Review of Environmental Factors

Potato Point Road Bridge Upgrade – Bodalla

May 2025

Version 1.0

eurobodalla shire council

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Review of Environmental Factors

Contents

1. Environmental Safeguards Summary

Table 1: Summary of environmental safeguards to be implemented for more information see relevant sections contained in this document.

Safeguards for the proposed work	
General	• If the scope of the works changes at any time, review this REF to determine any new measures to take. • An environmental management plan is prepared and implemented prior to the commencement of works. • No new access tracks to be created for the works. • Parking of vehicles and storage of plant/equipment is to occur on existing paved areas. Where this is not possible, vehicles and plant/equipment are to be kept away from environmentally sensitive areas and outside the dripline of trees. • All project staff and contractors will be inducted on the environmental sensitivities of the work site(s) and relevant safeguards prior to commencement. • The Project Manager will be notified immediately of any complaints relating to management of environmental issues • To ensure compliance with Section 148(3) of the Protection of the Environment Operations Act 1997, the Council's Health and Building Manager must be notified of any pollution incidents that have caused or threaten material harm to the environment

	• The Asset Manager will be notified if damage occurs to an area (vegetation, etc) outside of the nominated work area
Soil	• A site-specific erosion and sediment control plan will be implemented on site before earthworks commence. • Site management will incorporate best management erosion and sediment control practices such as those found in the Landcom's "Blue Book (4th Edition) on erosion and sediment control. • Either a linear silt stop fencing or an earth mound is to be installed down slope of all affected areas and stockpiles. Sediment controls will be installed before any excavation begins. • All erosion and silt control devices will be visually inspected weekly to ensure effectiveness as well as after each rainfall event. • The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with Landcom's "Blue Book (4th Edition) on sediment and erosion control. • Construct temporary drainage structures in accordance with the 'Technical Guideline - Temporary Stormwater Drainage for Road Construction' (RMS 2011) • Overburden will be placed in the form of a bund upslope of the site where necessary to reduce surface water entering the site. • Stockpiles will be designed, established, operated and decommissioned in accordance with the RMS Stockpile Site Management Guidelines 2015.
Waterways and water quality	• Visual monitoring of local water quality (ie turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls. • Water quality control measures are to be used to prevent any materials (eg. concrete, grout, sediment etc) entering drain inlets or waterways. • Wash down should use potable water and excess debris removed using hand tools. Wash down waste must be filtered before release, and away from all waterways.

	• No dirty water may be released into drainage lines and/or waterways. • Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets. • Reduce water velocity and capture sediment on site. • Minimise the amount of material transported from site to surrounding pavement surfaces.
Air quality	• Measures to minimise or prevent air pollution or dust are to be used including watering or covering exposed areas. • Works are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely. • Vegetation or other materials are not to be burnt on site. • Vehicles and vessels transporting waste or other materials that may produce odours or dust are to be covered during transportation. • Vehicles and equipment are to be maintained in good working order. • Monitor work areas and stockpiles for dust generation and seed/cover/spray to suppress. • Measures (including watering or covering exposed areas) are to be used to minimise or prevent air pollution and dust. • Do not leave vehicles idling
Aboriginal Heritage **STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!!** **Follow Unexpected Finds Protocol Appendix D** **AHIP APPLICATION PENDING** **INSERT CONDITIONS HERE and full AHIP in** **Appendix B**	<u>Awareness:</u> • All personnel working on site will receive training to ensure awareness of location of existing Aboriginal objects within the Study Area and immediate surrounds, and relevant statutory responsibilities. <u>AHIP (Appendix B):</u> • Insert AHIP conditions [redacted]

	[redacted]
Non-Aboriginal Heritage **STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!!** **Follow Unexpected Finds Protocol Appendix D**	<u>Awareness:</u> • All personnel working on site will receive training to ensure awareness of location of existing heritage items within the Study Area and immediate surrounds, and relevant statutory responsibilities.

	Management of existing (known) items: • Mort's Quarry, LEP #I266, Potato Point Road is within the wider vicinity of the project. • The scope of works, confined to the project area will not impact on Mort's Quarry. Unexpected Finds (Appendix D): • If heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Project Manager contacted immediately, and the Standard Management Procedure - Unexpected Heritage Items (RMS, 2015) will be followed.
Biodiversity **Flora & Fauna Assessment -** Borang Bridge - Flora and Fauna Assessment	General: • Identify measures to manage vegetation within the road reserve; • Detail restoration, regeneration and rehabilitation of areas of native vegetation that will be removed to accommodate the proposed works. • Detail appropriate management for the potential habitat of threatened flora and fauna species that will be indirectly impacted by the proposal. This may include fencing and signage. • Identify weed management strategies. • Should unexpected, threatened fauna be located at any time during construction, cease work immediately in the area to prevent further harm to the individual. Contact Council's Environmental Officer and a suitably qualified ecologist to determine if further assessment or management plans are required. Flora & Fauna Assessment (Borang Bridge - Flora and Fauna Assessment) Recommendations **1.** The extent of clearing/modification over the work site to be clearly delineated during clearing and "no go" flagging should be used as a barrier to protect vegetation outside the work footprint. **2.** Flag the two HBTs to protect from indirect impact, which is considered unlikely with their positions in relation to works.

	3. Avoid lighting aiming at the HBT on the eastern side of the work site to lessen impact on microbats known to inhabit. **4.** To ensure that weeds are not spread into the site, machinery should be washed down with high water/air pressure followed by spraying with a 3% Bleach solution or Phytoclean/F10 prior to being floated to the site and also post clearing works. See "Keeping It Clean" in references for disinfectant solution rates. **5.** Instream sedimentation controls (isolation barriers such as silt curtains/rubber dams) should be placed as close as possible to new abutment works to lessen any sedimentation risk and loss of water flow from construction, and to reduce the risk of indirect impacts on downstream vegetation/habitats of risks such as oil spills. Silt curtains should not block the entirety of Borang Creek to allow aquatic species movement away from works. **6.** For box culvert removal, investigate the ability to use silt curtains in staged removal of the culverts to avoid blocking fish passage. Should temporary blocking of fish passage is needed, a Fisheries Permit will be required. **7.** Water diversion/dewatering should consider aquatic fauna and measures to reduce fauna impacts must be included in the CEMP. This should include, but is not limited to: a) Fish screens on pumps b) Low velocity extraction or other measures to avoid fauna being drawn into pump **8.** All machinery entering the site should be high-pressure air or water hosed and sprayed with PHYTOCLEAN® prior to transportation to limit spread of Chytrid fungus (Batrachochytrium dendrobatidis) and Phytophthora cinnamomi into the subject site. **9.** Parking of vehicles should only be within non-native dominated vegetation (refer Appendix A in the report) **10.** Avoid works in main breeding period of Green and Golden Bell Frog – September to February. **11.** Should unexpected, threatened fauna be found on the site, all works must cease near the find site and ESC environmental officer/ecologist contacted immediately for advice. A Fauna

	Rescue and Release Protocol should be implemented for all other fauna (refer Appendix c in the report). **12.** NSW DPI (Fisheries) is to be immediately notified of any fish kills in the vicinity of the works. **13.** Any soil stabilization/landscaping should be done with local native species or sterile/innocuous species, e.g., Sterile Oats (Avena sterilis). Invasive grass species such as Kikuyu or Buffalo Grass should not be used in revegetation of the area. **14.** For fencing repairs between road reserve and private property, liaise with landowner if barbed wire that may cause native mammals to become caught can be avoided. It is noted though that the area is grazed by cattle and barbed wire may be necessary. No barbed wire or netting type fencing should be used for any fencing that may need to occur for the works themselves (such as stockpile area).
NSW Fisheries Permit **Insert Fisheries Permit Conditions Here and full permit in Appendix E**	• Work within the vicinity of Borang Creek can NOT proceed until a fisheries permit has been obtained. <u>Dewatering and working in and around Borang Creek</u> • A small bund wall will be constructed across the channel for culvert removal and installing the bridge piling. • Install 300mm pipe through the wall for fish passage • Pumping may be required during construction to lower the water level, a fish guard will be installed on the inlet hose and a filter on the outlet. The water is to be pumped to a grassed area in the paddock and allowed to soak through the vegetation prior to reaching the lake. • The works will be undertaken on the eastern side of the creek with a proposed trench to run parallel to the creek through the adjacent private property to allow for dewatering through the life of the project. There will be no excavation within the creek bed. • A permit to enter has been signed by the landowner for the works to proceed. • At no point will any machinery be required to enter or disturb the existing creek in any way. • Machinery is to work from the embankment of the creek to minimise damage.

Traffic and transport	• Where possible, current traffic movements and property accesses are to be maintained during the works. Any disturbance is to be minimised to prevent unnecessary traffic delays. • A Traffic Management Plan (TMP) will be prepared in accordance with the RMS Traffic Control at Work Sites Manual RTA 2010) and QA Specification G10 Control of Traffic (RTA 2008). • Comply with Council requirements regarding traffic control, access and road/ pedestrian access. • Erect signs regarding proposed works, temporary road closures, diversions etc. • Council aims to carry out majority of construction works in the tourist offseason to minimise traffic disruption. • Construction area of road to be illuminated during period of construction. • All Businesses will be able to remain open and traffic will be directed to the venue via signs and appropriate Traffic Control.
Noise and vibration	<u>Notification:</u> • All sensitive receivers (eg local residents) likely to be affected will be notified at least five working days prior to the start of any works associated with the activity that may have an adverse noise or vibration impact. <u>Standard Hours of Operation:</u> • Works to be carried out during normal work hours (i.e. 7am to 6pm Monday to Friday; 8am to 1pm Saturdays). Any work that is performed outside normal work hours or on Sundays or public holidays may not be permitted and, if permitted, works are to minimise noise impacts. <u>Out of hours:</u> • Where out-of-hours activities are required, a Noise and Vibration Management Plan will be prepared and implemented in consultation with sensitive receivers.
Socio-economic	• Contain all work within the boundaries designated on the site plan.

	• Restore work sites to as close to their original condition as possible. • Display public information signs until site restoration is complete. • Carry out community and stakeholder consultation before works start. • Notify the Works Supervisor and Coordinator immediately of any complaints or any accidental damage to property. • Locate services on DBYD search and peg out no-go areas to avoid service-disruption. • All Council staff will exercise courtesy in dealing with the community.
Landscape character and visual amenity	• Contain all work within the boundaries designated on the site plan. • Restore work sites to as close to their original condition as possible. • Minimise spread of stockpiles, waste, and parking
Waste	• A Waste Management Plan will be prepared as part of the CEMP. • All surplus material, off cuts, and other debris resulting from the work shall be removed from site and disposed of by a licensed contractor to a licensed waste management facility. • Waste material, other than vegetation and tree mulch, is not to be left on site once the works have been completed. • Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.

2. Introduction

The environmental assessment and determination of the proposal has been undertaken in accordance with Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). For this proposal, Eurobodalla Shire Council is both a public authority proponent (EP&A Act s5.3) and the determining authority (EP&A Act s5.1). The REF has been prepared in accordance with Clause 228 of the EP&A Regulation (2000). Table 1 below outlines the proponent contact details.

Table 2. Proponent details

Project name	Potato Point Road Bridge Upgrade
Proponent (council) name	Eurobodalla Shire Council
Project manager	Philip Oste
Position	Divisional Manager, Major Projects
Contact details	0429 504 652

Project description and background

Background and scope

Potato Point Road serves as the sole vehicular access to the coastal village of Potato Point, making its reliability crucial for residents, visitors, and essential services. The current crossing over Borang Creek, located just 1 km east of Bodalla, is a low-lying culvert that frequently becomes impassable during heavy rainfall, effectively isolating the community and disrupting access to vital services such as the Bodalla Sewage Treatment Plant. To address these issues, the Eurobodalla Shire Council has initiated a project to replace the culvert with a new two-lane concrete bridge, elevated by 2 meters to reduce flood susceptibility. This upgrade aims to enhance access reliability, minimise environmental impacts, and decrease maintenance needs, thereby ensuring that Potato Point remains connected and resilient during extreme weather events.

