



REVIEW OF ENVIRONMENTAL FACTORS

Wardell Wharf and Boardwalk Remediation Works

NOTE: This Review of Environmental Factors (REF) is for projects that have minor and predictable impacts and require a Division 5.1 assessment under the EPA Act 1979.

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INTRODUCTION

Project name:	Wardell Wharf and Boardwalk Remediation Works	Project number:	N/A
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Project budget: \$1.53m

Work order number: 1767

Project manager: Alistair Weallans

CONSTRUCTION WORK MUST NOT COMMENCE UNLESS:

- The person completing this REF has signed the completed document, verifying that each of the steps has been satisfied and no further assessment or investigation is required; AND
- The Determining Officer has signed the completed document to verify that the assessment has been adequately completed, the conclusion as to the likely environmental impact of the project is reasonable, and the project can proceed subject to relevant control measures and conditions in any approval, licence or permit; AND
- Prior to the project commencing the required approvals, licences and permits have been obtained as outlined in Section 5; AND
- All relevant construction personnel are aware of:
 - The project details in Section 1
 - The project’s environmental impacts in Section 6
 - The project’s specific control measures in Section 6
 - The conditions in any approval, licence or permit in Section 5
 - Their responsibilities detailed in this REF.

NOTE: If any environmental issue is identified or if any environmental control measure is required, the following is to occur:

- Where a construction drawing is prepared as part of the construction work pack, the environmental control measures should be listed in the schedule on that drawing and/or the CEMP
- For more complicated projects, the environmental control measures should be included in a project-specific construction and environmental management plan.

NOTE: If any approval, licence or permit is required then copies of these MUST be included in the construction work pack that is submitted to the Construction Manager for the project.

NOTE: Projects may require a more detailed assessment of particular issues (e.g. a specialist ecology or heritage report). In these cases, this document should accompany this REF as an appendix, and the findings should be considered in the assessment and identification of control measures.

NOTE: Some minor projects are exempt development. There is a separate checklist to be completed if you think your project is exempt. Where the project meets the exempt criteria and the exempt criteria checklist has been completed, a REF is not required.

NOTE: Projects requiring a Part 4 planning approval require a Statement of Environmental Effects and approval from Council. **DO NOT USE** this REF template for these matters. For further details of assessing whether a project is exempt development or requires approval under Part 4, refer to relevant flow charts.

Section 1 PROJECT DETAILS

NOTE: Prior to completing this REF a site inspection is to be undertaken by the officer completing the assessment.

1.1 Site inspection

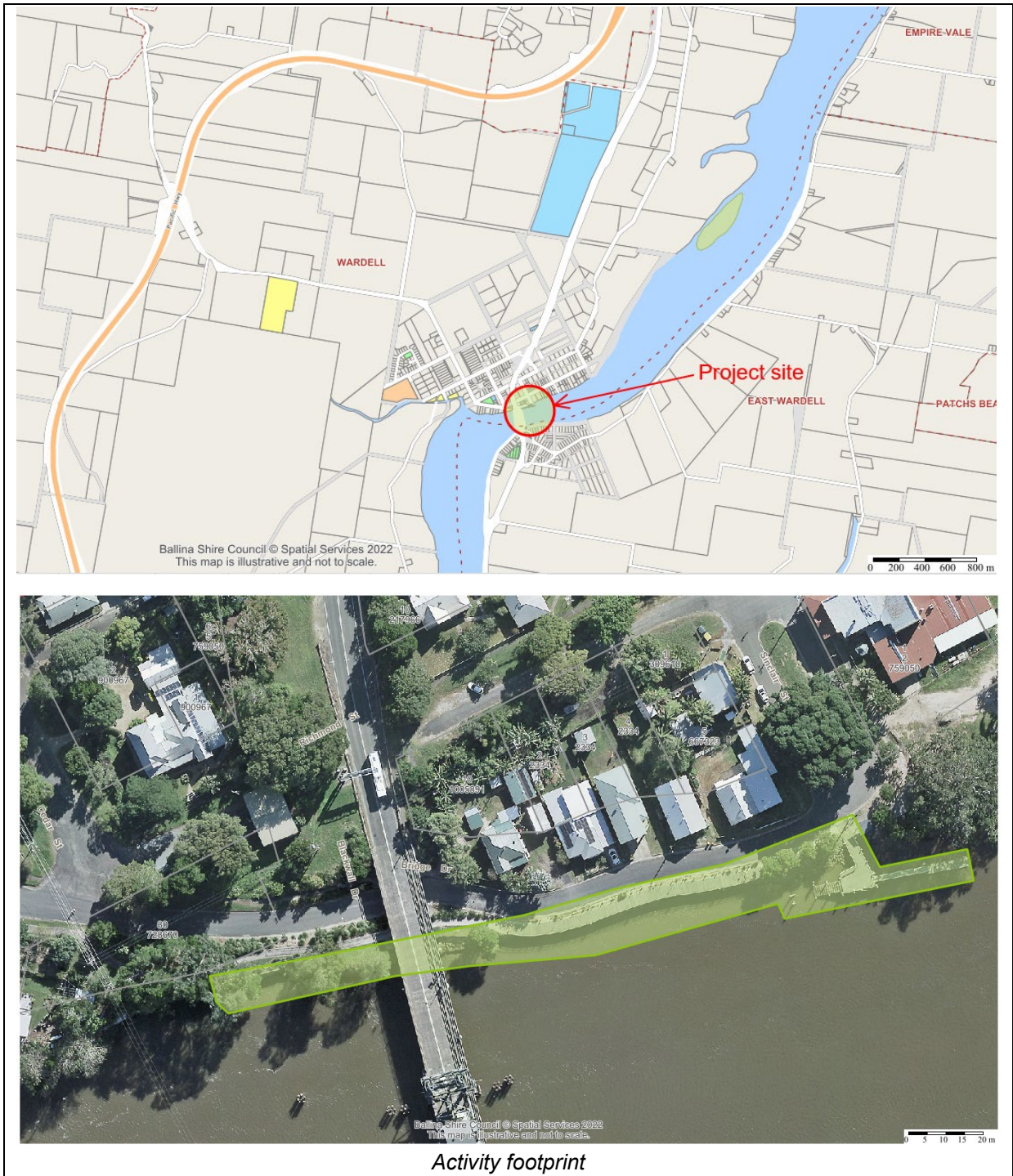
A site inspection was undertaken by the person completing this REF	<input checked="" type="checkbox"/> Yes	18/01/2023	10:50am
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1.2 Location of activity

Please attach a locality plan, map, photographs, diagrams and a site plan (as necessary) showing the location and layout of the proposed activity and provide the following details of the location of the proposed activity site. If Council land, is it Community or Operational land?

Site commonly known as <i>(if applicable)</i>	Wharf and boardwalk, Bridge Drive; Part Bridge Drive road reserve; Part former wharf site (Lot 80 DP 728670); Part north bank Richmond River; East Wardell Reserve, Byron Street			
Street address <i>(if applicable)</i>	No:	NA	Street name: Bridge Drive	
	Town, village or locality:		Wardell	
Title reference	Lot and deposited plan (or strata plan): Part Lot 80 DP 728670			
Site reference	Easting: <i>(6 digits)</i>	545314	Northing: <i>(7 digits)</i>	6797133
	Nearest cross street or streets:		Sinclair Street, Blackwall Drive	
	Site owner and tenure:		Crown Land leased by Council; Crown Land managed by Council; Council-owned reserve	
	Land classification <i>(Community or Operational, if applicable)</i> :		Community land (East Wardell Reserve)	

Site map or aerial image



1.3 Description of the proposed activity

Description of the proposed activity – include pre-construction, construction, operation and remediation

The February 2022 flood event resulted in substantial damage to the Wardell wharf and boardwalk on the Richmond River, including erosion of the riverbank – see photos below.

The proposed works will allow the ongoing functionality of this infrastructure as well as repair and protect the adjacent bank area from future scour.



The proposed repair works covered by this REF include:

- Removing and replacing existing damaged decking on the boardwalk and other repair works to these structures as required.
- Removing and replacing a number of damaged piles (three on the wharf and eight on the boardwalk). The floating pontoon may also need to be replaced.
- Restoring the revetment where scour has occurred as a consequence of the flood. Revetment works will be limited to the scoured and damaged river embankment, extending 80 m west to 150 m east of the bridge & including a works compound on the south bank.

Fish passage will not be obstructed, and marine vegetation will not be harmed.

Traffic control equipment and signs will remain in place for the duration of works.

Pre-construction:

The contractor will be required to establish suitable safety fencing around the worksite to prevent public access. A works compound will be established off Byron Street south of the river adjacent to the bridge.

Signage will be set up in advance to advertise the proposed works.

Construction:

Wharf repairs involve removal and replacement of eight wooden piles ranging in diameter 250-350 mm. Length of pile removal is variable approximately 2-4 m. It is anticipated that the removal of the piles and replacement of damaged decking would be completed over a 2-week period.

Revetment repairs involve excavation of loose material, debris and organic material, followed by installation of geotextile material and rock to recreate the revetment.

Exposed surfaces may require the treatment and removal of small amounts acid sulfate soil (ASS).

Post-construction:

Once all works have been undertaken footpath and verge tidy up can take place to finish the project.

Size of the proposed activity footprint

Approximate footprint of worksite = 230 m long x 10 m wide x 0.75 m deep.

Ancillary activities, such as advertising or other signage (including any temporary sign, banner or structure promoting an event or sponsorship arrangement), roads, infrastructure, bushfire hazard reduction

Advertising and notifying adjoining owners (including Crown Lands) and residents.

Proposed construction methods, materials and equipment

Methodology:

The proposed methodology is summarised below.

For full details of the proposed works, refer to Appendix D: Structural Remediation of Wardell Wharf and Boardwalk Post 2022 Flood Events, Bridge Drive, Wardell. Ardill Payne & Partners, 30 September 2022.

Boardwalk remedial works:

Numerous boardwalk piles have been displaced laterally and undergone vertical movement. Some have laterally displaced at the base, causing a degree of settlement and rotation with the base moving eastward (direction of river flow during flood).

To allow replacement of affected piles, the supported bearers as well as decking and joists in the spans either side of the pile will require removal and reinstatement. Handrailing will also require removal and reinstatement.

The replacement piles will be driven to the depths identified within the specification. It is expected that piles may be driven from the land. Although it is possible that a contractor may also nominate barge driven piles for ease of construction.

Settlement and lateral movement of the piles has caused downward rotation of bearers, which has in turn has caused buckling of decking adjacent to the piles. A number of the bolted joints have also experienced broken bolts, timber or have had nuts undone.

Eight of the boardwalk piles will require replacement with new piles driven to 4-7 m AHD (approximately 3-5 m below the current scour). Oversize plate washers, new bolts, strapping and other augmentations will also be required where timbers have split.

Wharf Remedial Works:

The wharf was generally in fair condition with minor flood related damage.

One of the wharf piles has dislodged at the base likely due to a combination of impact and scour and will require replacement with a new pile driven a minimum of 3 m embedment into the riverbed.

Another pile and its associated raking pile have considerable damage and scouring and will require replacement and reconnection, with 7 m and 5 m of embedment into the riverbed respectively. The alloy stair system will require removal to enable installation of the new piles.

Some piles will require additional strapping. Damaged decking boards will be replaced.

The floating concrete pontoon to the east of the wharf which is accessed via gangway from the wharf has a noticeable list toward the north. The north-west corner is approximately 100 mm closer to water line than the south-west corner. Whilst still somewhat serviceable, replacement of the pontoon may be required. The piling appears to be in good condition and is not expected to be replaced.

Bank Rehabilitation:

Along the boardwalk there are areas of significant scour (2-3 m) occurring directly adjacent to the boardwalk and further west. The revetment will require reinstatement in these locations.

Rock armouring will be installed in line with the plan titled "Approximate Extent of Rock Armouring" – see Appendix A. Rock shall be 150-500 mm nominal diameter angular igneous or metamorphic rock, which is dense and resistant to abrasion. The rock shall be free of cracks, cleavage, planes, seams and other defects which would result in breakdown of the rock. The rock shall be clean and free of any debris or sediment which could add contaminants to the river. It is expected that the majority of rock will be placed from a barge.

The revetment will be reconstructed with a geotextile material base and clean rock armour placed at 3-to-1 slope (max) to improve stability and longevity of the wall.

Preliminary estimates of rock volumes required is approximately 500-600 m³ hard in place.

Materials to be used:

- Clean hard rock ranging in diameter 150-500 mm.
- Geotextile fabric.
- Timber piles and decking.
- Replacement pontoon.

