

Review of Environmental Factors

Maintenance Permit for very minor, low impact dredging and reclamation works and harm marine vegetation works associated with maintenance works within Ballina Shire Council LGA

NOTE:

This Review of Environmental Factors (REF) is for projects that have minor and predictable impacts and require a Part 5 assessment under the EPA Act 1979.

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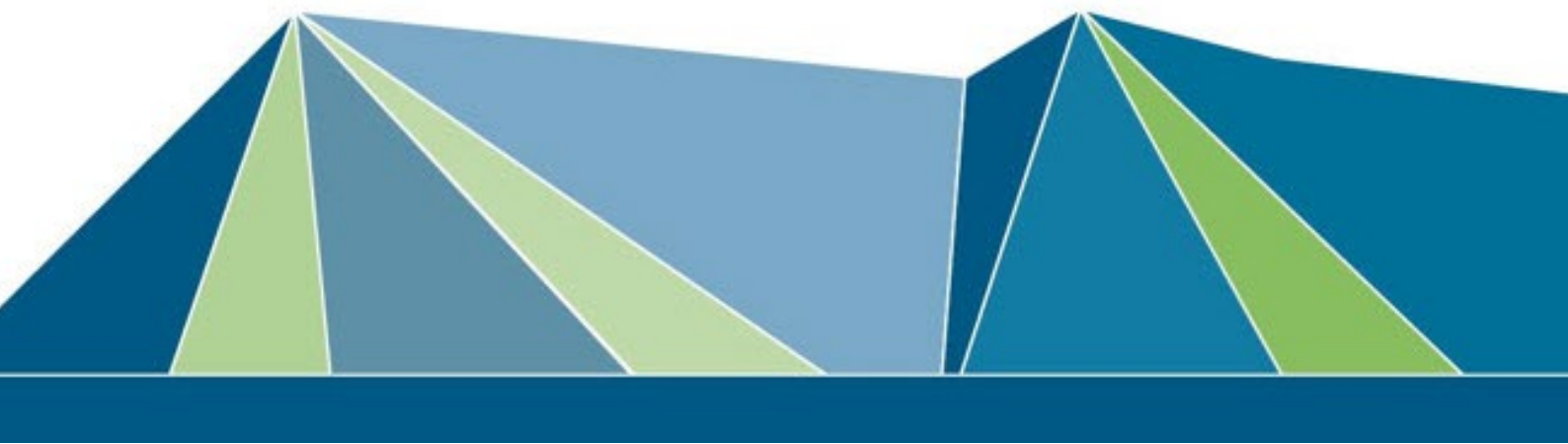


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INTRODUCTION

1.1 Project background

For a number of years Ballina Shire Council (Council) has held a Fisheries maintenance permit for undertaking minor, low impact dredging and reclamation works and harm to marine vegetation works associated with maintenance works within the Ballina Shire Council Local Government Area (LGA).

The maintenance permit enables Council to undertake regular, minor, low risk maintenance works that trigger Part 7 of the Fisheries Management Act, 1994 (FM Act). The use of the 'maintenance permit' streamlines the approval process for very minor maintenance works providing administrative efficiencies for both Council and NSW Fisheries.

Activities included under the maintenance permit can be categorised into four broad groups of works associated with maintenance of:

- stormwater outlets and flood gates
- bridges, crossings and pathways
- boat ramps
- vegetation that impedes the above infrastructure.

The works carried out under the maintenance permit are generally permissible without consent as maintenance works under the State Environmental Planning Policy (Transport and Infrastructure) 2021, requiring a Part 5 assessment under the EP&A Act in the form of a Review of Environmental Factors (REF).

A draft version of a new and updated Fisheries maintenance permit (PN20/292) has been issued to Council; however, NSW Fisheries have requested that a REF be prepared to assess the environmental impacts of the activities being carried out under the permit. NSW Fisheries have advised that following the submission and assessment of the REF, the draft permit will become finalised. A copy of the draft Fisheries maintenance permit (PN20/292) is provided in Appendix A.

Accordingly, this REF has been prepared to address the request by NSW Fisheries and assess the environmental impacts of specified works outlined in the draft maintenance permit (PN20/292).

1.2 Location of activity

This Review of Environmental Factors is for routine, low impact dredging and reclamation works and harm of marine vegetation works associated with minor maintenance works in various locations across the Ballina Shire Council LGA.

1.3 Description of the proposed activity

Infrastructure maintenance works carried out under the Fisheries maintenance permit typically involves the removal of accumulated silt and debris around structures such as stormwater outlets to ensure that they function as designed. Specifically, the maintenance permit allows for the following works to be carried out:

(Please note, changes to the Draft permit # PN20/292 appear in red for ease of review, once agreed, changes will be reflected in a new permit to cover the period 2022-2025).

Details of harm marine vegetation works

Permit area	Permit activity	Additional detail in application dated
<p>Council owned and/or managed stormwater outlets</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots at the outlet of a piped stormwater system, within an area no greater than the width of the apron, or pipe width, up to 1m where there is no apron, and up to 10m in front of the apron, or pipe outlet where there is no apron, and to a depth no deeper than the invert of the pipe and/or apron, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.</p>	
<p>Council owned and/or managed flood gates and flood flaps</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots at the outlet of flood gates and flood flaps within an area no greater than the width of the apron, or gate/flap width where there is no apron, and up to 10m in front of the apron, or gate/flap where there is no apron, and to a sufficient depth to allow free movement of the gate/flap, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.</p>	
<p>Council owned and/or managed access tracks to maintainable assets such as stormwater outlets, floodgates, detention basins, and asset protection zones</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances, generally providing a vegetation free envelope up to 3m vertically from the surface of the track, and up to 0.5m from the edge of the constructed track surface.</p>	
<p>Council owned and/or managed roads, bridges, culverts and causeways</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances from the edge of the structure/pavement to achieve height distance and safe sight lines.</p>	

<p>Council owned and/or managed pedestrian and shared paths</p> <ul style="list-style-type: none"> • within Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances, generally providing a vegetation free envelope up to 3m vertically from the surface of the structure, and up to 0.5m from the edge of the hard constructed path surface.</p>	
<p>Council owned and/or managed waterfront structures</p> <ul style="list-style-type: none"> • within Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots, generally providing a vegetation free envelope vertically from the surface of the structure and up to 1m from the edge of the structure, and the removal of slime, algal and marine growth by high pressure water cleaning.</p>	
<p>Council owned and/or managed constructed waterways</p> <ul style="list-style-type: none"> • Ballina Quays • Lake Prospect • Lake Banyanda • Endeavour Lake • Chickiba Lake 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots, to carry out routine maintenance works, and works consistent with current, site-specific management plans.</p>	<p>Chickiba Lake Bird Roost Site Management Plan</p>
<p>Shaws Bay</p>	<p>Removal of mangroves (<1m height) adjacent to the break wall that separates the Bay from the Richmond River, and mangroves and pneumatophores and trimming of overhanging branches and spreading roots growing in access areas identified in the Shaws Bay Coastal Zone Management Plan.</p>	

Details of dredging and reclamation works

Permit area	Permit activity	Additional detail in application dated
<p>Council owned and/or managed stormwater outlets</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of material at the outlet of piped stormwater systems within an area no greater than the width of the apron, or pipe width where there is no apron, and up to 10m in front of the apron, or pipe outlet where there is no apron, and to a depth no deeper than the invert of the pipe and/or apron, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour</p>	

protection consistent with the Blue Book or best practice.

<p>Council owned and/or managed flood gates and flood flaps</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of material at the outlet of flood gates and flood flaps within an area no greater than the width of the apron, or gate/flap width where there is no apron, up to 10m in front of the apron, or gate/flap where there is no apron, and to a sufficient depth to allow free movement of the gate/flap, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.</p>
<p>Council owned and/or managed roads, bridges, culverts and causeways</p> <ul style="list-style-type: none"> • Within the Ballina LGA 	<p>Realignment, and where that is not possible, relocation downstream, and where that is not possible, removal of natural materials on the structure and/or up to 10m either side of the structure.</p> <p>Removal of instream debris where bank or instream works are not required to reach the debris.</p> <p>Removal and/or placement of material to maintain, repair and re-establish constructed embankment stabilisation associated with the structure, that is consistent with best management practice and/or design.</p>
<p>Council owned and/or managed waterfront structures</p> <ul style="list-style-type: none"> • within Ballina LGA 	<p>Removal of material on the structure, and a minimum volume of material from the toe area of ramps to maintain safe access and function of the structure.</p> <p>Placement of material at the toe area and along the edges of a ramp, or at foundation level of a structure, to prevent or repair unsafe erosion.</p>
<p>Council owned and/or managed revetment areas</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal and/or placement of material to maintain, repair and re-establish constructed foreshores, riverine and estuary embankments, that is consistent with best management practice.</p>
<p>Chickiba Lake</p>	<p>Maintenance and repair of the artificial compensatory bird roosting island in Chickiba Lake.</p>

