

# Review of Environmental Factors (REF)

Review of Environmental Factors under PART 5 Division 5.1 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 and REGULATION 2021 (Section 171)



## Project name and location of the works:

## Plan No:

Project name: Poidevins Bridge Replacement

Project location: The bridge is located at the following coordinates:

Latitude: -30.2834281

Longitude: 153.0033853

### 1.1 Project Site Description:

The proposed activity is situated approximately 670m southwest of Upper Orara in NSW and is accessed via an unnamed unsealed road approximately 300m east of Upper Orara Road within the Coffs Harbour Local Government Area (LGA) as shown in Figure 1.

Poidevins Bridge is a 22m timber timber/concrete bridge spanning the Orara River and provides access to multiple rural properties west of Upper Orara. The bridge is situated on land zoned both W1 Natural Waterways and C2 Environmental Conservation under the *Coffs Harbour Local Environmental Plan 2013* (LEP) as shown in Figure 2. All land adjacent to the riparian zones of Orara River is zoned RU2 Rural Landscape, of which the ancillary site will be located.

### 1.2 Description of Project:

The proposed activity is to replace Poidevins Bridge over the Orara River as part of the Fixing Country Bridges Program – Round 2B. The Program enables councils to replace timber bridges in poor condition to better connect regional and rural communities and will significantly reduce the maintenance and renewal burden for Coffs Harbour City Council (Council).

The existing 18m timber/concrete bridge will be replaced with a single span, single lane 22m steel girder bridge with concrete precast deck panels which will be constructed offline to the existing bridge alignment. The works will involve lifting the road approaches to match the new bridge height. Steel UC piles with 2m deep bored reinforced concrete encased collars will be driven into the soil profile, and precast abutments will be utilised to support the bridge.

The existing bridge will remain in situ for the duration of works which will remove the need for any detours and further disturbance to the receiving environment. Upon completion, the existing bridge will be demolished and removed from site.

An overview of the project area is shown Figure 3.

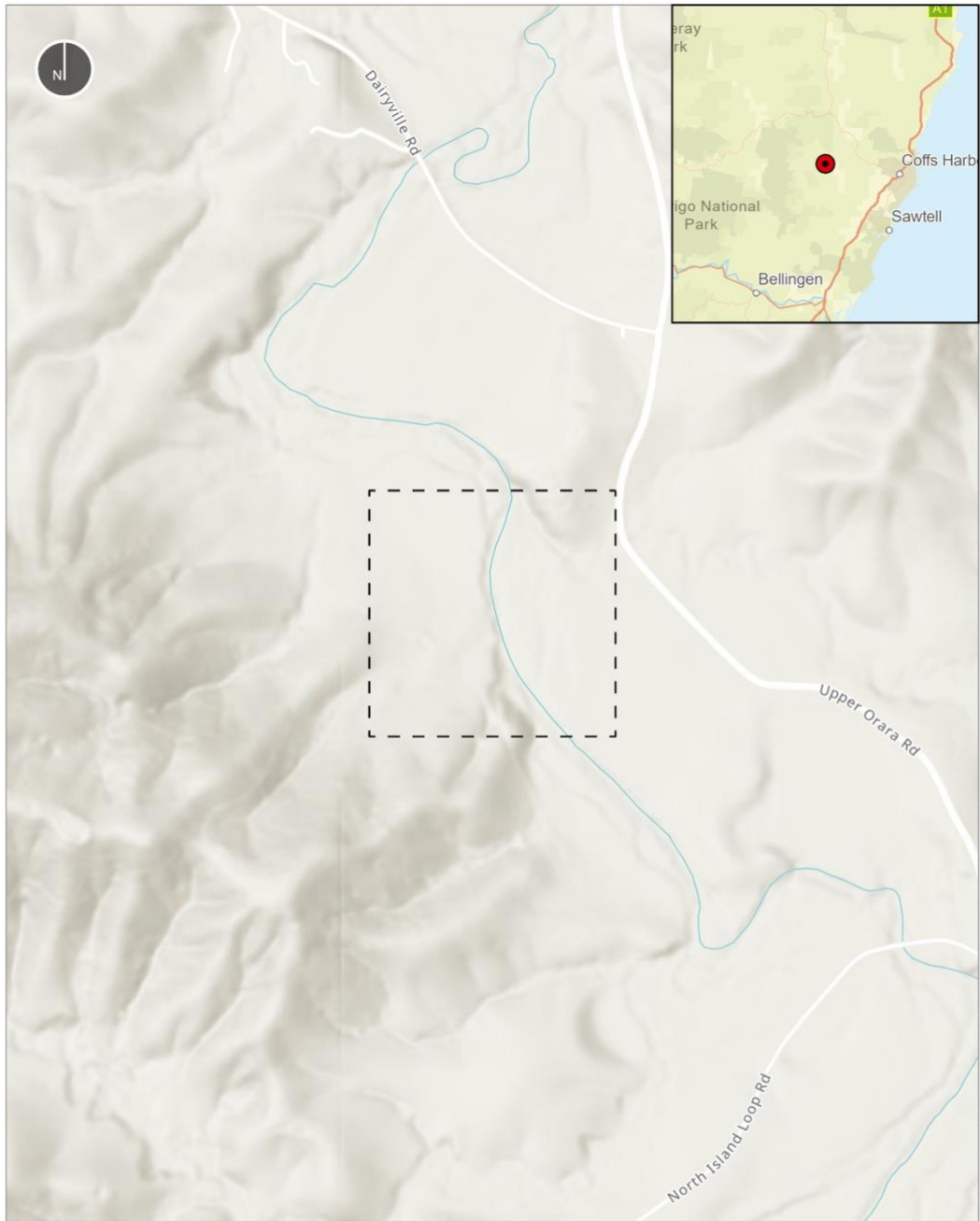
The proposed activity requires the removal of approximately 52m<sup>2</sup> of wet sclerophyll forest vegetation on the south-western bank which comprises a mix of canopy and understorey trees, shrubs, and groundcover. Approximately five (5) Flooded Gums (*Eucalyptus grandis*) which are locally preferred Koala food trees, one (1) hollow-bearing tree (stag), and up to 15 threatened Rusty Plum, Plum Boxwood (*Niemeyera whitei*) will be removed during construction. A small area of aquatic habitat will be impacted by the works, comprising the excavation of approximately 60m<sup>2</sup> of river bank, the removal of some trailing aquatic vegetation beneath the existing bridge, the removal of one large snag located within the footprint of the proposed bridge, approximately 5m<sup>2</sup> of submerged gravel will be covered by scour rock, and up to 3m<sup>2</sup> of aquatic plant beds (*Potamogeton ochreatus*) growing beneath the footprint of the proposed bridge will be subject to increased shading impacts.

The site is mapped as Key Fish Habitat; thus, a permit to carry out dredging and/or reclamation works is required from NSW Fisheries.

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Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, Esri,

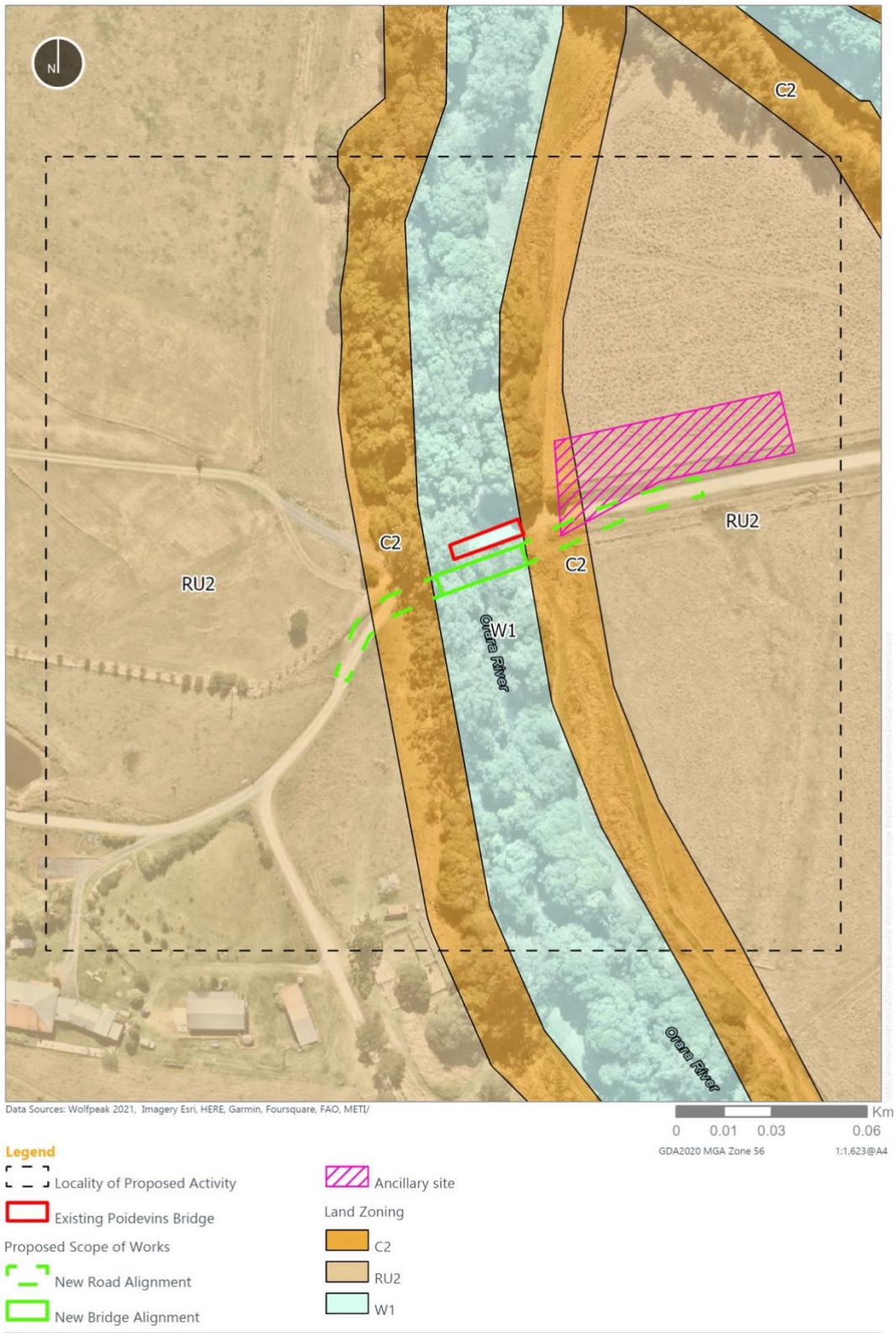
0 0.1 0.2 0.4 Km  
GDA2020 MGA Zone 56 1:11,783@A4

**Legend**  
[Dashed Box] Locality of Proposed Activity



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**Figure 1:** Location of the proposed activity



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Figure 2: Land zoning applicable to the proposed activity



Data Sources: Wolfpeak 2021, Imagery Esri, HERE, Garmin, Foursquare, FAO, METI/

0 0.01 0.01 0.03 Km  
GDA2020 MGA Zone 56 1:935@A4

**Legend**

-  Existing Poidevins Bridge
- Proposed Scope of Works
-  New Road Alignment
-  New Bridge Alignment
-  Ancillary site



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**Figure 3:** Site overview of project area



## 1.3 Reasons for the Activity and Consideration of Alternatives

### 1.3.1 Objectives of the Proposal

The primary objective of the proposed activity is to replace and realign Poidevins Bridge at part of the NSW Government's Fixing Country Bridges Program which aims to better connect regional and rural communities. Upon completion, the condition and safety of the bridge and road approaches will be significantly improved for all road users on this section of the road.

