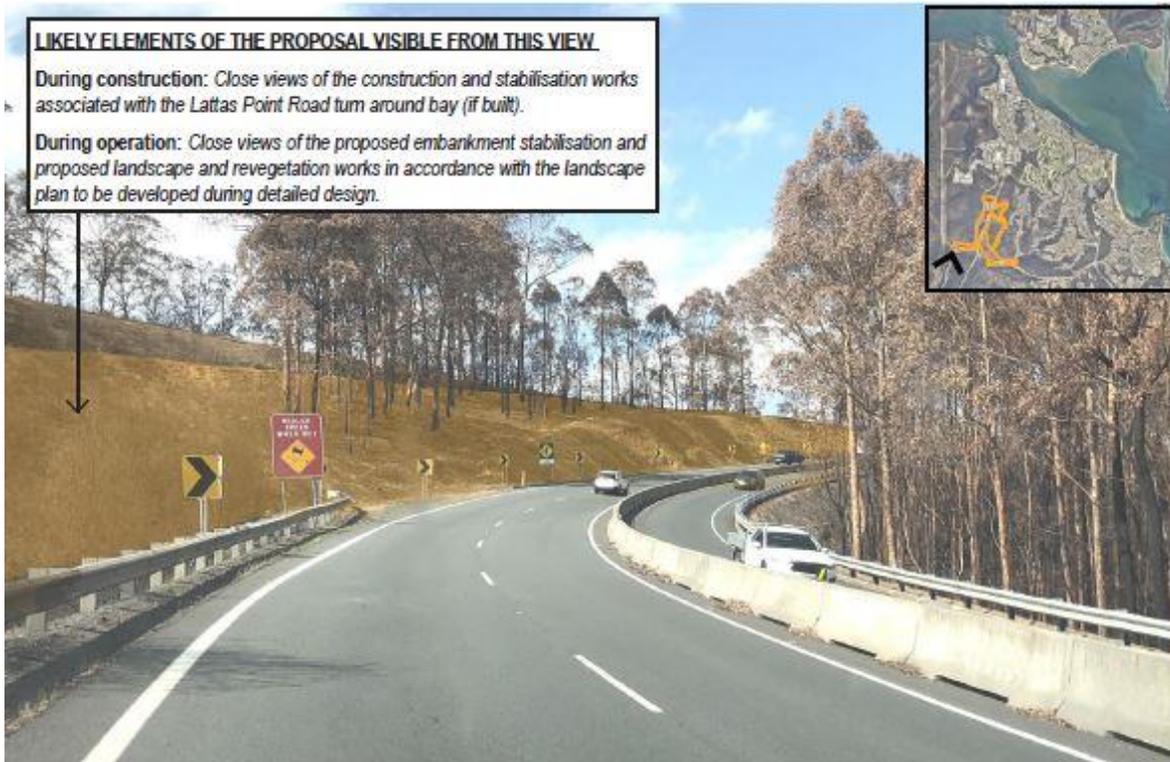


Figure 7-27: View point 6 - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-27 is indicative only



Figure 7-28: Viewpoint 6 – actual view

Table 7-6: View point 6 assessment table

Viewpoint 6 – Princes Highway (north bound - adjacent to southern site works area)	
Category of view	Close view (up to 1km from the construction boundary)
Description	Princes Highway in the north bound lane (adjacent to southern site works area at Lattas Point Rd)
Element of the project visible (during construction)	Close views of the construction and stabilisation works associated with the Lattas Point Road turn around bay (if built).
Element of the project visible (operation)	Close views of the proposed embankment stabilisation and proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design.
Category of viewer	Road users
Nature of Impact	Adverse
Sensitivity of view	Low – due to the transient nature of the road users who would be exposed to this view
Magnitude of change (during construction)	Moderate – as the photos show there is currently only a small stand of existing trees screening this portion of the proposal from Princes Highway. These trees were severely damaged in the fire. As a result the proposal during construction would be highly visible from this location. Having said this, the associated works of the proposal are not out of character for this zone, therefore, the magnitude of change has been rated moderate.
Magnitude of change (operation)	Low – during operation the associated landscaping works as part of the design would assist in screening the proposal from this particular view from the Princes Highway. Landscaping on the batter between the Princes Highway and Lattas Point Road, if required, would likely be an improvement on what is currently provided in terms of screening and visual appearance, hence the low rating.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation in this location due to the close proximity and moderate magnitude of change rating. For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. Where possible, the proposal is to be designed to avoid impact to prominent trees on the embankment that are visible from Princes Highway. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design, particularly for the existing trees on the embankment that are visible from Princes Highway. Other planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area are to be used to help screen associated infrastructure and soften batters. Species to be used would be determined in consultation with council during detailed design. 3. <u>Integration of earthworks design with existing landform</u> The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use

Viewpoint 6 – Princes Highway (north bound - adjacent to southern site works area)

of visually recessive materials in order to minimise the visual dominance of retaining walls.