1.4 Environmental safeguards and mitigation measures

The proposed activity is to be carried out in accordance with the conditions of approval under the Fisheries Maintenance Permit (PN20/292) and the following mitigation measures. All activities to be carried out as part of proposed works will be reviewed and site locations will be checked for any site specific/ additional controls that may be required prior to activating the permit.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Timing of works	Works below the tidal water level within a waterway will be carried out either side of low tide conditions to minimise disturbance and potential impacts on aquatic ecosystems.	
Erosion and sediment control	<p>Pre-construction – All erosion and sediment control practices will be designed, installed and maintained in accordance with best practice measures outlined in the Blue Book (Landcom 2004).</p> <p>All required erosion and sediment controls would be in place before the commencement of work and maintained until all works are completed.</p> <p>During construction - Works would be stopped if unsuitable weather conditions are predicted, such as during and after heavy rain.</p> <p>Works will minimise both the removal of soil stabilising vegetation and disturbance in waterway.</p> <p>All erosion and sediment control devices would be monitored and maintained in proper working order throughout the time they are in place. They would be always kept clear of debris and cleared of sediment if filled >50% capacity.</p> <p>Stockpile sites would be located in existing cleared areas away from drains and surface water flows and protected with an upslope diversion bund and down slope sediment fencing (if required).</p> <p>Construction plant should be floated on-site using established access roads/tracks or areas previously cleared of vegetation.</p> <p>Ensure excess material and waste is regularly removed from site and disposed in accordance with NSW EPA waste guidelines.</p> <p>Post-construction - Following completion of works, the site would be cleared of all debris, waste soil and foreign matter. All disturbed surfaces would be reinstated and stabilised appropriately as soon as possible after completion. All temporary erosion and sediment control structures would be removed once the site is stabilised.</p>	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Waterways	<p>A floating boom and silt curtain is to be used where riparian or in-stream works are to be undertaken and sediment is to be mobilised with a potential endpoint within the waterway.</p> <p>In-stream sediment fences are to remain in place throughout the duration of works.</p> <p>In-stream sediment fencing is to be installed and maintained in accordance with the best practice methodology outlined in "the Blue Book".</p> <p>The condition of sediment control structures would be monitored and maintained in proper working order throughout the time they are in place.</p> <p>To minimise the risk of water pollution and disturbance to the streambed substrate, machinery is not to enter or work from the waterway without prior written approval.</p> <p>To avoid fines, clay and other sediments unnecessarily entering the waterway, only clean rock is to be used for construction works within the waterway.</p> <p>There is to be no release of dirty water into drainage lines and/or waterways. Visual monitoring of local water quality (i.e. turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls.</p> <p>Emergency Spill Kits appropriate for containing and cleaning up petroleum and solvent product spills within waterways will be available on-site during works.</p>	<p>Click here to enter text.</p>
Soils and geotech	<p>The proposed maintenance works would typically occur along the alluvial plains and estuarine deposits of the lower Richmond catchment comprising of deep Quaternary alluvium and estuarine sediments and coastal sand sheets.</p> <p>The proposed maintenance works would typically occur within areas mapped as containing acid sulfate soil (ASS). An ASS management plan will be developed for works where needed. The aim of the plan is to outline appropriate environmental controls and procedures to be implemented during the work activities to avoid or reduce potential adverse environmental impacts associated with ASS and PASS disturbance, handling, treatment or disposal.</p>	<p>Click here to enter text.</p>
Air quality	<p>During construction - All plant and machinery would be serviced at regular intervals to minimise exhaust emissions. Vehicles would be switched off when not in use.</p> <p>Any transport trucks would be covered during journeys to and from the site.</p> <p>All stockpiles and exposed areas will be covered where practical (using plastic, mulch, hydro-mulch, etc.) or wet down as needed to minimise wind-blown and traffic generated dust. Wetting down of these areas should not be done to the extent that run-off occurs.</p> <p>Post-construction - Disturbed areas would be stabilised once works are complete, or progressively where appropriate.</p>	

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Noise and vibration	<p>The operation of plant and equipment would be restricted to standard hours of 7:00 am to 5:00 pm Monday to Friday and 8:00 am – 1:00 pm Saturday. Under exceptional circumstances, times may be varied slightly to work within tidal conditions. No work would be undertaken on Sunday or public holidays.</p> <p>Trucks and equipment would not arrive or queue outside the site before 7 am Monday to Saturday. Reversing of vehicles would be minimised where possible to alleviate the annoyance of beeping reverse alarms.</p> <p>All plant would be kept in good condition, with all reasonable acoustic treatments (i.e. residential mufflers and plant enclosures) installed and maintained (refer to AS 2436 – 1981 ‘Guide to noise control on construction, maintenance and demolition sites’).</p> <p>Any stationary equipment (e.g. generators) would be located as far as possible from residential receptors.</p> <p>Plant operators would be instructed to operate equipment in a manner that does not generate unnecessary noise, such as:</p> <ul style="list-style-type: none"> • avoiding excessive revving • avoiding dragging objects or dropping objects from a height • minimising impact with solid objects where possible • using excavator bucket heads or rock claw attachment to move solid objects • turning off machines/plant equipment when not in use or throttled down to idling. <p>Noise complaints will be responded to promptly. Details of the complaint will be recorded, and all reasonable steps will be taken to minimise noise and address the complaint.</p>	Click here to enter text.
Non-Aboriginal heritage	<p>If non-aboriginal heritage is discovered, work should stop and the item demarcated. An <i>in-situ</i> heritage assessment is required to determine whether the item is a relic. If the item is concluded to be a relic, the NSW Heritage Council are to be contacted as soon as practical. The NSW Heritage Council would recommend the appropriate course of action to be taken.</p> <p>N.B. The Heritage Act 1977 defines ‘Relic’ as meaning any deposit, artefact, object or material evidence that:</p> <p>(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or local heritage significance.</p>	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Aboriginal heritage	<p>If an Aboriginal object or objects, or any cultural heritage material is identified during the works, all works would stop immediately and the BSC contact is to advise the Jali Local Aboriginal Land Council Aboriginal Sites Officer (on 6686 7055) and OEH.</p> <p>No works or development may be undertaken until the required investigations (refer to Due Diligence Process, section 4.10 of this report) have been completed and any permits or approvals obtained, where required, in accordance with the National Parks and Wildlife Act 1974.</p> <p>Any works that may reveal or disturb cultural heritage objects or sites will require an Aboriginal Heritage Impact Permit (AHIP) from OEH for the find(s) to be mitigated (if avoidance is not an option).</p> <p>The National Parks and Wildlife Act requires that, if any person finds an Aboriginal object on land and the object is not already recorded on AHIMS, they are legally bound under Section 89A of the Act to notify OEH as soon as possible of the object's location.</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>	Click here to enter text.
Biodiversity	<p>The proposed maintenance works would typically occur within the riparian zones of Ballina Shire's waterways. Historic land uses, including urban and agricultural development, have significantly disturbed riparian corridors throughout much of the Shire, including the total removal of vegetation in many locations, particularly along floodplain agricultural areas. Where riparian vegetation does exist it generally exhibits some level of disturbance and often adjoins high impact land uses such as urban development and agricultural production.</p> <p>Accordingly, although riparian corridors can provide potential habitat for a range of flora and fauna species, given the extent of historic disturbance, the habitat values of land that where maintenance adjoins the Ballina's waterways is generally considered to be limited.</p> <p>The work area will be controlled to minimise unnecessary disturbance. No-go areas will be established if required.</p>	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Trees and vegetation	<p>The proposed works are minor and short term and restricted to disturbed areas associated with artificial structures and their immediate surrounds.</p> <p>Vegetation removal associated with the repair and maintenance works is minor and generally restricted to recent regrowth. Mangroves will be removed using hand held tools.</p> <p>If any trimming of vegetation is required, shall be undertaken in accordance with AS4373-1996 Pruning Amenity Trees.</p> <p>Branches or trees to be removed should be felled towards cleared areas and away from vegetation to be retained.</p> <p>No construction materials, stockpiles, or construction equipment including heavy vehicles and machinery shall be located or parked within the drip line of trees adjacent the project.</p>	Click here to enter text.
Traffic, transport and parking	<p>Access to each of the sites would generally be via Councils existing road networks, and via existing flood gate maintenance access tracks.</p> <p>Works may involve some short-term minor disruptions to vehicle traffic along local roads and/or pedestrian access along footpaths during the proposed works. Appropriate traffic control procedures would be implemented to manage traffic during the work where appropriate.</p> <p>Boat ramps may also be temporarily inaccessible during maintenance works.</p>	Click here to enter text.
Waste	<p>All waste materials generated by the project should be managed in accordance with the NSW EPA Waste Classification Guidelines, 2014. All reasonable efforts will be made to avoid and minimise waste and to reuse or recycle where possible. All general rubbish and construction waste would be removed from the site and disposed of in an appropriate bin or Council waste recovery facility.</p>	Click here to enter text.
Visual amenity	<p>Machinery and activities would have a short-term minor impact on the overall visual amenity of works areas. There may also be some minor loss of visual amenity following works as regrowth trees are removed during maintenance works. However, the amenity values of these areas are generally low as the riparian vegetation had already been cleared for development.</p>	Click here to enter text.
Land contamination	<p>Works are to cease immediately if any potential source of contamination is uncovered during works (e.g. chemical drums, stained soil or foreign odours) and contact Council's Coordinator Environmental Management. Appropriate investigation, remediation and validation works may be required.</p>	Click here to enter text.

Potential area of impact	Safeguards or mitigation measures	Comments (if applicable)
Hazard management	<p>Appropriate spill kits, advocated for use in association with fuels and chemicals are to be kept on-site. These are to include spill booms and other methods aimed at the containment of fuels and chemicals spilled within the aquatic environment.</p> <p>Forecast checks of the Bureau of Meteorology site would be undertaken daily. Works will be undertaken during dry conditions, where possible.</p> <p>If flooding rain is predicted, plant and equipment will be removed from within the banks of the waterway.</p> <p>In case of flooding, no workers would be directed into flood waters. All environmental controls would be reinstated as soon as possible following flooding.</p>	<p>Click here to enter text.</p>

1.5 Reasons/objectives for the activity and consideration of alternatives

Provide details of the reasons/objectives for the activity

The proposed works are required to restore and maintain the function of drainage infrastructure and repair any failing infrastructure. Proposed works also involve the maintenance and minor repair of boat ramps, bridges, bike paths, footpaths and jetties.

The objectives of the proposed works are to:

- Improve the function of drains where vegetation has regrown and has the potential to block drains.
- Allow ongoing maintenance of drains to prevent vegetation regrowth in the future.
- Maintain the operation of footpaths, boat ramps and jetties in intertidal and near shore areas.
- Minimise incidence of drain overflow and flooding in Ballina.

Alternatives

Option 1 Do nothing. The consequences of not maintaining this infrastructure include an increased risk of flooding, greater potential for ecological impacts associated with more substantial maintenance works that would cost more to carry out.

Justification for preferred option

Regular, minor maintenance works will ensure infrastructure performs as designed, with minimal disturbance to the community, ecology and the environment. Ongoing maintenance works will also extend the operational life of Council assets.

Section 2 CONSULTATION

Extensive consultation has occurred with NSW Fisheries regarding the new Fisheries maintenance permit. Fisheries have provided Council with a draft version of the updated permit and requested that a REF be prepared for each activity covered under the permit prior to the final version being issued.