The scope of work for this project are;

Stage 1 – Pre- construction

- Land acquisition of Lot 15 DP752131 Potato Point Rd (~525m²) to allow for new road alignment.
- Install traffic control
- Fence off Environmental sensitivities

Dewatering and working in and around Borang Creek

- A small bund wall will be constructed across the channel for culvert removal and installing the bridge piling.
- Install 300mm pipe through the wall for fish passage
- Pumping may be required during construction to lower the water level, a fish guard will be installed on the inlet hose and a filter on the outlet. The water is to be pumped to a grassed area in the paddock and allowed to soak through the vegetation prior to reaching the lake.
- The works will be undertaken on the eastern side of the creek with a proposed trench to run parallel to the creek through the adjacent private property to allow for dewatering through the life of the project. There will be no excavation within the creek bed.
- A permit to enter has been signed by the landowner for the works to proceed.
- At no point will any machinery be required to enter or disturb the existing creek in any way.
- Machinery is to work from the embankment of the creek to minimise damage.

Stage 2 - Construction

- Re-align Potato Point Road for construction of the new bridge.
- Construct new bridge on north side of existing culvert. Bridge height of RL 10.06, Bridge Span 19,mBridge width approximately 13m.
- 150mm overlay over existing pavement
- Import new sub-base and base pavement where alignment deviates from existing road
- Import new fill material (approx. 6000m³) to achieve desired road levels for new bridge height
- Install new guard rail for sections of road alignment (where batter exceeds ~1m high)
- Install new SO kerb along Northern cut batter on western side of Borang Creek
- Reconstruct 2 driveways for Lot 15 Potato Point Rd (one east of bridge, one west of bridge)

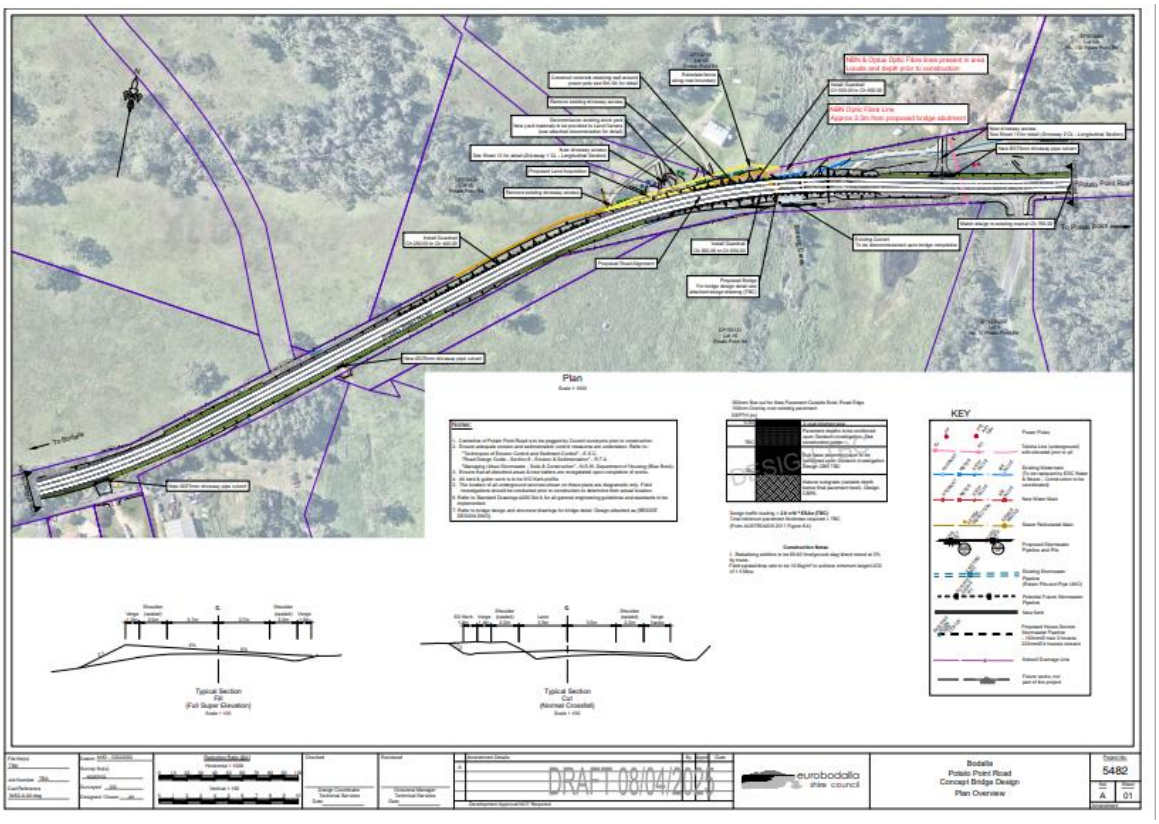


Figure 1. Design Plan showing the Potato Point Road bridge and road upgrades.

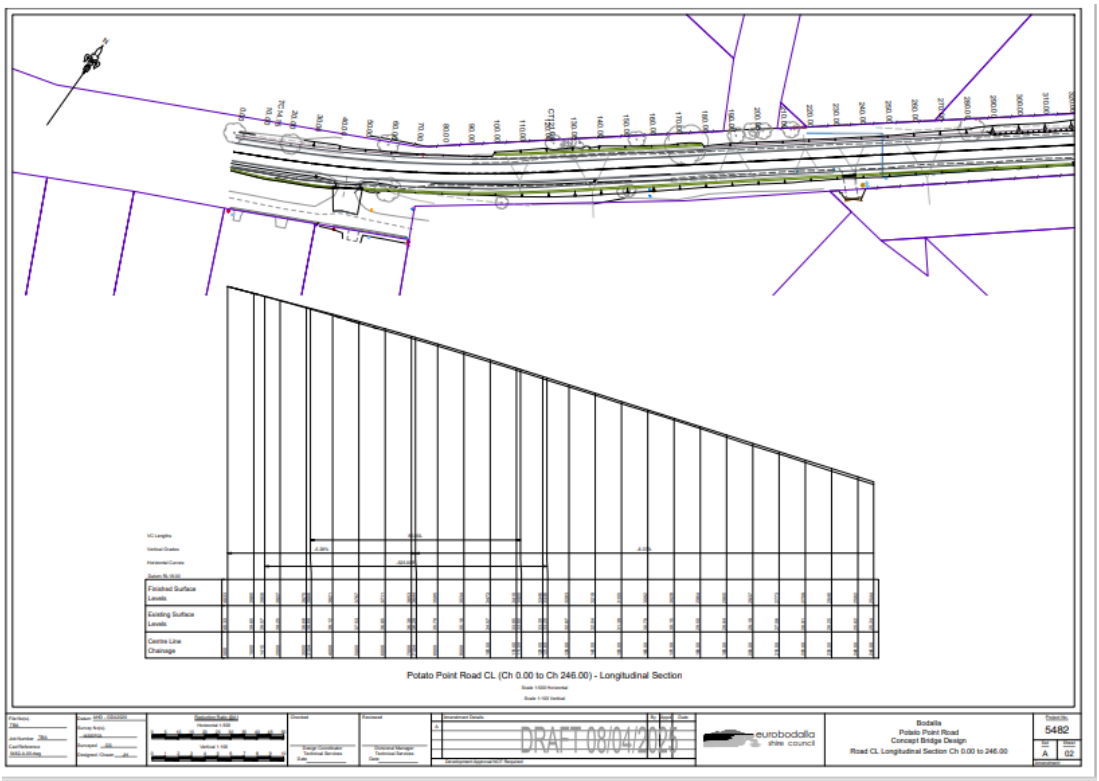


Figure 2. Detailed design Plan showing the upgrades for the western section of Potato Point Road.

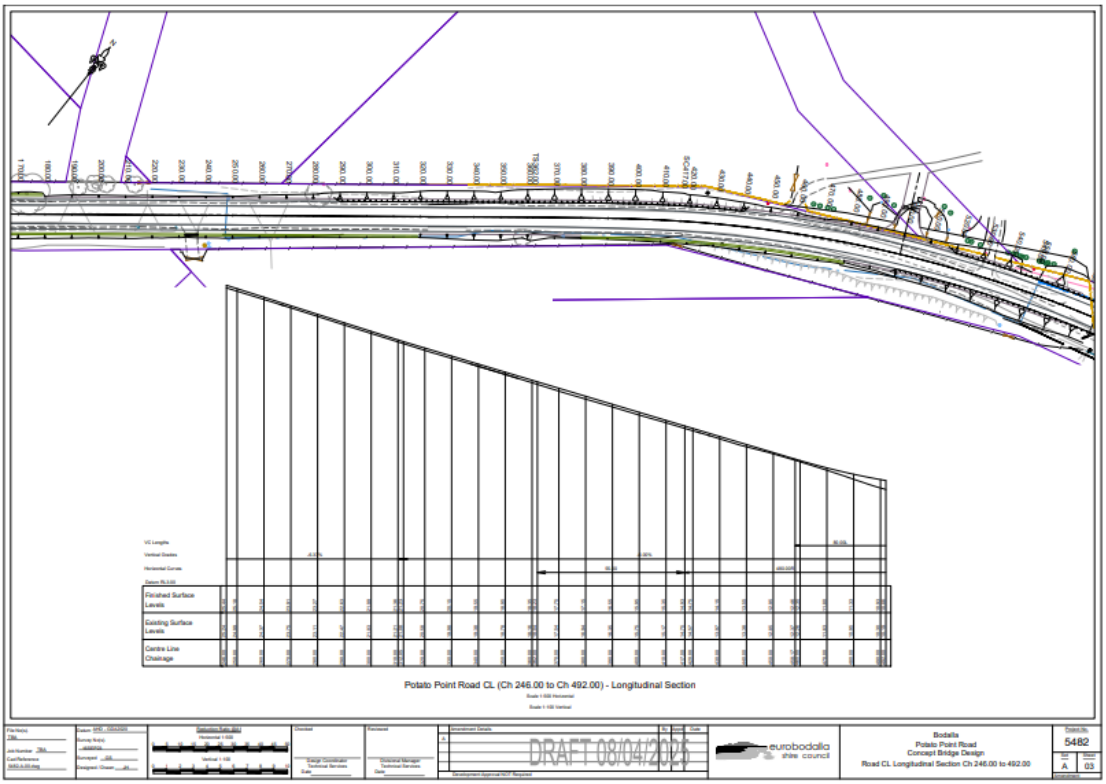


Figure 3. Detailed design for Potato Point Road mid-section upgrade.

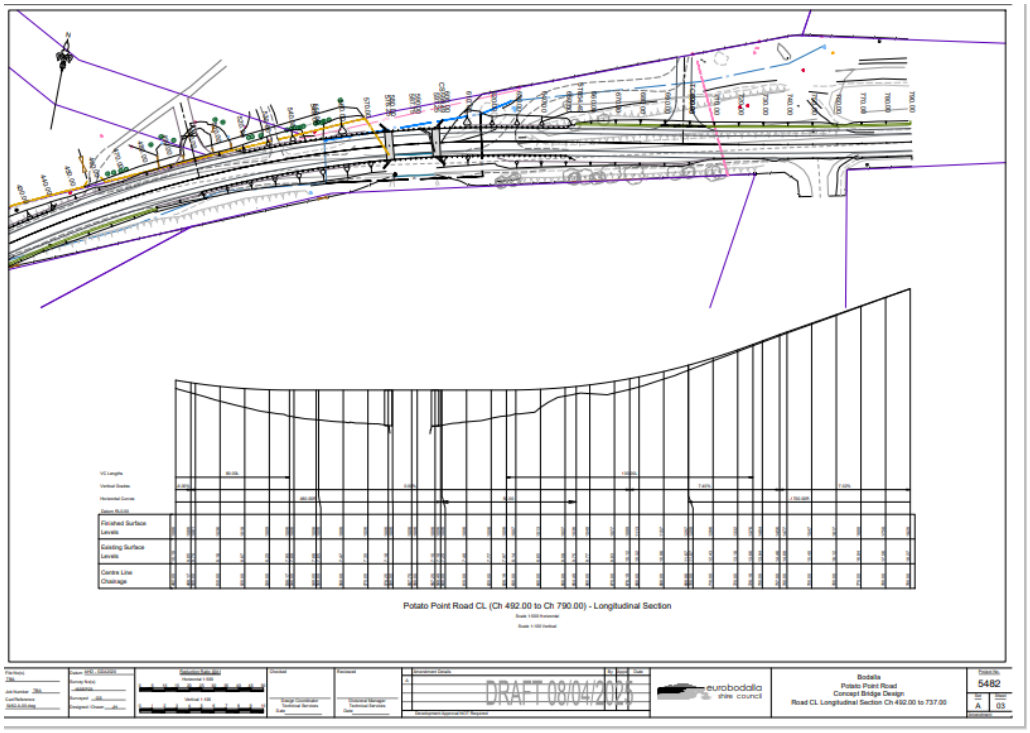


Figure 4. Detailed design plan for Potato Point Road Bridge approach.