### 1.3.2 Consideration of Alternatives

#### Option 1: 'Do Nothing'

The existing bridge is in a state of poor condition and is no longer fit for purpose. The 'do nothing' option would exacerbate the continuing deterioration of the bridge and would impact on the safety of motorists using the bridge. The 'do nothing' approach is not consistent with the aims and objectives of the NSW Government's Fixing Country Bridges Program.

#### Option 2: Bridge Replacement (Preferred Option)

It is proposed the existing 18m bridge be demolished and replaced with a new bridge constructed offline to the existing alignment.

### 1.3.3 Justification for the Preferred Option

The existing bridge is a combination of timber and concrete construction which is in a state of poor condition and continually deteriorating, leading to increasing maintenance burdens for Council and safety risks to motorists.

Carrying out the required bridge replacement will significantly improve the accessibility and safety for motorists using the bridge and reduce future maintenance costs for Council.

## 1.4 Scope of Works

A survey of the site was undertaken on 12<sup>th</sup> July 2023 which involved walking around the bridge site, an opportunistic fauna survey, searches for threatened flora and fauna species and an assessment of the terrestrial habitat values. An aquatic survey was undertaken on 18<sup>th</sup> December 2023 which comprised a foot-based meander around the bed and banks of the Orara River within 50m upstream and downstream of the bridge site to identify aquatic habitat features and assess bank condition.

#### Pre-Construction

- Environmental safeguards including the installation of sediment fencing and sediment traps will be implemented in a manner consistent with currently accepted best management practices (i.e., Landcom [2004] Managing Urban Stormwater: Soils and Construction [4th Edition]) to prevent the entry of sediment into the adjacent waterway, or mobilisation of sediment within the waterway
  - These controls will be maintained and in good working order for the whole duration of the works and subsequently until the site has been stabilised and the risk of erosion and sediment movement from the site is minimal
- The area to be cleared/modified should be clearly marked before clearing in order to prevent inadvertent clearance beyond what is required and has been assessed. Laydown areas are to be located in existing clearings nearby on the edge of the road
- Establish traffic controls as necessary
- A qualified ecologist shall undertake pre-clearing survey and clearing supervision during vegetation clearing works
- A qualified ecologist shall undertake searches for Platypus activity around the work site as part of the daily pre-start
- Hygiene protocols to avoid and minimise the spread of Myrtle Rust and Amphibian Chytrid Fungus will be required in accordance with the protocols set out in section 5.7 of the supporting Environmental Assessment and shall be followed

- Weed control in accordance with the recommendations in section 5.9 shall be followed
- Cut the existing snag within footprint of the proposed bridge so that only the required length is removed

**Construction**

- Both sides of the river would be regraded accordingly to allow the placement of the rip-rap scour protection over geotextile
- 1 set of four (4)x 750mm bored piles with concrete collar to be installed under each abutment
- Installation of precast abutments, hold down bolts and wingwalls
- Installation of four (4) steel girders with bearings and deck
- Place scour rock from the bank to eliminate the need to track machinery on the river bed
- If tracked vehicles are to access the river bed use removable 2 tonne rock filled sacks to protect the river bed

All construction and installation sequencing shall follow the approved engineering construction documents attached in Appendix A.

**Post-work Remediation**

- Immediately prior to removal of the existing bridge a qualified ecologist shall thoroughly inspect potential roosting crevices underneath the bridge to determine if any microbats are present. If none are found, bridge removal works can proceed without any further measures; however, if microbats are identified, they are to be left undisturbed and measures must be taken to prevent bats returning to roost under the bridge
  - This may include filling cavities with expanding foam or installing geofabric under the entire underside of the bridge at night to block bats returning to roost under the bridge.
- Bridge removal is to be undertaken by gradually dismantling the bridge and is to be supervised by an ecologist
- The existing bridge and all waste generated during the activity will be removed from site and recycled/disposed of as necessary
- Reposition any snags that are removed to a suitable location within the permanent aquatic environment
- Check the bank upstream and downstream is not eroding into waterway – stabilise as required
- Fully remove all temporary piling rig materials
- Rehabilitate banks and exposed surfaces to prevent future erosion at the site
- Rehabilitate area of riverbank under existing bridge abutment with suitable plantings to replicate existing riparian vegetation (see Coffs Harbour City Council 2012)
- Monitor for settling and manage as required

**1.5 Description of the Existing Environment**

**1.5.1 Overview of the project area**

Poidevins Bridge spans the Orara River at Upper Orara, approximately 670m southwest of Upper Orara and approximately 11km west of Coffs Harbour, NSW. The closest open meteorological station with up-to-date climate data is the Dorrigo (Old Coramba Rd) site, which is located approximately 28km southwest of the bridge, and is detailed as follows:

**Site name:** Dorrigo (Old Coramba Rd)  
**Site number:** 059140  
**Latitude:** 30.34 °S      **Longitude:** 152.72 °E  
**Elevation:** 746m  
**Commenced:** 1996      **Status:** Open

Mean maximum and minimum temperatures, and mean rainfall statistic for the area are detailed below for the years 1996-2023.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>Mean max temp (°C)</b>	24.5	23.7	22.3	19.8	17.1	14.9	14.6	16.2	19.2	21.1	22.3	24.0	20.0

Mean min temp (°C)	15.2	15.1	13.7	10.7	7.5	5.5	4.5	4.8	7.6	10.0	12.1	13.9	10.0
Mean rainfall (mm)	270.6	287.5	313.6	133.4	87.4	122.9	62.9	86.0	81.0	120.7	164.1	204.1	1932.0



### 1.5.2 Geology, geomorphology, and topography

Poidevins Bridge and all adjacent areas of the proposal are situated on the Brooklana Beds of the New England Orogen which comprises thin-bedded siliceous mudstone and siltstone with rare lithofeldspathic wacke, locally chert, jasper, magnetite-bearing chert and metabasalt of the Carboniferous Age.

Quaternary geology associated with the subject site comprises an alluvial floodplain consisting of silt, clay, fluvial sand and gravel.

The topography is level to gently undulating floodplains and alluvial terraces, the latter dominating as the active floodplain is generally confined to the immediate vicinity of stream channels. Slopes are typically up to 5% and occasionally to 10% on terrace edges, with local relief generally less than 10m and elevations less than 190m in the upper Orara valley.

### 1.5.3 Soil types and properties (including contamination)

The activity site is situated on the Dairyville soil landscape which comprises deep (>150cm), moderately well-drained Alluvial soils on floodplains. Deep (>150cm) moderately well-drained structured sand and sand deposits occur on terraces, as well as moderately deep to deep (>120cm), well-drained structured Brown Earths.

The Australian Soil Classification (ASC) landscape occurring at the site comprise Dermosols, while natric Kurosols occur approximately 50m southwest of the bridge as shown in Figure 4.

No Acid Sulphate Soils (ASS) have been mapped or are considered a potential occurrence at the site as per the *Coffs Harbour Local Environmental Plan 2013*.

Searches of the NSW Environment Protection Authority (EPA) List of Notified Sites and the Contaminated Land Public Records were undertaken on 7 December 2023 which did not identify any contaminated land sites occurring in proximity to the proposed works locations.



Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

0 0.02 0.04 0.08 Km  
GDA2020 MGA Zone 56 1:2,327@A4

- Legend**
- Existing Poidevins Bridge
  - Proposed Scope of Works
  - New Road Alignment
  - New Bridge Alignment
  - Ancillary site
  - Soil Types - Australian Soil Classification (ASC)
  - Derosols (DE)
  - Kandosols (KA)
  - Kurosols - natric (KUn)



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**Figure 4:** Dominant soil types (ASC) proximate to the proposed activity



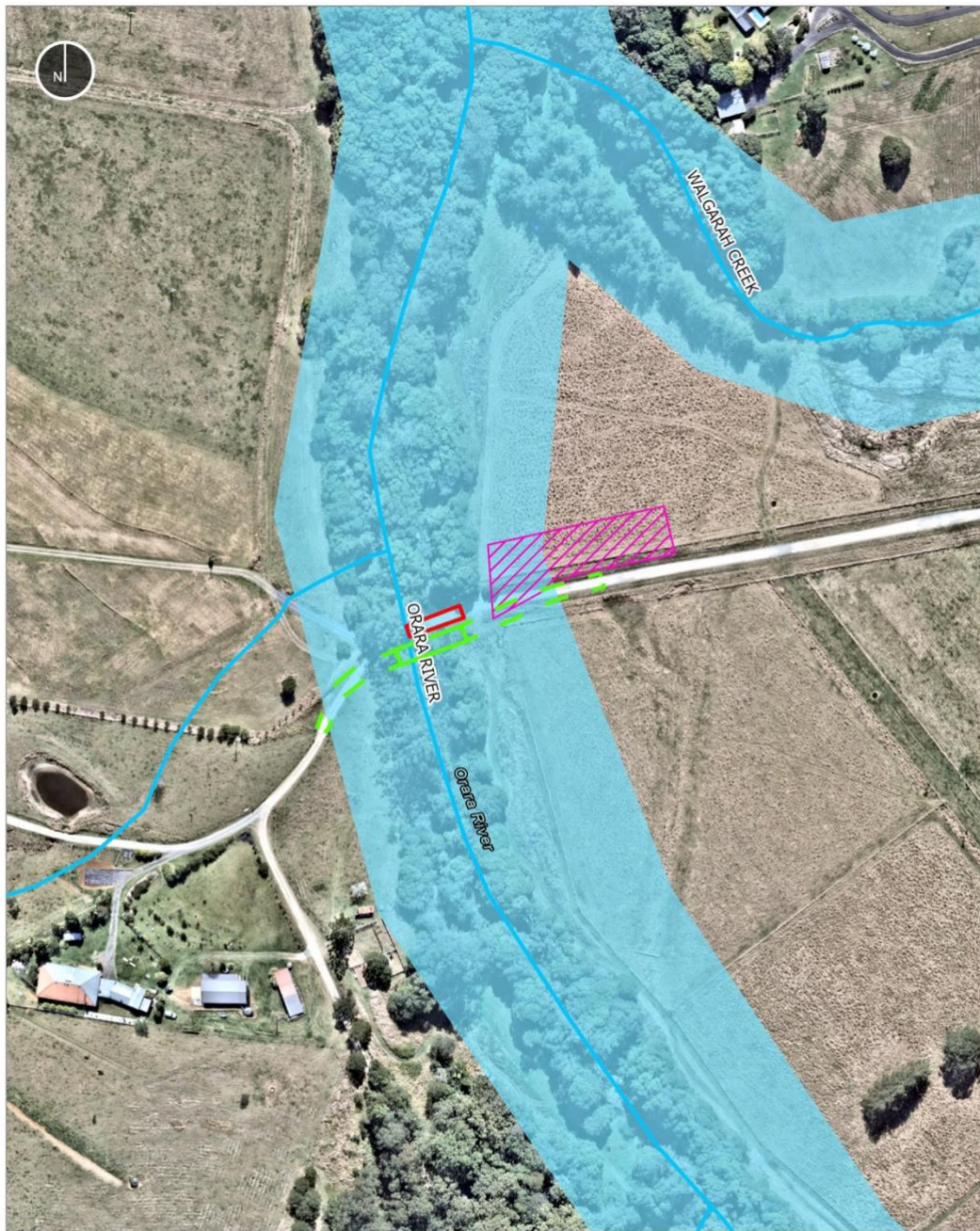
### 1.5.4 Watercourses, waterbodies and wetlands (including their catchment values)

Poidevins Bridge spans the Orara River which is a 5<sup>th</sup> order stream under the Strahler stream order and is mapped as Key Fish Habitat (KFH) under the *Fisheries Management Act 1994* (FM Act) as shown in Figure 5. The river is approximately 2m deep at the bridge site and becomes shallower in other areas. The riverbed substrate consists of gravel and rock and qualifies as a Class 1 waterway for fish passage under the *Policy and guidelines for fish habitat conservation and management: Update 2013*.