Part 2.2 of the Transport and Infrastructure SEPP (TISEPP) contains provisions for consultation with local councils and other public authorities prior to the commencement of certain types of development. As Council is the proponent for the proposed works and the works are not considered specified development as defined in Section 2.15 of the TISEPP, consultation with specified public authorities is not required.

Any land (which includes the bed of rivers) that exists below the below the Mean High-Water Mark (MHWM) is known as Crown foreshore land which is vested in the Crown and under management by Department of Planning, Industry and Environment-Crown Lands (DPIE-CL). The local representative of DPIE-CL will be advised prior to works commencing within crown lands.

The proposed works are considered to be minor maintenance works with minimal potential impacts to the community. Accordingly, community consultation is not considered warranted.

Council will consult with relevant service providers as required, for example Essential Energy and Jali Local Aboriginal Land Council, prior to undertaking works.

Once approved, this REF will be placed on council's website in accordance with the requirements of the EP&A Regulation (Section 171(4)) for this type of activity.

Section 3 STATUTORY FRAMEWORK

3.1 Description of relevant environmental planning instruments

3.1.1 State Environmental Planning Policies (SEPPs)

SEPP (Transport and Infrastructure) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. Division 20 of TISEPP permits development for the purpose of stormwater management systems to be carried out by or on behalf of a public authority without consent on any land.

Development for the purpose of stormwater management systems includes:

2.137 (2)(b) routine maintenance works, including maintenance dredging to remove sediment build-up in a stormwater canal or at exit points into natural waterways that affects the efficiency of the stormwater management system.

As defined in section 2.136, stormwater management system means - works for the collection, detention, harvesting, distribution or discharge of stormwater (such as channels, aqueducts, pipes, drainage works, embankments, detention basins and pumping stations).

As the proposal is for routine maintenance works and is to be carried out by BSC, it can be assessed under Part 5 of the Environmental Planning and Assessment Act 1979.

SEPP (Resilience and Hazards) 2021

The State Environmental Planning Policy (Resilience and Hazards) 2021 (RHSEPP) outlines a range of development controls that aim to help protect and manage our sensitive coastal environments, manage risks from coastal hazards, and support appropriate urban development.

Some drainage infrastructure requiring maintenance works may occur within areas of mapped Coastal wetlands, Littoral Rainforests and/or within the mapped proximity area for Coastal wetlands and/or littoral rainforests. The relationship between the RHSEPP and the TISEPP is outlined in Section 2.7 of the TISEPP.

Section 2.7(4) of the TISEPP, allows for development for the purpose of emergency works or routine maintenance works to be carried out without consent and prevails over clauses 10 and 11 of State Environmental Planning Policy (Coastal Management) 2018; (now Sections 2.7 and 2.8 of the Resilience and Hazards SEPP) to the extent of any inconsistency, but only if any adverse effect on the land concerned is restricted to the minimum possible to allow the works to be carried out.

However, BSC as the determining authority still needs to comply with the usual assessments and requirements for EP&A Part 5 activities and obtain any seek other approvals such as under the Fisheries Management Act 1994.

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

Zoning

The proposed works are located in the Ballina Shire Local Government Area (LGA). Under the Ballina Local Environment Plan (BLEP) 2012 proposed works may be required within several land use zonings including RE1 (public recreation), B3 (commercial core), B4 (mixed use), R2 (low density residential), R3 (medium density residential) and W2 (recreational waterways).

Clause 1.9(1) of BLEP confirms that provisions of SEPPs prevail over this BLEP which is consistent with Clause 3.28 of the EP&A Act. Accordingly, given the TISEPP allows the proposed works to occur as development without consent, it prevails over clause 2.3 BLEP in relation to development permitted with consent relevant to the land use zone.

Clause 2.7 of TISEPP 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 minor maintenance works proposed in this REF are consistent with the objectives of the land use zones.

Local provisions

Acid Sulfate Soils

Many sites are likely to trigger the BLEP local provisions clause for acid sulfate soils (ASS) (Clause 7.1). However, development consent is not required for the proposed works under Division 20 Clause 2.137 TISEPP.

To minimise the potential for environmental damage caused by disturbance of actual and/or potential acid sulfate soil and monosulfidic black ooze (MBO), prior to the commencement of maintenance works, a risk assessment for the potential for acid sulfate soil will be undertaken based on factors such as site location, ASS risk mapping and the project activities. An acid sulfate soil management plan will be developed for activities as required.

In addition, the majority of routine maintenance works carried out by a public authority will disturb less than 1 tonne of soil or would be considered emergency work.

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

Section 4 EXISTING ENVIRONMENT

4.1 Description of the existing environment

The environments included in this REF are varied and extend to the maintenance of existing council infrastructure within the Ballina LGA.

4.2 Topography

Mostly low lying coastal, flood plain and estuarine environments extending up to locations on undulating, rolling hills.

4.3 Surrounding land uses

Surrounding land uses vary across the LGA, but commonly comprise a range of residential, commercial and rural based land uses.

4.4 Geology/Geomorphology

The four main landscape types along lower lying areas of the Ballina Shire comprise beaches, headlands, alluvial & estuarine deposits, and the sand sheets or sandplains.

Western upland areas are typically composed of the East Ballina Aeolian Landscape which includes elevated Quaternary (Pleistocene) dunes forming very low undulating rises blanketing Lismore Basalts and comprise very deep (300cm), rapidly drained Podzols (Morand 1994).

The headlands within the Ballina LGA are outcrops of the Lismore Basalts (Tertiary) resulting from lava flows from the Mount Warning Shield Volcano.

4.5 Soil types and properties

Beaches within the Study area are predominantly Quaternary (Holocene) beach and dune sand. The beach, fore-dunes and most of the hind-dunes are deep siliceous and calcareous sands, with some disturbed hind-dunes also consisting of very disturbed Podzols (Morand, 1994).

Mapping produced by Morand (1994) shows the western parts of Shaws Bay and inland areas of Sharpes Beach comprise the Ewingsdale Residual Landscape, which is made up of deep, well-drained Krasnozem soils on very low to low undulating hills and rises on Lismore Basalts.

Lighthouse Beach is a recently accreted landform, occupying the original Richmond River mouth. Prior to the construction of the northern training wall, the river mouth was very mobile and transient, part of a broad meandering marine tidal delta forming the mouth of the Richmond River (BSC 2006).

Morand (1994) indicates the majority of Ballina Island is mapped as disturbed terrain with native vegetation completely cleared and highly disturbed soils with landfill of soil rock and building and waste material. Soils of the Burns Point soil landscape are either sand dominated (estuarine/tidal delta sediments) or clay dominated (deltaic sediments).

4.6 Waterways

Work activities discussed in this REF are predominantly the maintenance of council infrastructure such as stormwater outlets, flood gates, bridges and culverts etc which are typically located within or adjacent waterways.

The following drinking water catchments are located within the Ballina LGA:

- Emigrant Creek catchment area to the north,
- Wilsons River catchment area along the north-western boundary,
- Marom Creek catchment on the western boundary,
- Gum Creek catchment near Dalwood toward the south.

4.7 Flora (including flora of conservation significance)

A flora assessment was undertaken by Blackwood Ecology (Refer to Appendix D).

The Ballina Shire contains a diverse range of flora and fauna, including NSW Endangered or Vulnerable species, Populations, or Ecological Communities, pursuant to the NSW Biodiversity Conservation Act 2016 (BC Act) and the Fisheries Management Act (FM Act).

These species occur in a wide range of habitat types, including coastal, rainforest, sclerophyll and swampland communities.

The proposed maintenance works would typically occur within the riparian zones of the waterways within Ballina Shire. Historic land uses, including urban and agricultural development, have resulted in significant disturbance to riparian corridors throughout the LGA, including the total removal of vegetation in many locations, particularly along floodplain agricultural areas. Where riparian vegetation does exist it generally exhibits some level of disturbance, although it can provide potential habitat for a range of flora and fauna species. Notwithstanding, given the extent of past disturbance and the ongoing land uses adjoining the waterways, particularly for agriculture, the habitat value of these riparian vegetation areas is considered to be limited.

Considering the above and given the minor nature of the maintenance works, the proposed activity is unlikely to significantly impact upon protected flora or fauna. Furthermore, detailed assessment of potential impacts to flora and fauna is not considered warranted in this instance given the minor scale of the works.

4.8 Fauna (including fauna of conservation significance)

A fauna assessment was undertaken by Blackwood Ecology (Refer to Appendix D). Databases were searched to identify threatened fauna known from, or potentially occurring in, the Study area. A total of 149 threatened fauna species listed on the BC Act (2016) were identified on database searches for Ballina Shire.

These species occur in a wide range of habitat types, including rainforest, sclerophyll, coastal, marine and swampland communities. Several Threatened fauna species may occur in intertidal and riparian vegetation communities where proposed works are largely located, including microchiropteran bats, the Grey-headed flying-fox and bird species including the White-eared monarch and Mangrove honeyeater.

DPI Fisheries distribution maps record one freshwater threatened species as occurring or potentially occurring within the Richmond River system, the Southern, purple-spotted gudgeon. A 7-part test was undertaken for the endangered Southern purple spotted gudgeon, which has some potential to occur within the area (Appendix D). Several other marine threatened species, including the Grey nurse shark and White shark, may occur in waters off the river mouth.

