



NGH



Addendum Review of Environmental Factors

Blackfellows Lake Boat Ramp Upgrade

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Acronyms and abbreviations

AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
ASS	Acis Sulfate Soils
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BVSC	Bega Valley Shire Council
CEMP	Construction environmental management plan
Cwth	Commonwealth
DPI	Department of Primary Industries (NSW)
EEC	Endangered ecological community – as defined under relevant law applying to the proposal
EIS	Environmental impact statement
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
FRP	fibre-reinforced plastic
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
ISEPP	State Environmental Planning Policy (Infrastructure) 2007 (NSW)
km	kilometres
LEP	Local Environment Plan
m	metres
NSW	New South Wales
PCT	Plant Community Types
POEO Act	Protection of the <i>Environment Operations Act 1997</i>
REF	Review of Environmental Factors
SHI	State Heritage Inventory

1. Introduction

A Review of Environmental Factors (REF) was prepared by NGH Pty Ltd on 28 September 2020 for the *Blackfellows Lake Boat Ramp Upgrade* on behalf of Bega Valley Shire Council (BVSC) (referred to in this document as the Project REF). The Project REF included upgrades to the existing access road, the construction of a vehicle turnaround and parking area, and installation of lighting. Additionally, the existing boat ramp was replaced with a prefabricated reinforced concrete single boat ramp, and a 30 metres (m) long finger pontoon jetty was installed parallel to the upgraded boat ramp. The majority of the works within the Project REF has been completed and council constructed a 25m long fixed jetty instead of a 30m long finger pontoon jetty.

In addition to the works assessed in the Project REF, BVSC are now proposing to install a floating pontoon and foreshore access path at the site to improve accessibility of the jetty and to the foreshore. The NSW Department of Primary Industries (DPI) Fisheries have requested that the Project REF be updated to consider the impacts of the proposed changes, specifically the floating pontoon and foreshore access path. The installation of the floating pontoon is unlikely to preclude the validity of the Project REF.

This Addendum REF has been prepared to assess the potential impacts of the installation of a floating pontoon and foreshore pedestrian access path. This Addendum REF is to be read in conjunction with the Project REF. The purpose of this Addendum REF is to describe the proposal, to document and assess the likely environmental impacts of the proposal, and to detail consequent implementation of mitigation and management measures.

BVSC are both the proponent and determining authority for the works proposed. As such, the proposal would be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979*. This Addendum REF has been prepared according to the requirements of Section 5.5 of the *Environmental Planning and Assessment Act 1979*, specifying a “duty to consider environmental impact”. This Addendum REF provides a full analysis of all environmental, economic, physical, and social implications of the proposal.

2. The proposal

2.1 Purpose and general scope of works

The purpose of this Addendum REF is to expand on community outcomes of the Project REF via the construction of a floating pontoon and the construction of a pedestrian path to the timber jetty. This decision comes after BVSC received community feedback once construction was completed on the boat ramp component. Issues were identified regarding accessibility of the jetty and to the foreshore. In response, BVSC resolved to pursue the addition of a floating pontoon and foreshore access pedestrian path to improve accessibility of the jetty and to the foreshore.

The floating pontoon and foreshore pedestrian access path would be installed as an addition to the *Blackfellows Lake Boat Ramp Upgrade* discussed in the Project REF.

2.2 Location of the activities

Figure 2-1 shows the location of the proposed works at Blackfellows Lake, Kalaru. The proposed works would be located:

- At the existing boat ramp, Lot 7313 DP 1164453.
- Adjacent to the access road to the boat ramp, Lot 5 DP 263996



Figure 2-1 Proposal location Blackfellows Lake boat ramp. The figure shows the Project REF area in red and the Addendum REF area in yellow.

2.3 Proposal needs and objectives

The proposal needs and objectives are outlined in Section 2.4 of the Project REF.

The key objective of the addendum REF is to improve accessibility of the jetty and to the foreshore via the installation of a floating pontoon and foreshore pedestrian access path. The pedestrian access path is required to minimise disturbance for pedestrians and kayakers accessing the jetty and for aesthetic purposes. The access path would additionally reduce vegetation and foreshore disturbance by providing a defined pathway, as current visitors are making their own path to the lake. The floating pontoon would improve accessibility and safety for all users of the lake.

2.4 Consideration of alternatives

Option 1 – Do nothing

This option would not improve pedestrian accessibility of the jetty and to the foreshore. Without the proposed floating pontoon and pedestrian access path, accessibility for all boat ramp would not be improved. This option would increase the potential disturbance to marine vegetation and the lake foreshore via uncontrolled pedestrian accessibility.

This option would avoid the need to undertake works to install the floating pontoon and pedestrian path including the costs associated with these works and associated environmental impacts.