Equipment:

- Excavator.
- Light commercial and passenger vehicles.
- Transport trucks for excavated material and construction materials.
- 24 m x 10 m barge, 200 tonne capacity with spud bar anchors.
- 27 tonne excavator, mounted on the barge and equipped with pile driving/drilling equipment and specialised rock grabs, to carry out the wharf & boardwalk piling repairs and then to load and place the rock in the areas required.
- Optional 2nd 12 m x 6 m barge to assist with rock transport and placement.
- Security fencing.
- Traffic/pedestrian control equipment and signs.

Receivables, storage and on-site management of materials used in construction (e.g. stockpiles and lay-down areas)

A works storage compound will be established off Byron Street south of the river adjacent the Wardell Bridge – see below.

Excavated material and waste will be removed directly into trucks and transported off-site daily, and materials required for the reconstruction will also be transported in quantities sufficient for the days task.



Location of set-down area and works compound

Earthworks or site clearing, including extent of vegetation to be removed

General earthworks:

The volume of fill material to be placed in situ is approximately 1500 m³.

The excavation and construction will occur in areas mapped on Council's GIS as ASS Classes 1 to 4 – see Section 4.15 below. An ASS management plan will be required for the works and disturbance will be minimised to the extent required to complete the works.

Vegetation assessment:

The existing rock batter is largely vegetation free and limited to weed species (e.g. fleabane, milk thistle, cudweed).

West of Wardell Bridge, vegetation adjacent to the embankment consists of a small patch of disturbed Swamp Oak including other species cockscomb coral tree and camphor laurel. At the western end of the worksite there is a larger patch of forest dominated coastal cypress pine. The thicker vegetation along the western extent of the works will be retained (no trees to be removed). The placement of rock at this location will stabilise the embankment and help to protect the longevity of this vegetation.

No aquatic vegetation is visible or documented to occur within the area. Given the extent of erosion that as occurred it is highly unlikely works will impact aquatic vegetation.

A small mangrove sapling exists at the eastern extent of the revetment works slightly west of the wharf and will be retained if possible.

Sustainability measures, including choice of materials (such as recycled content) and water and energy efficiency

Materials will be sourced from approved licenced supplies, and from local sources wherever practical.

Environmental safeguards and mitigation measures

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Erosion and sediment control	To prevent the pollution of waterways and the nearby mapped Coastal Management SEPP, sediment and erosion control measures will be installed prior to the commencement of works. These are to be maintained during construction of the project until the site has been stabilised by permanent vegetation cover or a hard surface. This should include drain entrance-based sediment traps.	Click here to enter text.
Waterways	Emergency spill procedures, including the provision of an on-site spill kit, will be implemented during construction. Works to be in accordance with DPI Fisheries permit.	Click here to enter text.
Noise and vibration	Minimise plant and tool noise by providing regular maintenance and by turning machinery off when not in use. Use reverse alarms that meet Australian Standards on all machinery.	Click here to enter text.
Air quality	All plant will be serviced and appropriate controls in place to limit plant fumes and emissions.	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Non-Aboriginal heritage	In the event that a heritage item or relic is found during the works, work will stop and the relic will remain in place as found. The area around the item(s) will be protected and archaeological advice and if required, an excavation permit will be sought.	<p>Lot 80 DP 728670 is the location of the 'Old Wardell Ferry Approaches' heritage item in Schedule 5 of the BLEP 2012.</p> <p>It is unlikely that heritage items or relics will be encountered as the repair works are on an existing wharf, boardwalk and revetment wall on land that is already heavily disturbed.</p>
Aboriginal heritage	In the event a heritage object is found during the works, work will stop, and the item will remain in place as found. The area around the item(s) will be protected, and then archaeological advice and an Aboriginal Heritage Impact Permit (AHIP) will be sought.	<p>Lot 80 DP 728670 is subject to an undetermined Aboriginal Land Claim. Council wrote to the Australian Aboriginal Land Council seeking consent to undertake the works. On the 3/4/23, a response was provided indicating a 'non-objection' to the works proceeding.</p> <p>It is unlikely that heritage items will be encountered as the repair works are an existing wharf, boardwalk and revetment wall in an already heavily disturbed land.</p>

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Biodiversity	No aquatic or riparian vegetation is to be removed.	No aquatic vegetation is visible or has been documented to occur within the area. Given the extent of erosion that as occurred it is highly unlikely works will impact any aquatic vegetation.
Trees and vegetation	The proposed works will not impact any existing trees or vegetation	Click here to enter text.
Traffic, transport and parking	<p>Install suitable traffic control measures for the works site in accordance with the RMS "Traffic Control at Worksites" manual, current version.</p> <p>Ensure construction access and compound areas are managed to minimise risks to the local environment and adjacent land use.</p>	Click here to enter text.
Socio-economic	<p>Notify affected neighbouring landowners and occupiers regarding timing and progress of works, traffic control measures, construction access requirements and hazards, and project officer contact details.</p> <p>Advertise pending works through local media or on-site message boards to raise awareness of any traffic control measures, including disruptions and night work regime (if applicable).</p>	Click here to enter text.
Waste	All excess concrete, hardstand, topsoil, etc. from the demolition/construction works must be stockpiled and/or removed from the site. Stockpiles must be subject to sediment controls to prevent stormwater pollution. Material unsuitable for reuse on site must be disposed of at a suitably licensed waste management facility and/or managed in accordance with NSW Resource Recovery Orders and Exemptions.	Click here to enter text.
Visual amenity	<p>The site will be maintained, kept free of rubbish and cleaned up at the end of each working day.</p> <p>Areas impacted by the works will be restored to an acceptable visual state upon completion of the works.</p>	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Land contamination	<p>Remove all waste material from site once the works are completed.</p> <p>Notify BSC's Public and Environmental Health Section immediately if new information becomes known during demolition or construction that has the potential to alter previous conclusions about site contamination.</p> <p>Notify the EPA immediately in response to incidents causing or threatening actual or potential harm to the environment in accordance with section 148 of the POEO Act (via EPA Environment Line on 131 555).</p>	Click here to enter text.
Soils and geotech	Any fill material sourced from elsewhere must be certified as either virgin excavated natural material (VENM) or in compliance with a NSW EPA Resource Recovery Order or Exemption.	Click here to enter text.
Miscellaneous	A CEMP shall be prepared by the contractor prior to commencement of any works. The CEMP is to incorporate standard mitigation measures applicable to the works being undertaken, including all measures outlined in this REF (and associated reports and permits/licences).	Click here to enter text.

Construction timetable and staging hours of operation

Works are to be undertaken during low flows in the Richmond River (i.e. non-flood flows) and when Bureau of Meteorology forecast for the Northern Rivers district forecast region (available at: www.bom.gov.au/nsw/forecasts/map.shtml) indicates several days of clear, dry weather.

The hours of operation, including the delivery and removal of materials from site, will be limited to Monday to Friday 7.00am-5.00pm and Saturday 8.00am-1.00pm. No works will occur on Sunday or public holidays.

Estimated commencement date:

To be determined

Estimated completion date:

To be determined

NOTE: If the activity involves building or infrastructure works, it may require certification to Building Code of Australia or Australian Standards prior to commencement.

1.4 Reasons/objectives for the activity and consideration of alternatives

Provide details of the reasons/objectives for the activity (need for the activity)

The proposed repairs to the wharf and boardwalk will allow the ongoing functionality of this infrastructure. Repairs to the revetment will reinstate and protect the adjacent bank area from future scour.

Alternatives

- Option 1: Repair the wharf and boardwalk and undertake revetment works to reinstate the embankment. This is the preferred option.
- Option 2: Do nothing.

Justification for preferred option

The boardwalk is a significant recreational feature of Wardell and has been identified as a strategic action in the Wardell Strategic Plan 2015 – 2035. The boardwalk, wharf and rock embankment works were completed in 2017 and have provided the community with increased amenity and support recreational activities and tourism within the village itself. This infrastructure was damaged during the 2022 flood event and there is strong desire from the community to have the repair works completed as quickly as possible.

1.5 Relationship with other projects, programs and plans

Construction of the boardwalk was a strategic action in the Wardell Strategic Plan 2015 – 2035.

Section 2 CONSULTATION

Consultation is not compulsory for all REFs but it may be advisable. Specify the details of any consultation, including who was consulted, how, when and the results of the consultation.

Consider whether advice/feedback from any State agencies should be sought/might be beneficial.

If the works are located on land (or water) subject to a determined Native Title claim or an Aboriginal land claim, have you consulted with the Aboriginal traditional owners, e.g. Jali Local Aboriginal Land Council? Any response to be included as an appendix.

Council currently holds a Crown Land lease for the existing boardwalk and wharf. Notification will be provided to NSW Crown Lands prior to commencement of works.

A permit has been obtained from NSW Department of Primary Industries (Fisheries) for dredging and reclamation work associated with the boardwalk and revetment repair works.

There is an undetermined Aboriginal Land Claim over Lot 80 DP 728670. Council has received concurrence by the way of 'non-objection' from the Australian Aboriginal Land Council for the works to proceed.

Section 3 STATUTORY FRAMEWORK

3.1 Description of relevant environmental planning instruments

This could include SEPPs or LEPs and, if necessary, the relevant zoning, clause, provision or schedule.

3.1.1 State Environmental Planning Policies (SEPPs)

SEPP (Transport and Infrastructure) 2021

Briefly document the relevant part of this SEPP that places your activity in Part 5 of the EPA Act 1979.

State Environmental Planning Policy (SEPP) (Transport and Infrastructure) 2021 aims to facilitate the effective delivery and maintenance of infrastructure across the state.

Section 2.165 of the SEPP permits the development of any land for the purpose of foreshore management activities to be carried out by or on behalf of a public authority without consent. Part of the proposed works meets the definition of 'foreshore management activities' which means:

- (a) Construction works,
- (b) routine maintenance works,
- (c) emergency works, including works required as a result of flooding storms or erosion,
- (d) environmental management works.

Section 2.80 of the SEPP permits the development of any land for the purpose of a wharf to be carried out by or on behalf of a public authority without consent. Part of the proposed works meets the definition of 'wharf' which means:

- (a) development for the purposes of navigation and emergency response facilities,
- (b) environmental management works associated with a port facility or a wharf or boating facility,
- (c) emergency works associated with a navigation and emergency response facility or a port facility.

Part 2.2 Division 1 of the SEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. The majority of works occur on Crown Land leased by Council. A permit for dredging and harming marine vegetation is required (and has been obtained) from NSW Department of Planning, Industry and Environment (DPIE) - Fisheries. NSW DPIE Crown Lands are also required to be notified of the works on the riverbed prior to commencement. Works within the road reserve where Council is the public authority require no formal consultation.

As development consent is not required for the proposed activity under Sections 2.165 and 2.80 of the SEPP, the activity becomes a proposal to be considered under Part 5 of EP&A, where Council is both the proponent and determining authority for the activity.

Clause 5.5 of EP&A requires Council as the determining authority to consider all possible matters affecting or likely to affect the environment due to the activity occurring. And in accordance with Section 2.7 of the SEPP, also ensure that any adverse effect on the land concerned is restricted to the minimum possible to allow the works to be carried out, and to obtain any other approvals such as under the Fisheries Management Act 1994 prior to the commencement of work.

This REF addresses the environmental impact assessment of the proposal for the purposes of clause 5.5 of EP&A.

SEPP (Resilience and Hazards) 2021

If you intend to clear, fill or drain in a SEPP Coastal Wetland or SEPP Littoral Rainforest you cannot use this REF template. Part 4 of the EPA Act 1979 applies. If work (other than the above) is proposed in or near (within 100 metres of) a wetland or littoral rainforest, seek professional assistance.

SEPP (Resilience and Hazards) 2021 aims to provide an integrated and coordinated approach to land use planning in coastal zones in a manner consistent with the objectives of the Coastal Management Act 2016.

The proposed road and revetment works are within the following areas identified in the SEPP (Resilience and Hazards) 2021:

- Coastal environment area
- Coastal use area

The proposed works are not located within an identified coastal wetland, littoral forest or associated proximity zone.

Section 2.7 of the SEPP (Transport and Infrastructure) 2021 provides for the relationship between it and other environmental planning instruments, including how it interacts with the SEPP (Resilience and Hazards) 2021. In particular, section 2.7(2) of the SEPP (Transport and Infrastructure) 2021 provides that clauses 10, 11 and 19 of the SEPP (Resilience and Hazards) 2021 generally prevail over the SEPP (Transport and Infrastructure) 2021. However, clause 19 of the SEPP (Resilience and Hazards) 2021 (which deals with coastal protection works) only prevails where development consent is required. As the SEPP (Transport and Infrastructure) 2021 allows the proposed works to occur as development without consent, there is no inconsistency with clause 19 of the SEPP (Resilience and Hazards) 2021.