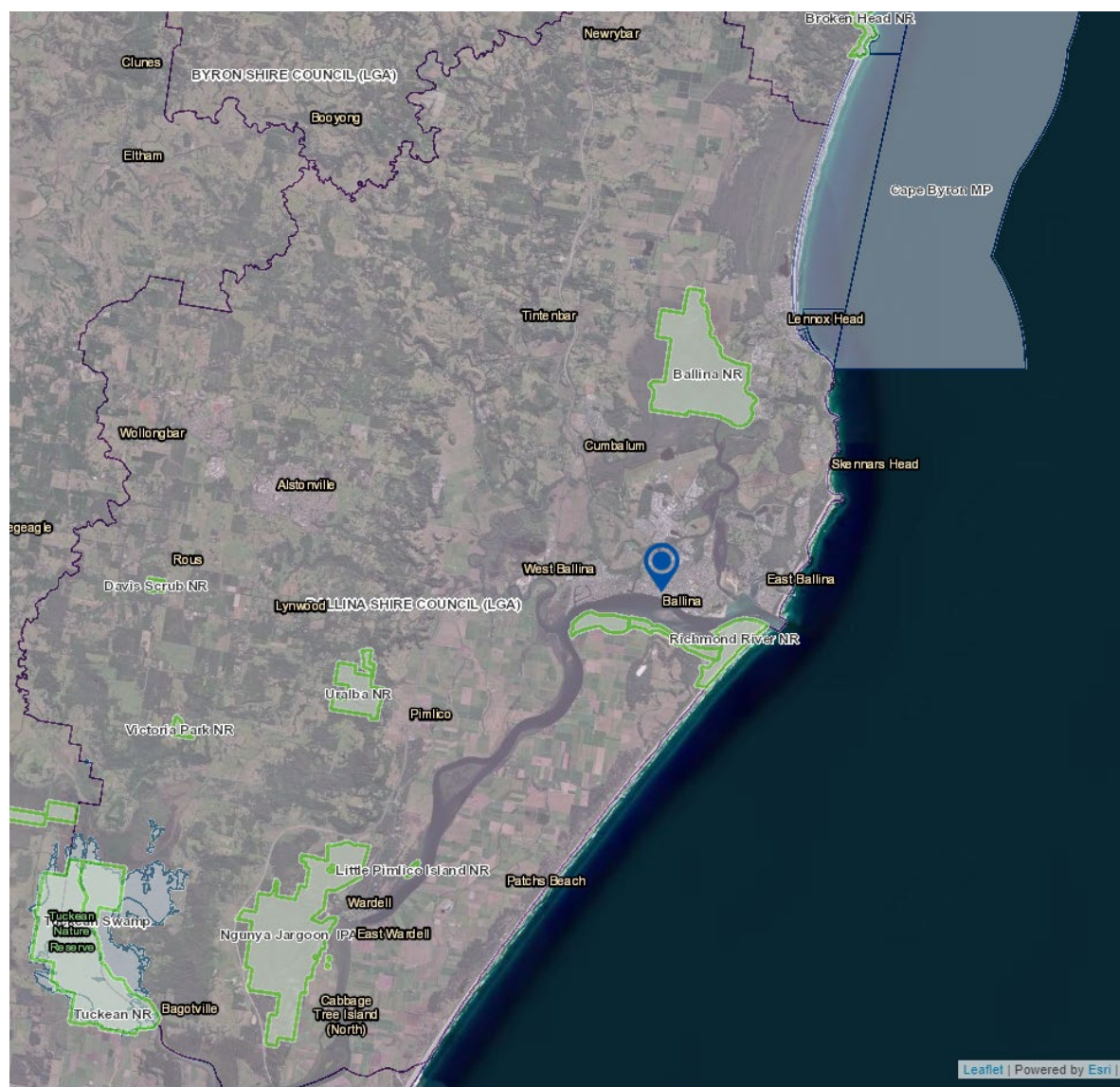
State Environmental Planning Policy (Biodiversity and Conservation) 2021 (BCSEPP) BCSEPP aims to encourage the conservation and management of natural vegetation areas, including vegetation that provide habitat for koalas. The proposed minor maintenance works are unlikely to impact identified or potential koala habitat.

4.9 Biodiversity values mapping

Environment Protection and Biodiversity Conservation Act 1999 (EPBC)

Under the EPBC a referral is required to the Australian Government for proposed 'actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land'.

The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) protected matters search tool was used to identify Matters of National Environmental Significance. Areas of national environmental significance, such as a RAMSAR Wetlands, World, Commonwealth or National Heritage Places are not identified within the Ballina LGA.



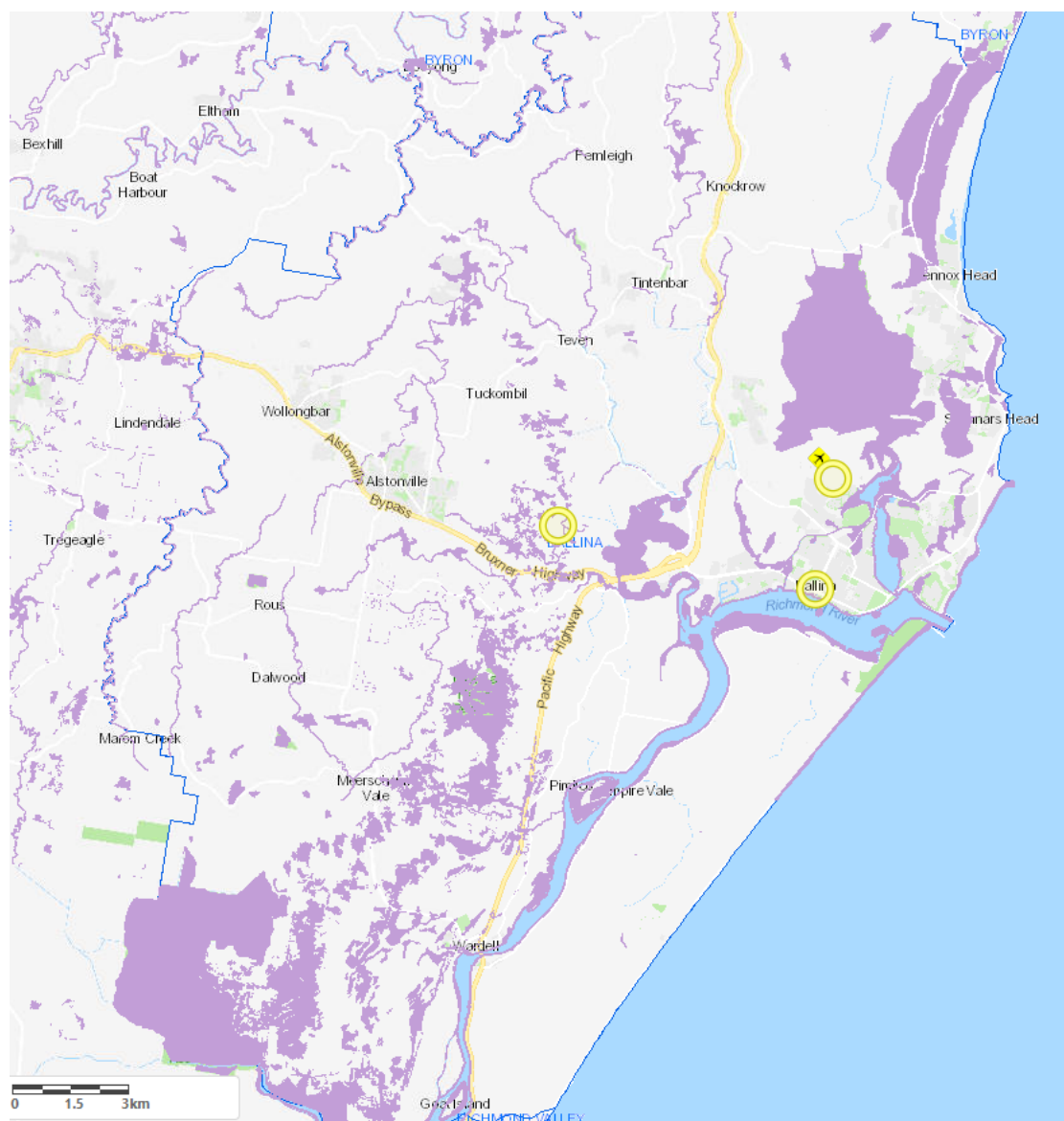
The Tuckean Swamp is identified as a Wetland of National Significance, and the above map shows the locations of Nature Reserves, an Indigenous Protection Area and portion of the Cape Byron Marine Park.

Given the minor nature of the maintenance works, Matters of National Environmental Significance protected under the EPBC Act would not be significantly impacted by the proposal. Accordingly, the Proposal has not been referred to the DCCEEW.

Biodiversity Conservation Act 2016 (BCA), Local Land Services Act 2013 (LLS) and Biodiversity Conservation Regulations (BCR)

The Biodiversity Conservation Act 2016 (BC Act), Local Land Services Act 2013 (LLS) and associated Regulations aims to protect biodiversity, regulate a range of development activities on land, and manage the activities' impact on the natural environment including a biodiversity offsetting scheme. The Acts apply in relation to animals and plants and not (unless otherwise provided) in relation to fish and marine vegetation. The Fisheries Management Act 1994 contains provisions in relation to fish and marine vegetation.

The following map (produced from the NSW DPIE Biodiversity Values Map and Threshold Tool under the BC Act) outlines areas identified as having high biodiversity values (in purple).



A biodiversity conservation licence must be sought to carry out works that would constitute an offence under BCA, including harm or attempt to harm endangered, threatened, vulnerable or protected species, populations, ecological communities or critical habitat (flora and fauna). The proposed works are not occurring in an area of outstanding biodiversity value or containing endangered, threatened, vulnerable or protected species, populations, ecological communities or critical habitat (flora and fauna). A biodiversity conservation licence is not required.

4.10 Aboriginal cultural heritage

Aboriginal sites do occur within the Ballina Shire however they are considered unlikely within works areas due to previous ground disturbance. Specific amelioration measures are detailed in the unlikely event that an artefact is uncovered.

National Parks and Wildlife Heritage Act 1974 (NPWHA) and National Parks and Wildlife Regulation 2019 (NPWR)

The purpose of the National Parks and Wildlife Heritage Act 1974 (NPWHA) is to specify that national parks exist to protect habitats, ecosystems, biological diversity, landforms, landscapes and natural features, including wilderness. It is also to protect many places and features of cultural and social value, and historic, architectural and scientific significance.

The works are not occurring on land reserved under the NPWA or in an area subject to any conservation agreement, plan of management or joint management agreement entered under the Act. The works are not classified as “state significant development” so cultural heritage items are regulated under Part 6 of NPWHA and Part 5 of NPWR.

An assessment of potential heritage items or sites was undertaken using the Aboriginal Heritage Information Management System – see Appendix C.