4. **Hardscape Materiality**

Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.

Overall rating of visual impact (during construction)

During construction the overall visual impact rating is considered **Moderate-Low**. This rating is based on the approach indicated in Table 3.1.

Overall rating of visual impact (operation)

During operation the overall visual impact rating is considered **Low**. This rating is based on the approach indicated in Table 3.1.

7.4.7 Viewpoint 7 – Clyde Mitsubishi / Batemans Bay Cemetery

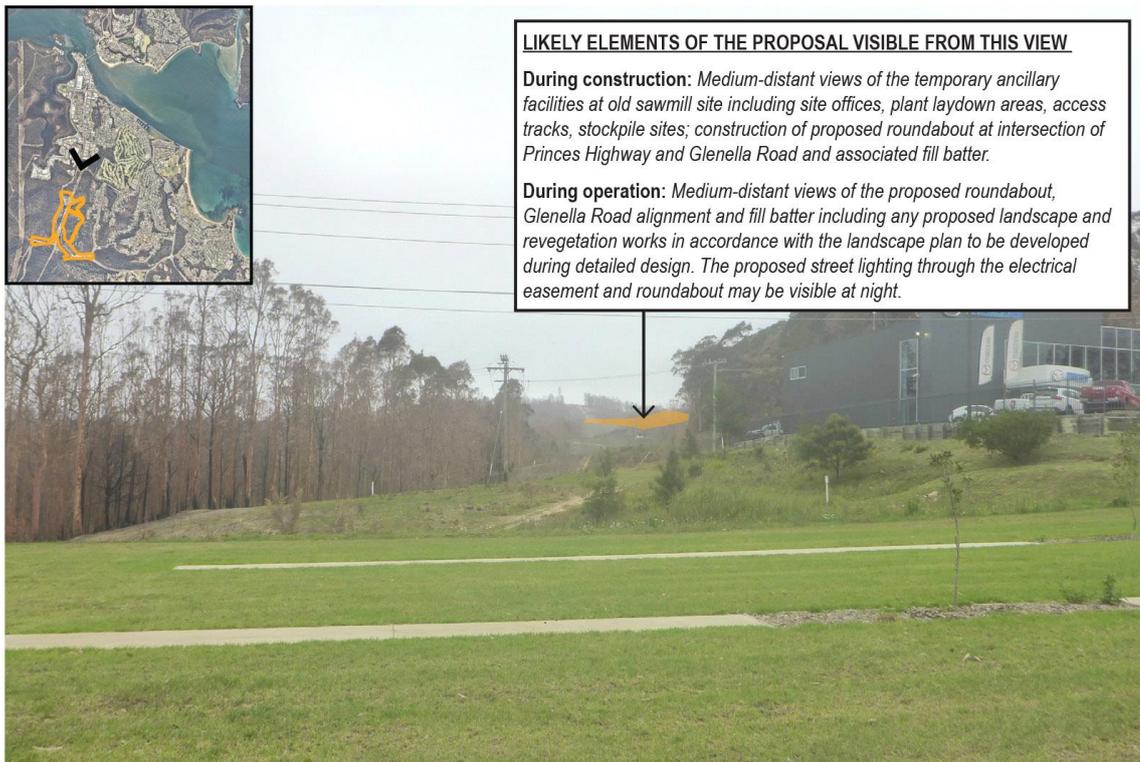


Figure 7-29: View point 7 - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-29 is indicative only.