Option 2 – Installation of floating pontoon and pedestrian access path

This option to install the floating pontoon and pedestrian access path would improve the accessibility of the jetty and to the foreshore. This option would result in minor excavation works that would have an impact on existing vegetation and disturb soils. These works would also include noise and visual impacts via the use of machinery, earthworks and workers onsite. Once completed, the pedestrian access path would improve aesthetics and reduce on-going disturbance to vegetation by visitors creating informal paths. The option would improve the long-term recreational benefits for site users and therefore is the preferred option.

Selection of the preferred option

Option 2 is the preferred option as it meets the key objective to improve accessibility of the jetty and to the foreshore at Blackfellows Lake. On balance, the preferred option achieves the best balance of environmental, social and cost factors, provided the safeguards identified in Section 5 are implemented.

2.5 Description of works

The proposal includes construction work at the Blackfellows Lake Boat Ramp to improve accessibility of the jetty and to the foreshore, which would include the following features:

- The construction of a 6m by 1.4m gangway (Figure 2-2).
- The construction of a 6m by 2.5m floating pontoon (Figure 2-2).
- The construction of a pedestrian access path to the west of the boat ramp access, approximately 1-2m wide and 25-30m long (Figure 2-3 and Figure 2-4). The path would be within an existing disturbed area, adjacent to the road. The path material is yet to be confirmed, options include diamond grid, gravel or concrete. The preference is diamond grid.

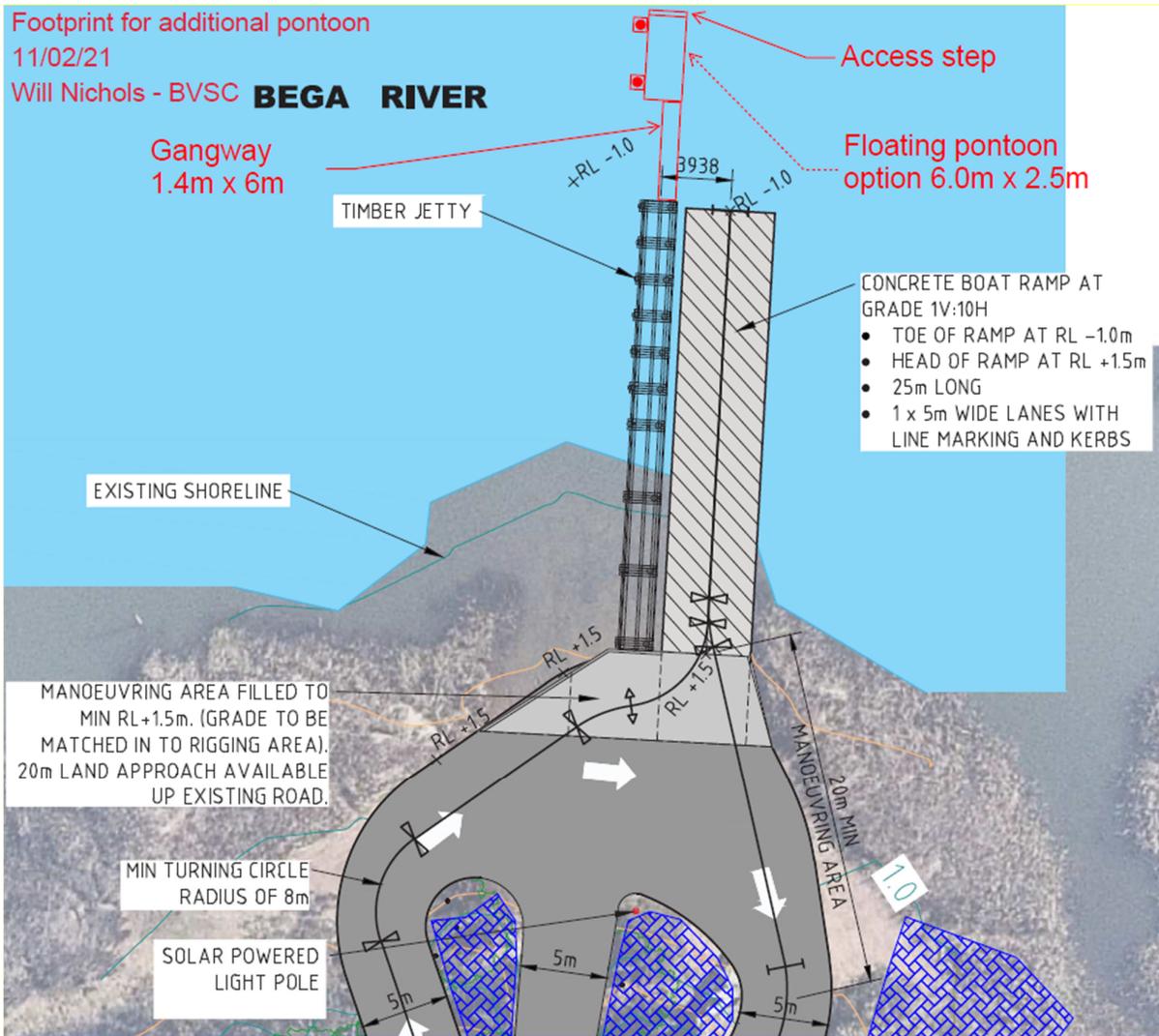


Figure 2-2 Location of gangway and floating pontoon.