Prior to enacting the Maintenance Permit (PN20/292), the following due diligence process will be undertaken for each maintenance activity. It is unlikely that heritage items will be encountered as the works are maintenance activities on an existing road with existing stormwater facilities, in an already heavily disturbed land. The works would be considered low impact acts (NPWR clause 58(c),(e) and (h)) provided there is minimal disturbance to complete them.

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.

Due diligence process step	Comment
1 Will the activity disturb the ground surface or any culturally modified trees?	Click here to enter text.
2(a) Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?	Click here to enter text.
2(b) Are there any other sources of information of which a person is already aware?	Click here to enter text.
2(c) Are there any landscape features that are likely to indicate the presence of Aboriginal objects?	Click here to enter text.

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.

If the answer to any of the above questions is yes then the following three questions must be answered.

Due diligence process step	Comment
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?	Click here to enter text.
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?	Click here to enter text.
5 Is further investigation and impact assessment warranted?	Click here to enter text.

4.11 Native Title and Crown land management

The Crown Lands Act 1989 (CL Act) and the Crown Lands Management Act 2016 (CLM Act) provide for the administration and management of Crown Land in NSW. Division 4 of CLA and Division 5.6 of CLMA specify that a licence may be issued for the temporary use or occupation of Crown Land.

Various works including stormwater outlet and flood gate maintenance works would occur within the bed and banks of the various waterways within the Ballina Shire. Any land (which includes the bed of rivers) that exists below the Mean High-Water Mark (MHWM) is known as Crown foreshore land. The MHWM defines the legal boundary of the land and is set out on the Deposited Plan.

Section 191A of the Local Government Act 1993 (LG Act) gives provision for a council employee (or other person) authorised by council to enter any premises to carry out stormwater drainage work on or under the premises. Prior to entering a site, however, council must give the owner or occupier of the premises written notice of their intention to enter the premises.

In accordance with Section 191A of the LG Act, a Crown Land licence would not be required to undertake maintenance works within Crown land. Notwithstanding, prior to maintenance works being carried out, notice of entry would be served upon the Department of Planning and Environment – Crown Lands in accordance with Section 193 of the LG Act.

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

An assessment of potential heritage items or sites was undertaken using the BLEP Schedule 5 Environmental Heritage. No items or sites on the State Heritage Register or of local heritage significance were recorded about the infrastructure to be maintained.

4.13 Interests of external stakeholders (e.g. adjoining landowners, lease holders)

Where applicable, road users will be made aware of the works through traffic control measures in place on site.

In addition, to ensure appropriate notification and consultation:

- Works located within 10 kilometres of an oyster aquaculture lease are to be designed, planned and undertaken in a manner that meets the intended outcomes of the Healthy Estuaries for Healthy Oysters Guidelines 2017 available on the DPI Fisheries website.
- Oyster growers with leases within 2km of the work site (see Attachment 3 of Appendix A) are to be informed of the proposed works and works are to be timed to avoid affecting oyster aquaculture activities such as, but not limited to spat collection periods. The liaison for oyster growers in Ballina is Local Shellfish Program coordinator Mr Geoff Lawler (ph: 02 6686 3394; mob: 0412 919 032).
- For works and sites specified by DPI Fisheries, consultation is to be undertaken with Ballina Fishermen's Cooperative. Where possible these works are to be timed to avoid impacting on licensed commercial fishing activities.

4.14 Hazards mapping

Clause 63 of Rural Fires Act 1997 requires public authorities to prevent the occurrence of bush fires and minimise the danger of bush fires spreading on land under its control and management including roads, streets, land or thoroughfare. The proposed works will not adversely impact bush fire risks.

The Protection of Environment Operations Act 1997 (PoEO Act) aims to protect, restore and enhance the quality of the environment in New South Wales, and to reduce risks to human health and prevent the degradation of the environment through licencing and regulation. Clause 148 of PoEO Act requires BSC to report to the relevant authority any pollution incident that threatens or causes material harm to the environment.

No potentially contaminated sites notified to the EPA under section 60 of the Contaminated Land Management Act 1997 (CLM Act) within the Ballina Shire LGA will impact the proposed maintenance works. In addition, BSC has developed and maintains their own Contaminated Land Register in accordance with the requirements of Council's Contaminated Land Policy. A review of former land uses and sources of potential contamination indicate that there is low risk of the maintenance activities encountering contamination.

Works would cease immediately if any potential source of contamination (e.g. soil discolouration, odours or asbestos material) is discovered. The Project Manager shall be notified, and in consultation with BSC's Coordinator Environmental Management, appropriate investigation and remediation works will be undertaken.

Section 5 APPROVALS, LICENCES and PERMITS

Item	Locations that may trigger an external approval, licence or permit	Check one	
5.1	<p>Working in an area containing endangered, threatened, vulnerable or protected species, populations, ecological communities or critical habitat (flora and fauna)</p> <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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.2	<p>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)</p> <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	<p>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</p> <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	<p>Working within an area that is subject to any conservation agreement entered into under the <i>National Parks and Wildlife Act 1974</i></p> <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	<p>Working within an area that is subject to any plan of management under the <i>National Parks and Wildlife Act 1974</i></p> <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	<p>Working within an area that is subject to any joint management agreement under the <i>National Parks and Wildlife Act 1974</i></p> <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	<p>Working in an area subject to a joint management agreement entered into under the <i>Threatened Species Conservation Act 1995</i></p> <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	<p>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</p> <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	<p>Working in an aquatic reserve or in marine vegetation such as seagrass, mangroves, saltmarsh, etc</p> <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	<p>Working in a Marine Park declared under the Marine Parks Act</p> <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

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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>) – <i>Department of Primary Industries—Fishing (DPI—Fishing); and/or</i> – <i>NSW Water</i> – <i>Transport for NSW</i>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5.12	Enlarge, deepen or sink a new water bore – <i>NSW Water</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.13	An activity that will pollute water (e.g. dewatering) – <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 – <i>Australian Heritage Council</i> – <i>Heritage NSW</i> – <i>Heritage Council of NSW</i> – <i>Ballina Shire Council</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.15	Working within a ‘heritage conservation area’ identified in Ballina LEP Schedule 5 Environmental Heritage – Part 2 – <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) – <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 – <i>Jali Local Aboriginal Land Council</i> – <i>Heritage NSW</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.18	An activity comprising a fixed or floating structure in or over a navigable waterway – <i>Transport for NSW</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5.19	An activity comprising work on Crown land not subject to a plan of management – <i>Department of Planning and Environment—Crown Lands (DPE—Crown Lands)</i>	<input type="checkbox"/> Yes	<input checked="" 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) – <i>SafeWork NSW</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Are any permit(s) required?

Yes No

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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:

This REF provides the required information to undertake works in accordance with the Fisheries Permit PN20/292 in various locations across the Ballina Shire Council LGA. The Fisheries Permit Application and draft permit are attached to this REF.

There may be instances where specific maintenance activities and locations will require additional approval and consent under other legislation. This may include, but not be limited to:

- works that are required to be undertaken within a Marine Park (refer to the Marine Estate Management Act 2014).
- works occurring on land reserved under the National Parks and Wildlife Heritage Act 1974 (NPWHA) identified using the Aboriginal Heritage Information Management System. An Aboriginal Heritage Impact Permit (AHIP) may be sought.
- sites where asbestos containing material may be identified (Work Health and Safety Act 2011)
- legislation administered by other public authorities such as the Crown Land Management Act 2016; and
- obtaining landowners consent where maintenance activities are necessary on private or public land where landowners consent is not automatically provided by legislation.

Where maintenance activities included within the maintenance permit trigger other legislation, then all permits, licences, approvals and consents required by the other legislation will need to be obtained prior to undertaking the work. A checklist has been prepared to ensure that all stakeholders and legislation are considered appropriately (Appendix D).

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.

Columns:	4	5	6	7	8	9	10	
				Multiply the three scores:	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).	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Dust generation due to earthwork activities, soil disturbance, stockpiling, trenching.	Vehicles transporting materials that may produce dust will be covered during transportation. Waste will be segregated and collected on a regular basis to ensure odours associated with waste do not become an issue. Erosion and sediment control (E&SC) structures will be checked regularly for build-up of silt and other materials to ensure deposits do not become a dust source. Areas disturbed by construction will be stabilised and restored as soon as practicable after construction.	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 type="checkbox"/> No impact <i>If checked, go to next issue</i>	Fumes from equipment and machinery.	Vehicles and equipment will be switched off when not operating. Vehicles, plant and equipment will be maintained in accordance with manufacturer specifications.	1	1	1	1
6.3	WATER	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). Machinery related spills (e.g. fuel, oil, hydraulic fluid). Sedimentation of waterways, wetlands, stormwater drains or groundwater (e.g. excavating, disturbing soil, stockpiling, trenching, concrete cutting, access tracks, erosion-prone sites, etc).	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Turbidity and sedimentation impacts that could impact on waterways. Erosion of areas disturbed by construction activities. Mud tracking from construction plant, vehicles and equipment.	Water generated during the works will wherever possible be collected, treated and disposed of by appropriate means. Refer to section 1.4 of this report for additional details.	1	1	2	2
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 type="checkbox"/> No impact <i>If checked, go to next issue</i>	Machinery hydraulic spills	No oils/ fuels will be stored onsite. If refuelling is required, it will be undertaken outside of the works area. A spill kit shall be always kept on site.	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	
6.5	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>	Noise and vibration from use of construction plant and equipment such as excavators, backhoe, trucks.	Most minor maintenance works are completed in a short time frame e.g. hours or days further reducing the potential noise impact. Refer to section 1.4 of this report for additional details.	1	1	1	1
6.6		Operation: Noise/vibration (e.g. pumps, generators).	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
6.7	CONTAMINATION & WASTE	Construction: Disturbing contaminated soil (e.g. known contamination, ASS, old industrial site, previous landfill, etc). Disturbing old sand mining area or stockpile (radioactivity). Contaminating or polluting land (e.g. storing, handling or disposing of oils, fuels, pesticides, chemicals, pit/trench water or other liquids). Excavating public road material for reuse in the road reserve. Environmental problems caused by generating, storing, handling, transporting or disposing of waste (e.g. soils, building materials, oils, solvents, toilets, etc). Restricting current and potential activities associated with the land (e.g. amenity, buildings, parking).	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Disturbance of ASS Oxidation of PASS Waste material generated from construction activities such as spoil, concrete, packaging materials etc	An ASS management plan will be in place for the activity as required. Excavation will be undertaken in a controlled manner to minimise disturbance of ASS/PASS. Discharge waters will be tested and treated if required prior to discharge to the environment. Resource management hierarchy principles will be followed.	2	1	1	2