Figure 7-30: View point 7 – actual view

Table 7-7: View point 7 assessment table

Viewpoint 7 – Clyde Mitsubishi / Batemans Bay Cemetery	
Category of view	Medium distant view (1km to 2kms from the construction boundary)
Description	Clyde Mitsubishi car dealership and Batemans Bay Cemetery which sit below the site at the northern, low end of the easement
Element of the project visible (during construction)	Medium-distant views of the temporary ancillary facilities at old sawmill site including site offices, plant laydown areas, access tracks, stockpile sites; construction of proposed roundabout at intersection of Princes Highway and Glenella Road and associated fill batter.
Element of the project visible (operation)	Medium-distant views of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design. The proposed street lighting through the electrical easement and roundabout may be visible at night.
Category of viewer	Visitors to cemetery and Clyde Mitsubishi
Nature of Impact	Adverse
Sensitivity of view	Low - the surrounding view may contribute to the users' overall experience from this location, however it is unlikely to be the specific reason they visit, therefore it is less susceptible to change.
Magnitude of change (during construction)	Moderate - the photos indicate that there would be a change to views towards the proposal site from this location. During construction it is likely the proposal would be more visible due to the removal of trees for construction of the roundabout. The topography of the land and existing trees in the foreground that were unaffected by the fires assist in the softening and screening of the proposal during construction.
Magnitude of change (operation)	Low – during operation the regenerated bushland and associated landscaping works would assist in softening and screening the proposal from this location.
Mitigation measures	<p>An integrated landscape/engineering design is essential for visual mitigation in this location due to the close proximity and moderate magnitude of change rating. For this view point the following visual mitigation measures include:</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. This is particularly important at the northern end of the proposal where the new roundabout is proposed. This portion of the proposal would be highly visible from this view, therefore, retaining prominent trees where possible on either side of the electrical easement would aid in visual mitigation. Any proposed water quality structures and drainage lines visible from this view are to be designed to avoid existing vegetation where possible. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Due to the nature of the electrical easement no revegetation works can be proposed within this section of the proposal, however, new tree plantings and screen vegetation within the construction boundary outside of the easement would assist in screening the proposal and associated infrastructure from this view. All batters are to be softly integrated through use of vegetation where possible.

Viewpoint 7 – Clyde Mitsubishi / Batemans Bay Cemetery

	<p>Species to be used would be determined in consultation with council during detailed design.</p> <p>3. <u>Integration of earthworks design with existing landform</u></p> <p>The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.</p> <p>4. <u>Hardscape Materiality</u></p> <p>Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.</p>
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered Moderate-Low . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Low . This rating is based on the approach indicated in Table 3.1.