Machinery and equipment

Machinery and equipment used for the works will include.

- Trucks
- Excavator
- Water Cart
- Piling machinery
- Grader
- Rollers
- Bobcat
- Chipper
- Hand Tools

Access and ancillary works

There are environmental and Aboriginal Heritage sensitivities in the project area. Laydown areas for parking of vehicles/machines can be situated in areas of exotic grasses within adjoining private property to the northwest, or the ESC access road to Bodalla Sewerage Pump Station to the south-east and will not entail native vegetation impact (Figure X).

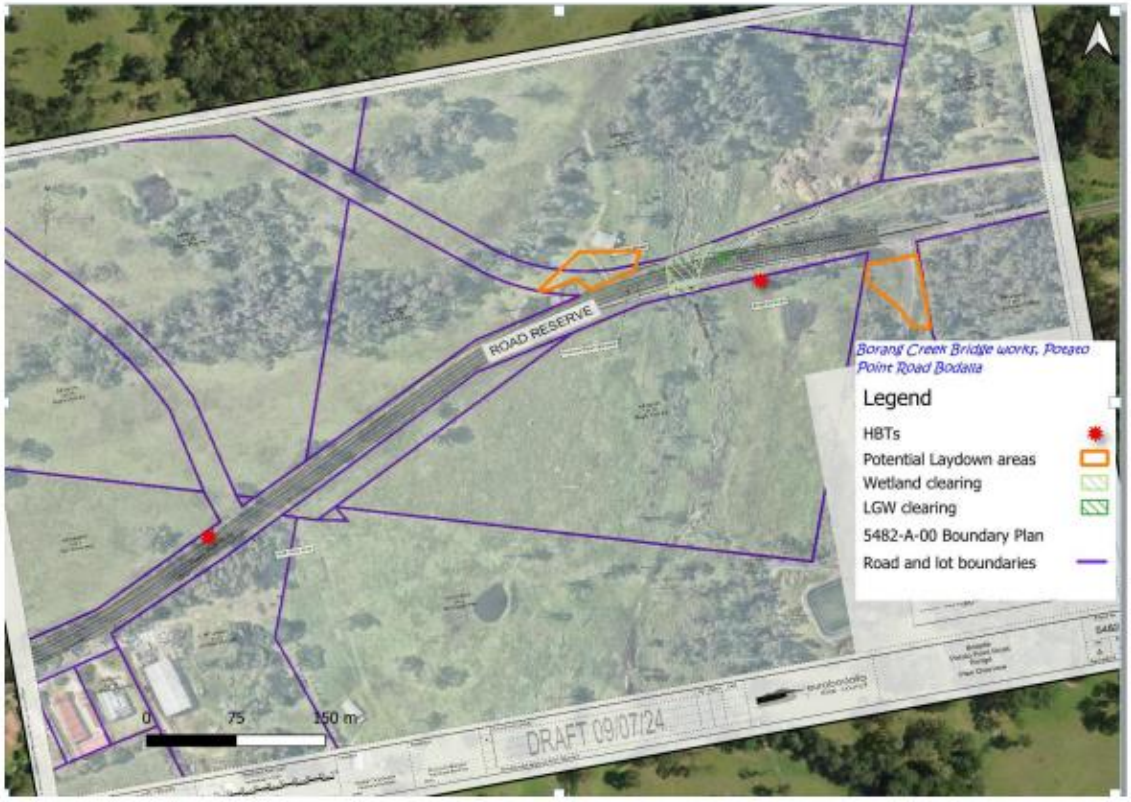


Figure 2. Work footprint for new bridge, culvert removal and road realignment/upgrade

Figure 5. Copy of Figure 2 within the report Borang Creek bridge upgrade, Potato Point Road, Bodalla-Flora & Fauna Assessment (Borang Bridge - Flora and Fauna Assessment) showing the appropriate laydown and ancillary areas outlined in orange.

Duration and working hours

The works are described as long term, as outlined in Table 3.

Table 3. Project timeframes

Start date	July 2025
Work duration	6 months
Work hours	Working hours will be Monday-Friday 7am to 6pm Saturday 8am to 1pm Sunday & public holidays – No works other than inspections Any work outside these hours would require appropriate advice to residents, approval of the Divisional Manager Works and notification of the NSW EPA.

Project location and context

Location of the proposed activity

The Borang Creek bridge is located on Potato Point Road, approximately one kilometre east of Bodalla in the Eurobodalla Shire, New South Wales. The site lies within a rural setting associated with place names such as Borang Creek, Potato Point Road, Bodalla, and the broader Tuross River catchment. It is situated about 15 kilometres south of Narooma, 25 kilometres north of Moruya, 350 kilometres south of Sydney, and 170 kilometres southeast of Canberra. The approximate coordinates for the site are latitude -36.0950° and longitude 150.0800°.

Site context

The Potato Point Road bridge over Borang Creek, located approximately one kilometre east of Bodalla in the Eurobodalla Shire, is set within a predominantly rural and natural landscape comprising native bushland and agricultural land, with minimal urban development. The site forms part of the Tuross River catchment, with Borang Creek contributing to the local drainage system and being subject to frequent inundation during significant rainfall events. The surrounding topography is gently undulating, with relatively low elevations that contribute to the area's flood susceptibility. Regional rainfall patterns strongly influence the creek's flow, and historically, flooding has resulted in road closures and the temporary isolation of the Potato Point community. In response, the construction of a new, elevated bridge has been proposed to enhance flood resilience and maintain reliable access. The soils in the area are primarily alluvial, supporting a mix of native vegetation and agricultural activities, with effective drainage and erosion management essential to preserving the environmental stability of the site.

Aquatic Habitat

The site is located across a low-lying section of Borang Creek, a Strahler third-order stream that flows into Borang Lake, the Tuross River system, Tuross Lake, and ultimately to the ocean at Tuross Head. The majority of the work footprint is dominated by exotic vegetation, with an estimated 1,000 m² of impact on freshwater wetlands and a small area (approximately 55 m²) of native vegetation to be removed. While the freshwater wetland at Borang Creek was initially assessed at approximately 1 hectare, further surveys revised this to around 5,373 m² due to the predominance of exotic vegetation upstream. Vegetation at the site is not mapped as native under State Vegetation Type Mapping (SVTM), and the surrounding mapped Plant Community Types (PCTs) — Estuarine Club Rush-Arrowgrass Wetland (PCT 4094) and Estuarine Swamp Oak Twig-rush Forest (PCT 4028) — are not

considered representative of the southern area of Borang Creek. Instead, the vegetation aligns more closely with PCT 781 Coastal Freshwater Wetland, based on species composition and freshwater quality (pH 6.2–7). Surrounding areas are largely cleared paddocks dominated by exotic grasses, although remnants of canopy species suggest that Southeast Lowland Grassy Woodland (PCT 3332) historically occurred in the locality, with PCT 4028 present north of Lake Borang. Although the Swamp Oak Floodplain Forest Endangered Ecological Community (EEC) is present in the broader area, the proposed works are not expected to impact this community. The stream bed consisting of a pool and silted run is mud silt with some fine sand, with large stands of emergent aquatic reeds predominately consisting of floating Cumbungi (Typha orientalis), Mosquito Fern (Azolla filiculoides) and Phragmites (Phragmites australis). Borang Creek falls under Type 3 minimally sensitive key fish habitat and is classified as moderate key fish habitat

Land use and ownership

The land tenure includes a combination of privately owned land parcels and a Council-owned road reserve. The project involves land acquisition from Lot 15 DP752131 to realign the road for a straighter approach to the new bridge. All other work will be on the Council owned road reserve and is not on or adjacent to Crown Land or NSW National Park.

The land is zoned RU1 for primary production with a section of the creek and riparian area zoned as C2 Environmental Conservation according to the LEP.

Project justification and consideration of alternatives

The proposed construction of a new elevated bridge over Borang Creek is essential to ensure the provision of reliable, safe, and continuous access for the Potato Point community and other road users. The existing low-level causeway is highly vulnerable to flooding during significant rainfall events, resulting in frequent road closures and the temporary isolation of residents. Such interruptions adversely affect the community's access to essential services, emergency response capabilities, and the overall social and economic resilience of the region. Addressing this accessibility issue through infrastructure improvement is therefore a critical priority.

If the proposed project does not go ahead, the existing low-level crossing would remain susceptible to frequent inundation, perpetuating recurrent road closures and continued isolation of the Potato Point community. This would have ongoing negative implications for community safety, emergency service response times, social wellbeing, and local economic activity.

3. Statutory and planning framework

Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provide the framework for development and environmental assessment in NSW.

As Council is the proponent, the works have been assessed as 'development permissible without consent' under Part 5 of the EP&A Act. Therefore, the activity has been assessed in accordance with Sections 5.5, 5.6 and 5.7 of that Act by examining and taking into account to the fullest extent possible all matters which are likely to affect the environment. Environmental Planning Instruments made under the EP&A Act 1979 may also be relevant and are addressed below.

State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 aims to facilitate the delivery of infrastructure across NSW by identifying whether certain types of infrastructure require consent, can be carried out without consent or are exempt development.

Pursuant to Division 17 Section 2.109 (1) of the Transport and Infrastructure SEPP, development for the purpose of a road or road infrastructure facilities may be carried out by or on behalf of a public authority without consent on any land. The proposed works are therefore assessed under Part 5 of the EP&A Act.

Not all roadside vegetation management requires assessment under Part 5 of the EP&A Act. Division 17 Section 2.113 (1) of the Transport and Infrastructure SEPP states:

> (1) Development for any of the following purposes is exempt development if it is carried out by or on behalf of a public authority in connection with a road or road infrastructure facilities and complies with general requirements for exempt development Division 4 section 2.20 of the Transport and Infrastructure SEPP:
>
> (f) upgrading or maintenance of landscaping, or vegetation management (such as weed spraying, slashing and pruning), and:
>
> (i) does not involve construction works, and

(ii) involves the replacement (if any) of existing materials with similar materials only.

Clause 4 Section 2.20 in the T&I SEPP limits when 'exempt development' applies, including a statement that it must not involve clearing of vegetation that would otherwise require a permit – unless the clearing is undertaken in accordance with the permit.

Other environmental legislation

Table 3 outlines how the project has been considered under other relevant Commonwealth and State environmental legislation.

Table 4: Other environmental legislation

Legislation	Relevance to the proposed activity
COMMONWEALTH LEGISLATION	
Environmental Protection and Biodiversity Conservation Act 1999 **(EPBC Act)**	The EPBC Act protects matters of National Environmental Significance (NES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others). **Potential impacts of the proposal upon Matters of NES within these EPBC Act Significant Impact Assessments have been limited to nonmarine, aquatic or potentially aquatic threatened species, populations or communities. This is due to the fact that none of the marine species listed would occur at the site, the minor nature of the works in scope, area and potential for habitat alteration, the low likelihood that ground mammals/reptiles will be present in or near the waterway during the works and surrounding habitats, and due to the high mobility levels of bird and arboreal mammal species during the works. As such, Significant Impact Assessment in line with the EPBC Act were undertaken for the following Matters of NES and are set out below:** **1. Australasian Bittern (Botaurus poiciloptilus)** **2. Australian Painted Snipe (Rostratula australis)** **3. Green and Golden Bell Frog (Litoria aurea)** **Three listed migratory birds were also considered- Latham's Snipe (Gallinago hardwickii), Swinhoe's snipe (Gallinago megala) and**

	Pin-tailed Snipe (Gallinago stenura). Whilst none are listed in the vulnerable to critically endangered categories, the wetland could provide some temporary staging habitat, though areas of Borang Lake are more suitable than the deeper pooled, heavily vegetated creekline near the roadway. After consideration of the available resources at the wetland, its likely ephemeral nature and the works themselves, no significant impact is considered likely on these migratory birds. Australian Grayling (Protroctes maraena) was also considered but as for the BC Act AoS, was excluded from the assessment based on advice from NSW Fisheries and the degraded nature of much of Borang Creek. **Based on the information provided above the proposal is considered unlikely to result in a significant impact on any EPBC listed entity. However, the mitigation measures outlined in Section 6 have been recommended to further reduce the potential impacts of the proposal on any species that may be found unexpectedly within the works area (for more information please see the Flora and Fauna Assessment Report - Borang Bridge - Flora and Fauna Assessment).**
STATE LEGISLATION	
***Biodiversity Conservation Act 2016* (BC Act)**	Part 7 of the BC Act provides the environmental assessment requirements for activities being assessed under Part 5 of the EP&A Act 1979. If a significant impact is likely, a Species Impact Statement is required. A biodiversity development assessment report may also be required if the proponent elects for this. Section 7.2(1)(a) and 7.3 describe the assessment requirements and thresholds for what is considered a significant impact. **Known or predicted threatened species and EECs within a ten-kilometre radius of the wetland were assessed against the habitats present and species habitat, range and life cycle information. Following this assessment, it was determined that the following entities required assessment under Section 7.3 of the Biodiversity Conservation Act 2016 – Significant effect on threatened species, populations or ecological communities, or their habitats or the Fisheries Management Act 1994:**