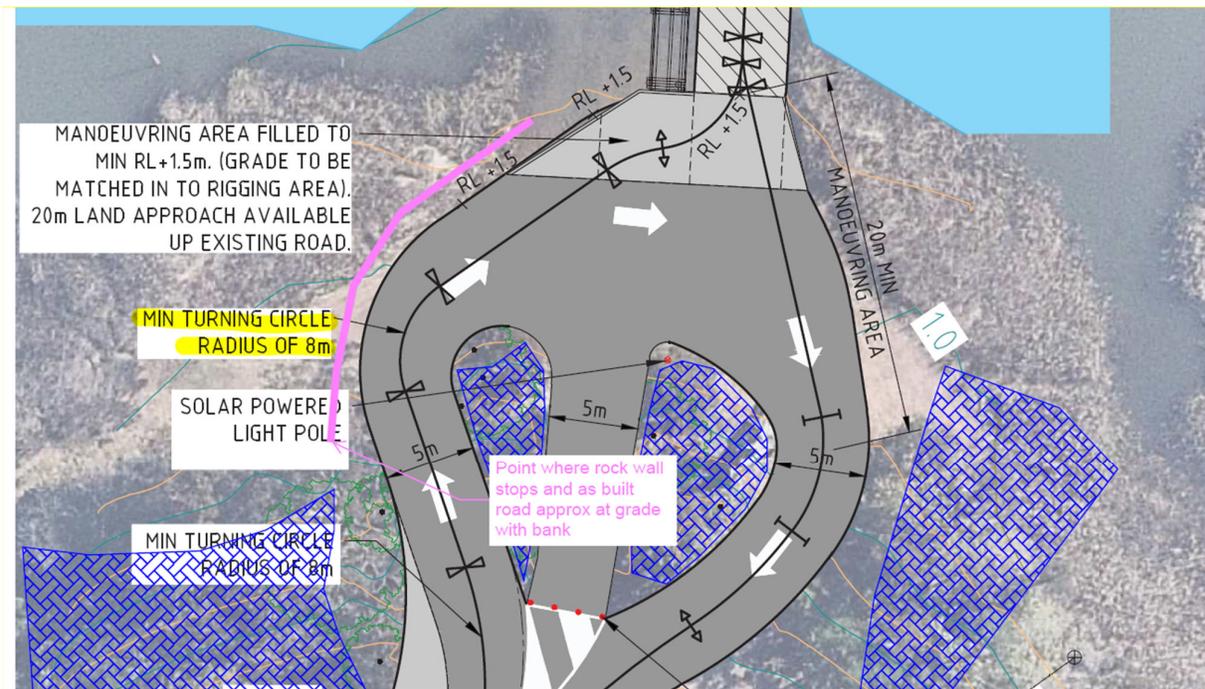


Figure 2-3 Proposed location of the pedestrian access path (purple line).



Figure 2-4 Existing conditions onsite and proposed location of the pedestrian access path to the boat ramp.

2.5.1 Construction methods

The proposal construction program would involve:

- Installation of temporary fencing around works area to prevent unauthorised access. The boat ramp and adjacent carpark would be closed during works.
- Installation of environmental controls, including booms to contain debris from within the waterway and sediment and erosion controls.
- Construction of a new pedestrian access pathway, including:
 - Removal of any vegetation if required
 - Replacement of unsuitable material if required
 - Minor grading and compaction
 - Placement of chosen path material
- Installation of a new floating pontoon and gangway, including:
 - Installation and connection of gangway to existing timber jetty
 - Installation of two piles via excavator. The piles would be screwed or hammered into the lakebed.
 - Placement of sleaving and white caps
 - Placement of pontoon connecting to the newly constructed gangway
- Site clean up
- Removal of environmental controls, once surfaces are stable.

2.5.2 Proposed construction equipment

The following plant and equipment would be used during construction:

- Excavator.
- Piling hammer
- Bobcat
- Loader
- Concrete trucks.
- General hand tools.