7.4.8 Typical views from Batemans Bay north shore recreational areas

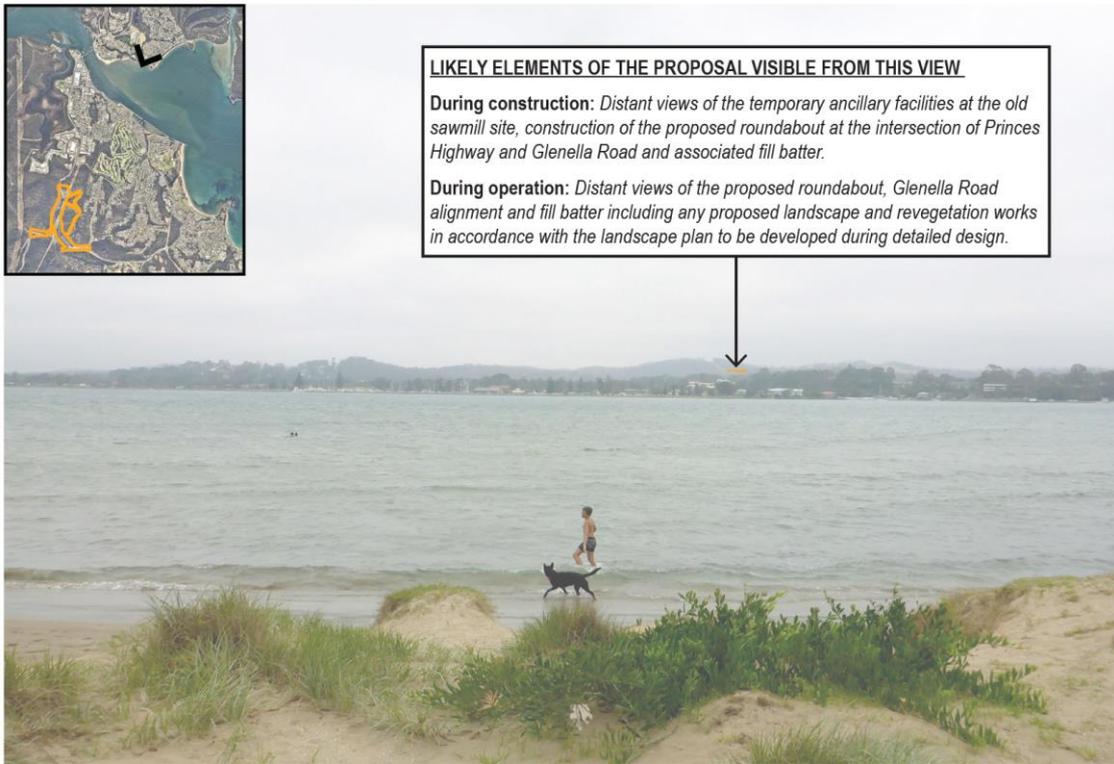


Figure 7-31: Typical north shore view 1 (Surfside dog beach) - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-31 is indicative only.



Figure 7-32: Typical north shore view 1 (Surfside dog beach) – actual view



LIKELY ELEMENTS OF THE PROPOSAL VISIBLE FROM THIS VIEW

During construction: Distant views of the temporary ancillary facilities at the old sawmill site, construction of the proposed roundabout at the intersection of Princes Highway and Glenella Road and associated fill batter.

During operation: Distant views of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the landscape plan to be developed during detailed design.



Figure 7-33: Typical north shore view 2 (Surfside park) - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-33 is indicative only.



Figure 7-34: Typical north shore view 2 (Surfside park) – actual view

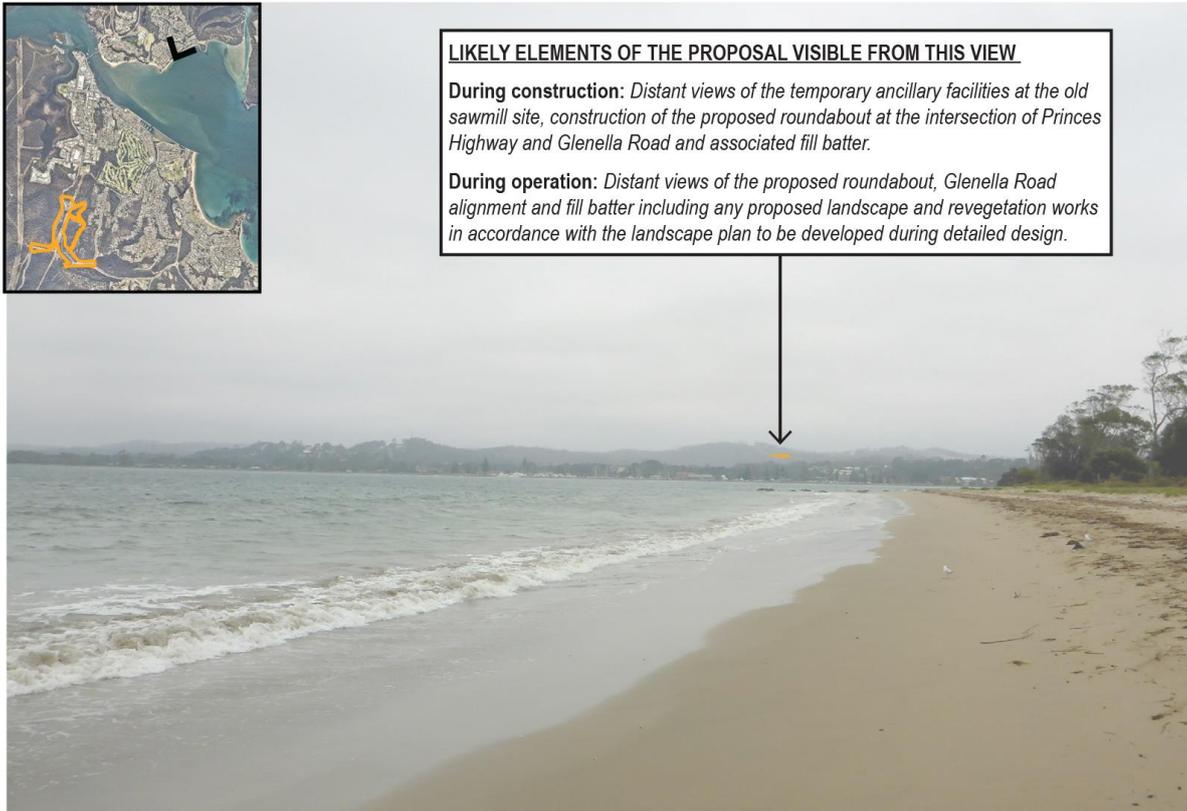


Figure 7-35: Typical north shore view 3 (Surfside beach) - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-35 is indicative only.