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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	
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>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.				Multiply scores in columns 7,8,9	
6.9	TRANSPORT	<p>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).</p>	<input type="checkbox"/> No impact <i>If checked, go to next issue</i>	Short term, minor and temporary impacts to various infrastructure e.g. roads, footpaths, boat ramps, etc.	A traffic management plan will be prepared and implemented to maintain access to local roads and properties. Site specific traffic control measures will be implemented to manage and regulate traffic and pedestrian movement, access to construction sites including entry and exit locations. Public safety will be maintained at all times. Appropriate signage will be erected.	2	1	1	2
6.10		<p>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).</p>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.				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	
6.11	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>	Trimming, pruning or removal of vegetation associated with minor maintenance works outline in Fisheries Permit PN20/292	Refer to section 1.4 of this report for additional details. Should injured fauna be discovered at site, WIRES or the nearest Veterinary Practice will be contacted immediately.	1	1	1	1

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

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>	Click here to enter text.	Click here to enter text.	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>	Potential for impact on waterways in the vicinity of oyster leases.	Oyster growers will be notified of works within 2km of leases. All works will be undertaken in accordance with best practice measures outlined in the Blue Book and any permit conditions of consent.	1	1	2	2

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

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>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	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>	<p>Potential damage to unidentified heritage items during excavation.</p>	<p>An AHIMS search will be conducted for each work site prior to enacting the permit.</p> <p>All personnel working on site will be trained and inducted on their responsibilities under the National Parks and Wildlife Act 1974 prior to commencing any ground disturbance.</p> <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, for discovery of unexpected or incidental finds.</p> <p>Any works that may reveal or disturb cultural heritage objects or sites will require an Aboriginal Heritage Impact Permit (AHIP) from OEH for the find(s) to be mitigated (if avoidance is not an option).</p> <p>All on-site contractor/worker is provided with a copy of the SWP process and that all on-site workers are made aware</p>	1	1	2	2
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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	
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>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	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. affecting or restricting views).</p> <p>Transforming a locality (e.g. significant earthworks).</p>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

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). Increasing demands on resources (natural or otherwise) that are or are likely to become in short supply (e.g. demand on water use). Changing the visual or scenic landscape (e.g. affecting or restricting views). Transforming a locality (e.g. significant earthworks). Any cumulative environmental effect with other existing or likely future activities. Reducing the range of beneficial uses of the environment (e.g. effect on surrounding land uses and considering response of affected landowners).</p>	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
6.19	OTHER	NA	<input checked="" type="checkbox"/> No impact <i>If checked, go to next issue</i>	Click here to enter text.	Click here to enter text.	Enter score	Enter score	Enter score	Multiply scores in columns 7,8,9
TOTAL ENVIRONMENTAL SCORE:								16	

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

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

Environmental factor	IMPACTS:				
		Minor	Medium	Major	
(a) Any environmental impact on the community? The proposed works would have temporary impacts on noise and traffic.	<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 checked="" 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 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
(b) Any transformation of the locality? The proposed maintenance works would result in a temporary transformation of the locality during the works in association with machinery, equipment and materials.	<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>(c) Any environmental impact on the ecosystems of the locality?</p> <p>The environmental impact on local ecosystems is expected to be minimal based on the minor scope of works. Proposed works would not alter the integrity or the survival of ecosystems in the subject site.</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	
<p>(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality?</p> <p>There would be a minor reduction in the aesthetic value of the locality due to the temporary presence of maintenance works and associated plant and control measures.</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	
<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>The proposed maintenance works are not expected to impact on any locality, place or building having aesthetic, anthropological, archaeological, architectural, or historic value.</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"/> 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	

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>Some vegetation removal may be required as part of routine, minor maintenance works within areas that may provide habitat at times for Threatened fauna such as the Grey-headed flying fox. Given the minor nature of the maintenance works and the management measures outlined in this REF, any impact on the habitat of protected fauna species would be minor.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative	<input type="checkbox"/> Short-term <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	<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>It is not anticipated that any plant or animal species (including fish) or other form of life would become endangered as a result of the maintenance works.</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 <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>The proposed works would provide a long-term improvement to the function of drainage infrastructure and other Council assets.</p> <p>Mitigation measures listed in Section 1.4 of this REF would be implemented during maintenance works to ensure that there are no long-term effects on the environment.</p>	<input type="checkbox"/> Nil <i>If checked, go to next factor</i>	<input checked="" 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 checked="" 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>(i) Any degradation of the quality of the environment?</p> <p>Mitigation measures as listed in Section 1.4 of this REF would be implemented to ensure that the maintenance works do not degrade the quality of the environment in the longer term.</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>(j) Any risk to the safety of the environment?</p> <p>The proposed maintenance works would have minimal risk to the safety of the environment. A range of risk management measures would be utilised during construction which are summarised in Section 1.4 of this REF</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>(k) Any reduction in the range of beneficial uses of the environment?</p> <p>The proposed maintenance works would not reduce the overall range of beneficial uses of the environment.</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

Environmental factor	IMPACTS:				
		Minor	Medium	Major	
<p>(o) Any cumulative environmental effect with other existing or likely future activities? These works are minor and seek to maintain existing infrastructure.</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 <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>(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? There are no anticipated impacts to the coastal processes or coastal hazards.</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 <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>(q) Any applicable local strategic planning statements, regional strategic plans or district strategic plans? This minor work does not apply to local, regional or strategic plans.</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 <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>	<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>
<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>	<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>

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	<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
			<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 9 CONCLUSION

9.1 Publishing the REF on the NSW Planning Portal

	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, 201, 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:			
<ul style="list-style-type: none"> • I have completed this REF, and • The assessment meets the requirements of sections 1.7, 5.5 and 5.7 of the EPA Act, section 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 <input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH (<i>check one</i>), 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 during both the construction and operation phases, and • An Environmental Impact Statement is not required, and • A Species Impact Statement is not required, and • The REF is required to be published on the Council website or NSW Planning Portal. 			
Signature:		Date:	13/09/2022
Name (<i>print</i>):	Christine Pitman		
Position:	Coordinator Environmental Management, Ballina Shire Council		

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:	13/09/2022
Name (print):	Amy Hart		
Position:	Project and Operations Engineer, Ballina Shire Council		

Section 11 DETERMINATION


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 conclude that the assessment has been adequately completed, the project has minor and predictable impacts, and the conclusion as to the likely environmental impact of the project is reasonable. I consider that an Environmental Impact Statement is not required, and a Species Impact Statement is not required.

The project can proceed subject to the mitigation measures in this REF, as well as any approval, licence or permit. I agree with the conclusion in section 9.

I determine that the REF is required to be published on the Council website or NSW Planning Portal.

Signature:		Date:	20/09/2022
Name (print):	John Truman		
Position:	Director Civil Services Division		

APPENDIX A

Draft Fisheries Maintenance Permit #PN20/292

Draft Ballina Shire Council Amended Permit Activities

Details of harm marine vegetation works

Permit area	Permit activity	Additional detail in application dated
<p>Council owned and/or managed stormwater outlets</p> <ul style="list-style-type: none"> • within the Ballina LGA; and not within SEPP Coastal Wetlands or NPWS Reserves. 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots at the outlet of a piped stormwater system, within an area no greater than the width of the apron, or pipe width, up to 1m where there is no apron, and up to 10m in front of the apron, or pipe outlet where there is no apron, and to a depth no deeper than the invert of the pipe and/or apron, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.</p>	
<p>Council owned and/or managed flood gates and flood flaps</p> <ul style="list-style-type: none"> • within the Ballina LGA; and not within SEPP Coastal Wetlands or NPWS Reserves. 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots at the outlet of flood gates and flood flaps within an area no greater than the width of the apron, or gate/flap width where there is no apron, and up to 10m in front of the apron, or gate/flap where there is no apron, and to a sufficient depth to allow free movement of the gate/flap no deeper than the invert of the pipe and/or apron, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.</p>	
<p>Council owned and/or managed access tracks to maintainable assets such as stormwater outlets, floodgates, detention basins, and asset protection zones</p> <ul style="list-style-type: none"> • within the Ballina LGA 	<p>Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances, generally providing a vegetation free envelope up to 3m vertically from the surface of the track, and up to 0.5m from the edge of the constructed track surface.</p>	

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

Council owned and/or managed roads, bridges, culverts and causeways	Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances from the edge of the structure/pavement to achieve height distance and safe sight lines.	<ul style="list-style-type: none"> • within the Ballina LGA; and • not within SEPP Coastal Wetlands or NPWS Reserves.
Council owned and/or managed pedestrian and shared paths	Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots within minimum safe, accessible clearance distances, generally providing a vegetation free envelope up to 3m vertically from the surface of the structure, and up to 0.5m from the edge of the hard constructed path surface.	<ul style="list-style-type: none"> • within Ballina LGA
Council owned and/or managed waterfront structures	Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots, generally providing a vegetation free envelope vertically from the surface of the structure and up to 1m from the edge of the structure, and the removal of slime, algal and marine growth by high pressure water cleaning.	<ul style="list-style-type: none"> • within Ballina LGA
Council owned and/or managed constructed waterways	Removal of mangroves and pneumatophores and trimming of overhanging branches and spreading roots, to carry out routine maintenance works, and works consistent with current, site specific management plans.	Chickiba Lake Bird Roost Site Management Plan
Shaws Bay	Removal of mangroves (<1m height) adjacent to the break wall that separates the Bay from the Richmond River, and mangroves and pneumatophores and trimming of overhanging branches and spreading roots growing in access areas identified in the Shaws Bay Coastal Zone Management Plan.	