	1. Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions **2. Lowland Grassy Woodland in the South East Corner Bioregion/ EPBC Lowland Grassy Woodland in the South East Corner Bioregion** **3. Australasian Bittern (Botaurus poiciloptilus)** **4. Australian Painted Snipe (Rostratula australis)** **5. Green and Golden Bell Frog (Litoria aurea)** **The Flora and Fauna Assessment (Borang Bridge - Flora and Fauna Assessment) found the scope of works would not cause significant impact to the listed threatened species and ecological communities.**
***Local Land Services Act 2013* (LLS Act)**	The objects of the LLS Act include 'to ensure the proper management of natural resources in the social, economic and environmental interests of the State, consistently with the principles of ecologically sustainable development. The Act regulates the clearing of native vegetation, however section 60(O)(b)(ii) excludes the need for consent under the LLS Act where the clearing is an activity carried out by a determining authority within the meaning of Part 5 of the EP&A Act 1979. **ESC is the determining authority and therefore consent is not needed under the LLS Act.**
***Fisheries Management Act 1995* (FM Act)** **Insert Fisheries Permit Info**	FM Act provides for the protection, conservation, and recovery of threatened species, populations and ecological communities of fish and marine vegetation and fish habitats, as well as promoting the development and sharing of fishery resources in NSW. **A fisheries permit is required, works cannot proceed until this permit is received.**
***National Parks and Wildlife Act 1974* (NPW Act)**	The NPW Act regulates the control and management of all national parks, historic sites, nature reserves, and Aboriginal areas. The main aim of the Act is to conserve the natural and cultural heritage of NSW. Where works will disturb Aboriginal objects, an Aboriginal Heritage Impact Permit (AHIP) is required.

Insert AHIP information when received.	**An application for an AHIP has been lodged, works can NOT proceed until this permit has been received.**
Heritage Act 1977	The proposed activity does not involve an item or place listed on the NSW State Heritage Inventory or the subject of an interim heritage order or listing and is therefore not a controlled activity. Approval of works on the site is therefore not required under Part 4 of the Heritage Act. **There are no known Heritage sites within the project site, works can proceed under the Unexpected Finds Protocol Appendix D.**
***Protection of the Environment Operations Act 1997* (POEO Act)**	The POEO Act is the key environmental protection and pollution statute. The POEO Act is administered by the EPA and establishes a licensing regime for waste, air, water and pollution. Relevant sections of the Act are listed below: • Part 5.3 Water Pollution • Part 5.4 Air Pollution • Part 5.5 Noise Pollution • Part 5.6 Land Pollution and Waste Any work potentially resulting in pollution must comply with the POEO Act. Relevant licences must be obtained if required. Check the POEO Public Register for any relevant Environment Protection Licences (EPLs). **Licenses are not required, dust and noise will be carefully monitored.**
***Water Management Act 2000* (WM Act)**	The WM Act's main objective is to manage NSW water in a sustainable and integrated manner that will benefit today's generations without compromising future generations' ability to meet their needs. Section 91E of the Act establishes an approval regime for controlled activities within waterfront land. However, clause 41 of the Water Management (General) Regulation 2018 provides an exemption for public authorities in relation to all controlled activities on waterfront land. Therefore, approval under the WM Act is not required. **Although formal approval under the WM Act is not required, if the proposed activity is within 40m of a waterway, an attempt should**

	be made to comply with the requirements of controlled activities in order to reduce risks to waterways.
Roads Act 1993	Section 88 of the *Roads Act* states that a roads authority may, despite any other Act or law to the contrary, remove or lop any tree or other vegetation that is on or overhanging a public road if, in its opinion it is necessary to do so for the purposes of carrying out road work or removing a traffic hazard. **Vegetation will be cleared within the road reserve under Section 88 of the Roads Act.** **This vegetation has been assessed by a qualified ecologist (Borang Bridge - Flora and Fauna Assessment) and consists of;** "Vegetation along Borang Creek is considered to meet the SVTM Plant Community Type (PCT) 781- Coastal freshwater wetland. Much of the road verges and the surrounding private land are cleared paddocks dominated by exotic grasses from visual inspection. However, the remaining canopy are indicative that PCT 3332- Southeast Lowland Grassy Woodland once occurred across the locality, and PCT 4028- Estuarine Swamp Oak Twigrush Forest does occur to the north around Lake Borang." – Section 3.1 in Borang Bridge - Flora and Fauna Assessment
State Environmental Planning Policy – Resilience and Hazards 2021, Chapter 2 - Coastal Management	Chapter 2 of The *State Environmental Planning Policy (Resilience and Hazards) 2021* provides controls for undertaking development and activities in coastal management areas. The four coastal management areas are: • Coastal wetlands and littoral rainforests area – areas which display the characteristics of coastal wetlands or littoral rainforests that were previously protected by SEPP 14 and SEPP 26 • Coastal vulnerability area – areas subject to coastal hazards such as coastal erosion and tidal inundation

	• Coastal environment area – areas that are characterised by natural coastal features such as beaches, rock platforms, coastal lakes and lagoons and undeveloped headlands. Marine and estuarine waters are also included • Coastal use area – land adjacent to coastal waters, estuaries and coastal lakes and lagoons. Under Chapter 2 Part 2.2 Division 1 of the Resilience and Hazards SEPP, clearing native vegetation in the mapped '*Coastal wetland and littoral rainforest area*' is permissible without consent when undertaken by or on behalf of a public authority and in accordance with a certified coastal management program, a plan of management under Clause 2 of Part 2 of Chapter 6 of the *Local Government Act*, or a plan of management under Division 6 of the *Crown Land Management Act 2016*. In other cases, the clearing requires consent. **The proposal is not situated on land mapped under the Coastal Environment or Use Areas.**
State Environmental Planning Policy Biodiversity and Conservation 2021 – Chapter 2 Vegetation in Non-Rural Areas	Chapter 2, part 2.2 of the Biodiversity and Conservation SEPP states that an authority to clear vegetation under this policy is not required if it is a clearing authorised under section 60(O) of the Local Land Services Act 2013. Section 60(O) provides an exemption for clearing under Part 5 of the EP&A Act and therefore consent is not required under the B&C SEPP (Vegetation in Non-Rural Areas). **This proposal is within an area to which the Biodiversity and Conservation SEPP applies, however as the works are being assessed under part 5 of the EP&A Act and are not "development", the requirements of the SEPP do not apply.**
State Environmental Planning Policy - Biodiversity and Conservation 2021 -Chapter 3 Koala Habitat Protection 2020	Biodiversity and Conservation SEPP aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for *Phascolarctos cinereus* (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. B&I SEPP applies to development under part 4 of the EP&A Act 1979. As the proposed activity is not 'development', Koala Habitat Protection SEPP doesn't apply. Regardless, consideration of impacts to koala and koala habitat may still be relevant under the BC Act 2016.

	The site does not contain core or potential koala habitat with no canopy feed trees for the Koala in the work site, and no Koala records for the last 18 years. Therefore, the proposal is not inconsistent with chapter 4 of this SEPP.
The Rural Fires Act 1997	Section 100C of the *Rural Fires Act 1997* takes in regard – a. the principles of ecologically sustainable development (as described by section 6 (2) of the *Protection of the Environment Administration Act 1991*), and b. any matter likely to affect the environment by reason of the carrying out of bush fire hazard reduction works on the land that a determining authority would be required to consider under section 5.5 (1) of *the Environmental Planning & Assessment Act 1979* if Part 5 of that Act were applicable to the work and the carrying out of the works were and activity within the meaning of that part. **Not applicable.**

4. Community and agency consultation

Table 5: Community and agency consultation

Community / agency consultation	Have any community stakeholders been identified for the proposed works? Yes ☒ No ☐ **The landholder whose property is being affected has been notified and the appropriate land has been purchased. Laydown and ancillary areas in Environmentally non-sensitive areas have been negotiated.** Is consultation with other authorities required under the requirements of Clause 1, section 2.15 of the Transport and Infrastructure SEPP 2021? Yes ☐ No ☒

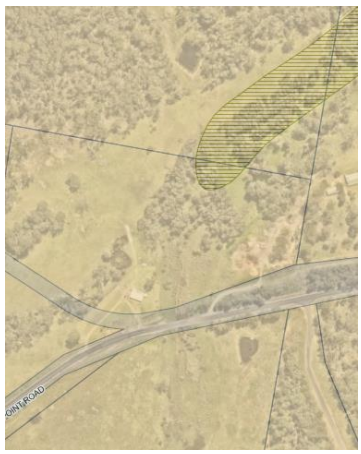
	Are the works adjacent to a national park, nature reserve or other area reserved under the National Parks and Wildlife Act 1974? Yes ☐ No ☒ Are the works adjacent to a declared aquatic reserve under the Fisheries Management Act 1994? Yes ☐ No ☒ Other agency and community consultation: **NSW Fisheries and Heritage NSW have been consulted and permits are required for the works to proceed.**

5. Environmental assessment

This section describes in detail the potential key environmental impacts associated with the proposal during both construction and operation and includes identifying site-specific safeguards to ameliorate the identified potential impact.

Table 6: Impacts, environmental safeguards and mitigation measures

Issue	Description
Landform, geology and soils	Does the project involve the disturbance of large areas (eg >2ha) for earthworks? **Yes ☐ No ☒** Does the site have constraints for erosion and sedimentation controls such as steep gradients, narrow corridors or is located on private property? **Yes ☒ No ☐** Are there any sensitive receiving environments that are located in or nearby the likely project footprint or that would likely receive stormwater discharge from the project? Sensitive receiving environments include (but are not limited to) wetlands, state forests, national parks, nature reserves, rainforests, drinking water catchments). **Yes ☒ No ☐**
Potential impacts	Any disturbance of groundcover presents a potential risk for erosion, this risk can be minimised through implementation of the following safeguards.
Safeguards	• Site management will incorporate best management erosion and sediment control practices such as those found in the Landcom's "Blue Book (4th Edition) on erosion and sediment control. • Linear silt stop fencing to be installed down slope of all affected areas and stockpiles. Silt fencing will be installed before any excavation begins. • Sandbags, hay bales wrapped in geotextile fabric etc. will be used to slow water flow and trap sediment. No straw bales are to be used. • All erosion and silt control devices will be visually inspected weekly to ensure effectiveness as well as after each rainfall event. • The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with Landcom's "Blue Book (4th Edition) on sediment and erosion control.

	• Construct temporary drainage structures in accordance with the 'Technical Guideline - Temporary Stormwater Drainage for Road Construction' (RMS 2011) • Overburden will be placed in the form of a bund upslope of the site where necessary to reduce surface water entering the site. • Stockpiles will be designed, established, operated and decommissioned in accordance with the RMS Stockpile Site Management Guidelines 2015.
Contaminated land and acid sulfate soils	Is the project located within an area mapped as Potential Acid Sulfate Soils? **Yes ☐ No ☒** Are there any known occurrences of acid sulfate soils in the area? **Yes ☒ No ☐** **There is acid sulfate soils mapped downstream of the project on Borang Creek outside of the project area (Figure 6).**  **Figure 6. Map showing the acid sulfate soils outlined in green cross hatching mapped downstream of the project site.** Is the project located within an area mapped as Potential Contaminated Land? **Yes ☐ No ☒**
Potential impacts	Disturbance of acid sulfate soils can generate large amounts of sulfuric acid leachate which can impact on the surrounding environment. Potential impacts include water quality impacts and impacts on flora and fauna.