However, while Council has the benefit of the provision in the SEPP (Transport and Infrastructure) 2021 that allows development for the purposes emergency works or routine maintenance to be carried out without consent that prevail over clause 19 of the SEPP (Resilience and Hazards) 2021, Council as the determining authority still needs to comply with the usual assessments and requirements for EP&A Act Part 5 activities, and in accordance with clause 2.7(4) of SEPP (Transport and Infrastructure) 2021 ensure that any adverse effect on the land concerned is restricted to the minimum possible to allow the works to be carried out, and to obtain any other approvals such as under the Fisheries Management Act 1994.

This REF has taken into account the matters of consideration within the SEPP (Resilience and Hazards) 2021.

SEPP Vegetation in Non-Rural Areas 2017

The worksite is within an area covered by SEPP Vegetation in Non-Rural Areas 2017.

No vegetation will be removed or pruned.

3.1.2 Ballina Local Environmental Plan 2012 (and/or Ballina LEP 1987)

Zoning

Check the defined uses in the LEP Dictionary. Check the zones on e-view, confirm it is a Part 5 matter.

Ballina Local Environment Plan (BLEP) 2012

The BLEP aims to provide local environmental planning provisions for land in Ballina that are sustainable and support community, environmental and economic values. The proposed works sites

are zoned W1 Natural Waterways and R2 Low Density Residential. The set-down and works compound on the south side of the river adjacent to the bridge is zoned RU2 Rural Landscape.

Clause 1.9(1) of BLEP provides for the relationship between it and other environmental planning instruments, including how it interacts with SEPPs, in particular that SEPPs prevail over the BLEP. As the SEPP (Transport and Infrastructure) 2021 allows the proposed works to occur as development without consent, it prevails over BLEP clause 2.3 in relation to development permitted with consent relevant to the land use of zones W1 and R2. Clause 2.7(4) of SEPP (Transport and Infrastructure) 2021 requires that any adverse effect on the land concerned is restricted to the minimum possible to allow the works to be carried out, and that any other approvals such as under the Fisheries Management Act 1994 are obtained prior to the commencement of work.

The proposed works will not adversely impact on the objectives of the W1 Zone:

- To protect the ecological and scenic values of natural waterways.
- To prevent development that would have an adverse effect on the natural values of waterways in this zone.
- To provide for sustainable fishing industries and recreational fishing.
- To ensure that development maintains and enhances the integrity of aquatic ecosystems and biodiversity.

The proposed works will not adversely impact on the objectives of the R2 Zone:

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To provide for development that is compatible with the character and amenity of the surrounding neighbourhood.
- To provide for development that meets the social and cultural needs of the community.
- To encourage development that achieves efficient use of resources such as energy and water.

The proposed works will not adversely impact on the objectives of the RU2 Zone:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To enable small-scale tourist-orientated development that is compatible with the rural nature of the land.
- To encourage development that involves restoration or enhancement (or both) of the natural environment if consistent with the production and landscape character of the land.
- To enable development that does not adversely impact on the natural environment, including habitat and waterways.
- To ensure that there is not unreasonable or uneconomic demands (or both) for the provision of public infrastructure.

Local provisions

Do clauses 7.1 to 7.13 apply?

Is the site Community or Operational land (LEP Schedule 4)? Check Ballina Council Land Register.

Is the site listed in LEP Schedule 5 Environmental Heritage – Part 1 (Heritage items)?

Is the site affected by LEP Schedule 5 Environmental Heritage – Part 2 (Heritage conservation areas)?

Is the site affected by LEP Schedule 5 Environmental Heritage – Part 3 (Archaeological sites)?

As stated earlier, the SEPP (Transport and Infrastructure) 2021 allows the proposed works to occur as development without consent, hence it prevails over BLEP 2012 clauses 7.1, 7.2 and 7.3 in relation to acid sulfate soils (ASS), earthworks and flooding respectively. Notwithstanding, consideration is given to these matters in order to restrict any adverse effect on the land.

The old Wardell ferry approaches at Lot 80, DP 728670 Bridge Drive are listed as a heritage item in Schedule 5 of the BLEP 2012.

Clause 5.10(1) of the BLEP 2012 specifies the following heritage conservation objectives:

- (a) to conserve the environmental heritage of Ballina,
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Clause 5.10(2) states that development consent is required for any of the following:

- (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
 - (i) a heritage item,
 - (ii) an Aboriginal object,
 - (iii) a building, work, relic or tree within a heritage conservation area,
- (b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,
- (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- (d) disturbing or excavating an Aboriginal place of heritage significance,
- (e) erecting a building on land:
 - (i) on which a heritage item is located or that is within a heritage conservation area, or
 - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- (f) subdividing land—
 - (i) on which a heritage item is located or that is within a heritage conservation area, or
 - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

Clause 5.10(3) specifies when consent is not required, as follows:

(a) the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development:

(i) is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site or a building, work, relic, tree or place within the heritage conservation area, and

(ii) would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area, or

The need for development consent has been considered with regard to the old Wardell ferry approaches, but since the revetment work is for essential maintenance to protect and preserve the riverbank, it will by its very nature preserve the old Wardell ferry approaches from further damage. Hence, it has been concluded that Clause 5.10(3)(i) applies, therefore development consent is not required.

Notwithstanding, advice has been sought from Council's DEHG, with a view to confirming or otherwise the previously mentioned conclusion and/or to ascertain whether or not a heritage impact assessment is warranted. The following response has been received:

"In this instance we recommend engaging of a heritage consult to confirm the significance of the identified heritage items and to assess whether the works will adversely affect the heritage significance of the item."

A Statement of Heritage Impact(SoHI) was subsequently prepared by Heritage Management & Planning Pty Ltd to support this REF. The SoHI confirmed that the proposed works did not pose a risk to the heritage items listed within the vicinity (including I85).

3.2 Description of any relevant plan of management, policy or procedure

The boardwalk is identified as a strategic action in the Wardell Strategic Plan 2015 – 2035.

Lot 80, DP 728670 Bridge Drive is Crown Land managed by Council and is subject to Ballina Shire Council Plan of Management for Community Land 2015.

NOTE: Many Council activities can be considered under Part 5 of the EPA Act 1979. There are some exceptions (see flow charts). If in doubt, consult with Council's planners. Where the project cannot be considered under Part 5, this template should not be used.

Section 4 EXISTING ENVIRONMENT

4.1 Description of the existing environment

The site includes eroded rock embankment that protects the existing wharf/boardwalk and Bridge Drive. Within this environment is a wooden boardwalk and wharf that has recently sustained damage.

The site is located on the bank of the Richmond River and has experienced significant scour and loss of material (refer to hydro survey data within APP specification).

At this location, the river is approximately 160m wide, slow moving and the depth increases quickly from the edge of the bank.

No aquatic vegetation is visible or has been documented to occur within the area.

Given the extent of erosion that has occurred (both visibly and based on hydro-survey data) it is highly unlikely that works will impact any aquatic vegetation.

East of Wardell Bridge (see below), the foreshore is highly disturbed and comprises the boardwalk/wharf structures, cultivated grasses (couch, kikuyu) and Lomandra planted as part of the previous project works.



The existing rock batter in this location (see below) is largely vegetation free and limited to weed species (e.g. fleabane, milk thistle, cudweed).



A small mangrove sapling exists at the eastern extent of the rock replenishment works just west of the wharf (to be retained).



West of Wardell Bridge (see below), there is more vegetation adjacent to the embankment. Vegetation appears to consist of a small patch of disturbed Swamp Oak including other species cockscomb coral tree and camphor laurel.



Toward the western end of the site (see below) there is a larger patch of forest dominated coastal cypress pine.



The thicker vegetation along the western extent of the works will be retained (no trees to be removed). The placement of rock at this location will stabilise the embankment and help to protect the longevity of this vegetation.



The photo below taken from the other site of the river provides an indication of the precarious nature of this vegetation as a consequence of scour sustained during the flooding.



4.2 Topography

East of bridge: level to very gently inclined deltaic alluvial plain of the Richmond River. Relief 3–5 m, slopes 0–1%. Extensively cleared closed and open forest, now almost entirely devoted to sugar cane.

West of bridge: level to gently undulating sand plain and dune fields on Pleistocene beach and dune sand. The topography is characterised by dune/swale systems. Partially cleared woodland and heathland. Elevation 5 -6 m, relief 1–2 m, slopes 1–3%.

4.3 Surrounding land uses

How far away are the nearest dwellings, school, bus stops, etc?

Residential with recreational land uses (parks and maritime infrastructure).

4.4 Geology/Geomorphology

Is the site slip-prone or unstable?

East of bridge: quaternary alluvium—alluvium, sand, clay. The alluvium is derived predominantly from weathered basalts and has been deposited on Pleistocene barrier sands.

West of bridge: quaternary (Pleistocene) sand sheets and barrier dunes consisting of aeolian and marine quartz sands.

4.5 Soil types and properties

Is the site affected by acid sulfate soils and at what depth?

East of bridge: alluvial (ep = Empire Vale) soil landscape comprising deep (>200 cm), moderately well-drained Prairie Soils, minimal Prairie Soils and Dense Clays (Gn3.44, Db4.11, Gn3.91, Uf6.6)

overlying poorly drained mixed sediments. Moderate foundation hazard due to flood potential and reactive, highly plastic soils. Topsoil depth is 30–50 cm. Total soil depth is >150 cm. High probability of occurrence of acid sulfate soil (ASS) in localised areas. Potential to disturb ASS where works extend beyond 1 metre below natural ground surface or where the water table is likely to be lowered beyond 1 metre below natural ground surface. Oxidation of ASS can lead to corrosion of concrete, whilst inappropriate building practices can lead to acid runoff.

West of bridge: deep aeolian (wa = Wardell) (>300 cm), well-drained Podzols (Uc2.3, Uc5). Deep (>300 cm), poorly drained Peaty Podzols (Uc2) and Acid Peats (O) in low-lying, poorly drained areas. Generally low foundation hazard. Localised high foundation hazard within peaty swales and depressions which have soil materials of low wet bearing strength and seasonal waterlogging. Topsoil depth is 30–50 cm. Total soil depth is >300 cm. Low probability of occurrence of ASS in localised areas. Potential to disturb ASS where works extend beyond 2 metres below natural ground surface or where the water table is likely to be lowered beyond 2 metres below natural ground surface.

Ref: Morand D.T., 1994, *Soil Landscapes of the Lismore-Ballina 1:100,000 Sheets report*, NSW Department of Land and Water Conservation, Sydney



Alluvial (ep) and aeolian (wa) soil landscapes

4.6 Waterways

How close are the works to the waterway, and is it a drinking water catchment?

The site is located on the bank of the Richmond River and has experienced significant scour and loss of material. At this location, the river is approximately 160 m wide, slow moving and the depth increases quickly from the edge of the bank.

4.7 Flora (including flora of conservation significance)

Check Council's GIS.

Complete a search of the threatened species database in cases where vegetation is to be impacted/removed.

No aquatic vegetation is visible or has been documented to occur within the area. Given the extent of erosion that has occurred (both visibly and based on hydro-survey data) it is highly unlikely works will impact any aquatic vegetation.

4.8 Fauna (including fauna of conservation significance)

Check Council's GIS.

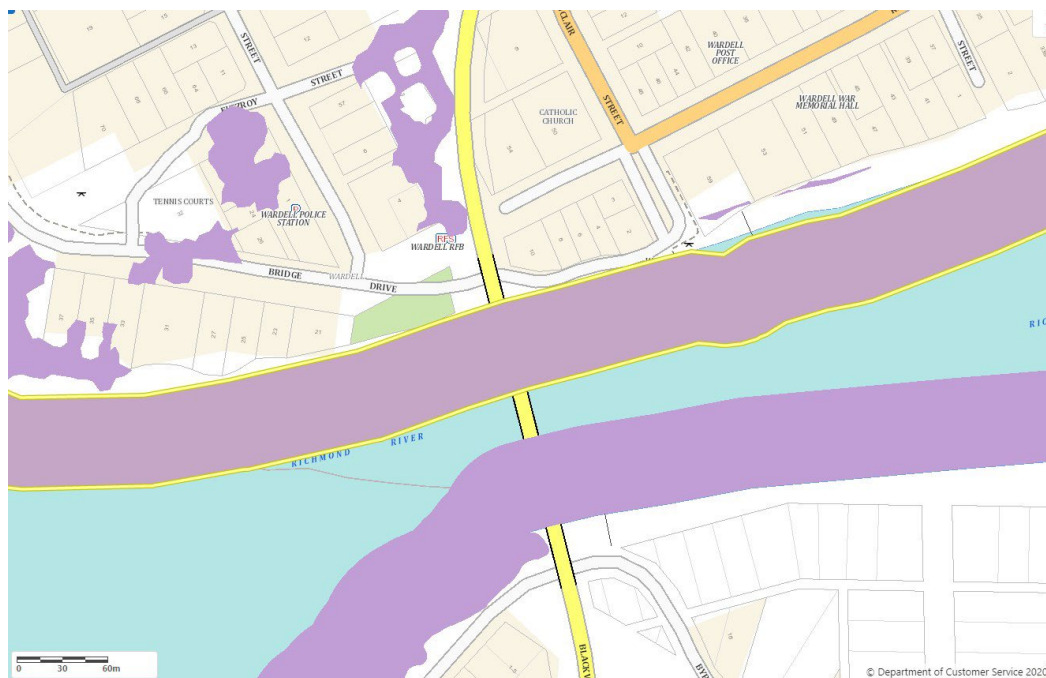
Complete a search of the threatened species database in cases where habitat is to be impacted/removed.