Orara River and the project site are situated within the Clarence River freshwater catchment on the far north coast of NSW. The catchment supports a large diversity of vegetation types and wildlife habitats, with many areas protected in national parks, nature reserves and other types of reserves. Of particular ecological importance are the catchment's remnant rainforests, which are habitat areas of great species diversity.

An Aquatic Ecological Assessment (Appendix D) has been prepared to support the REF which details the aquatic habitat features in proximity to the proposed activity site.





Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

0 0.02 0.04 0.08 Km  
GDA2020 MGA Zone 56 1:2,327@A4

**Legend**

- |   |   |
|---|---|
|  Existing Poidevins Bridge |  Ancillary site                    |
|  Proposed Scope of Works   |  Watercourses                      |
|  New Road Alignment        |  Mapped Key Fish Habitat (NSW DPI) |
|  New Bridge Alignment      |   |



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**Figure 5:** Mapped watercourses and Key Fish Habitat proximate to Poidevins Bridge

## 1.5.5 Biodiversity

### 1.5.5.1 Vegetation Communities

The proposed activity spans the Orara River which contains a mix of native and exotic flora species. The surrounding rural areas have been heavily cleared for agricultural purposes; however, patches of native vegetation occur along the riverbanks.

NSW State Vegetation Type Mapping maps the vegetation surround the bridge as the Plant Community Type (PCT) 3021 – Northern Lowland Subtropical Rainforest as shown in Figure 6. A site survey was carried out by WolfPeak’s Senior Ecologist which confirmed the vegetation in the vicinity of the bridge corresponds to this PCT.

An Ecological Assessment (Appendix B) has been prepared to support the REF which details the vegetation occurring in proximity to the proposed activity site. The vegetation is described as follows:

The canopy is mid-dense, with dominant species comprising Flooded Gum (*Eucalyptus grandis*) and exotic Camphor Laurel (*Cinnamomum camphora*). The understorey is dense and is dominated by Water Gum (*Tristaniopsis laurina*); with Green Wattle (*Acacia irrorata*), Guioa (*Guioa semiglauca*), Crabapple (*Schizomeria ovata*) and Common Silkpod (*Parsonsia straminea*) also commonly occurring. The shrub layer is diverse and includes Water Gum, Orange Thorn (*Pittosporum multiflorum*), Rusty Plum, Sweet Pittosporum (*Pittosporum undulatum*) and Small-leaved Supplejack (*Ripogonum brevifolium*). The groundcover layer comprises a mix of native and exotic species, including Spiny-headed Mat-rush (*Lomandra longifolia*), Bordered Panic (*Entolasia marginata*), Broadleaf Paspalum (*Paspalum mandiocanum*), Tassel Sedge (*Carex fascicularis*) and Spotted Knotweed (*Persicaria strigosa*).

Weed species within the site include Lantana (*Lantana camara*), Large-leaved Privet (*Ligustrum lucidum*), Small-leaved Privet (*Ligustrum sinense*), Senna (*Senna pendula* var. *glabrata*) and Fireweed (*Senecio madagascariensis*).

### 1.5.5.2 Endangered Ecological Communities

The Northern Lowland Subtropical Forest occurring on site is listed as the following Endangered Ecological Communities (EECs):

- BC Act listed – Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions (Endangered)
- BC Act listed – Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion (Endangered)
- EPBC Act listed – Lowland Rainforest of Subtropical Australia (Critically Endangered)

The Ecological Assessment has determined that the vegetation community occurring at the site does not correspond with the listed EECs as it does not comprise the correct mix of canopy tree species which defines the EECs.

### 1.5.5.3 Threatened Flora and Fauna

A BioNet search was undertaken on 12<sup>th</sup> December 2023 and is included in the Ecological Assessment. The search identified eight (8) threatened flora species and 29 threatened fauna species records within a 10x10km search area around the proposal site as shown in Figure 7 and Figure 8 respectively. One (1) threatened flora species, Rusty Plum, Plum Boxwood, was detected within the works footprint during the field survey as shown in Figure 9. This finding comprised 15 individuals on the south-western bank which will be impacted by the works, and several more individuals on the north-western bank (not counted) which will not be directly impacted.

Given the habitat types on site and presence of local records, the following threatened species are considered to potentially occur within the study area:

Species	Legal Status	Habitat suitability/Occurrence type	Occurrence likelihood
Scrub Turpentine ( <i>Rhodamnia rubescens</i> )	CE – BCA CE – EPBCA	Suitable habitat within site and nearby records	Moderate
Rusty Plum, Plum Boxwood ( <i>Niemeyera whitei</i> )	V – BCA	Occurring within footprint and surrounding area	Confirmed
Giant Barred Frog ( <i>Mixophyes iteratus</i> )	E – BCA E – EPBCA	Creek and riparian habitats provide potential foraging and breeding habitat	Moderate
Green-thighed Frog ( <i>Litoria brevipalmata</i> )	V – BCA	Creek and riparian habitats provide potential foraging and breeding habitat	Moderate
Stephens' Banded Snake ( <i>Hoplocephalus stephensii</i> )	V – BCA	Generic potential habitat	Low
Wompoo Fruit-Dove ( <i>Ptilinopus magnificus</i> )	V – BCA	Generic potential foraging habitat	Low
Rose-crowned Fruit-Dove ( <i>Ptilinopus regina</i> )	V – BCA	Generic potential foraging habitat	Low
Powerful Owl ( <i>Ninox strenua</i> )	V – BCA	Generic potential foraging habitat	Low
Sooty Owl ( <i>Tyto tenebricosa</i> )	V – BCA	Generic potential foraging habitat	Low
Masked Owl ( <i>Tyto novaehollandiae</i> )	V – BCA	Generic potential foraging habitat	Low
Koala ( <i>Phascolarctos cinereus</i> )	E – BCA E – EPBCA	Flooded Gums are a locally preferred Koala food tree (Coffs Harbour City Koala Plan of Management)	Moderate
Yellow-bellied Glider ( <i>Petaurus australis</i> )	V – BCA V – EPBCA	Generic potential foraging habitat	Low
Grey-headed Flying-fox ( <i>Pteropus poliocephalus</i> )	V – BCA V – EPBCA	Generic potential foraging habitat	Low
Eastern False Pipistrelle ( <i>Falsistrellus tasmaniensis</i> )	V – BCA	Good potential foraging habitat	Moderate
Little Bent-winged Bat ( <i>Miniopterus australis</i> )	V – BCA	Good potential foraging habitat	High
Large Bent-winged Bat ( <i>Miniopterus orianae oceanensis</i> )	V – BCA	Good potential foraging habitat	High
Southern Myotis ( <i>Myotis Macropus</i> )	V – BCA	Potential foraging habitat along creek line	High

Key: V – Vulnerable; E – Endangered; CE – Critically Endangered; BCA – BC Act; EPBCA – EPBC Act



A test of significance as prescribed by the BC Act was undertaken (refer to Appendix B) for the species listed above to determine if the proposal is likely to significantly affect threatened species or ecological communities, or their habitats.

The test of significance determined that the proposed activity would not result in a significant impact on threatened species or ecological communities, or their habitats.

Project specific control measures to limit potential impacts to threatened species and/or communities are included in section 1.9.

#### 1.5.5.4 Aquatic

The Orara River in the study area is Key Fish Habitat. For the purpose of environmental assessment under the Fisheries Management Act 1994, the Poidevins Bridge site is Class 1 - Major Key Fish Habitat, containing Type 1 - highly sensitive Key Fish Habitat (Freshwater habitats that contain in-stream gravel beds, snags greater than 300 mm in diameter or 3 m in length, or native aquatic plants). Specific habitat features in the study area are submerged and exposed gravel bars, sparse beds of aquatic plants, unvegetated unconsolidated sediments, large snag features, deep pools and riffles. With respect to fish passage, the Orara River is Class 1 Major Key Fish habitat. Bridges are the preferred crossing type in Class 1 waterways.

An Aquatic Ecological Assessment (Appendix D) has been prepared to support the REF which details the aquatic habitat features, water quality, aquatic flora and aquatic fauna occurring in proximity to the proposed activity site. This is summarised below.

Sparse beds of aquatic and semi-aquatic flora were observed at the bridge site, upstream and downstream. The species observed comprised *Cyanogeton rheophilum*, Floating Clubrush (*Isolepis fluitans*), Water Pepper (*Persicaria hydropiper*), Spotted Knotweed (*Persicaria strigosa*), Pigweed (*Portulaca sp.*), Curled Pondweed (*Potamogeton crispus*), Blunt Pondweed (*Potamogeton octandrus*) and Marsh Clubrush (*Schoenoplectus mucronatus*). No threatened species of aquatic flora were observed.

Two species of aquatic fauna were observed during the site inspection; Eel Tailed Catfish (*Tandanus tandanus*) and Striped Gudgeon (*Gobiomorphus asutralis*). Platypus (*Ornithorhynchus anatinus*) are known from the Orara River, and are known to utilise habitats with similar characteristics to the study. Platypus are likely to inhabit or utilise the study area. However, a search for Platypus burrows within 20 m upstream and downstream of the bridge site during the site inspection failed to locate any.

The search of the DPI Fisheries threatened species distribution maps indicated potential habitat for one species of fauna, the Southern Purple-spotted Gudgeon (*Mogurnda adspersa*) within the study area (Figure 10) and potential habitat for one species of fauna, the Eastern Freshwater Cod (*Maccullochella ikei*) downstream of the study area. A seven-part test (as per the FM Act) to assess the likelihood of a significant impact upon the Southern Purple-spotted Gudgeon and the Eastern Freshwater Cod was undertaken for both of these species (Appendix D). A test of significance under the EPBC Act was also undertaken, as both of these species are listed as threatened under the EPBC Act. The tests concluded that there is not likely to be any significant impact arising from the proposed activity on Southern Purple-spotted Gudgeon or Eastern Freshwater Cod.



Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

0 0.02 0.04 0.08 Km  
GDA2020 MGA Zone 56 1:2,327@A4

**Legend**

-  Existing Poidevins Bridge
- Proposed Scope of Works
-  New Road Alignment
-  New Bridge Alignment
-  Ancillary site

State Mapped Vegetation Communities

-  PCT: 3021 Northern Lowland Subtropical Rainforest
-  PCT: 3161 Mid North Hinterland Wet Forest
-  PCT: 3165 Northern Brush Box Subtropical Wet Forest



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**Figure 6:** Mapped vegetation communities proximate to the proposed activity (SVTM)



Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

- Legend**
- Locality of Proposed Activity
  - ▲ Flora Records

0 0.07 0.15 0.3 Km  
GDA2020 MGA Zone 56 1:8,373@A4



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**Figure 7:** Recorded threatened flora species (BioNet)



Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

0 0.07 0.15 0.3 Km  
GDA2020 MGA Zone 56 1:8,373@A4

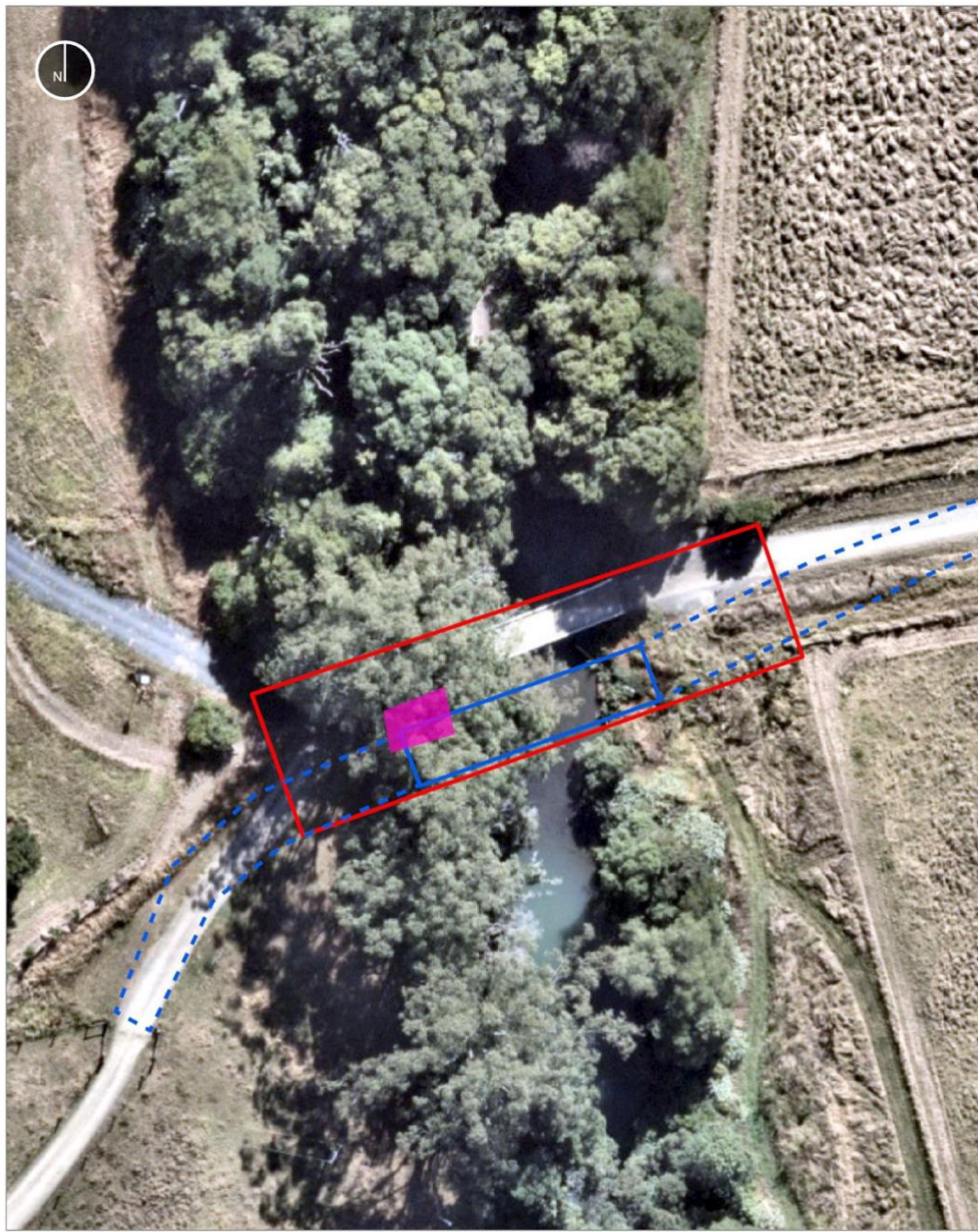
- Legend**
- - - Locality of Proposed Activity
  - + Fauna Records



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**Figure 8:** Recorded threatened fauna species (BioNet)





Data Sources: Wolfpeak 2021, Imagery Esri, © OpenStreetMap contributors, HERE, Garmin, USGS, NGA  
 0 20 40 Meters  
 GDA2020 MGA Zone 56 1:639@A4

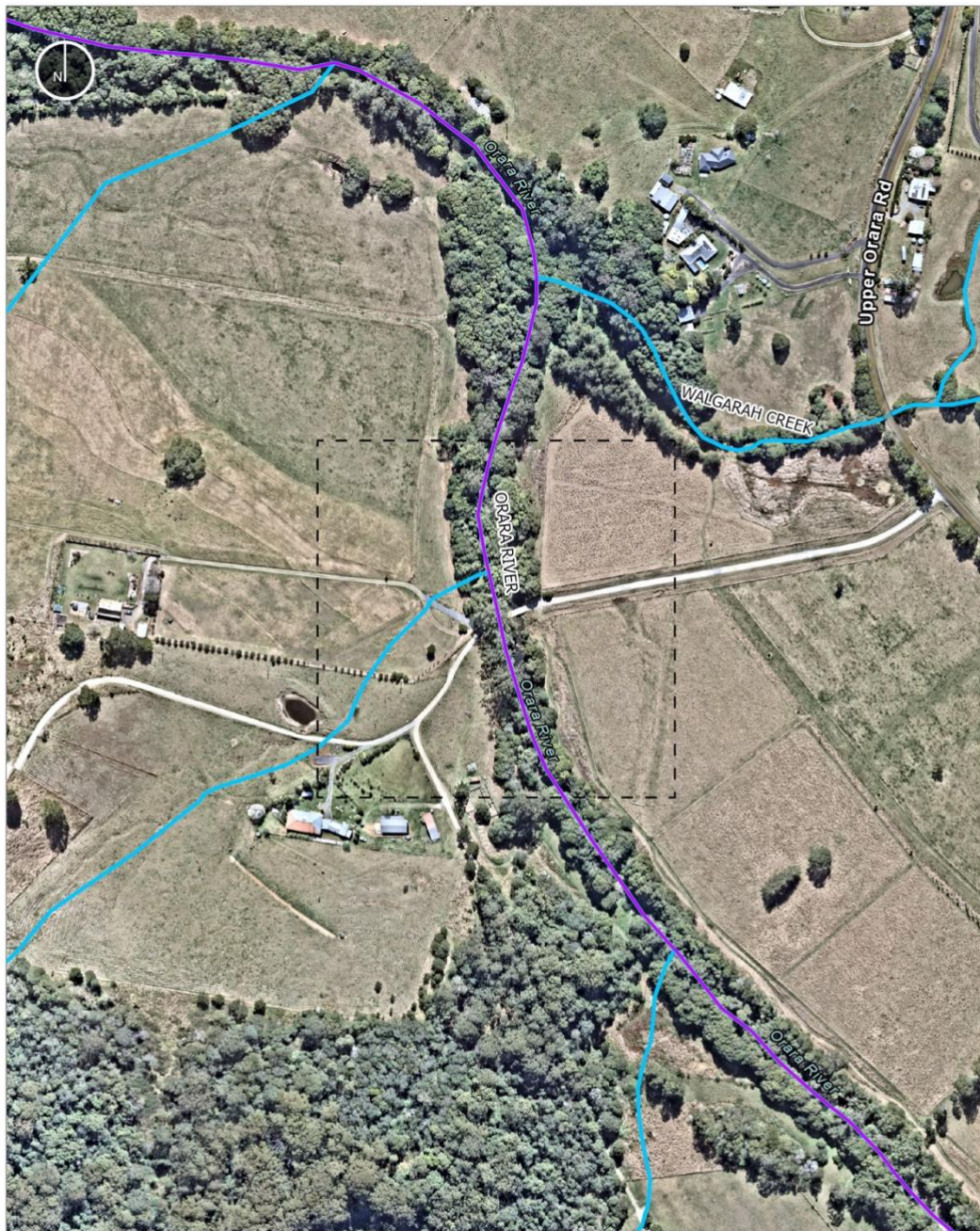
- Legend**
- Bridge Site
  - New Bridge Alignment
  - New Road Alignment
  - Rusty Plum, Plum Boxwood



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**Figure 9:** Rusty Plum, Plum Boxwood impact area





Data Sources: Wolfpeak 2021, Imagery Esri Community Maps Contributors, ©

0 0.04 0.07 0.15 Km  
GDA2020 MGA Zone 56 1:4,038@A4

**Legend**

 Locality of Proposed Activity

 Watercourses

 Mapped Southern Purple Spotted Gudgeon Distribution (NSW DPI)



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**Figure 10:** Mapped Southern Purple Spotted Gudgeon distribution proximate to the proposed activity

### 1.5.6 Areas of outstanding biodiversity value or critical habitat

The proposed activity would not directly or indirectly affect an area of outstanding biodiversity value or critical habitat as none are mapped as occurring within or proximate to the proposed works area.

### 1.5.7 Aboriginal Cultural Heritage Values

The proposed activity involves undertaking on-ground riverbank works targeted at replacing the existing Poidevins Bridge and replacing it with a new structure at a different alignment. Works on the riverbank include reshaping the bank and securing with rip-rap scour protection. Bored piles for the new bridge will also impact the on-ground riverbank area.

The existing environment has been extensively disturbed through historic vegetation clearing and the original construction of Poidevins Bridge and road approaches. A search of the Aboriginal Heritage Information Management System (AHIMS) (Appendix C) was undertaken on 08 December 2023 which did not identify any Aboriginal sites or places within or near the proposed works.

The proposed works will be undertaken within 200m of waters, which is considered a landscape feature indicative of the presence of Aboriginal objects; however, given the proposed activity will occur on land which is previously disturbed by human activity with changes that remain clear and observable, it is considered unlikely that potential Aboriginal objects would be impacted. Notwithstanding, the potential for Aboriginal objects does exist, and the project specific control measures identified in section 1.9.1.10 of this REF should ensure that any potential impacts to Aboriginal objects are negated.

### 1.5.8 Historic Heritage Values

Searches have been undertaken of Australia's National Heritage List, the NSW State Heritage Register, and Schedule 5 Environmental heritage of the *Coffs Harbour Local Environmental Plan 2013* which did not identify any historic heritage items within or near the proposed activity area.

## 1.6 Statutory and Planning Framework

### 1.6.1 Commonwealth Legislation

#### 1.6.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides an assessment and approvals system for actions that impact on Matters of National Environmental Significance (MNES) and actions that have a significant impact on Commonwealth land. The approval of the Minister for the Department of the Climate Change, Energy, the Environment and Water (DCCEEW) is required if an action is likely to have a significant impact on or involve; world heritage properties, national heritage places, wetlands of international importance, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, the Great Barrier Reef Marine Park, nuclear action, or a water resource, in relation to coal seam gas development and large coal mining development.

Under the Act, any action which has a significant impact on a MNES value triggers a referral under that Act. Evaluations of species and communities listed under the EPBC Act have been assessed in the Ecological Assessment in Appendix B. The Ecological Assessment has determined there are no significant impacts detected on MNES values on or near the activity area and therefore referral under the Act is not triggered by this proposal.

An EPBC Act Protected Matters Report was generated using a 10km radius of the site on 7<sup>th</sup> December 2023. A summary of that report and the Ecological Assessment is provided in Table 1.

**Table 1:** Summary of EPBC Act matters of national environmental significance assessment

<b>Matters of National Environmental Significance</b>	<b>Results</b>	<b>Comment</b>
Any significant impact on a World Heritage property?	1	The proposed activity would not impact on a World Heritage property as none are occurring within or in close proximity to the reserve.
Any significant impact on a National Heritage Place?	1	The proposed activity would not impact on a National Heritage place as none are occurring within or in close proximity to the reserve.
Any significant impact on a wetland of international importance (Ramsar)?	N/A	The proposed activity would not impact on a wetland of international importance as none are occurring within or in close proximity to the reserve.
Any significant impact on a listed threatened species or ecological community?	80 threatened species and six (6) threatened ecological communities	A number of threatened species and/or ecological communities occur within the study area; however, the Ecological Assessment has determined that no listed threatened species or ecological communities are likely to be significantly impacted by the proposed activity.
Any significant impact on listed migratory species?	19	Several migratory species are considered potential occurrences in the study area; however, the Ecological Assessment has determined that no migratory species are likely to be significantly impacted by the proposed activity.
Any significant impact on Commonwealth marine areas?	None	The proposed activity would not impact on a Commonwealth marine area.
Any significant impact on the Great Barrier Reef Marine Park?	None	The proposed activity would not impact on the Great Barrier Reef Marine Park.
Does the proposed activity involve a nuclear action (including uranium mining)?	N/A	The proposed activity does not involve a nuclear action (including uranium mines).
Is there any impact on a water resource, in relation to coal seam gas development and large coal mining development?	N/A	The proposed activity is not related to coal seam gas development and large coal mining development, thus, will not impact (directly, indirectly or cumulatively) on a water resource.