Safeguards	If it is anticipated that Potential Acid Sulfate Soils will be disturbed, an Acid Sulfate Management Plan will be prepared.
	If contaminated areas are encountered during construction, appropriate control measures will be implemented to manage the immediate risks of contamination. All other works that may impact on the contaminated area will cease until the nature and extent of the contamination has been confirmed and any necessary site-specific controls or further actions identified in consultation with relevant government agencies.
Water quality and hydrology	Are the works located within or adjacent to a waterbody or wetland, or within 40m of a waterway? **Yes ☒ No ☐** *If yes, provide details:* **Works are located within and adjacent to Borang Creek.** If yes, the NSW DPI Water or DPI Fisheries should be notified. Have they been notified? **Yes ☒ No ☐** *If yes, is a permit required? Provide details:* **A permit is required and has been applied for. INSERT PERMIT INFORMATION**
	Will the proposed works be undertaken on a bridge? **Yes ☒ No ☐** *If yes, name the bridge:* **Potato Point Road, Borang Creek crossing. The crossing is currently culverts.** Is the location known to flood or be prone to water logging? **Yes ☒ No ☐** *If yes, provide details* **The section of road and adjacent land floods and may be prone to water logging.**
Potential impacts	Does the project pose any potential risk to the surrounding water quality? **Yes ☒ No ☐** *Describe the potential impact*

	Erosion and sedimentation during bridge construction and road upgrades pose a threat to the water quality of Borang Creek, all mitigation measures in Table 1 of this REF must be followed. Disturbance of groundcover, use of chemicals and generation of waste all have the potential to impact on the surrounding waterways via runoff. This risk can be minimised through implementation of the following safeguards.
Safeguards	• Visual monitoring of local water quality (ie turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls. • Water quality control measures are to be used to prevent any materials (eg. concrete, grout, sediment etc) entering drain inlets or waterways. • Wash down should use potable water and excess debris removed using hand tools. Wash down waste must be filtered before release, and away from all waterways. • No dirty water may be released into drainage lines and/or waterways. • Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets. • Reduce water velocity and capture sediment on site. • Minimise the amount of material transported from site to surrounding pavement surfaces. • Divert clean water around the site. • Store fuels, chemical and hazardous materials in secure, bunded areas within temporary construction ancillary facilities, and at least 50m from all waterways. • Capture and dispose of spill and contaminated materials from temporary construction ancillary facilities at a licensed facility. • Provide spill kits around temporary construction ancillary facilities. • Measures to control pollutants from stormwater and spills will be investigated and incorporated in the pavement drainage system at locations where it discharges to the receiving drainage lines. Measures aimed at reducing flow rates during rain events and

	potential scour will also be incorporated in the design of the pavement drainage system.
Biodiversity	Have relevant database searches been carried out? • NSW Bionet • Threatened species profile search (www.environment.nsw.gov.au/threatenedspeciesapp/) • Commonwealth EPBC • Fisheries? **Yes ☒ No ☐** **Date searches undertaken:** **November 2025, please see the independent ecologists report Borang Creek bridge upgrade, Potato Point Road, Bodalla-Flora & Fauna Assessment (Borang Bridge - Flora and Fauna Assessment).** **Are the proposed works likely to impact on any vegetation including, shrubs, trees?** **Yes ☒ No ☐** Did the database searches identify any endangered ecological communities, populations, threatened flora and/or threatened or protected fauna, or migratory species within the vicinity of the proposed works? Both Federal and State listed matters must be considered. **Yes ☒ No ☐** **Please see the independent ecologists report Borang Creek bridge upgrade, Potato Point Road, Bodalla-Flora & Fauna Assessment (Borang Bridge - Flora and Fauna Assessment).** Are the works taking place in a roadside area designated as high conservation value vegetation? **Yes ☐ No ☒**

	The roadway itself is not 3 mapped, however this proposal will require works in the riparian land. Borang Creek is mapped under Biodiversity Values Mapping for "Biodiverse Riparian Land". Will the proposed works require the removal of any other vegetation? **Yes ☒ No ☐** *If yes, provide details:* **The wetland vegetation consisting of the species floating Cumbungi (Typha orientalis), Mosquito Fern (Azolla filiculoides) and Phragmites (Phragmites australis) will be cleared during construction and removal of the culverts currently providing the infrastructure for the water crossing. The streambed stream will contain seeds from these species which will readily recolonise post construction (Borang Bridge - Flora and Fauna Assessment).** Do the proposed works involve pruning, trimming or removal of any tree/s? **Yes ☒ No ☐** *If yes, provide details:* **12 Black Wattle (Acacia mearnsii) and one sapling Rough-barked Apple (Angophora floribunda) on the northeastern section and potentially two Swamp Oak (Casuarina glauca) on the southern side of works (included in wetland area clearing) will require removal.** Will the proposed works affect any tree hollows or hollow logs? **Yes ☐ No ☒** Will the proposed works disturb any crevices or other locations (such as on bridges and culverts) for potential bat habitat? **Yes ☒ No ☐** *If yes, provide details:* **The culverts currently providing the crossing infrastructure over Borang Creek will need to be removed for the Bridge to be constructed. An independent ecologist will inspect the culverts for fauna before removal.**

	Are there any known areas of Areas of Outstanding Biodiversity Value (formerly known as critical habitat), Directory of Important Wetlands in Australia within the vicinity of the proposed works? **Yes ☐ No ☒** Will the proposed works disturb any natural waterways or aquatic habitat? **Yes ☒ No ☐** *If yes, provide details:* **Works will entail construction of a double span bridge on the northern side of the existing roadway with abutments to be placed on the ground outside of the creek, road realignment to join this and then removal of the six box culverts within the creek. The majority of this work footprint is exotic vegetation with an estimated impact on the Freshwater wetlands of 1000m2.** Do the trees form part of a streetscape, an avenue or roadside planting? **Yes ☐ No ☒** Have the trees been planted by a community group, Landcare group or by council or is the tree a memorial or part of a memorial group eg. has a plaque? **Yes ☐ No ☒** Do the trees form part of a heritage listing or have other heritage value? **Yes ☐ No ☒** Are there any significant weeds present? **Yes ☒ No ☐** *If yes, provide details:* **The road reserve areas directly adjacent to the wetlands are dominated by exotic grasses and weed species, including Blackberry (Rubus sp. Ag), Narrow-leaved Carpet Grass (Axonpus fissifolius), and Honeysuckle (Lonicera japonica). Mitigation measures in Table 1 of this REF must be followed to prevent the spread of weeds.**
Potential impacts	Does the project pose any potential risk to the biodiversity within the vicinity of the site? **Yes ☒ No ☐**

	If yes, describe the potential impacts: **The direct impact of the proposal is the loss or modification of approximately 1,055m2 of native vegetation within the wetland and the northern side of the eastern abutment. Impact will be the result of machinery activity to install the new bridge on the northern side of the current crossing, Potato Point Road realignment to the new bridge and then the removal of the six box culverts currently in situ.** **Sections of the road verges west and east of the works site are considered part of the EEC LGW EEC, and Swamp Oak EEC occurs to the north bordering Borang Lake. Remaining lands are cleared paddocks dominated by exotic grasses from visual inspection. As most of the land surrounding the site is private, no further survey was undertaken. Potential indirect impact on LGW EEC could occur from damage of native plants by machinery movements during construction. Potential indirect impact on Swamp Oak EEC would be from potential contaminated runoff or sedimentation from the works, however this is considered unlikely. These potential direct and indirect impacts can be managed through risk mitigation measures that are standard to waterway works such as flagging "environmental zones" and floating siltation curtains. The risks are revised to low medium and neither entity is assessed further (Borang Bridge - Flora and Fauna Assessment).**

Safeguards	<u>General:</u>
	• Prepare a Vegetation Management Plan (VMP) to:
	  • Identify measures to manage vegetation within the road reserve;
	  • Detail restoration, regeneration and rehabilitation of areas of native vegetation that will be removed to accommodate the proposed works.
	  • Detail appropriate management for the potential habitat of threatened flora and fauna species that will be indirectly impacted by the proposal. This may include fencing and signage.
	  • Identify weed management strategies.
	• As part of the site induction process, provide all site personnel with information on the biodiversity values of the study area, including threatened species, no-go areas and responsibilities under relevant environmental legislation, including but not limited to the EP&A

	Act, BC Act and EPBC Act and associated management plans for individual species.
	• Should unexpected, threatened fauna be located at any time during construction, cease work immediately in the area to prevent further harm to the individual. Contact Council's Environmental Officer and a suitably qualified ecologist to determine if further assessment or management plans are required.
	<u>Clearing of Vegetation: Pre-clearing:</u>
	• Qualified fauna experts are required to conduct pre-clearing surveys and undertake fauna handling if required. This may include:
	  • Hollow bearing tree survey;
	  • Stag-watching survey (targeted threatened bird species, arboreal mammals and microbats) in order to identify the number and type of nest boxes required and appropriate locations to install them.
	• Where clearing is required, establish exclusion zones in accordance with Guide 2 Exclusion Zones of Roads and Maritime Biodiversity Guidelines (RTA 2011) to ensure clearing does not extend beyond the approved area.
	• Trees that are to be trimmed (or removed if necessary) will be clearly marked. Any vegetation to be protected adjacent to the work area will be protected with exclusion fencing.
	• Exclusion fencing will be placed at or beyond the drip lines of the protected vegetation so as to prevent damage to their root systems.
	• Any trees with hollows are to be checked for native fauna prior to being removed. If any fauna is found, works will stop and WIRES will be contacted. Refer to any Council specific policy requirements for hollow bearing trees and amend mitigation measures accordingly.
	<u>Clearing of vegetation – general safeguards</u>
	• Remove minimum required vegetation and minimise disturbance to remaining vegetation
	• If any damage occurs to vegetation outside of the boundaries of the work site as a result of the implementation of the proposal, the Project Manager will be notified and will establish strategies for mitigation of impacts and site restoration.

	Loss of threatened species and their habitats: • Minimise removal of native vegetation and fauna habitat. • Implement exclusion zones to protect threatened ecological communities and threatened species habitat. • Remove trees in accordance with Guide 4: Clearing of Vegetation and Removal of Bushrock of Roads and Maritimes Biodiversity Guidelines (RTA, 2011) and in the presence of a qualified ecologist or wildlife expert experienced in the rescue of fauna. • Where reasonable and feasible, retain mature and hollow bearing habitat trees, including dead stags. • If hollow bearing trees are being removed, provide nest boxes to mitigate impacts, as determined by the pre-clearing survey. • Works are not to harm threatened fauna. • Works are not to create a barrier to fauna movement. Aquatic habitats and Riparian Zones: • Manage riparian areas in accordance with Roads and Maritime's 'Biodiversity Guidelines Guidance Note 10: Aquatic Habitats and Riparian Zones' (RTA 2011). • Should alteration of fish passage occur during construction consult with NSW Department of Primary Industries to determine if a permit under Section 219 of the FM Act is required. Invasion of Exotic Species: • Manage vegetation within the road reserve and adjacent to areas of vegetation clearing in accordance with Guide 6 Weed Management and Guide 10 Aquatic Habitats and Riparian Zones of Roads and Maritime's Biodiversity Guidelines (RTA, 2011) to reduce invasion of noxious weed species. • Use weed-free topsoil in landscaping and revegetate disturbed sites with locally indigenous species. • Construction machinery should be washed prior to entering and leaving site to ensure weed propagules are not transported. Stockpiling: • Only place stockpiles in low value vegetation, where cleared sites are unavailable. • Stockpiles should be no taller than 2m height.

	• Use existing stockpiles before creating new ones.
	
	<u>Site Restoration:</u>
	• The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with:
	  • Landcom's "Blue Book (4th Edition) on sediment and erosion control;
	  • RMS Landscape Guidelines;
	  • RMS Guidelines for Batter Stabilisation Using Vegetation.