It is unlikely that aquatic/ riparian fauna will be disturbed. It is noted that there is a known osprey pole on the southern side of the river near the boat ramp (-28.954561, 153.465321) . A site inspection was completed on the morning of Monday 30th of January by Blackwood Ecology and a single adult female osprey was observed on the lower platform of the osprey pole. Blackwood Ecology recommended that additional monitoring be completed during initial site disturbance and piling to identify any signs of disturbance on the Ospreys occurring in real time.

4.9 Biodiversity values mapping

Check State Government mapping online.

Interrogation of the NSW Biodiversity Values Mapping shows the proposed worksite to be in an area having threatened species or communities with potential for serious and irreversible impacts; although Council's GIS shows the worksite as being outside of this area – see below.



NSW Biodiversity Value Map



Council's GIS Biodiversity Value Map

No aquatic vegetation is visible or documented to occur within the area. Given the extent of erosion and past disturbance that has occurred (both visibly and based on hydro-survey data) it is highly unlikely that works will impact any aquatic vegetation. A small mangrove sapling at the eastern extent of the rock replenishment works just west of the wharf will be retained if possible.

4.10 Test of significance – threatened species and endangered ecological communities

Consider the following for the purposes of determining if the proposed activity is likely to significantly affect threatened species, endangered ecological communities or their habitats. If there is potential impact on threatened species (e.g., vegetation clearing, substantial changes in hydrology, new night lighting) specialist assistance from an ecologist or environmental scientist is necessary to address this section and may require more detailed assessment.

Matter	Comment
(a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,	No.
(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity - (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	No.

Matter	Comment
<p>(c) in relation to the habitat of a threatened species or ecological community -</p> <p>(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and</p> <p>(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and</p> <p>(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,</p>	No.
<p>(d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),</p>	No.
<p>(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.</p>	No.

The proposed works are unlikely to significantly affect threatened species, endangered ecological communities or their habitats.

4.11 Aboriginal cultural heritage

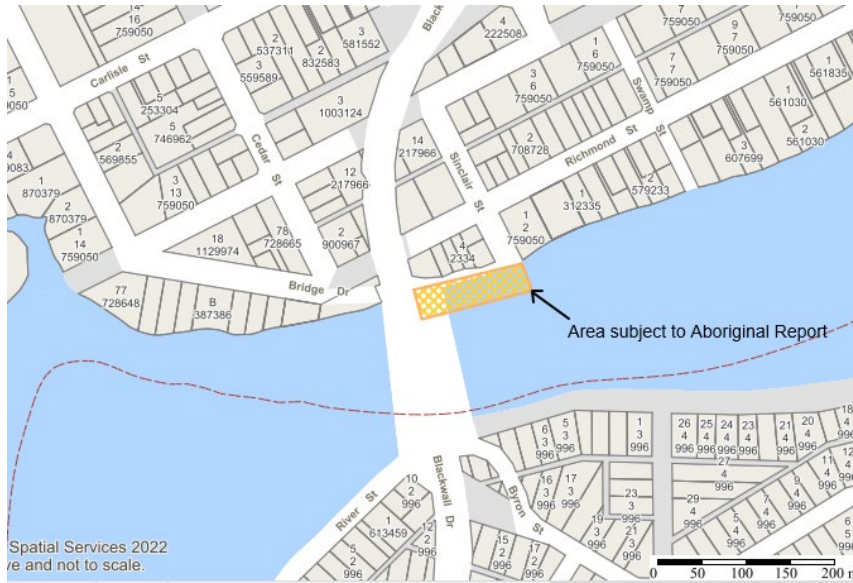
Undertake an AHIMS search and check Council's GIS.

Check Native Title claim maps and NSW Aboriginal land claim data and identify traditional owners.

In December 2011, Everick Heritage Consultants Pty undertook an assessment in relation to riverbank rehabilitation and a boat ramp. This report is referenced in Appendix D. The assessment applied the first stages of the New South Wales Office of Environment and Heritage ('OEH') *Due diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (2010)*, with the following findings:

- No Aboriginal Objects or Places were identified within the Project Area.
- Almost all of the Project Area has been heavily impacted by past development activities and is unlikely to contain physical Aboriginal cultural heritage.
- Consultation with the Jali LALC identified no places of cultural (spiritual) significance.
- The Project Area is adjacent to several places listed as being of local heritage significance.
- The project would appear unlikely to have any impact on the significance of these places.

The assessment also provided preliminary advice on potential impacts to significant historic heritage places.



Area subject to Everick Heritage Consultants Pty Aboriginal Report December 2011

A more recent AHIMS search conducted on 8 February 2023 (see Appendix C) identified an Aboriginal site (not identified in the 2011 report) adjacent to the south bank of the Richmond River approximately 100 m south of the wharf. It is considered that the proposed works are sufficiently far from the site not to cause an impact.

Due diligence process step	Comment
1 Will the activity disturb the ground surface or any culturally modified trees?	No.
2(a) Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?	Yes, a recent AHIMS search identified an Aboriginal site approximately 100 m south of the proposed works.
2(b) Are there any other sources of information of which a person is already aware?	Yes, the aforementioned due diligence assessment by Everick Heritage Consultants Pty Ltd in December 2011.
2(c) Are there any landscape features that are likely to indicate the presence of Aboriginal objects?	No.
<p>If after completing steps above and no information indicates site importance, it is reasonable to conclude that there are no known Aboriginal objects or a low probability of objects occurring in the area of the proposed activity, you can proceed with caution.</p> <p>If the answer to any of the above questions is yes then the following three questions must be answered.</p>	
3 Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?	The previous due diligence investigations by Everick Heritage Consultants Pty Ltd in December 2011 did not identify Aboriginal objects at the worksite.
4 Does a desktop assessment and visual inspection confirm that there are Aboriginal objects on the site or that they are likely to be there?	The previous due diligence investigations by Everick Heritage Consultants Pty Ltd in December 2011 did not identify Aboriginal objects at the worksite.

Due diligence process step	Comment
5 Is further investigation and impact assessment warranted?	No.

4.12 Native Title and Crown land management

If Crown land, confirm reserve purpose and address Native Title through Council's Native Title Manager.

The wharf and boardwalk are predominantly on Crown Land leased to Council. There is an undetermined Aboriginal Land Claim (ALC 53183) over Crown Land Lot 80 DP 728670 (see below hatched image) which was placed over the site on 5 May 2021.



Undetermined Aboriginal Land Claim, Lot 80 DP 728670 (hatched area)

Concurrence has been obtained from the Australian Aboriginal Land Council in the form of a 'non-objection' to the works proceeding. This was received in the form of an email on the 3/4/23.

4.13 Non-Aboriginal heritage item or place or heritage conservation area

Check LEP and State Government heritage register.

The old Wardell ferry approaches at Lot 80, DP 728670 Bridge Drive are listed as a heritage item in Schedule 5 of the Ballina LEP 2012. For over 60 years residents and travellers relied on the Wardell Ferry to cross the river. Initially privately owned, then operated by Tintenbar Shire until its removal in 1964, the ferry accommodated people, animals and vehicles.

A Statement of Heritage Impact (SoHI) was prepared by Heritage Management & Planning Pty Ltd to support this REF. The SoHI confirmed that the proposed works did not pose a risk to the heritage items listed within the vicinity (including I85).

4.14 Interests of external stakeholders (e.g. adjoining land owners, lease holders)

As stated earlier, most of the work will be done on Crown Land leased to Council, and on Lot 80 DP 728670 which is also Crown Land and subject to an undetermined Aboriginal land claim.

4.15 Hazards mapping

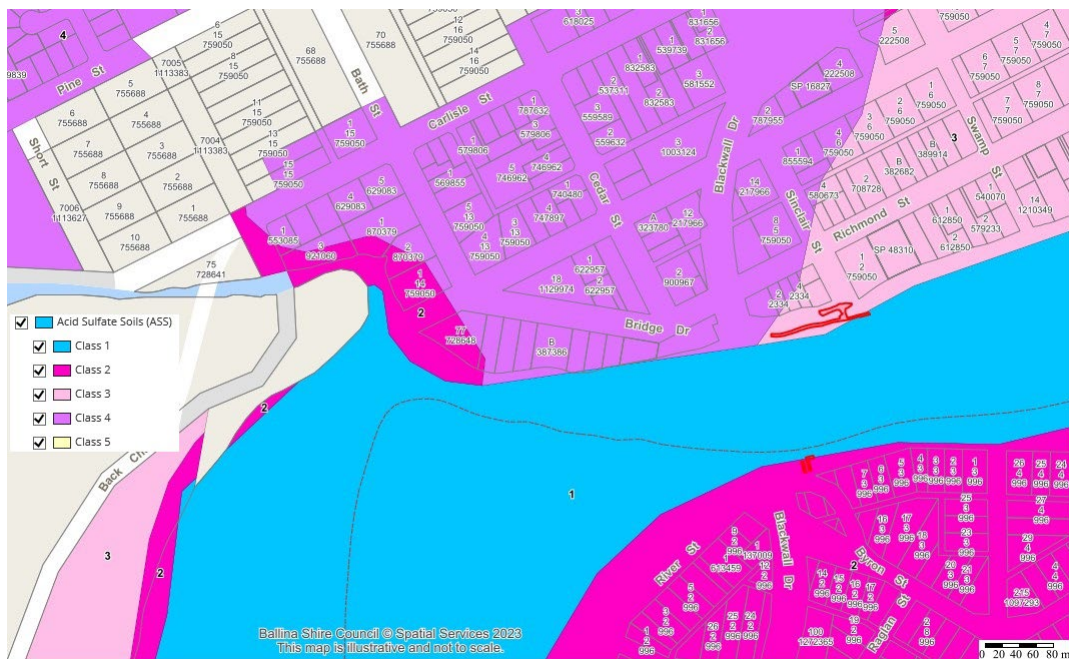
Is the site affected by bushfire hazard?

Is the land subject to contamination?

Is the site flood prone?

Other

The worksite and works compound are in areas with a probability of occurrence of ASS Classes 1 to 4 as indicated below. The probability of occurrence at the worksite is 'high' east of the bridge and 'low' west of the bridge.



ASS planning map

This worksite is not identified as bushfire prone land on Council's GIS.

The worksite is mapped as having a high/extreme flood hazard on Council's GIS.

The worksite is not identified as contaminated on Council's GIS. No evidence of contamination was visible during a site inspection.