## 1.6.2 State Legislation

### 1.6.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) regulates development carried out in NSW. Part 5 of the Act permits activities to be assessed by a determining authority.

Pursuant to section 5.1(1) of the Act:

- the proposal is an “activity” which includes (d) the carrying out of work; and
- “determining authority” includes a “public authority by or on whose behalf the activity is or is to be carried out

Pursuant to section 1.4 of the Act, a “public authority” includes “a public or local authority constituted by or under an Act”.

Coffs Harbour City Council is a council constituted by the *Local Government Act 1993* (section 219) and is therefore a public authority as defined in section 1.4 of the EP&A Act. For the purposes of the proposal, Coffs Harbour City Council is the proponent and determining authority.

The relevant sections of the EP&A Act include:

- section 5.5(1) which requires the determining authority to “examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity”;
- section 5.5(3) which requires the determining authority to “consider the effect of an activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on”;
- section 5.6 which requires the determining authority to address the regulations for environmental impact assessments (currently the *Environmental Planning and Assessment Regulation 2021*); and
- section 5.7 which require an Environmental Impact Statement (EIS) to be prepared if the proposed activity is “a prescribed activity, an activity of a prescribed kind or an activity that is likely to significantly affect the environment”

### 1.6.2.2 Environmental Planning and Assessment Regulation 2021

In conducting its assessment under Part 5 of the EP&A Act, Coffs Harbour City Council is required to consider the environmental factors listed in the Department of Planning and Environment’s *Guidelines for Division 5.1 assessments* (June 2022) published under section 170 of the EP&A Regulation.

The relevant factors outlined in Table 1 in section 3 of the Division 5.1 Guidelines are considered in section 1.8 of this REF.

In accordance with Section 171(4) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), a REF must be published on the determining authority’s website or the NSW Planning Portal only if:

- (a) the activity has a capital investment value of more than \$5 million, or
- (b) the activity requires an approval or permit as referred to in any of the following provisions before it may be carried out—
  - (i) *Fisheries Management Act 1994*, sections 144, 200, 205 or 219,
  - (ii) *Heritage Act 1977*, section 57
  - (iii) *National Parks and Wildlife Act 1974*, section 90,
  - (iv) *Protection of the Environment Operations Act 1997*, sections 47-49 or 122, or
- (c) the determining authority considers that it is in the public interest to publish the review.

These matters are addressed in section 1.8 of this REF.

This REF is required to be published on Coffs Harbour City Council’s website or the NSW Planning Portal as the proposal requires a permit under section 200 of the *Fisheries Management Act 1994*.

### 1.6.2.3 Biodiversity Conservation Act 2016

Pursuant to section 7.8(2) of the *Biodiversity Conservation Act 2016* (BC Act), an activity under Part 5 of the EP&A Act that is “likely to significantly affect threatened species” is regarded “as an activity likely to significantly affect the environment”.

In this circumstance, an EIS is required and must include or be accompanied by a species impact statement or a biodiversity development assessment report.

However, an EIS is not required if the likely significant effect on threatened species is the only likely significant effect on the environment. In this situation, a species impact statement or a biodiversity development assessment report is still required.

In accordance with section 7.2 of the BC Act, an activity is likely to significantly affect threatened species if:

- (a) it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, or
- (c) it is carried out in a declared area of outstanding biodiversity value.

Reliance on the Biodiversity Value Map is not relevant to this assessment as the biodiversity offsets scheme does not apply to development under Part 5 of the EP&A Act (section 7.2(2) of the BC Act).

A test of significance as prescribed under section 7.3 of the BC Act has been prepared to determine whether the proposed activity is likely to significantly affect threatened species or ecological communities, or their habitats and is included within the Ecological Assessment. The test of significance has determined that the proposed activity would not result in a significant impact on threatened species or ecological communities, or their habitats. A Biodiversity Development Assessment Report or Species Impact Statement is not required for the proposal.

### 1.6.2.4 Wilderness Act 1987

Pursuant with section 5.5 of the EP&A Act:

- (3) a determining authority shall consider the effect of an activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.

No land within or near the proposed activity is declared wilderness; thus, the Act does not apply to the proposal.

### 1.6.2.5 Heritage Act 1977

No part of the site or land in the vicinity of the site is listed on the State Heritage Register or subject to an interim heritage order, and no local heritage items under the *Coffs Harbour Local Environmental Plan 2013* will be impacted by the proposal.

### 1.6.2.6 Fisheries Management Act 1994

#### Division 12 Application of Planning Act

Division 12 applies to environmental assessments under Part 5 of the EP&A Act.

Pursuant to section 221ZX of the *Fisheries Management Act 1994* (FM Act), an activity under Part 5 of the EP&A Act that is “likely to significantly affect threatened species, populations or ecological communities” is regarded as “an activity likely to significantly affect the environment”.

Assessment of the factors in section 221ZV of the FM Act are considered in the Ecological Assessment.

Orara River is mapped as Key Fish Habitat (KFH) under the FM Act and the proposal requires dredging and/or reclamation works on the riverbank as defined in section 198A. Pursuant to section 200(1) of the FM Act, Coffs Harbour City Council must not carry out dredging work or reclamation work except under the authority of a permit issued by the Minister (for Agriculture).

### 1.6.2.7 Water Management Act 1993

The *Water Management Act 1993* (WM Act) outlines approval requirements for activities at a specified location in, on or under waterfront land. The WM Act also outlines water access rights and surface water runoff.

Section 91E of the WM Act establishes an approval regime for controlled activities in, on or under “waterfront land”, which is the bed of any river, lake or estuary, and the land within 40 metres of the highest bank of the river, the shore of the lake or the mean high-water mark of the estuary.

A “controlled activity” approval is required for certain types of activities on waterfront land (unless an exemption applies). A “controlled activity” is defined in the WM Act to include the erection of a building or the carrying out of work within the meaning of the EP&A Act and the carrying out of any other activity that affects the quantity or flow of water in a water source.

However, section 41 of the *Water Management (General) Regulation 2018* (WM Regulation) provides an exemption for public authorities in relation to all controlled activities carried out in or under waterfront land.

An approval under the WM Act is therefore not required as Coffs Harbour City Council is a public authority under section 41 of the WM Regulation.

### 1.6.2.8 Roads Act 1993

The proposed activity involves carrying out within the road reserve of an unnamed, unsealed road west of Upper Orara Road. The unnamed road is mapped as a public local road as identified in the Transport for NSW ‘Schedule of Classified Roads and Unclassified Regional Roads’. A public road is defined in the *Roads Act 1993* (Roads Act) as:

- (a) any road that is opened or dedicated as a public road, whether under this or any other Act or law, and
- (b) any road that is declared to be a public road for the purposes of the Act.

Pursuant to Section 138 of the Roads Act:

- (1) A person must not—
  - (a) erect a structure or carry out work in, on or over a public road, or
  - (b) dig up or disturb the surface of a public road, or
  - (c) remove or interfere with a structure, work or tree on a public road, or
  - (d) pump water into a public road from any land adjoining the road, or
  - (e) connect a road (whether public or private) to a classified road.

However, pursuant to Part 2, Division 1, section 5 of the Roads Act, section 138 does not require a public authority to obtain a roads authority’s consent to the exercise of the public authority’s functions in, on or over an unclassified road other than a Crown Road. Accordingly, consent is not required under section 138 of the Roads Act.

### 1.6.2.9 National Parks and Wildlife Act 1974

The proposal is not located on or adjacent to land reserved under the *National Parks and Wildlife Act 1974* (NPW Act).

One of the primary objectives of the NPW Act is the “conservation of places, objects and features of significance to Aboriginal people”. Section 86 of the NPW Act states that:

- (2) a person must not harm an Aboriginal object
- (4) a person must not harm or desecrate an Aboriginal place

Pursuant to section 87 of the NPW Act:

- (2) it is a defence to a prosecution for an offence under section 86(2) if the defendant shows that the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed

- (3) The regulations may provide that compliance with requirements specified in the regulations, or in a code of practice adopted or prescribed by the regulations, is taken for the purposes of subsection (2) to constitute due diligence in determining whether the act or omission constituting the alleged offence would harm an Aboriginal object

Pursuant to section 57 of the *National Parks and Wildlife Regulation 2021* (NPW Regulation), compliance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* published by the Department of Environment, Climate Change and Water and dated 13 September 2010 is taken for the purposes of section 87(2) of the NPW Act to constitute due diligence in determining whether the act or omission constituting the alleged offence would harm an Aboriginal Object.

The proposal does not comprise exempt development or is the subject of a complying development certificate; thus, the proposed activity is not a low impact activity pursuant to section 58 of the NPW Regulation. Therefore, the generic due diligence process as determined by the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* has been applied to the proposal.

#### 1.6.2.10 Rural Fires Act 1997

The objects of the *Rural Fires Act 1997* are to provide—

- (a) For the prevention, mitigation and suppression of bush and other fires in local government areas (or parts of areas) and other parts of the State constituted as rural fire districts, and
- (b) for the co-ordination of bush fire fighting and bush fire prevention throughout the State, and
- (c) for the protection of persons from injury or death, and property from damage, arising from fires, and
- (c1) for the protection of infrastructure and environmental, economic, cultural, agricultural and community assets from damage arising from fires, and
- (d) for the protection of the environment by requiring certain activities referred to in paragraphs (a)–(c1) to be carried out having regard to the principles of ecologically sustainable development described in section 6 (2) of the *Protection of the Environment Administration Act 1991*.

The condition of the existing bridge constrains fire fighting vehicle movements which are required to achieve the objectives of the Act. The proposed works will have a positive impact on the ability of the fire agencies to fully utilise the road network within the area to undertake operations to protect life, property or the environment, making it consistent with the objects of the NSW *Rural Fires Act 1997* (RF Act).

#### 1.6.2.11 Local Land Services Act 2013

The objects of the *Local Land Services Act 2013* (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, for the purposes of section 60(O), the clearing of native vegetation in a regulated rural area is authorised under other legislation if:

- (a) The clearing was
  - (ii) an activity carried out by a determining authority within the meaning of Part 5 of that Act after compliance with that Part.

As the activity is being assessed under Part 5 of the EP&A Act, the proposal is authorised under section 60(O)(b)(ii) of the LLS Act.

#### 1.6.2.12 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is the key environmental protection and pollution statute. The POEO Act is administered by the Environment Protection Authority 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; however, no licences have been identified as being required, including an Environmental Protection Licence (EPL). Further, the proposed activity is not a scheduled activity or scheduled development work identified in Schedule 1 of the POEO Act.

### 1.6.2.13 NSW Reconstruction Authority Act 2022

Pursuant to Part 4, Division 3, section 38(3) of the *NSW Reconstruction Authority Act 2022* (RA Act), a local council must have regard to the State disaster plan and any relevant disaster adaption plan in exercising the local council's functions under the EP&A Act.

The RA Act commenced on 17 December 2022 which did not include the commencement of Part 4 (as per section 2(a)). Pursuant to section 2(b), Part 4 of the Act will commence *on a day or days to be appointed by proclamation*; thus, the Act does not currently apply to this REF.

## 1.7 Description of Relevant Environmental Planning Instruments

### 1.7.1.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

The aim of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP Transport and Infrastructure) is to facilitate the effective delivery of infrastructure across the State. The proposed activity is considered development permitted without consent pursuant with the following section of SEPP Transport and Infrastructure:

#### Division 17 Roads and traffic

##### Section 2.109

(1) 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.

Pursuant to section 2.108, *road infrastructure facilities* includes (a) ...vehicle or pedestrian bridges...

### 1.7.1.2 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The proposed activity is situated on applicable to Chapter 3 and Chapter 4 of *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (SEPP Biodiversity and Conservation). The aim of Chapter 3 is to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline. The aim of Chapter 4 is to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline.