Figure 7-36: Typical north shore view 3 (Surfside beach) – actual view

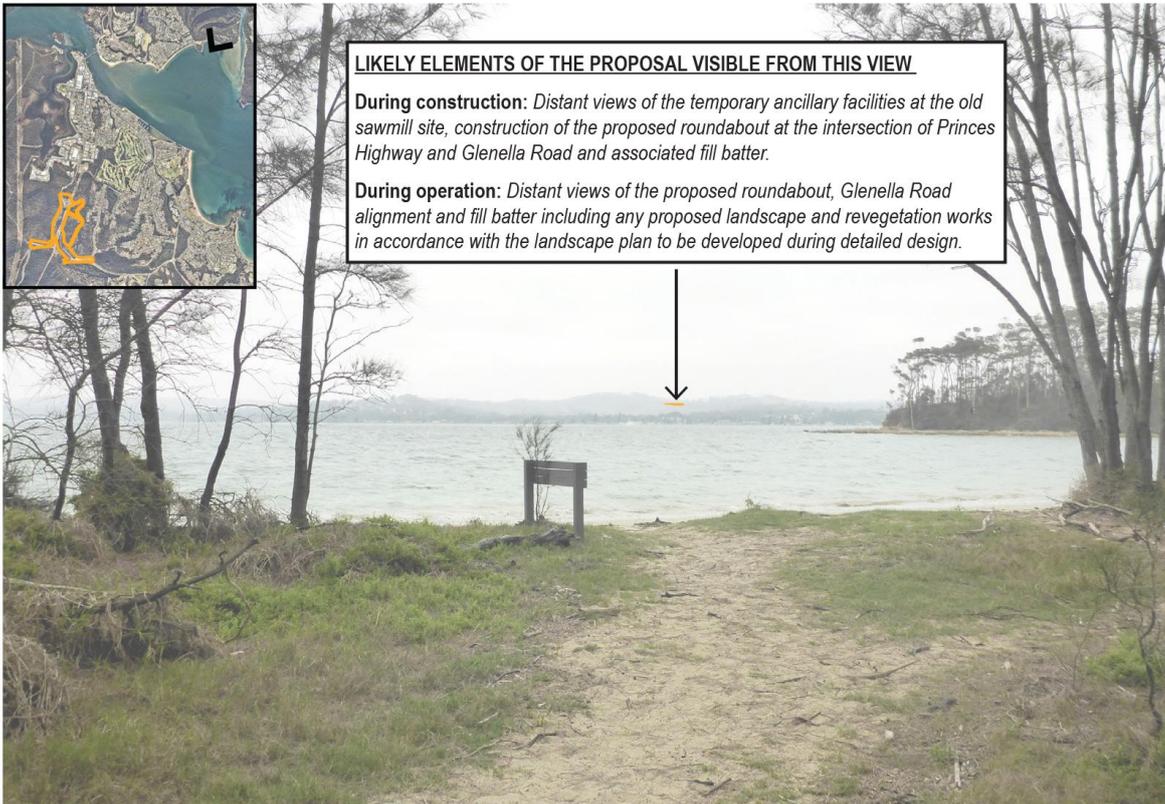


Figure 7-37: Typical north shore view 4 (Cullendulla Creek Nature Reserve walking track) - approximate portion of the proposal visible from this view (denoted in orange shade)

Note: the approximate portion of the proposal visible shown in Fig 7-37 is indicative only.



Figure 7-38: Typical north shore view 4 (Cullendulla Creek Nature Reserve walking track) – actual view