Aboriginal heritage	Are the works likely to disturb previously undisturbed areas of the landscape? **Yes ☒ No ☐** Has an AHIMS register search been conducted? **Yes ☒ No ☐** Has Due Diligence been conducted? **Yes ☒ No ☐** **Please see the Aboriginal Cultural Heritage Assessment Report by On Site Cultural Heritage Management (Appendix C). An AHIP application is currently pending.** Are there any known Aboriginal artefacts/sites within the vicinity of the work site? **Yes ☒ No ☐** **Please see the Aboriginal Cultural Heritage Assessment Report by On Site Cultural Heritage Management (Appendix C). An AHIP application is currently pending.** Would the proposal involve the removal of mature native trees? **Yes ☐ No ☒**
Potential impacts	Does the project pose any potential risk to Aboriginal heritage? **Yes ☒ No ☐**

	Please see the Aboriginal Cultural Heritage Assessment Report by On Site Cultural Heritage Management (Appendix C). An AHIP application is currently pending.
Safeguards	<u>Awareness:</u> • All personnel working on site will receive training to ensure awareness of location of existing Aboriginal objects within the Study Area and immediate surrounds, and relevant statutory responsibilities. <u>Management of existing (known) items:</u> • Exclusion fencing will be placed around existing known Aboriginal objects to prevent damage to these objects. • Works to be carried out in accordance with the AHIP. <u>Unexpected Finds (Appendix D):</u> • If Aboriginal heritage items are uncovered during the works, STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!! All works in the vicinity of the find must cease and the Project Manager and Environmental Officer contacted immediately. The Standard Management Procedure - Unexpected Heritage Items (RMS, 2015) must then be followed.
Non-Aboriginal heritage	Complete online heritage database searches • NSW Heritage database • Commonwealth EPBC heritage list • Australian Heritage Places Inventory • Local Environmental Plan(s) heritage items Are there any items of Non-Aboriginal heritage located within the vicinity of the proposed works? **Yes ☒ No ☐** **Mort's Quarry LEP #I266, is north west of the project site. The proposed project will not impact the quarry.**
Potential impacts	Does the project pose any potential risk to Non-Aboriginal heritage? **Yes ☐ No ☒**
Safeguards	<u>Awareness:</u>

	• All personnel working on site will receive training to ensure awareness of location of existing heritage items within the Study Area and immediate surrounds, and relevant statutory responsibilities. <u>Management of existing (known) items:</u> • Exclusion fencing will be placed around existing known heritage items to prevent damage to these objects. • Works to be carried out in accordance with the approved Conservation Management Plan for the heritage item (where available). <u>Unexpected Finds (Appendix D):</u> • If heritage items are uncovered during the works, **STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!!** All works in the vicinity of the find must cease and the Project Manager and Environmental Officer contacted immediately. The Standard Management Procedure - Unexpected Heritage Items (RMS, 2015) must then be followed.
Noise	Are there any noise sensitive areas near the location of the proposed works that may be affected by the works (i.e. church, school, hospital, residences)? During construction? **Yes ☒ No ☐** During Operation? **Yes ☐ No ☒** *If yes, provide details including a map to show proximity to proposed works*  **Figure 7.** Map showing sensitive noise receptors shown by a red X.

	Are the proposed works going to be undertaken during standard working hours detailed below? **Yes ☒ No ☐** *Standard working hours* *Monday – Friday* — *7:00am to 6:00pm* *Saturday* — *8:00am to 1:00pm* *Sunday and Public Holidays* — *No work* Would operation of the proposal alter the noise environment for sensitive receivers? This might include, but not be limited to, altering the line or level of an existing carriageway, changing traffic flow, increasing traffic speeds by more than 10km/hr or installing audio-tactile line markings. **Yes ☐ No ☒**
Potential impacts	Does the project pose any potential risk to the surrounding noise quality? **Yes ☒ No ☐** *If yes, provide details* **There will be noise disturbance during the construction phase of the project due to the use of heavy machinery.**
Safeguards	Notification: • All sensitive receivers (eg local residents) likely to be affected will be notified at least five working days prior to the start of any works associated with the activity that may have an adverse noise or vibration impact. Standard Hours of Operation: • Works to be carried out during normal work hours (i.e. 7am to 6pm Monday to Friday; 8am to 1pm Saturdays). Any work that is performed outside normal work hours or on Sundays or public holidays may not be permitted and, if permitted, works are to minimise noise impacts. Out of hours: • Where out-of-hours activities are required, a Noise and Vibration Management Plan will be prepared and implemented in consultation with sensitive receivers.
Air quality	Are the proposed works likely to result in large areas (>2ha) of exposed soils?

	Yes ☐ No ☒ Are there any dust sensitive receivers located within the vicinity of the proposed works during the construction period (i.e. church, school, hospital, residences)? **Yes ☒ No ☐** Please see figure 7 for sensitive receivers. Is there likely to be an emission to air of dust, smoke, steam or vehicle emissions? **Yes ☒ No ☐**
Potential impacts	Does the project pose any potential risk to the surrounding air quality? **Yes ☒ No ☐** *If yes, provide details* **There is risk to the surrounding air quality during the construction phase of the project due to the use of heavy machinery and vegetation clearing.**
Safeguards	• Measures to minimise or prevent air pollution or dust are to be used including watering or covering exposed areas. • Works are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely • Vegetation or other materials are not to be burnt on site. • Vehicles and vessels transporting waste or other materials that may produce odours or dust are to be covered during transportation • Vehicles and equipment are to be maintained in good working order. • Monitor work areas and stockpiles for dust generation and seed/cover/spray to suppress. • Measures (including watering or covering exposed areas) are to be used to minimise or prevent air pollution and dust • Do not leave vehicles idling

Waste and chemical management	Are the proposed works likely to generate >200 tonnes of waste material (contaminated and /or non-contaminated material)? **Yes ☐ No ☒** Are the proposed works likely to require a licence from EPA? **Yes ☐ No ☒** Is waste being transported off site to another location? **Yes ☒ No ☐** Does the project pose any potential risk to the surrounding environment as a result of waste generated? **Yes ☒ No ☐**
Potential impacts	**The proposed bridge construction project at Borang Creek does pose some potential risk to the surrounding environment from waste generation, as is typical with infrastructure works. Risks may include the accidental release of construction materials, sediment runoff, fuel or chemical spills, and general construction waste entering the surrounding freshwater wetlands and creek system. Given the site's proximity to sensitive freshwater environments, including Borang Creek, Borang Lake, and the Tuross River system, unmanaged waste could negatively impact water quality, aquatic habitats, and native vegetation. However, these risks can be effectively mitigated through the implementation of a Construction Environmental Management Plan (CEMP), incorporating strict waste management, erosion and sediment control measures, spill response procedures, and site rehabilitation practices. With appropriate controls in place, the risk of significant environmental impact from waste generation can be minimised.**

Safeguards	• A Waste Management Plan will be prepared as part of the CEMP • All surplus material, off cuts, and other debris resulting from the work shall be removed from site and disposed of by a licensed contractor to a licensed waste management facility. • Waste material, other than vegetation and tree mulch, is not to be left on site once the works have been completed. • Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.
Traffic and transport	Are the proposed works likely to result in detours, disruptions or delays to traffic flow (vehicular, cycle and pedestrian) or access to properties or businesses? During construction **Yes** ☒ **No** ☐ During Operation **Yes** ☐ **No** ☒
Potential impacts	Are the proposed works likely to affect any other transport nodes or transport infrastructure (eg bus stops, bus routes) in the surrounding area? Result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during operation? **Yes** ☒ **No** ☐ *Describe the potential impacts* **The proposed bridge construction works at Borang Creek are not expected to directly affect other transport nodes such as bus stops, bus routes, or public transport services, given the rural setting and limited public transport infrastructure in the immediate area. However, temporary impacts to local traffic flow are anticipated during the construction phase. Short-term detours or traffic control measures may be required to manage vehicular movement safely around the work site. Given that Potato Point Road is a key access route for the Potato Point community, careful planning will be necessary to ensure continued, albeit managed, access for residents, emergency services, and service vehicles. Impacts on pedestrian and cyclist movements are expected to be minimal, due to the low volumes of non-vehicular traffic in the area. Overall, with appropriate traffic management plans and clear communication with the local community, disruptions are expected to be temporary and manageable, with no long-term effects on transport connectivity once the new bridge is operational.**

Safeguards	• Where possible, current traffic movements and property accesses are to be maintained during the works. Any disturbance is to be minimised to prevent unnecessary traffic delays. • If traffic disturbance is unavoidable, a Traffic Management Plan (TMP) will be prepared in accordance with the RMS Traffic Control at Work Sites Manual RTA 2010) and QA Specification G10 Control of Traffic (RTA 2008). • Comply with Council requirements regarding traffic control, access and road/ pedestrian access. • Erect signs regarding proposed works, temporary road closures, diversions etc.
Visual amenity/ landscape	Will the project have any potential impact on visual amenity of the site and surrounding landscape? **Yes ☒ No ☐** *If yes, provide details*
Potential impacts	**The proposed bridge replacement project at Borang Creek is expected to have a minor and localised impact on the visual amenity of the site and surrounding landscape. The construction of a new elevated bridge will introduce a more prominent built structure into what is currently a predominantly natural and rural setting characterised by native bushland, open paddocks, and the creek environment. During construction, temporary visual impacts will occur due to the presence of machinery, materials, and site works. However, once complete, the bridge design is anticipated to be in keeping with the rural character of the area, and the visual impact is expected to be low, particularly given the scale of the structure relative to the broader landscape. Rehabilitation of disturbed areas with appropriate vegetation and careful design considerations will further minimise any long-term visual effects, helping the new bridge to integrate sensitively with the natural surroundings.**
Safeguards	• Contain all work within the boundaries designated on the site plan • Restore work sites to as close to their original condition as possible • Minimise spread of stockpiles, waste, and parking

Socio-economic	Are the proposed works likely to impact on local business? **Yes ☒ No ☐** *If yes, provide details* Are the proposed works likely to require any property acquisition? **Yes ☒ No ☐** *If yes, provide details* **A small area of Lot 15 DP752131 has been acquired from the landholder to allow for a straighter approach to the bridge and road upgrades.** Are the proposed works likely to alter any access for properties (either temporarily or permanently)? **Yes ☒ No ☐** *If yes, provide details* **Landholdes with residences and access from the road to both Lot 15 DP752131 and Lot 121 DP853480 will be impacted during the construction phase of the project.** Are the proposed works likely to alter any on-street parking arrangements (either temporarily or permanently)? **Yes ☐ No ☒** Are the proposed works likely to change pedestrian movements or pedestrian access (either temporarily or permanently)? **Yes ☐ No ☒** *If yes, provide details* Are the proposed works likely to impact on any items or places of social value to the community (either temporarily or permanently)? **Yes ☒ No ☐** *If yes, provide details* **The Potato Point Community and amenities will be impacted during the construction phase of the project.** Are the proposed works likely to reduce or change visibility of any businesses, farms, tourist attractions or the like (either temporarily or permanently)?

	Yes ☒ No ☐ *If yes, provide details* **The proposed works will temporarily reduce or change the visibility adjacent farms during the construction phase.**
Potential impacts	Does the project pose any potential risk to the socio-economic factors? **Yes ☒ No ☐** *If yes, provide details* **The proposed bridge replacement project at Borang Creek is not expected to pose a significant risk to socio-economic factors; rather, it is likely to deliver overall positive benefits to the local community. In the short term, minor temporary impacts may occur during construction, such as traffic disruptions that could affect local residents, businesses, and service delivery. However, these impacts are expected to be managed through appropriate traffic and construction management plans. In the long term, the new elevated bridge will enhance flood resilience, ensuring reliable access for the Potato Point community, reducing the risk of isolation during flood events, and supporting emergency response times. This improved connectivity will have positive socio-economic outcomes by strengthening community resilience, supporting property values, and improving access to employment, services, and tourism opportunities in the broader Eurobodalla region. Therefore, while temporary inconveniences may occur during construction, the overall socio-economic impact of the project is expected to be highly beneficial.**
Safeguards	• Contain all work within the boundaries designated on the site plan • Restore work sites to as close to their original condition as possible • Display public information signs until site restoration is complete • Carry out community and stakeholder consultation before works start • Notify the Works Supervisor and Asset Manager immediately of any complaints or any accidental damage to property • Locate services on DBYD search and peg out no-go areas to avoid service-disruption • All Council staff will exercise courtesy in dealing with the community

Environmental Planning and Assessment Regulation 2021 – Assessment Considerations

In accordance with the Environmental Planning and Assessment Act, the following factors have been considered in assessing the likely impact of this activity on the environment.

Does the work proposed:

a) **Have any environmental impact on a community?**

During construction, the main impact on the people within the community will be from dust, noise and machinery. Works will be undertaken between 7am to 6pm Mondays to Fridays or 8am to 1pm Saturdays. This will be a living document which will be regularly refined or updated as needed to address emerging or new environmental management issues as they arise.

b) **Cause any transformation of a locality?**

The project will not significantly transform the locality. It will replace an existing low-level crossing with an elevated structure, maintaining the rural character and improving flood resilience without substantially altering the existing land use or visual landscape.

c) **Have any environmental impact on the ecosystems of the locality?**

There will be some temporary disturbance to local ecosystems, primarily from vegetation clearing and construction activities near Borang Creek. However, these impacts are localised and can be managed and mitigated through environmental controls. No significant or widespread ecosystem impacts are expected (Borang Bridge - Flora and Fauna Assessment).

d) **Have a reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?**

Temporary reduction in aesthetic value may occur during construction due to the presence of machinery and site works. However, the completed bridge will be designed to be sympathetic to the landscape, and no long-term reduction in environmental, aesthetic, or recreational value is expected.

e) **Have any effect upon a locality, place or building having aesthetic or anthropological, cultural, historical, scientific or social significance or other social significance or other special value for present or future generations?**

No impacts are anticipated on places of cultural, historical, or social significance. No identified heritage-listed sites are located within the works footprint. The Aboriginal

Cultural Heritage Assessment identified an AHIMS site and an AHIP has been applied for with Heritage NSW.

f) Have any impact on the habitat of protected or endangered fauna (as per Biodiversity Conservation Act 2016)?