Chapters 3 and 4 only apply to development applications under Part 4 of the EP&A Act and therefore do not apply to the proposal.

## 1.8 Division 5.1 (EP&A Act) and Section 171 (EP&A Regulation) Assessment

This review considers the requirements of Division 5.1 of the EP&A Act, and the environmental factors specified in the environmental guidelines in accordance with Sections 170 and 171 of the <i>Environmental Planning and Assessment Regulation 2021</i>		Yes	No
1. Is the proposed work permissible under the LEP or SEPP Transport and Infrastructure?  The proposed activity is permissible under SEPP Transport and Infrastructure pursuant to section 2.109(1).	<i>If No reject proposal</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is development consent required?  As identified above, the proposed activity is permissible as development without consent under Part 5 of the	<i>If Yes lodge D/A</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



<p>EP&amp;A Act; thus, development consent is not required under Part 4 of the EP&amp;A Act.</p>			
<p>3. Does the development comply with exempt requirements under SEPP (Transport and Infrastructure) 2021?</p> <p>The proposed activity does not comply with Division 4 Exempt Development, or section 2.113 Exempt Development of SEPP Transport and Infrastructure.</p>	<p><i>If Yes and a Part 5 is not required for any other reason, complete Environmental Checklist</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>4. Are any approvals, permits, licences required under other legislation?</p> <p>The proposed activity requires dredging and/or reclamation works within Orara River. Pursuant to section 200(1) of the FM Act, a permit to carry out dredging and/or reclamation works from DPI Fisheries is required prior to works commencing.</p>	<p><i>If yes obtain before commencing works and attach to part 5.</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>5. Do the works constitute an “activity” under Part 5 of the EP&amp;A Act 1979?</p> <p>Pursuant to section 5.1(1) of the Act:</p> <ul style="list-style-type: none"> <li>the proposal is an “activity” which includes (d) the carrying out of work</li> </ul>	<p><i>If Yes complete REF/Part 5</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>6. Are threatened species or Threatened Ecological Communities (TEC’s) present?</p> <p>The threatened Rusty Plum, Plum Boxwood has been detected on the south-easter riverbank which is within the impact zone of the works. A number of threatened fauna species also have the potential to occur within and around the site.</p> <p>As described in section 1.6.2.3, a test of significance as prescribed under section 7.3 of the BC Act has been prepared to determine whether the proposed activity is likely to significantly affect threatened species or ecological communities, or their habitats and is included within the Ecological Assessment.</p> <p>The test of significance has determined that the proposed activity would not result in a significant impact on threatened species or ecological communities, or their habitats.</p> <p>A Biodiversity Development Assessment Report or Species Impact Statement is not required for the proposal.</p>	<p><i>If YES complete 5 Part Test (Biodiversity Conservation (BC) Act 2016) and SIS.</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>7. Does the REF require publication on the Coffs Harbour City Council website or the NSW Planning Portal?</p> <p>Does the project have a Capital Investment Value (CIV) of greater than \$5 Million?</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Is a fisheries permit required? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Is the project considered in the public interest? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p>This REF is required to be published on Coffs Harbour City Council’s website or the NSW Planning Portal as the proposal requires a permit under section 200 of the Fisheries Management Act 1994.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Are any of the following licences/permits required – Heritage permit, Environmental Protection Licence, National Park Section 90? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
8. Describe the likely impacts of the activity as follows:		Yes	No
a)	Any environmental impact on a community ( <i>e.g. social, economic and cultural impacts</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>The proposed works require the delivery and storage of plant and materials to the site which would be stored within the road reserve of the unnamed road for the duration of the activity. Construction vehicles and staff will be travelling on Upper Orara Road daily for the duration of the activity, slightly increasing traffic.</p> <p>Construction activities involve constructing a new bridge offline to the existing bridge structure prior to demolishing and removing the existing bridge from the site. New embankment profiling with an overlay of scour rip rap protection as per the engineering drawings attached as Appendix A is also required. The existing bridge will remain in service for local traffic for the duration of the works; thus, detours are not anticipated. There will; however, be short-term traffic delays as required to manoeuvre plant and materials. There is potential for social and economic impacts to motorists using the bridge and this section of the unnamed road due to short-term, temporary traffic delays.</p> <p>Upon completion, the condition and safety of the bridge crossing would be significantly improved for travellers in this locality.</p> <p>Cultural impacts are discussed in part e) of this section.</p>			
b)	Any transformation of a locality ( <i>e.g. viability of current AND future land uses - human and non-human environment</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>The proposed activity is not anticipated to transform the locality of the area in proximity to the works. With the exception of short term access limitations during the construction of the replacement bridge, there would be no change to the viability of current and future land uses to either human or non-human movement.</p>			
c)	Any environmental impact on the ecosystems of the locality ( <i>e.g. Marine or terrestrial habitats, flora, fauna, ecological integrity, biological diversity, connectivity/fragmentation, air, water including hydrology and soil</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>The proposed activity is not anticipated to adversely impact on the ecosystems of the locality. Approximately 52m<sup>2</sup> of wet sclerophyll forest vegetation requires removal to facilitate construction works. The construction activities associated with replacing the bridge are temporary in nature; thus, impacts to fauna movement and habitat fragmentation are not anticipated to be significant.</p> <p>Aquatic habitat within the creek and riparian vegetation in the vicinity of the construction site will be disturbed due to the removal of the existing bridge footing, the placement of scour rock on submerged gravel beds and increased shading impacts from the new bridge to approximately 3m<sup>2</sup> off aquatic plant beds, and potential secondary impacts from soil disturbance. Works will not block or divert the river but may result in some temporary sedimentation impacting water quality. If this is carried out in a period of low flow, potential water quality impacts would be minimised.</p>			
d)	Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality ( <i>e.g. Visual, recreational, scientific and other</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes: <i>No significant impact</i>			



The proposed activity will occur on a public road frequently used by motorists between the adjacent rural lifestyle areas and Upper Orara. There will be short-term, temporary impacts to the aesthetic values of the site which are associated with construction activities and the storage of machinery and materials on site.

Vegetation clearing required to undertake the works includes the removal of approximately 52m<sup>2</sup> of wet sclerophyll forest vegetation. There will be a permanent reduction in aesthetic values associated with removal of the vegetation; however, disturbed areas shall be revegetated upon completion of works which will contribute to restoring the site to pre-disturbance conditions as much as practicable.

The existing bridge will remain open for traffic access for the duration of works which will maintain any recreational and scientific values of the locality. Upon completion, the condition and safety of the road would be significantly improved which would improve access for recreational and scientific values.

e)	Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations ( <i>e.g. Aboriginal heritage including intangible cultural significance), architectural heritage, social/community values and identity, scenic values and other</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Notes: *No significant impact*

**Aboriginal cultural heritage**

An AHIMS search (Appendix C) undertaken on 08 December 2023 which did not identify any Aboriginal sites or Aboriginal places within or near the proposed activity location. Given the proposed activity will occur on land which has been previously disturbed by the installation of the original bridge, that has changed the land's surface, and those changes remain clear and observable, the proposed works are considered unlikely to impact on Aboriginal objects or Aboriginal places.

*Mitigation measures to protect Aboriginal objects and places are outlined in Section 1.9.1.10 of this REF.*

**Historic Heritage**

Searches have been undertaken of Australia's National Heritage List, the NSW State Heritage Register, and Schedule 5 Environmental heritage of the Coffs Harbour LEP 2013 which did not identify any historic heritage items within or near the proposed activity area.

f)	Any impact on the habitat of any protected fauna (within the meaning of the <i>BC Act 2016</i> , e.g. listed species and habitat requirements/critical habitat).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Notes: *No significant impact as determined by the supporting Ecological Assessment*

The proposed bridge replacement has been assessed by a supporting Ecological Assessment (Appendix B), which has determined the proposed activity is unlikely to significantly impact on the habitat of any protected fauna. The Environmental Assessment makes recommendations to minimise and mitigate against any potential environmental impacts.

g)	Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air (refer to 5 part test under <i>BC Act 2016</i> , <i>FM Act 1994</i> and Protected Matters under the <i>EPBC Act 1999</i> , e.g. listed species, non-listed species and key threatening processes).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Notes: *No significant impact as determined by the supporting Ecological Assessment*

The proposed activity requires the removal of up to 15 threatened juvenile Rusty Plum individuals which are situated on the south-eastern riverbank. No threatened terrestrial fauna species were observed during the site inspection; however, several threatened species are considered to potentially occur within the area. Orara River also contains suitable habitat for the threatened freshwater Southern Purple Spotted Gudgeon.



The proposed bridge replacement has been assessed by a supporting Ecological Assessment (Appendix B), which has determined the proposed activity is unlikely to significantly impact or endanger any species of animal, plant or other form of life on land, in water or in the air.

h)	Any long-term effects on the environment (e.g. ecological, social and economic).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Notes: *No significant impact*

Should the mitigation measure outlined in this REF be implemented correctly, long-term adverse ecological effects are considered unlikely. Replacing the existing bridge would prevent premature failure of the structure; thus, significantly limiting potential impacts to the adjacent waterway and riparian areas. The new bridge would provide a sustainable structure which would provide a positive long-term, safe solution for motorists in this locality, thus, contributing to social and economic values of the area.

i)	Any degradation of the quality of the environment (e.g. Ecological, social and economic, aesthetics, noise, climate).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Notes: *No significant impact*

*Ecological*

The Ecological Assessment has determined that approximately 52m<sup>2</sup> of wet sclerophyll forest vegetation on the south-western bank will require removal, comprising a mix of canopy and understorey trees, shrubs and groundcover. This includes approximately five (5) Flooded Gums (a locally preferred Koala food tree) and one (1) hollow-bearing tree (stag) containing one (1) medium trunk hollow. Up to 15 threatened Rusty Plum, Plum Boxwood occur within the works footprint on the south-western bank which will require removal, however these are juvenile trees and saplings.

A small area of aquatic habitat will be impacted by the works, comprising the excavation of approximately 60m<sup>2</sup> of river bank, the removal of some trailing aquatic vegetation beneath the existing bridge, the removal of one large snag located within the footprint of the proposed bridge, approximately 5m<sup>2</sup> of submerged gravel will be covered by scour rock, and up to 3m<sup>2</sup> of aquatic plant beds (*Potamogeton ochreatus*) growing beneath the footprint of the proposed bridge will be subject to increased shading impacts. Works will not block or divert the creek but may result in some temporary sedimentation impacting water quality. If this is carried out in a period of low flow, potential water quality impacts would be minimised.

*Social and economic:*

The existing bridge will remain open for the duration of the activity; thus; reducing potential impacts to local motorists requiring use of the bridge. There may traffic delays to facilitate construction activities; however, impacts would be temporary and short-term in duration. Upon completion, the condition and safety of the road would be significantly improved.

Given access will remain open during construction, no adverse economic impacts are likely. There will; however, be minor positive impacts to the locality through the employment of local contractors undertaking the works, and via potential sales to local businesses (e.g., cafes).

Upon completion, the crossing will be greatly improved which will contribute to road safety and associated flow on effects of reducing accidents and vehicle damage, which represents an important social benefit and reduced maintenance costs represent an economic benefit to Council, which in turn benefits the ratepayers of the LGA.

*Aesthetics and noise:*

During construction, there would be short-term, temporary impacts to the aesthetic values of the site which are associated with construction activities and the storage of machinery and materials on site. Approximately 52m<sup>2</sup> of wet sclerophyll forest vegetation on the south-western bank will require removal to facilitate installation of the new bridge structures and a small extent of groundcover and weeds would be removed to facilitate the construction stage. Upon completion, the site will be rehabilitated as required; however, the new bridge will permanently alter the aesthetics of the site.