Details of dredging and reclamation works

Permit area	Permit activity	Additional detail in application dated

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

Council owned and/or managed stormwater outlets

- within the Ballina LGA; ~~and~~
- ~~not within SEPP Coastal Wetlands or NPWS Reserves.~~

Removal of material at the outlet of piped stormwater ~~systems~~ within an area no greater than the width of the apron, or pipe width where there is no apron, ~~and~~ up to 10m in front of the apron, or pipe outlet where there is no apron, and to a depth no deeper than the invert of the pipe and/or apron, ~~with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.~~

Council owned and/or managed flood gates and flood flaps

- within the Ballina LGA; ~~and~~
- ~~not within SEPP Coastal Wetlands or NPWS Reserves.~~

Removal of material at the outlet of flood gates and flood flaps within an area no greater than the width of the apron, or gate/flap width where there is no apron, up to 10m in front of the apron, or gate/flap where there is no apron, and to a sufficient depth to allow free movement of the gate/flap, with minimal soil and/or vegetation disturbance to maintain and/or restore the efficiency of the stormwater system, or to place scour protection consistent with the Blue Book or best practice.

Council owned and/or managed roads, bridges, culverts and causeways

- Within the Ballina LGA

Realignment, and where that is not possible, relocation downstream, and where that is not possible, removal of natural materials on the structure and/or up to 10m either side of the structure.

Removal of instream debris where bank or instream works are not required to reach the debris.

Removal and/or placement of material to maintain, repair and re-establish constructed embankment stabilisation associated with the structure, that is consistent with best management practice and/or design.

Council owned and/or managed waterfront structures

- within Ballina LGA

Removal of material on the structure, and a minimum volume of material from the toe area of ramps to maintain safe access and function of the structure.

Placement of material at the toe area and along the edges of a ramp, or at foundation level of a structure, to prevent or repair unsafe erosion.

Council owned and/or managed ~~reek~~revetment areas

- within the Ballina LGA

Removal and/or placement of material to maintain, repair and re-establish constructed foreshores, riverine and estuary embankments, ~~that is involving topping up of revetment rock~~ consistent with best management practice.

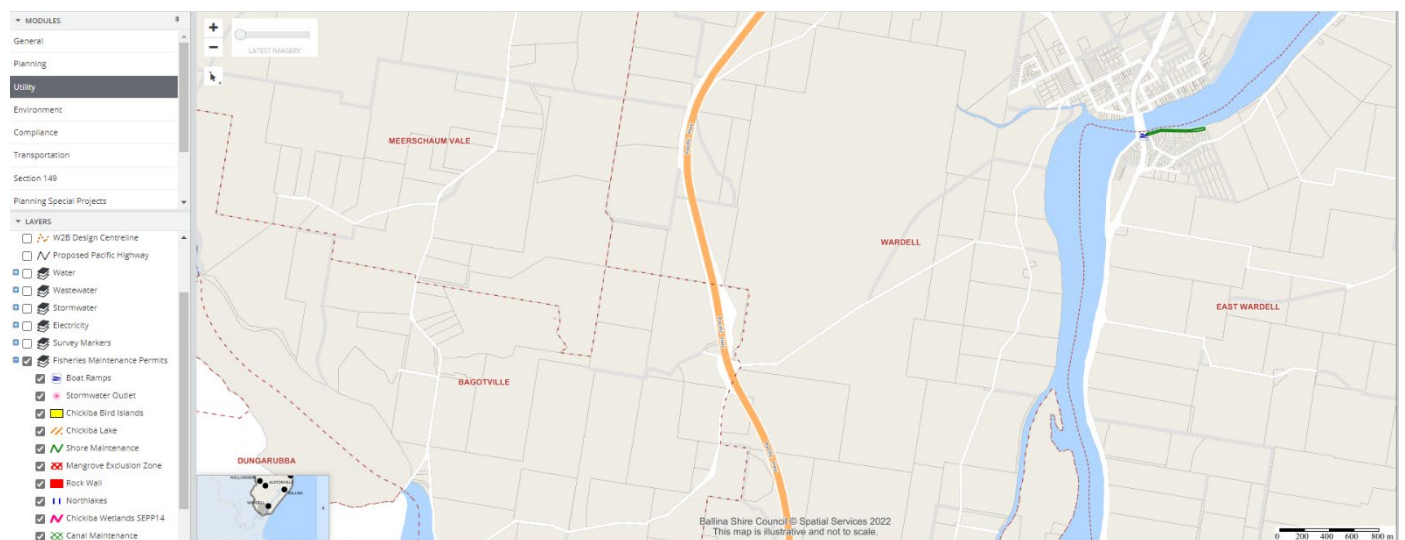
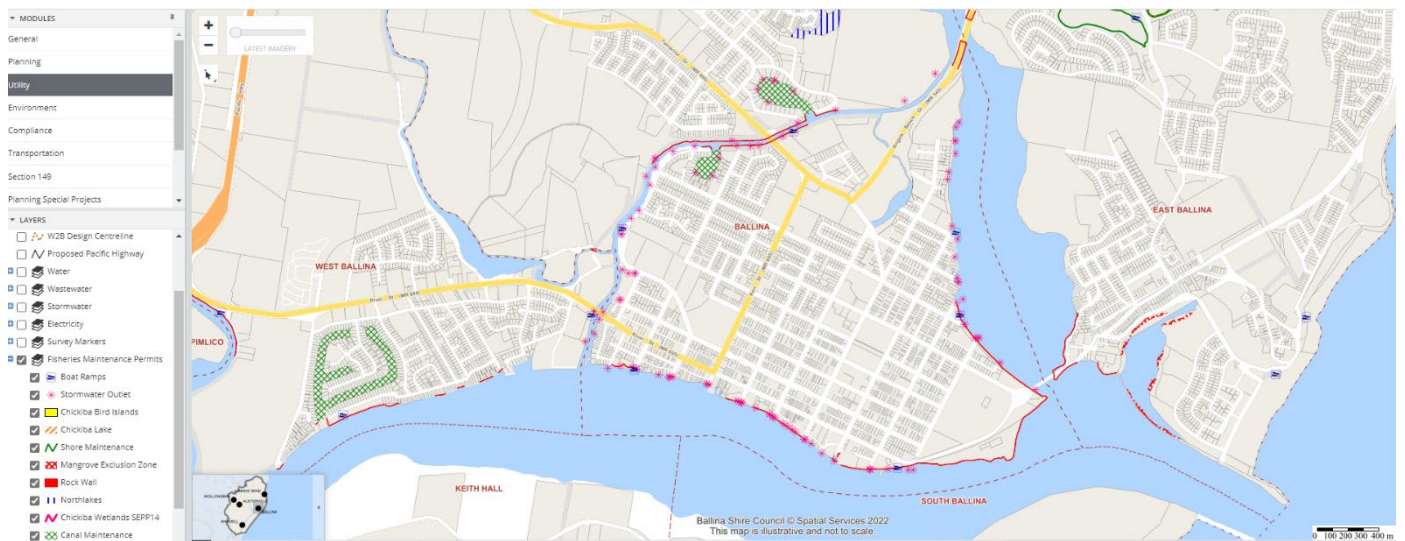
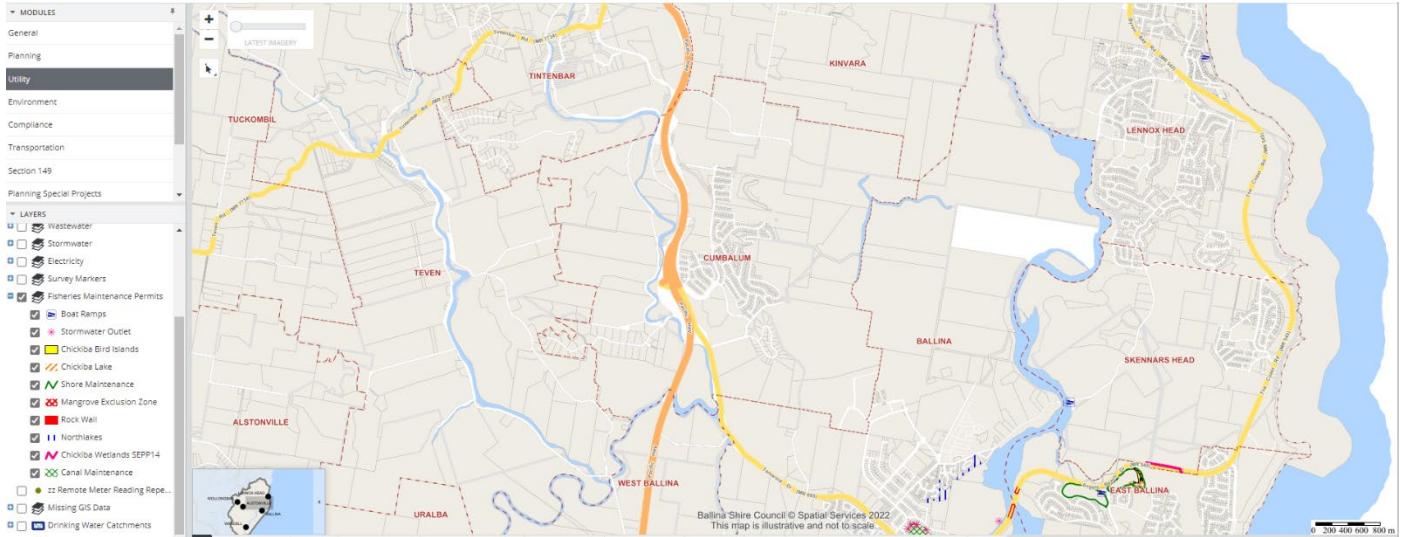
REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

Chickiba Lake

Maintenance and repair of the artificial compensatory bird roosting island in Chickiba Lake. ~~including periodically filling in wheel ruts.~~