Table 7-8: Typical views assessment table

Typical views from recreational areas on Batemans Bay north shore	
Category of view	Distant views – 3 - 5kms from the construction boundary
Description	Public recreational areas on Batemans Bay north shore: beaches, parks and nature reserve walking tracks
Element of the project visible (during construction)	Distant views of the temporary ancillary facilities at the old sawmill site, construction of the proposed roundabout at the intersection of Princes Highway and Glenella Road and associated fill batter.
Element of the project visible (operation)	Distant views of the proposed roundabout, Glenella Road alignment and fill batter including any proposed landscape and revegetation works in accordance with the revegetation plan to be developed during detailed design.
Category of viewer	Recreational users (locals and tourists), holiday park users
Nature of Impact	Adverse
Sensitivity of view	High – due to the north shore being an area with high recreational use by locals and tourists alike. Users would expect that views to and from the public realm of the north shore remain high quality
Magnitude of change (during construction)	Low - the visual impact of the proposal is very minor due to its distance to the viewer. As such the proposal is only a very small component of the view users would experience from this location. During construction it is likely the proposal would be slightly more visible due to the removal of trees for construction purposes.
Magnitude of change (operation)	Negligible – during operation (post construction), it is expected the proposal would be less visible and the impact to views from this location would be negligible.
Mitigation measures	<p>For typical views from recreational areas on Batemans Bay north shore the following visual mitigation measures include:</p> <ol style="list-style-type: none"> 1. <u>Retention and protection of existing vegetation</u> Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. 2. <u>Revegetation and screen planting</u> During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design. All batters are to be softly integrated through use of vegetation where possible.
Overall rating of visual impact (during construction)	During construction the overall visual impact rating is considered Moderate . This rating is based on the approach indicated in Table 3.1.
Overall rating of visual impact (operation)	During operation the overall visual impact rating is considered Negligible . This rating is based on the approach indicated in Table 3.1.

7.5 Summary of visual impacts

Table 7-9 below summarises the level of sensitivity, magnitude and overall rating of visual impact for each viewpoint. To differentiate the impacts during construction and operation two ratings have been provided for the magnitude of change and overall rating of visual impact (during construction and operation). It should be noted that the ratings are measured relative to each other, rather than being assigned through an absolute scale. Hence the resulting rating is project specific and identifies those views with the highest and lowest impacts.

The identified overall ratings of visual impacts are either in the Negligible, Moderate-Low, Moderate or High-Moderate category.

Table 7-9: Visual impact assessment summary table

Viewpoint	Sensitivity	Magnitude	Overall rating of visual impact
1	Low	Negligible (during construction) Negligible (operation)	Negligible (during construction) Negligible (operation)
2	High	Moderate (during construction) Low (operation)	High-Moderate (during construction) Moderate (operation)
3	High	Moderate (during construction) Low (operation)	High-Moderate (during construction) Moderate (operation)
4	High	Moderate (during construction) Low (operation)	High-Moderate (during construction) Moderate (operation)
5	Moderate	High (during construction) Moderate (operation)	High-Moderate (during construction) Moderate (operation)
6	Low	Moderate (during construction) Low (operation)	Moderate-Low (during construction) Low (operation)
7	Low	Moderate (during construction) Low (operation)	High-Moderate (during construction) Moderate (operation)
North shore views	High	Low (during construction) Negligible (operation)	Moderate (during construction) Negligible (operation)

8. Urban context assessment

Due to the bushland environment the proposal sits within, it is expected the impacts of the proposal on the urban context would be minimal. Despite this, the detailed design development of the proposal requires consideration of the broader urban context. Urban design principles have been developed based on the Roads and Maritime urban design policy '*Beyond the Pavement*' (NSW Roads and Traffic Authority, August 2014). The intention of the following urban design principles is to guide the detailed design development and ensure the proposal is designed in a way that is not only well integrated into its local bushland setting, but is also into the broader urban context.

Principle one: The design should fit into the built fabric

- The road footprint should be kept to the minimum possible

Principle two: The design should fit within the surrounding landform

- The road form should respond to the surrounding topography and landform.
- Slope stabilisation design should be carefully considered as part of the project. An integrated landscape approach should be taken on all cut and fill batters.

Principle three: The design should respond to the natural environment

- Introduce landscape strategies that reinforce the indigenous vegetation patterns of the area to settle the proposal into its setting and enhance biodiversity.

Principle four: Design in a way that is cost effective and requires minimal maintenance

- Minimise conflicts with existing infrastructure, including overhead and underground services.
- Design in a way that is cost effective and practical to construct, without creating significant risks to safety.
- Consider construction methodologies that limit environmental impacts.

9. Mitigation strategies

It is expected that many of the visual impacts of the proposal can be sufficiently mitigated. Mitigation measures to be incorporated during the concept and detailed design are outlined below.