Vehicle and plant would be used to demolish the existing bridge and construct the new bridge. Noise would be generated throughout the construction stages; however, impacts are anticipated to be minimal given the rural location of the proposed works.

Multiple rural properties are located within 300m of the works site, with one property located approximately 150m from the bridge. Given the short-term duration of the proposed activity and that no significant noise-generating activities are proposed, it is considered that measures to inform the nearest residents and communicate effectively with them about timing and duration of potentially noisy activities be put in place as part of the CEMP.

*Climate:*

Vehicles and machinery would be used during all stages of the proposal which have the potential to spill oil and/or fuel. The primary sources of airborne particulate matter generated by the activity include

- The delivery and transport of construction vehicles, staff, and materials to the works site
- Vehicle and machinery (exhaust) emissions
- Dust emissions from vegetation removal (chainsaws etc) and soil disturbance

Emissions generated by the proposed activity would not be significant to contribute to long-term degradation of the environment.

j)	Any risk to the safety of the environment (e.g. Public health, contamination, bushfire, sea level rise, flood, storm surge, wind speeds, extreme heat, urban heat and climate change adaptation).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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*Notes: No significant impact*

The proposed activity is unlikely to generate any adverse risk to the safety of the environment, provided the mitigation measures provided in this REF are implemented. The construction site will be closed off to the public during the duration of the activity.

The proposed activity is predominately situated within vegetation classified as Vegetation Category 1, and partially in vegetation classified as Vegetation Category 3 as determined by the NSW Rural Fire Service Guide for Bush Fire Prone Land Mapping.

Vegetation Category 1 is considered to be the highest risk for bush fire and has the highest combustibility and likelihood of forming fully developed fires including heavy ember production, while Vegetation Category 3 is considered to be medium bushfire risk vegetation.

Construction works would include limited ignition risks and would mostly occur within the existing cleared road reserve and the moist riparian areas of the Orara River. Sections requiring vegetation removal to facilitate the bridge construction would not occur within heavily vegetated areas. Machinery use would be limited during periods of Extreme fire danger rating or higher.

k)	Any reduction of the range of beneficial uses of the environment (e.g. Natural resources, community resources and existing uses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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*Notes: No significant impact*

The proposed activity is unlikely to reduce the range of beneficial uses of the environment. Provided the mitigation measures provided in this REF are implemented correctly, impacts to natural resources are considered unlikely. The existing bridge will remain open during construction; thus, reducing the requirement for detours. There is likely to be traffic delays during construction which have the potential to impact beneficial uses of the environment; however, potential impacts will be temporary and short-term in nature.

l)	Any pollution of the environment (e.g. Air, (including odours and greenhouse gases); water (including runoff patterns, flooding/tidal regimes, water quality health); soil (including contamination, erosion, instability risks); noise and vibration (including consideration of sensitive receptors) or light pollution)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<p>Notes: <i>No significant impact</i></p> <p>During demolition of the old bridge there is a risk of materials entering the waterway beneath such as dust from chainsaws, oils/fuels from equipment and machinery, pieces of demolished materials. Noise during the demolition phase would also be likely.</p> <p>There is a risk of soils contamination from machinery and equipment oils and fuels, which will be subject to on site management procedures.</p> <p>Noise would be produced during the construction stages, primarily associated with the use of vehicles and machinery as required to carry out construction works. The process of drilling and installing the bridge piles has potential to generate significant noise over a short period.</p> <p>Provided the mitigation measures specified in this REF are implemented correctly, impact from water runoff, soil erosion and sedimentation, and noise and vibration risks are considered unlikely.</p>			
m)	Any environmental problems associated with the disposal of waste ( <i>e.g. Solid or liquid wastes, effluent, ASS/PASS</i> ) including transportation, disposal and contamination).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>All waste generated by the proposed activity will be removed from the site and disposed of at a licenced waste facility. No hazardous waste is anticipated to be generation. Minor consumable and putrescible waste would be generated from workers undertaking the activity, and all waste (including excavated natural material) will be categorised and managed in accordance with the NSW EPA Waste Classification Guidelines.</p>			
n)	Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply ( <i>e.g. Land, soil, air, minerals and energy</i> )	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>Any work involving the use of plant and equipment will involve consumption of fuel, oil, water, vehicle and plant depreciation, etc.; however, as a small individual project, it is not anticipated that the works will lead to any increased demands on natural resources that are, or are likely to become, in short supply.</p>			
o)	Any cumulative environmental effect with other existing or likely future activities ( <i>e.g. existing and future activities</i> )	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>At the time this REF was prepared, no other activities were identified as occurring within or near the location of the proposed activity. There will be a slight increase in vehicle movements along Upper Orara Road during construction; however, the proposed activity is not considered likely to have a significant cumulative impact.</p>			
p)	Any impact on coastal processes and coastal hazards, including those under climate change conditions ( <i>e.g. Coastal processes and hazards (impacts arising from the proposed activity on coastal processes and hazards and impacts on the proposed activity from coastal processes and hazards), climate scenarios. Coastal Management Act 2016 mapping and proximity to project area.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p> <p>The proposed activity is not located within or near coastal areas and is unlikely to impact on coastal processes and coastal hazards, including those under climate change conditions.</p>			
q)	Any applicable local strategic planning statement, regional strategic plan or district strategic plan made under Division 3.1 of the Act ( <i>e.g. Issues, objectives, policies and actions identified in local, district and regional plans</i> ).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Notes: <i>No significant impact</i></p>			



The proposal would not adversely impact on the objectives identified in the Coffs Harbour Local Strategic Planning Statement 2020 or the Coffs Harbour Regional City Action Plan 2036.			
r)	Any other relevant environmental factors (e.g. Any other factors relevant in assessing impacts on the environment to the fullest extent, include any consultation details).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes: The proposed activity is not anticipated to adversely impact on any other relevant environmental factors.			
8.	Determination	Yes	No
	That the proposed activity is unlikely to have a significant effect on the environment and that the proposed activity proceed without modifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	That the proposed activity is unlikely to have a significant effect on the environment and that the activity proceed with the following conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Is further assessment needed to determine the activity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is an Environmental Impact Statement (EIS) required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is a Species Impact Statement (SIS) required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is a Biodiversity Assessment Report (BDAR) required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is referral to Commonwealth Environment Minister required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	That an environmental impact statement be required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	That the activity not to proceed	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Conditions of this determination – Permit / Approval / Licence attached  Pursuant to section 171(4) of the <i>Environmental Planning and Assessment Regulation 2021</i> , this REF is required to be published on Coffs Harbour City Council’s website or the NSW Planning Portal as the proposal requires a permit under section 200 of the <i>Fisheries Management Act 1994</i> .	<input checked="" type="checkbox"/>	<input type="checkbox"/>



## 1.9 Mitigation Measures

### 1.9.1 REQUIREMENTS

#### 1.9.1.1 General

- The mitigation measures identified within this REF are to be incorporated into a Construction Environmental Management Plan (CEMP) for the proposed works. The CEMP shall outline how the mitigation measures will be implemented as works are undertaken and who is responsible for their implementation.
- All personnel working on site shall be made aware of the environmental protection requirements to be implemented prior to and during construction.
- The Project Manager is to conduct a pre-start construction meeting and/or induction PRIOR to the commencement of works on site. All staff and contractors are to be made aware of the conditions in this Part 5 during the induction. If the Project Manager is unavailable, then a suitably trained person is to be delegated and authorised to conduct the induction and the induction documented.
  - Records of site inductions are to be kept as part of the CEMP.
- Establish “No Go” zones with signage and pedestrian barriers to temporarily prevent public access to works zones.
- All visitors to the site during works are to be inducted by a suitably trained person and made aware of the conditions of this Part 5.
- A copy of the conditions of this Part 5 assessment is to remain on site at all times.
- Generate a Before You Dig Australia (BYDA) document to locate underground services within the vicinity of the works e.g., power, telecommunications, and existing water mains.
- If works are to be conducted within less than 1m from an electrical power pole, the pole will require holding in place during excavation works until site is backfilled and rendered safe.
- Notification is to be issued to the relevant residential homes and/or businesses that may be affected by the works.
- In the event any animal is injured during the project the Environmental Project Officer or WIRES are to be contacted (1300 094 737).
- Tracking dirt onto the road pavement is to be appropriately managed.
- Noise generating works will be limited to the recommended standard hours for construction work outlined in the Interim Construction Noise Guideline which are:
  - Monday to Friday 7:00am to 6:00pm
  - Saturday 8:00am to 1:00pm
  - No works on Sundays or Public Holidays
  - Work outside standard hours will only comprise:
    - The delivery of materials outside standard hours requested by police or other authorities for safety reasons.
    - Emergency work to avoid the loss of lives and/or property.
- Where practicable, plant and machinery which are used intermittently are to have throttle setting reduced or shut down when not in use. Any plant or equipment that is not in use for extended periods of time are to be switched off.
- Minimise the use of machinery where practicable; machinery shall be in good, serviced condition to reduce emissions.
- Use electric machinery instead of diesel/petrol machinery where practicable.
- Store oils and fuels in a suitably bunded, covered and secure area with sufficient capacity to contain at least 110 percent of the volume of the largest container.
  - Spare fuels are to be stored in containers within pre-existing cleared areas and a minimum of 40m from drainage lines or waterways.
- Spills and leaks are to be contained within the worksite and site clean-up to occur.
- Spill kits to be available on site.



### 1.9.1.2 Hygiene

- Hygiene protocols as per the NSW Hygiene Guidelines: Protocols to protect biodiversity areas in NSW from *Phytophthora cinnamomic*, myrtle rust, amphibian chytrid fungus and invasive plants shall be implemented to reduce the risk of spreading weeds, diseases, and pathogens.
- Hygiene protocols as per the Commonwealth's Department of Sustainability, Environment, Water, Population and Communities (now DCCEEW) Hygiene protocols for the control of diseases in Australian frogs shall be implemented for works likely to impact frog species.
- Recommended measures required prior to entering the work site or moving to new areas include:
  - Check personnel, clothing, footwear, backpacks and equipment for soil, plant material/propagules and other debris.
  - Shoes/boots to be scrubbed free of dirt and decontaminated. Clothing to be checked for any plant propagules before work commences and cleaned accordingly.
  - Remove all soil, plant material and other debris using a hard brush and (if required) clean water.
  - Ensure plant and machinery is thoroughly cleaned inside and out before entering the site or moving between different areas. Use 70% alcohol wipes or a spray bottle to apply disinfectant to the interior of vehicle. Spray the exterior with disinfectant or hand pressure sprayer. Allow the disinfectant to remain in contact with the surface for at least 30 seconds before rinsing with clean water.
  - All tools/machinery to be cleaned and sterilised prior to transport to site.

### 1.9.1.3 Safety

- Appropriate alternative routes and detours for both road users (where required) and pedestrians shall be established as necessary.
- Barricades/fencing to exclude traffic and pedestrians from the worksite are to be installed.
- Install appropriate safety and road signage to inform road users and pedestrians of the proposed works, and to safely manage traffic.
- The exhausts of all construction machinery are to be inspected for smoke emissions prior to works, and service machinery if the machinery is producing excessive smoke/emissions.