Section 5 APPROVALS, LICENCES and PERMITS

Item	Locations that may trigger an external approval, licence or permit	Check one	
5.1	Working in an area containing endangered, threatened, vulnerable or protected species, populations, ecological communities or critical habitat (flora and fauna) <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> – <i>Department of Primary Industries—Fishing (DPI–Fishing)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.2	Working on land reserved under the National Parks and Wildlife Act (e.g. National Park, Nature Reserve, Aboriginal area, wilderness area, conservation area or wild river) <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.3	Working in an area of national environmental significance (Ramsar wetlands, threatened species, migratory birds, World Heritage, National Heritage, nature reserve, etc) or on Commonwealth land or marine area <ul style="list-style-type: none"> – <i>Department of Agriculture, Water and the Environment (Commonwealth)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.4	Working within an area that is subject to any conservation agreement entered into under the <i>National Parks and Wildlife Act 1974</i> <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.5	Working within an area that is subject to any plan of management under the <i>National Parks and Wildlife Act 1974</i> <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.6	Working within an area that is subject to any joint management agreement under the <i>National Parks and Wildlife Act 1974</i> <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.7	Working in an area subject to a joint management agreement entered into under the <i>Threatened Species Conservation Act 1995</i> <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.8	Working in an area subject to a biobanking agreement entered into under Part 7A of the <i>Threatened Species Conservation Act 1995</i> that applies to the whole or part of the land to which the activity relates <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.9	Working in an aquatic reserve or in marine vegetation such as seagrass, mangroves, saltmarsh, etc <ul style="list-style-type: none"> – <i>Department of Primary Industries—Fishing (DPI–Fishing)</i> – <i>Department of Primary Industries—Marine Parks (DPI–Marine Parks)</i> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE–EES Group)</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.10	Working in a Marine Park declared under the Marine Parks Act <ul style="list-style-type: none"> – <i>Department of Primary Industries—Marine Parks (DPI–Marine Parks)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Item	Locations that may trigger an external approval, licence or permit	Check one	
5.11	Dredging or reclamation of water. (Note that councils do not need approval for a controlled activity under the <i>Water Management Act 2000</i>) <ul style="list-style-type: none"> – <i>Department of Primary Industries—Fishing (DPI—Fishing); and/or</i> – <i>NSW Water</i> – <i>Transport for NSW</i> <p>A permit for dredging and reclamation has already been obtained from NSW DPI Fisheries</p>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.12	Enlarge, deepen or sink a new water bore <ul style="list-style-type: none"> – <i>NSW Water</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.13	An activity that will pollute water (e.g. dewatering) <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Environment, Energy and Science Group (DPE—EPA Group)</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.14	Working within the curtilage of a 'Heritage Place' or 'Heritage Item' identified on the Ballina LEP Heritage Schedule, the State Heritage Register or the National Heritage List <ul style="list-style-type: none"> – <i>Australian Heritage Council</i> – <i>Heritage NSW</i> – <i>Heritage Council of NSW</i> – <i>Ballina Shire Council</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.15	Working within a 'heritage conservation area' identified in Ballina LEP Schedule 5 Environmental Heritage – Part 2 <ul style="list-style-type: none"> – <i>Ballina Shire Council</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.16	Working where a 'Relic' is likely to be discovered (e.g. Archaeological Zoning Plans) <ul style="list-style-type: none"> – <i>Heritage Council of NSW; or</i> – <i>Heritage NSW</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.17	Working near Aboriginal relics or places where an Aboriginal Heritage Impact Permit (AHIP) may be required; working on land or water successfully claimed by traditional owners <ul style="list-style-type: none"> – <i>Jali Local Aboriginal Land Council</i> – <i>Heritage NSW</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.18	An activity comprising a fixed or floating structure in or over a navigable waterway <ul style="list-style-type: none"> – <i>Transport for NSW</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.19	An activity comprising work on Crown land not subject to a plan of management <ul style="list-style-type: none"> – <i>Department of Planning and Environment—Crown Lands (DPE—Crown Lands)</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.20	Working at sites at which asbestos or asbestos-containing materials exist. (Determine if a licence or exemption will be required) <ul style="list-style-type: none"> – <i>SafeWork NSW</i> 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Are any permit(s) required?

 Yes No

If **Yes**, please indicate what permit(s) are required:

Check box if required

- | | | |
|---|---------------------------|-------------------------------------|
| A | Fisheries Permit | <input checked="" type="checkbox"/> |
| B | Marine Park Permit | <input type="checkbox"/> |
| C | Other: Enter permit name. | <input type="checkbox"/> |

If **Yes**, but no permits are required, please indicate why not:

NA

NOTE: If you have checked any **Yes** in the table above then you must do one of the following:

- 1 Attach a copy of the approval, licence or permit to the final REF, OR
- 2 Detail who is responsible for obtaining the approval, licence or permit, OR
- 3 Explain why the project is exempt.

NOTE: If you have checked **Yes** at any item in the table above, a referral to the relevant authority may still be required under the Transport and Infrastructure SEPP, even if a permit or approval is not required. A period of 21 days is allowed for response. All responses are to be considered and included in this assessment.

Section 6 ENVIRONMENTAL IMPACT ASSESSMENT

If an impact is predicted, place a 1, 2 or 3 in columns 7, 8 and 9. Multiply these three scores to obtain the environmental score in column 10.

For each of columns 7, 8 and 9:

1 = Minor

2 = Moderate

3 = Major

Projects with any HIGH environmental score (greater than or equal to 10) will require specialist advice to assess environmental issues or re-evaluation of the project options or mitigation measures. It is recommended that there is consultation with your supervisor to determine the most appropriate course of action. Where the project is modified, a revised REF will be required.

In relation to impacts consider type, extent, size, duration, severity and geographic area, importance and level of community concern/interest.

Columns:

4	5	6	7	8	9	10
<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.1	AIR	Construction: Dust generation (excavating, disturbing soil, stockpiling, trenching, erosion-prone sites, clearing of vegetation, transporting soil, etc). Fumes, odours and other air pollution from vehicles, equipment, machinery or other activities.	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Dust generated from construction activities. Fumes generated from construction equipment and transport vehicles.	Manage dust as follows: water suppression, re-establishment of vegetation cover, stockpile management, covering loads, preventing spoil tracking onto roads and halting works on site in extreme wind events. Only operate clean, well-maintained equipment and vehicles, with equipment being cleaned before being brought to the site. Inspect dust controls daily and ensure they are adequately maintained. Construction works must cease during strong winds or in weather conditions where high levels of dust or air borne particulates are likely. Vehicles transporting waste or other materials that may produce odours or dust must be covered during transportation. Provide and implement a 'Dust - Air Quality Management Plan" (include escalation protocols and triggers).	1	1	1	1

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.2		Operation: Fumes, odours and other air pollution from vehicles, equipment, machinery or other activities.	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	No change from current situation.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

6.3	SOIL & WATER	<p>Construction: Polluting waterways, wetlands, stormwater drains or groundwater (e.g. storing, transporting, handling or disposing of oils, fuels, pesticides, chemicals, pit/trench water or other liquids).</p> <p>Machinery related spills (e.g. fuel, oil, hydraulic fluid).</p> <p>Sedimentation of waterways, wetlands, stormwater drains or groundwater (e.g. excavating, disturbing soil, stockpiling, trenching, concrete cutting, access tracks, erosion-prone sites, etc).</p>	<p><input type="checkbox"/> No impact <i>If checked, go to next issue</i></p>	<p>Ensure that sediment generated by the exposure of soil is not transported into the main water body.</p> <p>Minimise risk of water pollution from oil or petroleum products and minimise disturbance to the streambed substrate.</p> <p>Avoid fines, clay and other sediment un-necessarily entering the waterway and potentially impacting on aquatic habitats.</p> <p>Reduce the potential for the bank to continue to erode behind the rock armouring.</p> <p>Time the works to reduce delays and minimise impacts on the aquatic environments.</p> <p>Ensure that impacts on marine vegetation, aquatic habitats and the riparian zone are minimised.</p> <p>Excavations and their dewatering may expose ASS and will require an ASS management plan.</p>	<p>Erosion and sediment mitigation devices are to be erected in a manner consistent with the currently accepted Best Management Practice (i.e. Landcom [2004], Managing Urban Stormwater: Soils and Construction [4th Edition]) to prevent the entry of sediment into the waterway, or mobilisation of sediment within the waterway, prior to any earthworks being undertaken.</p> <p>These erosion and sediment devices are to be maintained in good working order for the whole duration of the works and subsequently until the worksite has been stabilised and the risk of erosion and sediment movement from the site is minimal.</p> <p>Stockpiles should be appropriately controlled by sediment fencing or other materials prescribed in the “Blue Book” (i.e. Landcom 2004, Managing Urban Stormwater: Soils and Construction [4th Edition]) to ensure sediments do not enter the waterway.</p> <p>Machinery is not to enter or work from the waterway unless in accordance with works proposed in the DPI Fisheries permit.</p> <p>Only clean rock is to be used in construction. Geotextile fabric</p>	2	2	2	8
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					<p>is to be used to underlay the rock used to armour the bank.</p> <p>Works are to be undertaken during low flows in the Richmond River (i.e. non-flood flows) and when Bureau of Meteorology forecast for the Northern Rivers district forecast region (available at: www.bom.gov.au/nsw/forecasts/map.shtml) indicates several days of clear, dry weather.</p> <p>Harm to marine vegetation is not permitted. If harm is caused to marine vegetation work is to stop. The harm is to be documented and reported to the contact officer who may direct that the removed, harmed or damaged marine vegetation on water land be restored.</p> <p>When working near marine vegetation (seagrass, mangroves and saltmarsh) and aquatic vegetation (phragmites and other aquatic vegetation) on water land, these areas are to be identified and appropriately delineated as “No Go” areas (with the aim of avoiding harm to these areas). Harm to aquatic or marine vegetation including removing or moving vegetation on water land outside the permit area approved under the authority of the Fisheries permit is not permitted. Such removal, harm or movement caused to</p>				
--	--	--	--	--	---	--	--	--	--

Columns:

4	5	6	7	8	9	10
<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
				aquatic and marine vegetation is to be documented and reported to the DPI contact officer who may direct that the removed, harmed or damaged aquatic vegetation on water land be restored.					
6.4		Operation: Polluting waterways, wetlands, stormwater drains or groundwater (e.g. storing, transporting, handling or disposing of oils, fuels, pesticides, chemicals, pit/trench water or other liquids).	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	No change from current situation.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

Columns:	4	5	6	7	8	9	10
			<i>Multiply the three scores:</i>	1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.5	NOISE & VIBRATION	Construction: Noise/vibration (e.g. rock breakers, concrete cutters, jackhammers, chainsaws, compressors, excavators, backhoes, trucks, vehicles, cranes, steel plate movements, generators, etc).	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Short-term impacts during construction involving operation of equipment and tools including trucks, excavators, agitators, etc.	<p>Notify neighbours of project dates and likely noise impacts.</p> <p>Minimise plant and tool noise by providing regular maintenance.</p> <p>Minimise construction noise by turning machinery off when not in use.</p> <p>Use reverse alarms that meet Australian Standards on all machinery.</p> <p>Demolition, excavation and construction work will comply with AS 2436:2010 'Guide to Noise Control on Construction, Maintenance and Demolition Sites' and 'NSW Interim Construction Noise Guidelines (DECC 2009).</p> <p>Record noise complaints in the complaints register. Record suitable identification/description of the noise source (e.g. continual/impulsive) and general location of the complaint. Noise complaints will be investigated and remedial action taken.</p> <p>Operating hours and times will be restricted as prescribed in Section 1.3 of the REF.</p>	2	1	2	4

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.6		Operation: Noise/vibration (e.g. pumps, generators).	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	No change from current situation.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

6.7	CONTAMINATION & WASTE	<p>Construction: Disturbing contaminated soil (e.g. known contamination, ASS, old industrial site, previous landfill, etc).</p> <p>Disturbing old sand mining area or stockpile (radioactivity).</p> <p>Contaminating or polluting land (e.g. storing, handling or disposing of oils, fuels, pesticides, chemicals, pit/trench water or other liquids).</p> <p>Excavating public road material for reuse in the road reserve.</p> <p>Environmental problems caused by generating, storing, handling, transporting or disposing of waste (e.g. soils, building materials, oils, solvents, toilets, etc).</p> <p>Restricting current and potential activities associated with the land (e.g. amenity, buildings, parking).</p>	<p><input type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p>	<p>To reduce the threat of an unintended pollution incident impacting upon the aquatic environment.</p> <p>Materials not reused on site will be classified as waste and subject to waste management regulations.</p>	<p>Keep work areas free of rubbish and clean-up work areas at the end of each day.</p> <p>Remove all waste material from site once the works are completed.</p> <p>Notify BSC's Public and Environmental Health Section immediately if new information becomes known during demolition or construction that has the potential to alter previous conclusions about site contamination.</p> <p>Notify the EPA immediately in response to incidents causing or threatening actual or potential harm to the environment in accordance with section 148 of the POEO Act (via EPA Environment Line on 131 555).</p> <p>Proposed site activities do not include soil excavation, accordingly, the potential for disturbance of acid sulfate soil is low.</p> <p>Waste must be disposed of at a licenced waste or recycling facility or in accordance with NSW EPA Resource Recovery Orders and Exemptions as appropriate.</p> <p>Export/import of waste (including fill or soil) to the site must be in accordance with:</p> <ul style="list-style-type: none"> • Protection of the Environment Operations 	1	1	1	1
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Columns:

4	5	6	7	8	9	10
<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score
				<p>(POEO) Act 1997, POEO (Waste) Regulation 2014 and NSW EPA 'Waste Classification Guidelines', which may require laboratory testing in accordance with NSW EPA requirements; or</p> <ul style="list-style-type: none"> • Current NSW EPA Resource Recovery Orders and Exemptions. Any material subject to a resource recovery exemption received at the site must be accompanied by documentation demonstrating compliance with the exemption conditions. This documentation must be kept and made available to BSC's Planning and Environmental Health Division upon request. <p>It is an offence to transport waste to a place that cannot lawfully be used as a waste facility.</p>				