9.1 Mitigation incorporated in the concept design

A number of measures in the concept design would serve to mitigate the impacts of the proposal on local and regional visual quality. These include:

- Selection of a road alignment that follows an existing low grade road. Impacts of the proposal on viewers would be tempered by the fact that the proposal is essentially an upgrade of an existing road
- Positioning of the proposed new roundabout where it would be largely screened from local views by its surrounding topography
- The location of the proposal in a bushland setting where it would be substantially screened by existing vegetation, notwithstanding the unexpected impacts of the 2019 / 2020 bushfires on the screening functions of the bushland.

9.2 Safeguards and management measures to be implemented during detail design

As the proposal progresses into detail design it would require design and implementation of an integrated landscape / engineering scheme for the entire construction boundary. The objective of the scheme is to ensure the proposal fits sensitively into its topographic, natural and cultural context and would have an acceptable impact on the developing visual character of the site and its environs. The proposal also needs to have an acceptable impact on its broader urban context. To achieve this, the scheme is to incorporate the following overarching mitigation measures:

1. Retention and protection of existing vegetation

Retention and protection of as many existing prominent trees as possible from within the construction boundary would substantially aid in visual mitigation. The proposal is to be designed to avoid impact to prominent trees and vegetation communities where possible. Water quality structures and drainage lines are to be designed to avoid existing vegetation where possible.

2. Revegetation and screen planting

During detailed design a revegetation plan is to be produced that details all proposed revegetation and landscape work. Where removal of existing trees is unavoidable, new tree plantings are to be considered for inclusion at appropriate locations during detailed design.

Other screen planting including grasses and shrubs that reflect the indigenous vegetation patterns of the local area is to be used to help screen associated infrastructure where practical, and help minimise the impacts of glare from headlights and street lights on surrounding residents. All proposed planting is to be consistent with all relevant road design and safety standards. All batters are to be softly integrated through use of vegetation where possible. Species to be used would be determined in consultation with council during detailed design.

With respect to visual character, the objective of the proposed revegetation and screen planting should be to soften the impact of the proposal.

3. Integration of earthworks design with existing landform

The potential visual impact of the earthworks would be minimised by careful design that integrates with adjoining landforms. This is to be achieved through rounding of the top of cut batters, tailing off of cut batters and a gradual flattening of grades at ends of fill embankments in order to avoid sharp transitions at ends. Retaining walls would be constructed to minimise the construction footprint and removal of existing vegetation, where possible. Consideration would be given to screen planting below walls and the use of visually recessive materials in order to minimise the visual dominance of retaining walls.

4. Hardscape Materiality

Materiality and colours of any retaining walls and other associated hardscape works of the proposal is to be carefully considered during detailed design to help reduce visual contrast. Materials selected need to reflect existing character to help the proposal and associated works blend in with the surrounding environment. This would be especially important during construction and the first few years of operation as the surrounding bushland takes time to regenerate to pre-fire screening conditions.

Detailed design of the proposal is to be conducted with reference to the Roads and Maritime urban design policy '*Beyond the Pavement*' (NSW Roads and Traffic Authority, August 2009).

10. Summary and conclusion

The visual impacts of the proposal to construct the Batemans Bay South Link Road have been assessed in accordance with the relevant Transport for NSW guidelines including:

- *Landscape Design Guidelines*, December 2018
- *Roads and Maritime: Guidelines for landscape character and visual impact assessment No. EIA-N04 - Version 2.1 December 2018*
- *Beyond the Pavement*, January 2014.

The assessment has been carried out with the aid of photographs from the identified viewpoints. This information has been presented as commentary and mitigation measures have been identified for consideration during the design development process.

In order to incorporate consideration of the impacts on visual quality of the 2019/2020 NSW bushfires, further assessments have been made to incorporate the dynamic visual environment that would be the outcome of the regeneration of the bushland. This assessment has been based on assumptions regarding the timeframe and the nature of the regeneration process. The assessment has identified that the impacts of the proposal in the context of the bushfires would generally be moderate and would decrease as the natural landscape recovers over time.

In summary, the conclusions of the visual impacts of the proposal are:

- The identified impacts are either in the negligible, low or moderate categories
- Generally, adverse impacts identified in the assessment have the potential to be mitigated through landscaping and careful consideration of materiality and colours used in the design.

The overall conclusion of the assessment is that composite visual impacts of the proposal to construct the final stage of the South Batemans Bay South Link Road would be low to moderate during operation. It is considered that these impacts would be acceptable after implementing the mitigation measures outlined in section 9.

Appendix A

Landscape character zone photographs



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