### 1.9.1.4 Vegetation

- Immediately prior to removal of the existing bridge and removal of identified vegetation the clearing footprint will be clearly marked out, as well as protection zones established around retained trees and vegetation.
- The area to be cleared/modified shall be clearly marked before clearing to prevent inadvertent clearance beyond what is required and has been assessed.
- "No Go" areas to be implemented and marked prior to construction commencing to protect adjacent vegetation.
- If threatened flora species are identified during construction, they are to be flagged, and a buffer zone created to protect them.
- Site inductions are to occur to specify that no clearing is to occur beyond the marked area, and vehicles are only to be parked in pre-existing cleared areas.
- A qualified ecologist will undertake pre-clearing survey and clearing supervision.
  - The clearing extent is to be inspected for fauna by a qualified ecologist immediately prior to commencement of any vegetation removal involving machinery and/or tree-felling. This is to occur each morning if clearing spans over multiple days/weeks. The ecologist is to flag any Rusty Plum/Plum Boxwood and habitat features which may contain fauna and trees which contain hollows, nests or dreys.
  - If a Koala is present in an area subject to vegetation removal/modification, works must be suspended until the Koala moves along on its own volition. If the Koala is located in a position that a 50m buffer may be established, works may proceed outside this buffer. In this event, the ecologist is to remain on site to monitor the Koala for signs of distress. If the

ecologist determines that the Koala is in distress, works must be suspended within this area until a larger buffer is created or the Koala moves along on its own volition.

- The ecologist is to remain on site for the duration of the vegetation clearing. This is to ensure the minimal removal of Rusty Plum/Plum Boxwood plants within the site and mitigate fauna injury during clearing operations. Other than Koalas, any fauna detected is to be relocated off-site. Any bird nest considered active is to be removed in a manner that allows retrieval of eggs/young, and these are to be taken into care by FAWNA.
- The hollow-bearing tree is to be removed in a manner that will minimise the risk of injury/mortality of denning/roosting fauna. This is suggested to be achieved by the following general procedure:
  - The tree is to be felled in a manner that minimises injury to fauna. This includes gently pushing or 'soft felling' with an excavator or gradual cut down by an arborist.
  - A qualified ecologist is to be present during felling and sectioning of the hollow-bearing tree in case of animal injury. Hollows are to be inspected for fauna once the tree is deposited. All uninjured animals are to be released in the retained habitat on the subject site.
  - If the hollow is determined to be occupied and fauna do not require assistance (e.g., roosting bats), the entrance is to be blocked and the log placed in a shaded and protected area on the edge of the site. The obstacle is to be removed just prior to dusk to allow passive escape of the fauna within. The log may then be removed if required.
- In the event any additional vegetation requires modification OR removal the Environmental Project Officer is to be contacted to undertake a site inspection
- Any removal and/or pruning works are to be conducted by certified arborists in accordance with The Australian Standards Tree Pruning Guidelines.
- Site compound, stockpiles and machinery are NOT permitted under the drip line of any native vegetation.
- A watercart shall be always kept on site to address bush fire risk in Vegetation Category 1 areas.
- Disturbance of vegetation and soils on the site should be limited to the areas of the proposed work and should not extend into adjacent vegetation.
- All vehicles and machinery are to be inspected for the presence of weeds prior to entering the site.
- Invasive weeds within the clearing footprint are to be appropriately treated and collected prior to clearing and disposed of within a landfill facility.
- The area shall be monitored for weeds post construction to ensure weed establishment does not occur. Weeds established shall be treated as necessary.

#### 1.9.1.5 Microchiropteran bats (Microbats)

- A qualified ecologist shall inspect the bridge for microbats immediately prior to removal of the existing bridge.
- If none are found, works may proceed without any further microbat measures.
- If microbats are detected, they are to be left undisturbed and measures must be taken to prevent bats returning to roost under the bridge.
  - This may include filling cavities or installing geofabric under the entire underside of the bridge at night to block microbats returning to roost under the bridge.
  - Bridge removal is to be undertaken by gradually dismantling the bridge and is to be supervised by a qualified ecologist.

#### 1.9.1.6 Aquatic Habitat

- Minimise the area of scour rock placed over submerged gravel.
  - Place scour rock from the bank to eliminate the need to track machinery on the river bed.
  - If tracked vehicles are to access the river bed use removable 2 tonne rock filled sacks to protect the river bed
- Reposition any snags that are removed to a suitable location within the permanent aquatic environment. Cut the existing snag so that only the required length is removed.

- Rehabilitate area of riverbank under existing bridge abutment with suitable plantings to replicate existing riparian vegetation (see Coffs Harbour City Council 2012).
- Daily pre-start should include a scan for Platypus activity around the work site. No instream works to be undertaken while Platypus are active in the area of works.
- A search of the banks for Platypus burrows by a suitably trained or experienced ecologist should be undertaken after vegetation clearing is complete and before bridge works commence. If active burrows are located, works are to be suspended until the Platypus are suitably managed under advice from the ecologist.
- Reduce sediment input into the river by following appropriate sedimentation and erosion controls in Section 1.9.1.8.

#### 1.9.1.7 Trenching and Excavation

- When trenching or excavation is to be undertaken within the root zone of any tree, roots are to be exposed first and then cut cleanly with a sharp saw or loppers.
  - Roots are not to be torn with a backhoe or other excavation equipment.
  - Exposed roots are to be kept moist and covered with hessian for the duration of the exposure.
  - Where roots with a diameter larger than 50mm are encountered excavation should be undertaken by hand or small implements to minimise impacts to the roots
  - Roots >40mm are considered to be structural – cutting of these roots may affect the stability of the tree.
  - Roots <40mm are considered to be feeder roots – cutting of these roots may affect the future health of the tree.
- The Environmental Project Officer and/or CHCC arborist are to be consulted if roots of this size require cutting.
- No trenching or excavation shall occur outside the footprint identified in this REF.

#### 1.9.1.8 Sediment and erosion controls

- Sediment fencing and sediment traps would be implemented in a manner consistent with currently accepted best management practice (i.e. Landcom [2004] Managing Urban Stormwater: Soils and Construction [4<sup>th</sup> Edition]) prior to any earthworks being undertaken. Sediment controls are to:
  - prevent sediment moving off-site and sediment laden water entering the creek, drainage lines or drain inlets.
  - protect bridge embankments from drain discharge.
  - reduce water velocity and capture sediment on site.
  - divert upslope and clean waters around the bridge during construction to ensure the entire system is stable.
- Sediment controls would be maintained and in good working order for the whole duration of the works and subsequently until the site has been stabilised and the risk of erosion and sediment movement from the site is minimal.

#### 1.9.1.9 Hydrology and Water Quality

- Sedimental and erosion controls as prescribed above shall be implemented to prevent the entry of sediment into the adjacent waterway, or mobilisation of sediment within the waterway, prior to any works being undertaken.
  - These controls would be maintained and in good working order for the whole duration of the works and subsequently until the site has been stabilised and the risk of erosion and sediment movement from the site is minimal.
- Rip-rap material shall comprise only 'clean rock' to facilitate filtration and drainage, and to prevent 'fines' (small particles) entering the waterway.
- Only natural material shall be used for rip-rap. Contaminated materials (tyres, building and demolition rubble, acid sulphate soils etc.) shall not be used as fill.

- Visual monitoring of local water quality during periods of flow, (i.e., turbidity, hydrocarbon spills/slicks) to be periodically undertaken to identify any water quality issues.
- All equipment is to be maintained in good working condition and operated according to manufacturer's specification.
- No vehicles or machinery shall enter or work within the creek.
- Refuelling of equipment is to occur a minimum of 40m from drainage lines.
- Stockpile sites are not to be located within 10m of drainage lines, and stockpiles are to be located on previously disturbed/cleared areas away from areas that receive concentrated runoff.
- Stockpiles are to be suitably bunded to prevent material moving off-site.
- As much earth and material as possible is to be excavated from the bridge surface prior to removal of the existing bridge to minimise silt and debris entering the waterway.
- Works are to be undertaken during periods of low flow, and shall not be undertaken during, or immediately following, periods of high rainfall.
- Prepare an ERSED plan for the earthworks and revegetation phase. All ERSED materials and methods to be consistent with the 'Blue Book' (Landcom 2004). Sediment fencing must be used around all excavations and disturbed ground.
- All materials specifications to exclude fines.
- Ensure there is a suitable wet weather protocol to protect downstream waters in the event of rainfall.
- Install spray screens, hydrocarbon booms and drop silt curtains around drilling activities.
- All site water to be removed by sucker truck.
- Maintain suitable spill kits on site during works.

#### 1.9.1.10 Aboriginal Cultural Heritage

- Works to proceed with caution, and if any Aboriginal objects or human remains are identified during the activity, the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW shall be implemented.
- If Aboriginal objects are detected, the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW apply, and consultation with Heritage NSW is required. As the authority for the protection of Aboriginal objects and Aboriginal Places in NSW, the NSW National Parks and Wildlife Service (NPWS) shall also be notified. As well as Council's Environmental Project Officer.
- If suspected human remains are discovered and/or harmed in, on or under the land within the activity footprint, the following actions must be undertaken:
  - The remains must not be harmed/further harmed.
  - Immediately cease all works at that location.
  - Secure the area to avoid further harm to the remains.
  - Notify the NSW Police and the Environment Line (Heritage NSW) on 131 555 as soon as practicable and provide any details of the remains and their location.
  - Do not recommence any work at that location unless authorised in writing by Heritage NSW.

#### 1.9.1.11 Waste Management

- If surplus excavated material will be generated from the works; however, if material is required to be removed from the site then appropriate documentation for transport and testing of the material for Excavated Natural Material (ENM) and Virgin Excavated Natural Material (VENM) (in accordance with the NSW Environment Protection Authority and the *Protection of the Environment Operations Act 1997*) will be the responsibility of the Project Manager. Otherwise, the material may be disposed of at a licenced waste facility.
- If the material is to be taken from one road reserve to another road reserve – the receiving environment must be previously identified, and a Fill Plan is to be prepared for the site.
  - Stockpiling of material is not acceptable and must be spread out in its final location as per the fill plan.



- Waste material generated by the project will be managed following the principles of waste avoidance by re-use, recycling and removal.
- The site is to be kept clear of rubbish through daily housekeeping and consistent with Councils' waste management system.
  - All waste is to be collected daily and disposed of appropriately.
- Contractors/workers shall be conversant with, and adhere to, the measures and controls outlined in the NSW Government's Code of Practice: Managing risks of hazardous chemicals in the workplace, to ensure gaseous, liquid, or solid wasters or emissions are managed appropriately.




**NB. These conditions will be subject to auditing by Council's Environmental Project Officers.**



### 1.10 Certification

This Part 5 Assessment is valid for six (6) months from the approval date below – if works have not commenced by this date this assessment is invalid. Contact the Environmental Project Officer for reassessment.



<b>I certify that I have reviewed and endorsed the contents of this REF document, and, to the best of my knowledge, it is in accordance with the EP&amp;A Act, the EP&amp;A regulation, and the Guidelines approved under section 170 of the EP&amp;A Regulation and the information it contains is neither false nor misleading.</b>			
Prepared by:	Grant Bennett		Date: 21/12/2023
Name		Signature	
(prepared this assessment under Part 5 of the EP&A Act 1979)			
Reviewed by:	Tori Harvey		Date: 12/01/2024
Name		Signature	
Director:	Andrew Beswick		Date: 11/01/2024
Name		Signature	

**You must notify the Environmental Engineer who prepared this Part 5 Assessment of any changes in the proposed activity, during works or planned as this may alter the assessment, rendering it invalid.**



## Appendix A – Poidevins Bridge Over Orara River (Construction Plans)

Refer to separate document.



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## Appendix B – Ecological Assessment for Poidevins Bridge Replacement, Upper Orara

Refer to separate document.



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Wolf Peak Pty Ltd - Sydney  
 Level 10 189 Kent Street  
 Sydney New South Wales 2000  
 Attention: David Stubbs  
 Email: dstubbs@wolfpeak.com.au

Date: 08 December 2023

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lat, Long From : -30.2882, 152.9959 - Lat, Long To : -30.2789, 153.0114, conducted by David Stubbs on 08 December 2023.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location.*



#### If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](https://www.legislation.nsw.gov.au/gazette) (<https://www.legislation.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

#### Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

## Appendix D – Poidevins Bridge Replacement Aquatic Ecological Assessment

Refer to separate document.



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