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score
6.8		<p>Operation: Contaminating or polluting land (e.g. storing, handling or disposing of oils, fuels, pesticides, chemicals, pit/trench water or other liquids).</p> <p>Environmental problems caused by generating, storing, handling, transporting or disposing of waste (e.g. soils, building materials, oils, solvents, etc).</p> <p>Restricting current and potential activities associated with the land (e.g. amenity, buildings, parking).</p>	<p><input checked="" type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p> <p>No change from current situation.</p>	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.9	TRANSPORT	Construction: Restricting or affecting transport (e.g. pedestrian, car, bus, train, airports, boats, river crossings, bus stops, public transport corridors and infrastructure, construction-related disturbances, property access, parking restrictions, etc).	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Construction works and associated vehicle movements can significantly impact the safety of road users and pedestrians.	Prepare a Traffic Control Plan to manage all vehicle movements to and from the site, including consideration of vehicles, pedestrians and cyclists in the vicinity. Erect appropriate signage; details to be confirmed by appropriate BSC personnel responsible for site safety during the works. Before vehicles leave the premises: <ul style="list-style-type: none">• Cover all vehicle/trailer loads of waste or excavation spoil to prevent spillage or escape of dust, waste or spoil.• Remove mud, splatter, dust and other material likely to fall or be cast off from the wheels, underside or body of vehicles, trailers or motorised plant.	1	1	1	1
6.10		Operation: Restricting or affecting transport (e.g. pedestrian, car, bus, train, airports, boats, river crossings, bus stops, public transport corridors and infrastructure, construction-related disturbances, property access, parking restrictions, etc).	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	No change from current situation.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

6.11	FLORA & FAUNA	<p>Construction: Clearing or modifying native vegetation (including trees, shrubs, grasses, roots, herbs or aquatic species).</p> <p>Clearing or modifying critical habitat.</p> <p>Clearing in a Biodiversity Value mapped area.</p> <p>In the case of threatened species, populations and ecological communities and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats.</p> <p>Introducing or spreading weeds (including noxious) or vermin.</p> <p>Introducing bushfire risk factors.</p> <p>Endangering any species of animal, plant or other form of life, whether living on land, in water or in the air (e.g. any danger to birds in the locality).</p> <p>Displacing, disturbing or damaging terrestrial or aquatic fauna (e.g. creating a barrier to fauna movement, clearing remnant vegetation or wildlife corridors, collisions, etc).</p> <p>Any other environmental impact on the ecosystems of the locality.</p>	<p><input type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p>	<p>DPI Fisheries needs to be aware of fish kills so that it can assess the cause and mitigate further incidents in consultation with relevant authorities. They are also potentially contentious incidents from the public perspective. Work practices may need to be modified to reduce the impacts upon the aquatic environment.</p> <p>To ensure that impacts on aquatic habitats and the riparian are minimised.</p> <p>“Degradation of native riparian vegetation along NSW water courses” is listed as a Key Threatening Process under the provisions of the Fisheries Management Act 1994.</p> <p>“Removal of large woody debris from NSW rivers and streams” is listed as a Key Threatening Process under the provisions of the Fisheries Management Act 1994. This approval has been granted on the basis that snags are not to be removed.</p>	<p>A visual inspection of the waterway for dead or distressed fish (indicated by fish gasping at the water surface, fish crowding in pools or at the creek’s banks) is to be undertaken twice daily during the works.</p> <p>Observations of dead or distressed fish are to be immediately reported to the DPI Contact Officer by the Permit Holder.</p> <p>In such a case all works are to cease until the issue is rectified and approval is given to proceed.</p> <p>If requested, the Permit Holder is to commit resources to the satisfaction of the DPI Contact Officer for an effective fish rescue, if in the view of that officer, a fish kill event is imminent and likely to occur within or adjacent to the works area due to conditions associated with weather, water quality and other parameters.</p> <p>Material storage and stockpiling is not to be undertaken on water land, marine vegetation (saltmarsh, mangrove, and seagrass) riparian or aquatic vegetation.</p> <p>Stockpiling must be undertaken in a manner to avoid harm to these types of vegetation or water land. Stockpiles should also be</p>	2	1	2	4
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Columns:	4	5	6	7	8	9	10
			<i>Multiply the three scores:</i>	1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score
				<p>located away from adjacent water land.</p> <p>No snags outside of the works area described in the permit application are to be removed, realigned or relocated without first obtaining the authority of the Senior Fisheries Manager, Coastal Systems.</p> <p>Care must be taken when operating machinery in close proximity to all trees. Mechanical wounding to the trunks and limbs of the trees should be avoided.</p> <p>Additional monitoring be completed during initial site disturbance and piling to identify any signs of disturbance on the Ospreys occurring in real time.</p>				

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score
6.12		<p>Operation: Introducing or spreading weeds (including noxious) or vermin. Introducing bushfire risk factors.</p> <p>In the case of threatened species, populations and ecological communities and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats.</p> <p>Endangering any species of animal, plant or other form of life, whether living on land, in water or in the air (e.g. any danger to birds in the locality).</p> <p>Displacing, disturbing or damaging terrestrial or aquatic fauna (e.g. creating a barrier to fauna movement, clearing remnant vegetation or wildlife corridors, collisions, etc).</p> <p>Any other environmental impact on the ecosystems of the locality.</p>	<p><input checked="" type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p> <p>No change from current situation.</p>	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
6.13	SOCIAL	<p>Construction: Creating a nuisance to the community (e.g. impact on amenity through noise, perceived risk of fires, explosions, property value devaluation, etc).</p> <p>Creating financial loss to members of the community (e.g. restricting access to commercial premises, changing land use, etc).</p>	<p><input type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p> <p>Amenity will be impacted through construction noise and increased traffic congestion.</p>	<p>Contractors/workers must be mindful of the needs of the local community.</p> <p>Notify/consult with potential impacted parties/landholders prior to construction aimed at minimising/eliminating any adverse impacts.</p> <p>Public assets must be restored to pre-construction status.</p> <p>Works will only be undertaken during specified hours.</p>	2	1	2	4

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.14		<p>Operation: Creating a nuisance to the community (e.g. impact on amenity through noise, perceived risk of fires, explosions, property value devaluation, etc).</p> <p>Creating quantifiable financial loss to members of the community (e.g. restricting access to commercial premises, changing land use, etc).</p>	<p><input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i></p>	Proposed repair works will improve amenity for the local community.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
6.15	HERITAGE	<p>Construction: Affecting a locality, item, place or building having aesthetic, anthropological, archaeological, architectural, historical, scientific, cultural or social significance or other special value (e.g. visual effect on adjoining heritage buildings or items; disturb, move, excavate Aboriginal object) or working where heritage items could be found.</p> <p>Affecting any Aboriginal heritage (e.g. engravings, middens, carved trees, grinding grooves, paintings, burial sites, etc).</p>	<p><input type="checkbox"/> No impact <i>If checked, go to next issue</i></p>	The worksite is highly disturbed however unexpected Aboriginal artefacts could be uncovered during excavations below natural ground level, albeit the risk is low.	<p>If Aboriginal heritage objects are uncovered, works must cease immediately and Jali LALC and relevant Traditional Owners contacted.</p> <p>Works in the vicinity of the find would not re-commence until clearance has been received from BSC Project Manager and NSW OEH.</p> <p>A Stop Work Procedure (SWP) must be implemented in recognition of the potential, albeit low potential for discovery of unexpected or incidental finds.</p> <p>Note that any works that may reveal or disturb cultural heritage objects or sites will require an Aboriginal Heritage Impact Permit (AHIP) from OEH in order for the find(s) to be mitigated (if avoidance is not an option).</p>	1	1	2	2

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.16		<p>Operation: Affecting a locality, item, place or building having aesthetic, anthropological, archaeological, architectural, historical, scientific, cultural or social significance or other special value (e.g. visual effect on adjoining heritage buildings or items; disturb, move, excavate Aboriginal object) or working where heritage items could be found.</p> <p>Affecting any Aboriginal heritage (e.g. engravings, middens, carved trees, grinding grooves, paintings, burial sites, etc).</p> <p>Affecting land claimed by traditional owners.</p>	<p><input checked="" type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p>	No change from current situation.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
6.17	VISUAL & OTHER ENVIRONMENTAL ISSUES	<p>Construction: The effect of an activity on any wilderness area (within the meaning of the <i>Wilderness Act 1987</i>) in the locality in which the activity is intended to be carried on.</p> <p>Changing the visual or scenic landscape (e.g. impacting or restricting views).</p> <p>Transforming a locality (e.g. significant earthworks).</p>	<p><input type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p>	To ensure that habitats are restored as quickly as possible, public safety is not compromised, aesthetic values are not degraded and sediment inputs into the waterway are reduced.	On completion of the works, the worksite is to be rehabilitated and stabilised including: <ul style="list-style-type: none"> • Removal of surplus construction materials and temporary structures (other than silt fences and other erosion and sediment control devices) installed during the course of the works. • Appropriate maintenance of erosion and sediment control devices until the site has stabilised. 	1	1	1	1

Columns:	4	5	6	7	8	9	10
	<i>Multiply the three scores:</i>			1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.18		<p>Operation: Any other risk to the safety of the environment (e.g. long-term effects on the environment as a result of waste emissions).</p> <p>Increasing demands on resources (natural or otherwise) that are or are likely to become in short supply (e.g. demand on water use).</p> <p>Changing the visual or scenic landscape (e.g. impacting or restricting views).</p> <p>Transforming a locality (e.g. significant earthworks).</p> <p>Any cumulative environmental effect with other existing or likely future activities.</p> <p>Reducing the range of beneficial uses of the environment (e.g. effect on surrounding land uses and considering response of affected land owners).</p>	<p><input checked="" type="checkbox"/> No impact</p> <p><i>If checked, go to next issue</i></p>	Repairs to the boardwalk and wharf will improve the visual amenity value of the site.	NA	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

Columns:	4	5	6	7	8	9	10
			<i>Multiply the three scores:</i>	1-3	1-3	1-3	=

Item	Issue	Examples of impacts	Description of impacts AND causes <i>NOTE: Either check 'No impact' OR provide details</i>	Project-specific control measures	Likelihood	Extent	Sensitivity	Environmental score	
6.19	OTHER	Click here to enter text.	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	<p>A DPI Fisheries Compliance Officer may wish to check compliance of works with imposed conditions.</p>	<p>A Construction Environmental Management Plan (CEMP) shall be prepared by the contractor detailing the requirements of this REF and any other approvals/permits. The DPI Fisheries permit (or a true copy), a copy of the determined REF (i.e. Part V Assessment), CEMP and other approvals such as landholder's consent must be carried by the permit holder or sub-contractor operating on-site at all times during work activity in the permit area.</p> <p>The permit holder must ensure that all works authorised by this permit are restricted to the permit area and undertaken in a manner consistent with those described in the application made to DPI Fisheries dated 25 November 2022. Other works which have not been described, excepting those activities required by this permit, are not to be undertaken.</p>	1	1	1	1

TOTAL ENVIRONMENTAL SCORE:	27
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NOTE 1: For the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of this Act or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

NOTE 2: In assessing the impacts on flora and fauna, Council must show that it has taken into account:

- (a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,
- (b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:
 - (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
 - (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,
- (c) in relation to the habitat of a threatened species or ecological community:
 - (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and
 - (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and
 - (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,
- (d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),
- (e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

Section 7 ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2021, SECTION 171(2) CHECKLIST

In addition to the requirements of the “Guidelines for Division 5.1 Assessments”, the following factors listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021 must be considered to assess the likely impacts of the proposal on the environment.