APPENDIX B

Infrastructure covered by this maintenance permit



APPENDIX C

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



AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : Ballina

Client Service ID : 548567

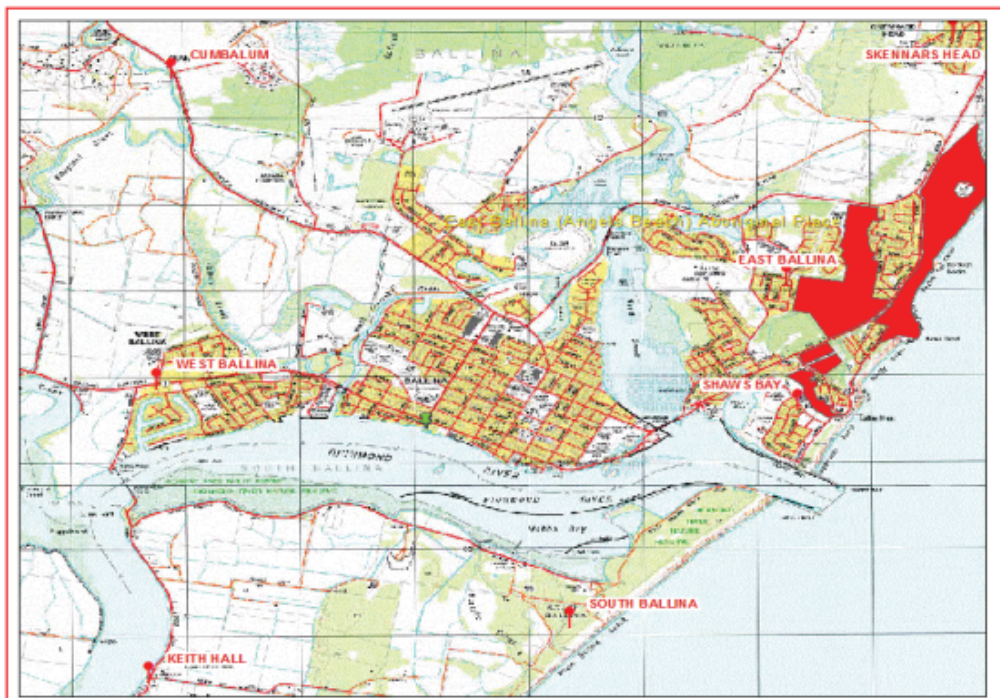
Mark Free
67 Lismore Road
BANGALOW New South Wales 2479
Attention: Mark Free
Email: mark@blackwoodecology.com.au

Date: 09 November 2020

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -28.8825, 153.5286 - Lat, Long To : -28.8409, 153.5947 with a Buffer of 1000 meters, conducted by Mark Free on 09 November 2020.

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 the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

102 Aboriginal sites are recorded in or near the above location.

1 Aboriginal places have been declared in or near the above location. *

ID	Aboriginal Place Name
49	East Ballina (Angels Beach)

APPENDIX D

Specialist Reports

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

EPBC Act Protected Matters Report

BC Act threatened communities

Blackwood Ecology has identified ten Threatened Ecological Communities (TECs) are known from the Ballina Shire. These are listed below:

- Coastal Cypress Pine Forest in the New South Wales North Coast Bioregion
- Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions
- Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions
- Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions
- Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions
- Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion
- Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion
- Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions
- Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions
- White Gum Moist Forest in the NSW North Coast Bioregion

Coastal Management Mapping

Key Fish Habitat – Ballina LGA

Fisheries Management Act (1994) 7-part test

Blackwood Ecology

A 7-part test has been undertaken for one species listed as endangered under the FM Act, the Southern purple spotted gudgeon, which has some potential to occur within the area. The following is to be taken into account for the purposes of determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats—

(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,

Southern Purple Spotted Gudgeon

Background information

Southern purple spotted gudgeon are found in slow moving or still waters of rivers, creeks and billabongs, often amongst weeds, rocks and snags. They feed mainly on insect larvae, but also consume worms, tadpoles, small fish and some plant matter. Females may lay several batches of eggs per season (30-1,300 per batch). The eggs are deposited in clusters on solid objects such as rocks, wood or broad-leafed plants. The male guards and fans the eggs until hatching (3-8 days).

Threats to the Southern purple spotted gudgeon include:

- Predation by introduced fish such as gambusia and redfin perch.
- Habitat degradation, particularly the loss of aquatic plants.
- Fluctuations in water levels as a result of river regulation, leading to negative impacts on reproduction and recruitment.

Recovery actions for the Southern purple spotted gudgeon include:

- Develop and implementing control programs for introduced pest species.
- Promote appropriate land management practices to improve water quality and river health.
- Allocate environmental water flows in regulated rivers to restore natural seasonal flow patterns.
- Conduct further research to establish the current distribution and abundance of purple spotted gudgeons in inland NSW and the key reasons for their decline.
- Implement the Threatened and Pest Species Sighting Program to improve knowledge of the distribution and abundance of the population.

Source: Department of Primary Industries 2011

The scientific determination for this species states that:

Two populations occur in NSW. The eastern population of the purple spotted gudgeon occurs north of the Clarence River catchment in the coastal drainage of NSW. Targeted sampling at sites where this species has previously been found has not produced any new records, although there are unconfirmed records from student research projects in the Tweed and Brunswick river catchments.

While suitable habitat for this species is present within the Richmond River catchment, aquatic habitats around the Ballina township where the majority of works are to be located typically comprise fast flowing waters and limited aquatic vegetation and provide only marginal habitat for this species.

Impacts from works are minor and short-term and largely confined to artificial structures along built-up foreshore environments. No suitable habitat for this species would be affected and there is highly unlikely to be a significant impact on any local population of this species.

b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity—

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

(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,

There are no FM Act listed endangered ecological communities likely to be affected by the proposed works.

(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,

The proposed development will result in minor and short-term disturbance largely confined to artificial structures along built-up foreshore environments. Suitable habitat for the Purple spotted gudgeon would not be affected and works would not isolate or fragment suitable areas of habitat.

(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),

There are no areas of outstanding biodiversity value in the Study area.

(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.

A “threatening process” means a process that threatens, or may have the capability to threaten, the survival or evolutionary development of a species, population or ecological community. Key Threatening Processes have been listed in Schedule 6 of the FM Act (1994) and include

- Degradation of native riparian vegetation along New South Wales water courses
- Hook and line fishing in areas important for the survival of threatened fish species
- Human-caused climate change
- Installation and operation of instream structures and other mechanisms that alter natural flow regimes of rivers and streams
- Introduction of fish to waters within a river catchment outside their natural range
- Introduction of non-indigenous fish and marine vegetation to the coastal waters of New South Wales
- Removal of large woody debris from New South Wales rivers and streams
- The current shark meshing program in New South Wales waters

The proposed works may involve minor and temporary changes to flow regimes from artificial structures and will make a negligible contribution toward human-caused climate change. The effect of the proposed works on the overall impact of these threatening processes will be negligible.

Conclusion

With the adoption of the amelioration measures discussed in this report, the proposed development is unlikely to result in a significant impact on any Threatened (FM Act 1994) species, population or ecological community. A Species Impact Statement is not required.

Fisheries Maintenance Permit Checklist

Prior to enacting a maintenance permit (giving DPI Fisheries 3 days notification prior to the commencement of works), the Team Leader or Coordinator Environmental Management must review the following checklist for the proposed activity and location of works.

If yes to any of the following questions, then further review or notification works will be required prior to commencement of works.

Is the site located within:	
An area (including 200m buffer) where Aboriginal sites or objects have been recorded? (Refer to Aboriginal Heritage Information Management System (AHIMS) search)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
An acid sulfate soil area where works will trigger the need for an acid sulfate soil management plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
The Cape Byron Marine Park (which extends south to Pat Morton Headland)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
The Richmond River Nature Reserve (in South Ballina)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
Crown Lands including works below the MHWL (notification requirements: email DPI Crown Lands Grafton office)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
Crown Lands including council managed land or land with Native title claim (liaise with Council Property Officer – Community Lands)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
Privately owned land (including land owned by Jali Local Aboriginal Land Council)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
A location where adjoining landowners should be notified of proposed works?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
An area with underground or overhead services where notification is required including BSC Water/Wastewater)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
2 km of Priority Oyster Aquaculture Areas? If so, notify the Local Shellfish Program Coordinator (Geoff Lawler on 6686 3394 or 0412 919 032)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
In an identified koala priority area (refer to Intramaps Environment/zz priority Koala Areas)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	

REF for Fisheries Maintenance Permit (PN20/292) Ballina Shire Council

Is the site located within:	
Land identified in Lennox Head with a "slight potential for unexploded ordnance (UXO)". Refer to Intramaps layer, land extends north of Ross Lane, Byron Street, Dodge Lane and Lennox Street	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
The council Contaminated Land Register	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
The council Asbestos Register	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	
A known Heritage area (non-indigenous) (refer to Schedule 5 of the Ballina Local Environmental Plan)	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, provide details:	

APPENDIX E

Reference Documents

Aboriginal Heritage Information Management System (AHIMS) Web Services
<http://www.environment.nsw.gov.au/awssapp/login.aspx>

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>

Australian Heritage Database http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=search_form;list_code=CHL

Briggs, J.D. and Leigh, J.H. (1995) *Rare or Threatened Australian Plants*, Revised Edition, CSIRO Publishing, Australia.

CRA Unit, Northern Zone NPWS (1999). Forest Ecosystem Classification and Mapping for Upper and Lower North East CRA Regions. A project undertaken for the Joint Commonwealth NSW Regional Forest Agreement Steering Committee as part of the NSW Comprehensive Regional Assessments project number NA35/EH.

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>

Ecowater Solutions (2006) Chickiba Lakes Acid Sulfate Soils and Wetland Management Plan. A Report for Ballina Shire Council and the NRCMA.

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>

Higgins, P.J. (Ed.) (1999) *Handbook of Australian, New Zealand and Antarctic Birds*. Oxford University Press, Melbourne.

Hydrosphere Consulting (2015) Coastal Zone Management Plan for Shaws Bay, Ballina. A Report to Ballina Shire Council.

Morand, D.T (1994). *Soil landscapes of the Lismore-Ballina 1:100 000 Sheet Report*, Soil Conservation Service of NSW, Sydney.

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NPWS (2002) *Threatened Species of the Upper North Coast of NSW – Flora*. NPWS Northern Directorate, Coffs Harbour.

NSW Government Legislation website <http://www.legislation.nsw.gov.au/>

NSW Heritage Database <http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx>

Office of Environment and Heritage (2014). Threatened species, populations and ecological communities. <http://www.environment.nsw.gov.au/threatenedspecies/index.htm>

Office of Water – Controlled Activities on Waterfront Land

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

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>