The project involves minor clearing of vegetation but is not expected to significantly impact the habitat of any protected or endangered species under the Biodiversity Conservation Act 2016. Surveys indicate the site is dominated by exotic species with small patches of native vegetation (Borang Bridge - Flora and Fauna Assessment).

g) Cause any long-term effects on the environment?

With appropriate mitigation and rehabilitation measures in place, the project is not expected to cause significant long-term environmental effects. Instead, it is anticipated to result in improved infrastructure resilience without major environmental degradation.

h) Cause any degradation of the quality of the environment?

Temporary construction-related impacts (e.g., sediment runoff, dust, noise) may occur but will be managed through standard environmental protection measures. No long-term degradation of environmental quality is expected (Borang Bridge - Flora and Fauna Assessment).

i) Cause any risk to the safety of the environment?

There are standard construction-phase risks (e.g., potential spills or accidental sedimentation), but these will be effectively managed through site-specific environmental management plans. Long-term, the project is expected to enhance safety by improving flood resilience and reliable community access.

j) Cause any reduction in the range of beneficial uses of the environment?

No significant reduction in the beneficial uses of the environment is anticipated. The project will maintain the site's rural and ecological functions, while improving transport infrastructure for community benefit.

k) Cause any pollution of the environment?

Minor, temporary risks of pollution (e.g., sediment runoff, potential fuel or chemical spills) exist during construction, but these will be managed through strict environmental controls. Long-term, the project will not cause pollution of the environment.

l) Have any environment problems associated with the disposal of waste?

Waste generated during construction (e.g., cleared vegetation, surplus materials) will be managed under a waste management plan to avoid environmental issues. Proper disposal and recycling measures will be implemented to minimise risk.

m) Increase demands on resources (natural or otherwise) which are, or are likely to become, in short supply?

The project will require typical construction materials (such as concrete, steel, and aggregates), but it is not expected to significantly impact resources in short supply. Demand on local natural resources will be minimal and temporary.

n) Have any cumulative environmental effect with other existing or likely future activities?

Given the small scale and localised nature of the project, significant cumulative environmental impacts are not anticipated. Ongoing land use in the area remains predominantly rural and natural, and the project complements broader community resilience planning.

o) Have any impact on coastal processes and coastal hazards, including those under projected climate change conditions.

The project site is inland and upstream of coastal areas, meaning it will not directly impact coastal processes or hazards. However, the design accounts for projected increases in extreme rainfall and flood events under climate change scenarios, improving infrastructure resilience to future flood risks.

Matters of national environmental significance

In accordance with the Environment Protection and Biodiversity Act 1999, the following factors have been considered in assessing the environmental impact of this activity.

Table 7. Matters of natural significance factors and possible impacts

Factor	**Impact**
(a) Any impact on a World Heritage property?	Nil
(b) Any impact on a National Heritage place?	Nil
(c) Any impact on a wetland of international significance?	Nil
(d) Any impact on nationally threatened species, ecological communities or migratory species?	Nil
(e) Any impact on a Commonwealth marine area?	Nil
(f) Does the proposal involve a nuclear action?	Nil
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	Nil

6. Certification, review and decision

This Review of Environmental Factors provides a true and fair review of the proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposal. It identifies the likely impacts of the proposal on the environment and details the environmental safeguards and mitigation measures to be implemented to minimise the potential impact to the environment. In light of the above assessment of the proposed activity, it is considered that the overall impact on the environment is likely to be minimal and therefore acceptable. The long-term benefits of the activity will have a cumulative positive impact on the safety of road users and the activity should proceed accordingly.

REF Author: Prue McGuffie

Position: Engineering Environmental Support Officer

Date: 24/04/2025

Reviewed and endorsed by: Jack Harding

Position: Design Officer

Date: 28/04/2025

Appendix A – Works Location

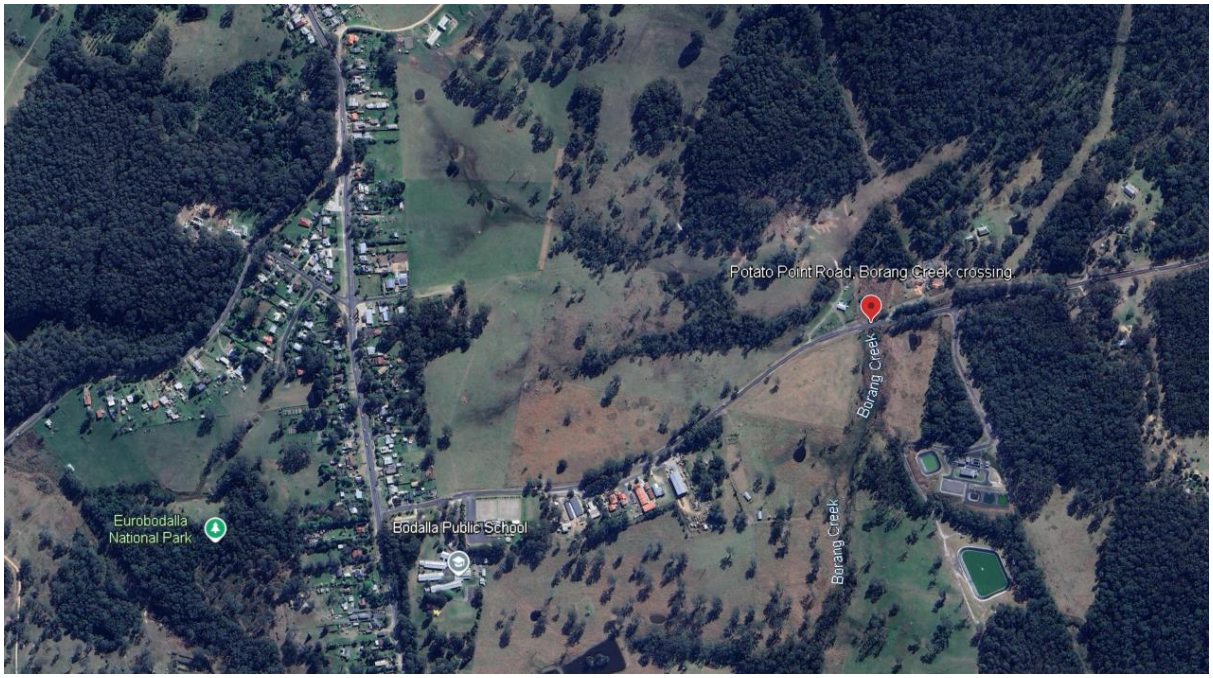


Figure X. Works location

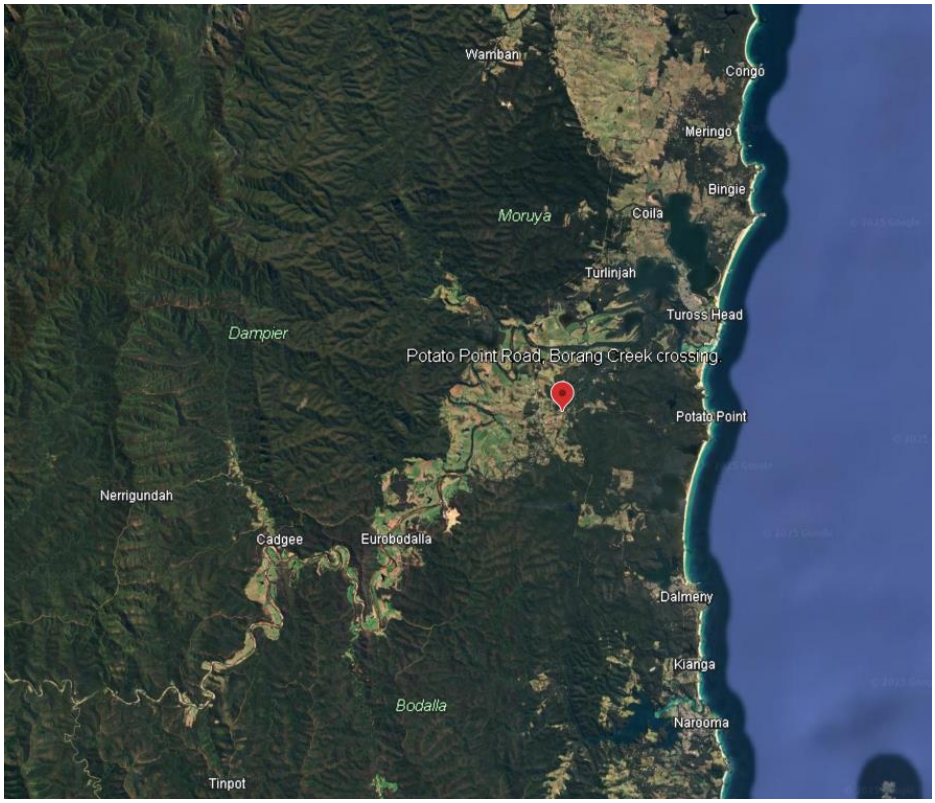


Figure X. Works location in proximity to larger regional centres

Appendix B – AHIP # INSERT AHIP HERE

Appendix C – Excerpt from the Aboriginal Cultural Heritage Assessment Report. INSERT FINAL REPORT

Insert Cover page and recommendations from the report plus any other relevant information contained within the report.

Appendix D – Unexpected Finds Protocol

STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!!

UNEXPECTED FINDS PROTOCOL

Eurobodalla Shire Council

Version 1.0

Purpose and scope

This protocol has been developed to provide a consistent method for Eurobodalla Shire Council (ESC) to manage unexpected heritage items (both Aboriginal and non-Aboriginal) that may be discovered during construction works. This protocol will apply to all construction activities undertaken by ESC.

Unexpected heritage items procedure

Step	Action
1	STOP, MARK THE AREA, TAKE A PHOTO, REPORT!!!
1.1	Stop all work in the immediate area of the item and notify the Project Manager and Environmental Officer.
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical. Avoid digging posts in the area.
1.3	Inform all site personnel about the no-go zone.
1.4	Inspect, document and photograph the item.
1.5	Is the item likely to be bone? Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site. Where human remains are likely to be aboriginal ancestral remains, also contact the OEH.
1.6	Confirm with the site environment representative that the site is unexpected and if a permit is in place.
2	**Contact Environmental Officer and Divisional Manager to engage an Aboriginal or Historical archaeologist and/or an Aboriginal heritage consultant**
2.1	Contact a qualified Aboriginal or Historical archaeologist to discuss the location and extent of the item and arrange a site inspection, if required. If requested, provide photographs.
3	**Preliminary assessment and recording of the find**
3.1	In a minority of cases, the Aboriginal or Historical archaeologist or LALC Rep may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (e.g., the item is not a 'relic', a

	'heritage item' or an 'Aboriginal object'). Any such advice should be provided in writing (e.g. via email) and confirmed by the Project Manager.
3.2	Arrange site access for the Aboriginal or Historical archaeologist/Aboriginal heritage consultant to inspect the item as soon as practicable
3.3	Subject to the Aboriginal or Historical archaeologist/Aboriginal heritage consultant's assessment, work may recommence at a set distance from the item. Existing protective fencing established in Step 1 may need to be adjusted to reflect the extent of the newly assessed protective area. No works are to take place within this area once established.
3.4	The Aboriginal or Historical archaeologist/Aboriginal heritage consultant may provide advice after the site inspection and preliminary assessment that no heritage constraint exists for the project (e.g. the item is not a 'relic' or a 'heritage item' or an 'Aboriginal item'. Any such advice should be provided in writing (e.g. via email or letter with the consultant's name and company details clearly identifiable) to the Project Manager.
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). The Aboriginal or Historical archaeologist consultant can provide contacts for such specialist consultants.
3.6	Where the item has been identified as a 'relic' or 'heritage item' or an 'Aboriginal object' the Aboriginal or Historical archaeologist should formally record the item. Where an Aboriginal object is recorded it must be registered on the Aboriginal heritage information management system (AHIMS) in accordance with section 89A of the NPW Act.
3.7	OEH (Heritage Division for non-Aboriginal relics and Planning and Aboriginal Heritage Section for Aboriginal objects) can be notified informally by telephone at this stage by the Environment and Cultural Heritage Manager. Any verbal conversations with regulators must be noted on the project file for future reference. • Heritage NSW ph.: 131 555 • Email: info@environment.nsw.gov.au Registered aboriginal parties (RAPs) will be notified at this point to inform them of unexpected find.