Compliance with section 171(2) of the EPA Regulation 2021

Environmental factor	IMPACTS:				
		Minor	Medium	Major	
<p>(a) Any environmental impact on the community?</p> <p>Construction works will have short-term impacts on the community, such as noise, dust, etc. A CEMP will be developed to minimise those impacts.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input checked="" type="checkbox"/> Negative <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input checked="" type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(b) Any transformation of the locality?</p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Environmental factor	IMPACTS:				
			Minor	Medium	Major
<p>(c) Any environmental impact on the ecosystems of the locality?</p> <p>Environmental safeguards will be applied during construction to manage the risk to flora and fauna.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality?</p> <p>The boardwalk and wharf are currently unusable. The proposed works will restore the aesthetic and recreational value of the site. The revetment works will reduce future risk of flood damage to the riverbank.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input checked="" type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input checked="" type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(e) The effect on any locality, place or building that has—</p> <p>(i) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or</p> <p>(ii) other special value for present or future generations.</p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Environmental factor	IMPACTS:				
			Minor	Medium	Major
<p>(f) Any impact on the habitat of protected animals, within the meaning of the <i>Biodiversity Conservation Act 2016</i>?</p> <p>Environmental safeguards will be applied during construction to manage the risk to flora and fauna.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(g) Any endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air?</p> <p>Environmental safeguards will be applied during construction to manage the risk to flora and fauna.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(h) Any long-term effects on the environment?</p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Environmental factor	IMPACTS:				
			Minor	Medium	Major
<p>(i) Any degradation of the quality of the environment?</p> <p>Click here to enter text.</p>	<p><input checked="" type="checkbox"/> Nil</p> <p><i>If checked, go to next factor</i></p>	<p><input type="checkbox"/> Positive</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>
<p>(j) Any risk to the safety of the environment?</p> <p>The wharf and boardwalk are currently unsafe and public access is restricted. The repair works will improve the long-term safety of the facility.</p>	<p><input type="checkbox"/> Nil</p> <p><i>If checked, go to next factor</i></p>	<p><input checked="" type="checkbox"/> Positive</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input checked="" type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>
<p>(k) Any reduction in the range of beneficial uses of the environment?</p> <p>Click here to enter text.</p>	<p><input checked="" type="checkbox"/> Nil</p> <p><i>If checked, go to next factor</i></p>	<p><input type="checkbox"/> Positive</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>
		<p><input type="checkbox"/> Negative</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>	<p><input type="checkbox"/> Short-term</p> <p><input type="checkbox"/> Medium-term</p> <p><input type="checkbox"/> Long-term</p>

Environmental factor	IMPACTS:				
			Minor	Medium	Major
<p>(l) Any pollution of the environment?</p> <p>Environmental safeguards will be applied during and post construction to manage the risk of pollution.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(m) Any environmental problems associated with the disposal of waste?</p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(n) Any increased demand on natural or other resources that are, or are likely to become, in short supply?</p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Environmental factor	IMPACTS:				
			Minor	Medium	Major
(o) Any cumulative environmental effect with other existing or likely future activities? Click here to enter text.	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? Click here to enter text.	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
(q) Any applicable local strategic planning statements, regional strategic plans or district strategic plans? The proposed repair works are consistent with strategic actions in the Wardell Strategic Plan 2015 – 2035.	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input checked="" type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input checked="" type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
		<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Environmental factor	IMPACTS:				
			Minor	Medium	Major
(r) Other relevant environmental factors. Click here to enter text.	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
	<input type="checkbox"/> Negative		<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Section 8 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Under the environmental assessment provisions of the Environment Protection and Biodiversity Conservation Act 1999, the following Matters of National Environmental Significance are required to be considered to assist in determining whether the proposal should be referred to the Australian Government Department of Agriculture, Water and the Environment.

Factor	IMPACTS:				
		Minor	Medium	Major	
<p>(a) Any impact on a World Heritage property?</p> <p><i>State whether the proposal would impact on a World Heritage property. If yes, describe the extent of the impact. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(b) Any impact on a National Heritage place?</p> <p><i>State whether or not the proposal would impact on a National Heritage place. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Factor	IMPACTS:				
		Minor	Medium	Major	
<p>(c) Any impact on a wetland of international importance?</p> <p><i>State whether the proposal would impact on a Commonwealth-listed wetland of international importance. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(d) Any impact on a listed threatened species or community?</p> <p><i>State whether the proposal would impact on a Commonwealth-listed threatened species or community. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(e) Any impact on listed migratory species?</p> <p><i>State whether the proposal would impact on a Commonwealth-listed migratory species. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Factor	IMPACTS:				
		Minor	Medium	Major	
<p>(f) Any impact on a Commonwealth marine area?</p> <p><i>State whether the proposal would impact on a Commonwealth marine area. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(g) Does the proposal involve a nuclear action (including uranium mining)?</p> <p><i>State whether the proposal would involve a nuclear action. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(h) Additionally, any impact (direct or indirect) on Commonwealth land?</p> <p><i>State whether the proposal would impact (either directly or indirectly) on Commonwealth land. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input checked="" type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term
<p>(f) Any impact on a Commonwealth marine area?</p> <p><i>State whether the proposal would impact on a Commonwealth marine area. If impacts are likely, describe the nature and extent of the impacts.</i></p> <p>Click here to enter text.</p>	<input type="checkbox"/> Negative	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term	<input type="checkbox"/> Short-term <input type="checkbox"/> Medium-term <input type="checkbox"/> Long-term

Section 9 CONCLUSION

9.1 Publishing the REF


	Check one	
Does the activity have a capital investment value of more than \$5 million?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does the activity require an approval or permit in relation to:		
• Fisheries Management Act 1994 (sections 144, 200, 205, 219)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Heritage Act 1977 (section 57)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
• National Parks and Wildlife Act 1974 (section 90)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
• Protection of the Environment Operations Act 1997 (sections 47–49 or 122)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is it in the public interest to publish the REF?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If the answer to any of the above questions is **Yes** then the REF must be published on the Council website OR the NSW Planning Portal.

9.2 Person who prepares this REF

I certify to the best of my knowledge that:


- I have completed this REF, and
- The assessment meets the requirements of sections 1.7, 5.5 and 5.7 of the EPA Act, clause 171(2) of the EPA Regulation and other relevant legislation and guidelines, and
- The information contained in this REF is not materially misleading, and
- My assessment has been adequately completed, and
- My conclusion as to the likely environmental and community impact of the project is reasonable, and is likely to be **LOW** **MODERATE** **HIGH** (*check one*), and
- I am satisfied that, subject to the inclusion of the mitigation measures included in this REF, the project will not have a significant impact on the environment or significantly affect threatened species, populations, ecological communities or their habitats during the construction or operation phases, and
- An Environmental Impact Statement is not required, and
- A Species Impact Statement is not required, and
- A Biodiversity Assessment Report is not required, and
- The REF is required to be published on the Council website or NSW Planning Portal.

Signature:		Date:	14/06/2023
Name (<i>print</i>):	Alistair Weallans		
Position:	Project Engineer - Roads		

Section 10 QUALITY ASSURANCE

10.1 Person who reviews this REF


I have reviewed this REF and agree with the conclusion in section 9.

Signature:		Date:	26/06/2023
Name (print):	Christine Pitman		
Position:	Coordinator Environmental Management		

Section 11 DETERMINATION AND DECISION STATEMENT

11.1 Determining officer – person who determines this REF

- I certify that on behalf of Ballina Shire Council I have reviewed the completed REF.
- 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&A Regulation and the Guidelines approved under clause 170 of EP&A Regulation, and the information it contains is neither false nor misleading.
- The proposed activity is not likely to have a significant impact on the environment and therefore an EIS is not required.
- The proposed activity will be carried out in proximity to a declared area of outstanding biodiversity value but is unlikely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS and BDAR are not required.
- Mitigation measures are required to eliminate, minimise or manage environmental impacts.
- The proposed activity does not require referral to the commonwealth minister for the Environment to determine if the activity is a controlled action under the EPBC Act.
- I conclude that the assessment has been adequately completed and the conclusion as to the likely environmental impact of the project is reasonable.
- The project may proceed subject to the mitigation measures in this REF, as well as any relevant referral approval, licence or permit.
- I determine the REF is required to be published on the Council website or NSW Planning Portal.

Signature:		Date:	6/07/2023
Name (print):	John Truman		
Position:	Director Civil Services		
Site inspected:	Not Required	Date:	N/A

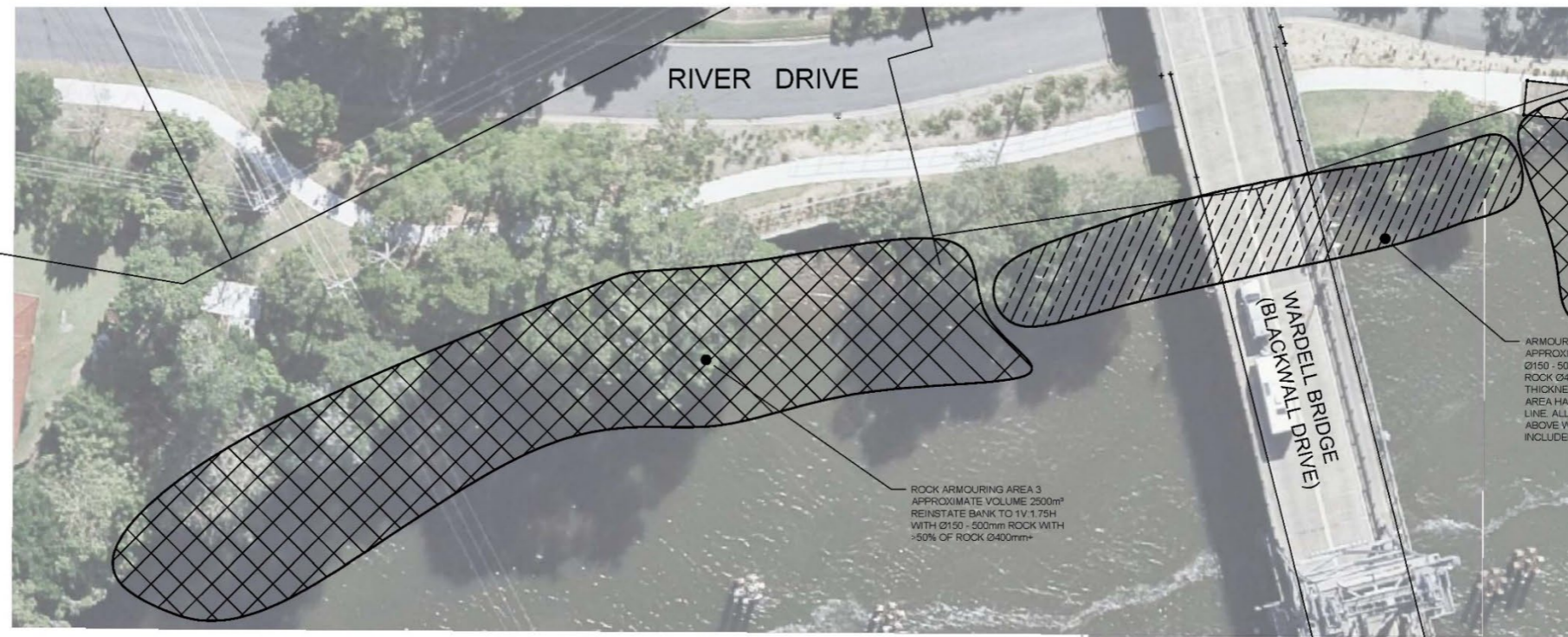
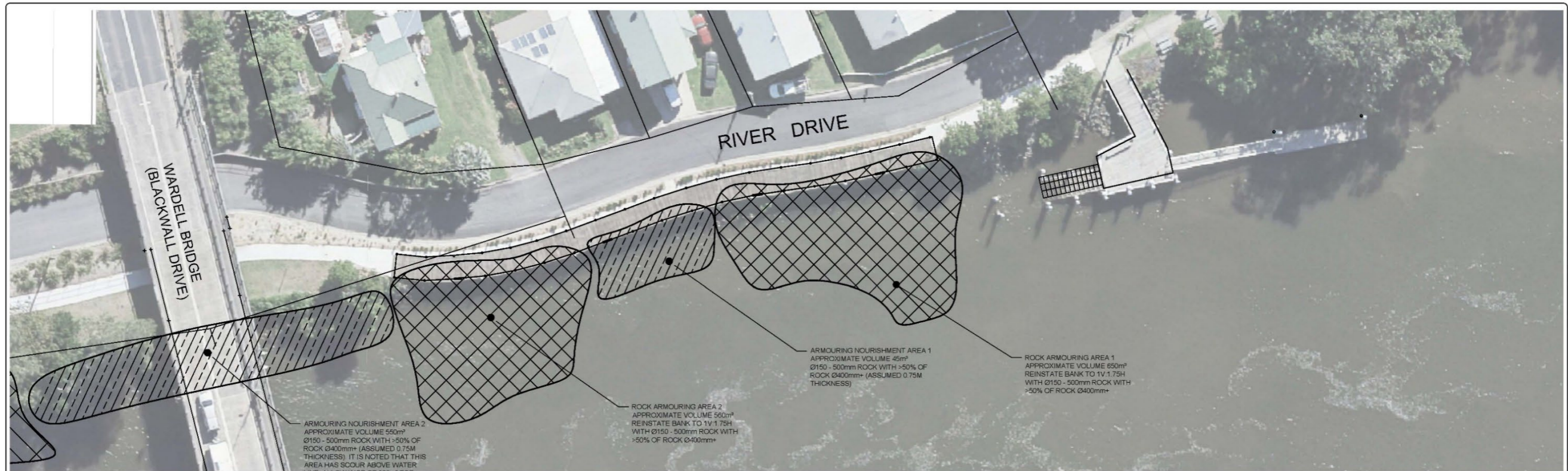
APPENDIX A

Design Plans

See below:

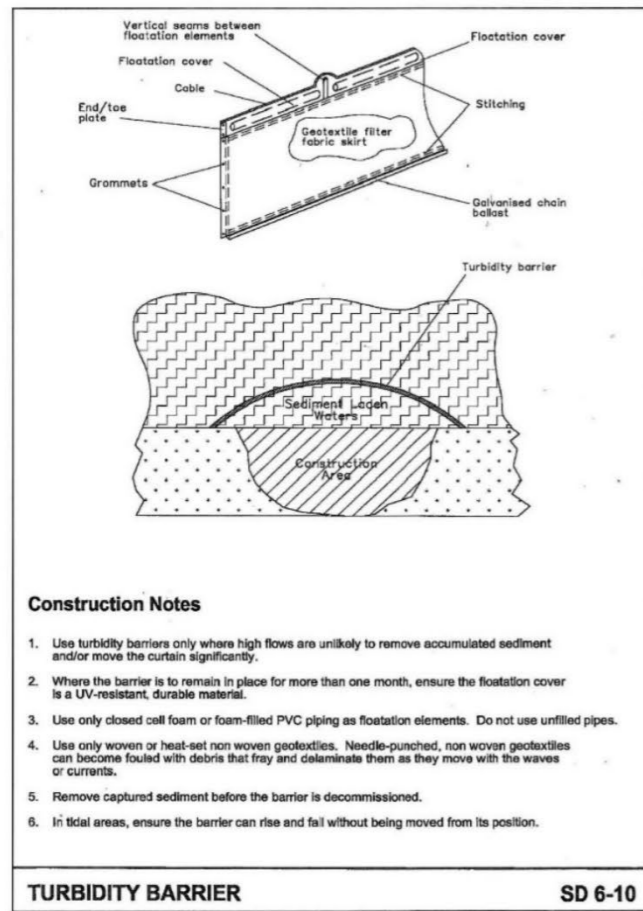
- Approximate Extent of Rock Armouring, Dwg no SK05. Ardill Payne & Partners, 19/8/2022
- Typical section and design specs, revetment wall, main channel Richmond River. Ballina Shire Council, 30/6/2020

Approximate Extent of Rock Armouring, Dwg no SK05. Ardill Payne & Partners, 19/8/2022.



0 10 20 30 40 50 TABLE OF MILLIMETRES 100 150 200 250 300 350 400 450 500 550 600 650				PRELIMINARY ISSUE			
CLIENT: BALLINA SHIRE COUNCIL		PROJECT: WARDPELL WHARF AND BOARDWALK 2022 FLOOD IMPACT REMEDIATION WORKS BRIDGE DRIVE, WARDPELL		TITLE: APPROXIMATE EXTENT OF ROCK ARMOURING		ISSUED FOR INFORMATION PURPOSES ONLY NOT TO BE USED FOR CONSTRUCTION	
A 19/08/2022 PRELIMINARY ISSUE P1 RB		DO NOT SCALE DRAWING. USE WRITTEN DIMENSIONS ONLY THIS PLAN IS COPYRIGHT © ALL RIGHTS RESERVED.		Ardill Payne & PARTNERS ENGINEERS PLANNERS SURVEYORS ENVIRONMENTAL PROJECT MANAGEMENT BALLINA 45 RIVER STREET 02 66863280 GUNNEDAH 285 CONADILLY STREET 02 67429955 info@ardillpayne.com.au		DESIGNED RB DRAWN RB SCALE VARIES - A1 CHECKED DATE 19/08/2022 DATUM AHD APPROVED CAD FILE 11344-HYDRO SURVEY_RawA.dwg JOB No 11344 DWG No SK05 ISSUE A	

Typical section and design specs, revetment wall, main channel Richmond River. Ballina Shire Council, 30/6/2020



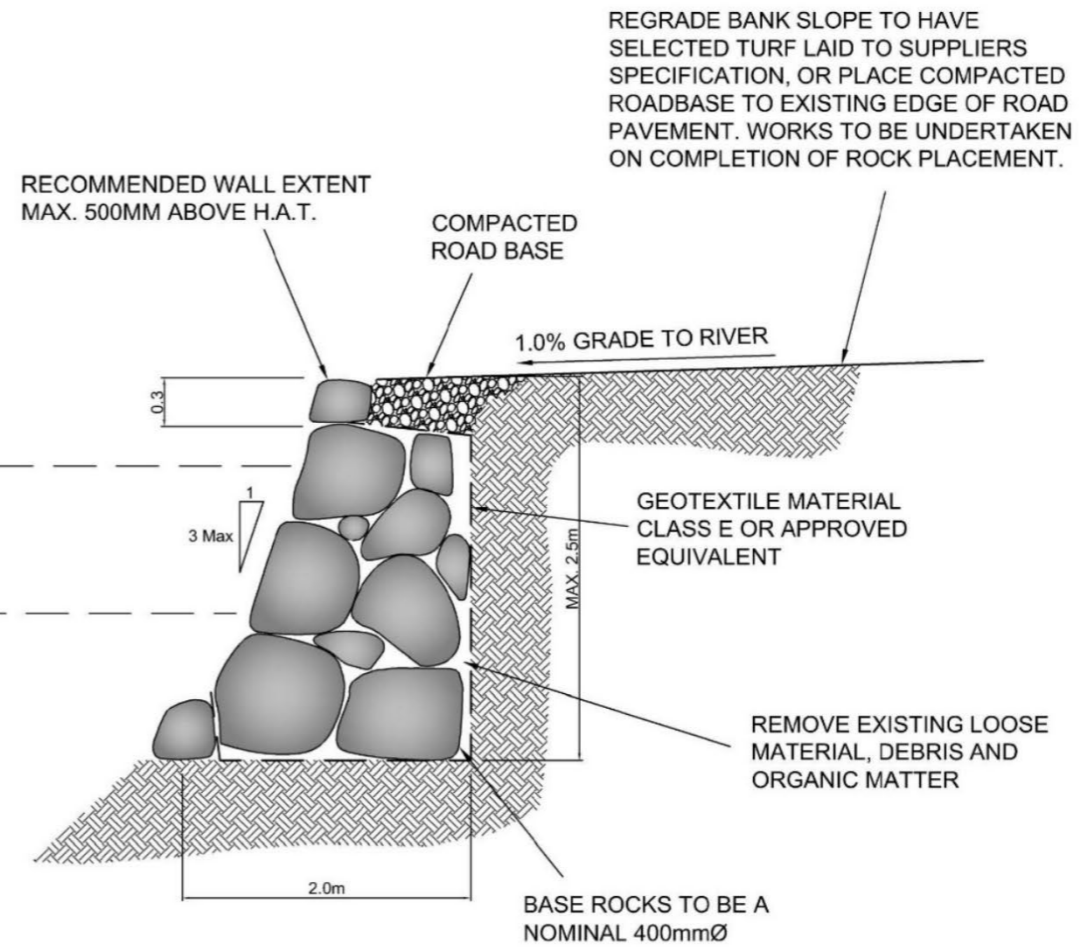
ARMOURING NOTES:
 NOM DIA. D=400mm
 NOM MASS W=200kg
 THE ROCK SHALL LIE WITHIN THE FOLLOWING LIMITES.
 RANGE: D = 300 - 800mm WITH:
 50% > D = 400mm
 AND IN ADDITION AT LEAST 50% BY NUMBER SHALL BE MORE THAN THE SPECIFIED NOMINAL MASS.

HIGHEST ASTRONOMICAL TIDE (H.A.T. KING TIDE)

MEAN HIGH WATER

NOTE:
 FINAL ALIGNMENT AND DESIGN OF ROCK REVETMENT TO BE DETERMINED ONSITE BY SITE OVERSEER

NOTE:
 HIGHEST ASTRONOMICAL TIDE (H.A.T.) AT BALLINA IS 0.9M AHD



TYPICAL SECTION: REVETMENT
 NOT TO SCALE

						SURVEY	DESIGNED	BALLINA SHIRE COUNCIL TYPICAL SECTION & DESIGN SPECS REVETMENT WALL MAIN CHANNEL RICHMOND RIVER	
						DATE 30/06/2020	DRAWN MNF		
						F.B. L.B.	CHECKED		
						DATUM AHD	APPROVED		
					DRAWING Revetment Wall Richmond River.dwg				Scale HORIZONTAL: NOT TO SCALE VERTICAL:
					SHEET	OF	Plan No.	A1	
					Amendments				

APPENDIX B

Community/Agency Consultation Responses

Separate attachments:

- DPI Fisheries Permit # PN22/520 for dredging and reclamation work associated with boardwalk and revetment repair works within the Richmond River, Bridge Drive Road Reserve adjacent Lot 80 DP 728670, Wardell, Ballina Shire Council LGA. DPI (Fisheries), 22 December 2022.

APPENDIX C

Aboriginal Heritage Information Management System Search and any Response from Traditional Owners



AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Wardell Wharf & Boardwalk

Client Service ID : 751541

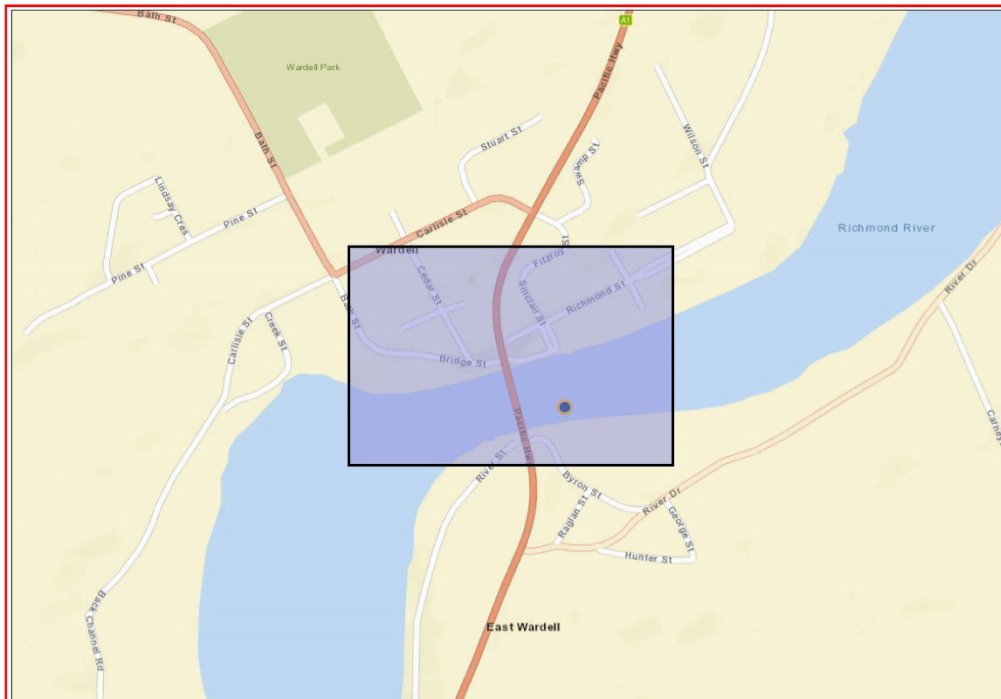
Ballina Shire Council
 PO Box 450
 ballina New South Wales 2478
 Attention: Simon Smith
 Email: simon.smith@ballina.nsw.gov.au

Date: 08 February 2023

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -28.9553, 153.4608 - Lat, Long To : -28.9506, 153.4686, conducted by Simon Smith on 08 February 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:

1	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

Specialist Reports

Separate attachments:

- Structural Remediation of Wardell Wharf and Boardwalk Post 2022 Flood Events, Bridge Drive, Wardell. Ardill Payne & Partners, 30 September 2022.
- Cultural Heritage Due Diligence Assessment, Wardell Riverbank Rehabilitation, Wardell NSW. Everick Heritage Consultants Pty Ltd, December 2011.

APPENDIX E

Reference Documents

Acid Sulfate Soils Assessment Guidelines 1998, published by the Acid Sulfate Soils Management Advisory Committee

<https://www.environment.nsw.gov.au/resources/soils/ASS-Manual-2-Assessment-Guidelines.pdf>

Erosion and Sediment Control info and Blue Book

<https://www.environment.nsw.gov.au/research-and-publications/publications-search/resource-guide-for-local-councils-erosion-and-sediment-control>

RMS Code of Practice – Minor Works in NSW Waterways

<https://www.rms.nsw.gov.au/documents/about/environment/code-practice-minor-work-nsw-waterways.pdf>

Office of Water – Controlled Activities on Waterfront Land

<https://www.industry.nsw.gov.au/water/licensing-trade/approvals/controlled-activities>

Legislation website

<https://www.legislation.nsw.gov.au>

Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW

<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Aboriginal-cultural-heritage/due-diligence-code-of-practice-aboriginal-objects-protection-100798.pdf>