4	**Aboriginal or Historical Archaeologist to prepare management requirements for site.**
4.1	An archaeological or heritage management plan is developed outlining management actions to ensure damage to the site is minimised and work can recommence. This plan will be developed by the Aboriginal or Historical archaeologist in consultation with the RAP's, OEH and DPE as required.
5	**Notify the regulator, if required.**
5.1	If notification is required, complete the template notification letter, including the archaeological/heritage management plan and other relevant supporting information. For historical relics a s146 notification form will be required to be submitted to the Heritage Division.
5.2	Forward the signed notification letter to OEH.
5.3	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form is to be kept on file and a copy sent to the Project Manager.
6	**Resume Work**
6.1	The management plan is implemented and the project construction environmental management plan (CEMP) is updated to reflect any additional controls and requirements
6.2	Seek written clearance to resume project work from the Environment and Planning Manager and the Aboriginal or Historical Archaeologist/Aboriginal heritage consultant. Clearance would only be given once all archaeological excavation and/or heritage recommendations and approvals (where required) are complete. Resumption of project work must be in accordance with all relevant project/heritage approvals/determinations.
6.3	If required, ensure archaeological excavation/heritage reporting and other heritage approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies

Responsibilities

Role	Responsibility
Project Manager	Ensure the process for unexpected finds is included as part of all site inductions. Ensure that this protocol is implemented, and all personnel are aware of their responsibilities.
Construction Supervisor	Ensure this protocol is understood and implemented on site. Stops works immediately adjacent to any unexpected archaeological finds until they have been assessed in accordance with this protocol. Report any unexpected finds to the Project Manager.
Aboriginal or Historical archaeologist	On call to provide professional assistance should there be an unexpected find.
LALC	On call to provide professional assistance should there be an unexpected find.
Environmental Officer	On call to provide professional assistance should there be an unexpected find.
All personnel	Be familiar with this protocol and report any unexpected finds to their construction supervisor or project manager.

Contact details

Position	Name	Phone Number
Project Manager	Philip Oste	0429 504 652
Environmental Officer	C/O Geoff Armstrong	0458 266 174
Consultant Archaeologist	Gerard Neimoeller	0414 441 896

Types of unexpected heritage items and their legal protection

An ‘unexpected heritage item’ means any unanticipated discovery of an actual or potential heritage item, for which Eurobodalla Shire Council does not have approval to disturb or does not have a safeguard in place (apart from this procedure) to manage the disturbance.

These discoveries are categorised as either:

(a) Aboriginal objects

(b) Historic (non-Aboriginal) heritage items

(c) Human skeletal remains.

Aboriginal objects

The National Park and Wildlife Act 1974 protects Aboriginal objects which are defined as:

“Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”

Examples of Aboriginal objects include stone tool artefacts, shell middens, axe grinding grooves, pigment or engraved rock art, burial sites, and scarred trees.

Historic heritage

The Heritage Act 1977 protects relics which are defined as:

“Any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance”.

Historic (non-Aboriginal) heritage items may include: Archaeological ‘relics’; Other historic items (i.e. works, structures, buildings or movable objects).

Relics are archaeological items of local or state significance which may relate to past domestic, industrial or agricultural activities in NSW, and can include bottles, remnants of clothing, pottery, building materials and general refuse.

Human skeletal remains

Human skeletal remains can be identified as either an Aboriginal object or non-Aboriginal relic depending on ancestry of the individual (Aboriginal or non-Aboriginal) and burial context (archaeological or non-archaeological). Remains are considered to be archaeological when the time elapsed since death is suspected of being 100 years or more.

All bones must be treated as potential human skeletal remains and work around them must stop while they are protected and investigated urgently.

Appendix E – INSERT FISHERIES PERMIT

Appendix F – Excerpt from Flora and Fauna Report (Borang Bridge - Flora and Fauna Assessment)

Borang Creek bridge upgrade, Potato Point Road, Bodalla-Flora & Fauna Assessment

Report Prepared for:

Eurobodalla Shire Council

November 2024

Prepared by

Southern Cross Environmental

"The Barn"
72 Malabar Dr MORUYA NSW 2537

eurobodalla shire council

2.0 METHODOLOGY

2.1. Desktop Assessment.

A literature review was carried out to identify records of species of conservation significance. This background information informed the field survey and impact assessment. The following databases and reports were relied upon regarding local conservation and planning issues for this study:

1. *Eurobodalla Local Environment Plan 2012* (http://www.esc.nsw.gov.au/development-and-planning/tools/local-environmental-plans)
2. A search of the EPBC Act (1999) database using the Protected Matters Search Tool on the Department of Climate Change, Energy, the Environment and Water (DCCEEW) website (www.environment.gov.au/erin/ert/epbc/index.html) was completed. The search area was confined to a 10 km radius of the bridge over Borang Creek. This identified species and ecological communities of conservation significance under the EPBC Act (1999) that may require habitat assessment or targeted survey.
3. The online database of collections held by the Australian Museum, National Parks and Wildlife Service and State Forests (BioNet Atlas-http://www.bionet.nsw.gov.au/) was analyzed using a 10km radius around the works site. Known or predicted threatened species and EECs were then assessed against the habitats present at the site, species range information, and habitat, range and life cycle information that would influence their presence.
4. NSW Flora Online (http://plantnet.rbgsyd.nsw.gov.au/) and the Centre for Plant Biodiversity Research (http://www.anbg.gov.au/cpbr/) were also utilized to identify flora species.
5. The NSW Office of Environment and Heritage (OEH) Threatened Species and Ecological Communities Profiles were utilized for listed ecological communities of the Bateman CMA sub-region and threatened flora and fauna information.

3.0 RESULTS

3.1. Plant Community Type & Connectivity

Vegetation at the work site is not mapped as native vegetation under State Vegetation Type Mapping (SVTM) (Figure 7). The surrounding SVTM PCTs mapped: 4094- Estuarine Club Rush-Arrowgrass Wetland and PCT 4028- *Estuarine Swamp Oak Twig-rush Forest* are not considered the correct PCTs for the southern (upstream) area of Borang Creek. Besides Swamp Oak (*Casuarina glauca*), few species known from these PCTs were seen at the site and water quality testing of Borang Creek indicate freshwater (with Ph levels between 6.2 to 7 from ESC water quality testing 2020-2024) rather than saline.

Vegetation along Borang Creek is considered to meet the SVTM Plant Community Type (PCT) 781- *Coastal freshwater wetland.* Much of the road verges and the surrounding private land are cleared paddocks dominated by exotic grasses from visual inspection. However, the remaining canopy are indicative that PCT 3332- *Southeast Lowland Grassy Woodland* once occurred across the locality, and PCT 4028- *Estuarine Swamp Oak Twig-rush Forest* does occur to the north around Lake Borang.

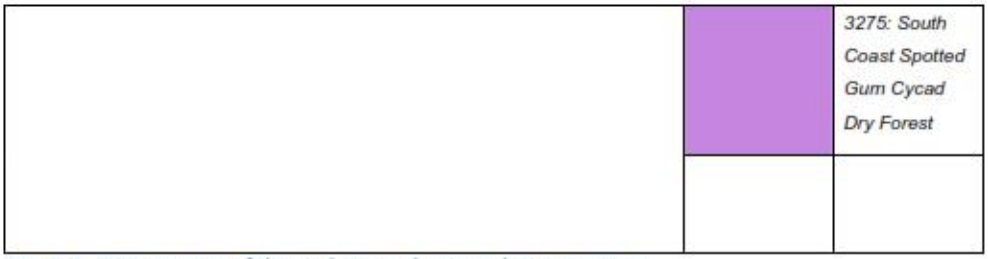


Figure 7. SEED mapping of the work site and surrounding vegetation.

3.2. Threatened Ecological Communities

The work site classified as freshwater wetland PCT 781 is part of the EEC *Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions*. The areas of road reserve to be realigned are dominated by exotic vegetation and are not classifiable to a PCT; however, the small area of native clearing in the northeast area is likely remnant *Lowlands Grassy Woodlands in the South East Corner Bioregion* EEC. The remnant is poor in quality with few native groundcovers and only 12 Black Wattles and one sapling (below 10cm DBH) Rough-barked Apple. The area to be cleared would equate to approximately 55m^2.

Whilst the EEC *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* (Swamp Oak EEC) does occur in the locality, no impact from the extent of works for this proposal is envisaged.

3.3. Flora of conservation significance

Fifteen threatened species were flagged as possibly occurring on or within 10 kms of the work site (Appendix A). No listed threatened flora species were found in surveys, and most were considered unlikely to occur due to the level of disturbance in the locality, and geology, landform or vegetation constraints. An assessment of impact on threatened flora is at Appendix A with a conclusion as to impact on threatened flora at section 8.

3.4. Fauna of conservation significance

It was considered unlikely that most of the threatened fauna identified as occurring or potentially occurring in a 10-km radius would occur at the work site. Again, this was based on the level of disturbance and lack of essential habitat features for many species' life

traits. However, several wetland species could not be definitively excluded even with survey. Therefore, it was determined that the following entities required assessment under Section 7.3 of the Biodiversity Conservation Act 2016 – Significant effect on threatened species, populations or ecological communities, or their habitats or the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999:

- Australasian Bittern (*Botaurus poiciloptilus*)
- Green and Golden Bell Frog (*Litoria aurea*)
- Australian Painted Snipe (*Rostratula australis*)
- Latham's Snipe (*Gallinago hardwickii*)

One species considered but then excluded was the Australian Grayling (*Prototroctes maraena*), listed under the Fisheries Management Act 1994. As the proposed clearing is within a waterbody, the species was considered with high potential to be present. However, Australian Grayling is not known or predicted for this watercourse (Figure 8), presumably due to the degradation of Borang Creek in farmland areas above the Freshwater Wetland site and the shorter length of the drainage line. The waterway is frequently ephemeral from the work site upstream, with limited riparian (and native) vegetation and no deeper pool areas for fish to survive in. It is likely Australian Grayling have been unable to establish a successful population in this short waterway.

9.0 CONCLUSION

Based on the information provided above the proposal is considered unlikely to result in a significant impact on any EPBC listed entity. However, the mitigation measures outlined in Section 6 have been recommended to further reduce the potential impacts of the proposal on any species that may be found unexpectedly within the works area.

Appendix G - Guidelines for Treatment of Potential Acid Sulfate Soils (PASS) During Construction.

Field observations suggest that some areas contained within the proposed worksite have some likelihood to be areas where potential acid sulfate soils (PASS) may occur as they are located in a generally low lying , estuarine area. Also as acid sulfate soil risk maps have identified this zone as an area of risk of acid sulfate soil (ASS), Council should adopt a conservative approach and assume that any/all soils encountered during any excavation within the work zone have the potential for ASS and be managed accordingly.

Common methods of management as detailed in ASSMAC manual for acid sulfate soils include:

- Avoidance.
- Burial below a permanent water table.
- Neutralisation.

As it is inevitable that some excavation will take place during construction neutralisation of any disturbed/excavated soils will need to be performed.

NEUTRALISATION PROCESS

- Any excavated soils should be stockpiled on level graded firmly compacted area away from the worksite. Appropriate sediment and erosion controls should be adopted around stockpiles.
- Stockpiled soils should be mixed with fine powdered **agricultural** lime at a minimum rate of 20kg of lime to 1 tonne of soil. Mixing can be achieved by turning several times with a backhoe or excavator.
- Neutralised soil (target pH between 6.5 and 8.5) can then be disposed of to landfill or buried below a permanent water table.

OTHER PASS MANAGEMENT ISSUES

Any disturbed /excavated soils should be maintained in a moist state to prevent oxidation prior to neutralisation or other management process.

Faces of excavated areas should be dusted with lime prior to placement of geotextile and/or bedding material for construction to establish a “lime buffer” which any potential acid water must pass through.

Council should appoint an appropriately experienced person to manage potential ASS issues at the site during earthwork activities and monitor the effectiveness of neutralisation processes.