2.5.3 Timing

The proposed works would commence November 2021 and take approximately 3-4 months to complete. The construction of the proposal would not occur during school holidays.

The proposed works would be undertaken during standard construction hours:

- Monday to Friday: 7am to 6pm.
- Saturday: 8am to 5pm.
- Sunday and Public Holidays: No work.

3. Confirmation of legislative context

The legal permissibility described in Chapter 3 of the Project REF is applicable to the proposal. In summary:

- The Land of the proposal is zoned as RE1 Public Recreation within the *Bega Valley Local Environment Plan 2013*. Under this land zoning community facilities or recreational areas are permitted with consent under the land zoning of the proposal.
- Clause 68 of the *State Environmental Planning Policy (Infrastructure) 2007* outlines the proposed path and pontoon is permitted without development consent by a public authority (i.e BVSC).
- No additional licences or approvals are required.

3.1 Works within coastal wetland

The proposed path and pontoon gangway is mapped as 'coastal wetland' and the floating pontoon occurs within land mapped as 'coastal wetlands proximity area' under *State Environmental Planning (Coastal Management) 2018* (refer to Figure 3-1).

Clause 10 declares all works, other than environmental protection works to be Designated Development. Clause 11 requires an Environmental Impact Statement to be completed if a 'significant' impact is anticipated on biophysical, hydrological or ecological integrity of the wetland affected. Section 5 addresses the potential for significant impacts in these areas and concludes that a significant impact is unlikely. Furthermore, the works could be considered ancillary to the existing development and thereby as 'alterations and additions' to existing development (under Schedule 3 Part 2 of the Environmental Planning and Assessment Regulation 2000, refer to Appendix E). As the environmental impacts of the total development would not be significantly increased, the works are not considered to trigger Designated Development.

Legend

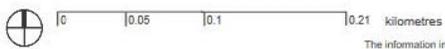
- Coastal Wetlands
- Proximity Area for Coastal Wetlands



Notes:

Map created: 20-Sep-2018

Imagery © Department of Finance Services & Innovation Basemap © OpenStreetMap



The information in this map is correct to the best of our knowledge. No warranty or guarantee is provided and no liability is accepted for any loss or damage resulting from any person relying upon or using the information contained in the map.

Figure 3-1 Works within coastal wetland and proximity to coastal wetland (Project REF is in red and Addendum REF area in yellow).

4. Consultation

Chapter 4 of the Project REF details the consultation process for the proposal.

The ISEPP agency consultation requirements, as detailed in Table 4-1 of the Project REF, are not changed for the proposal. There was no ISEPP consultation triggers.

Additional consultation that has been undertaken for this addendum with relevant stakeholders is outlined below.

4.1 Consultation undertaken

In addition to the consultation provided in Section 4 of the Project REF, BVSC has consulted with the NSW DPI Fisheries regarding the proposed works. This addendum REF has been completed as per advice received by BVSC from DPI Fisheries on the proposed path and floating pontoon.

Since the completion of the Project REF, BVSC has undertaken additional community consultation, this is outlined in Table 4-1.

Table 4-1 Community consultation summary

Date	Consultation undertaken
January 2021	BVSC received feedback from the community raising concerns regarding accessibility at the upgraded Blackfellows Lake boat ramp.
27 January 2021	Council resolved to hold a community meeting to discuss the issues and to workshop a solution.
23 February 2021.	A public meeting was held with approximately. 40 attendees including community members, council staff and Councillors.
21 April 2021	Council resolved for staff to pursue the addition of a floating pontoon and shoreline access subject to funding and necessary permits.

4.2 Ongoing community consultation

As the project progresses, nearby residents, and businesses to the proposal site would be notified regarding the proposed works. Information provided would include a proposed works program and proposal details.

Site users would be informed well in advance of site closures, works periods, proposal details and alternative facilities.

5. Environmental assessment

The proposal involves the installation of a path and floating pontoon which would involve minor earthworks, use of equipment, deliveries and potentially concreting within an existing disturbed recreational reserve of Blackfellows Lake. The existing environment for the proposal site was assessed as part of the Project REF. The potential impacts associated with the Project REF also involved earthworks, use of equipment, deliveries and concreting. As such, the changes assessed in this addendum relate to the extent of impact, not the nature of the impact. It is assumed the path would be concreted as worst-case scenario. The receiving environment remains the same as described in the REF.

Aiming to avoid duplication where possible, Table 5-1 provides an impact assessment for the proposed path and floating pontoon, sourcing key information from the REF as required. No site visit or further specialist assessment was considered to be required for this addendum assessment. In the context of the REF's mitigation measures and environmental management strategies, Table 5-1 also considered if any mitigation measures additional to those committed to in the REF are required to manage the proposed works. The full list of mitigation measures from the Project REF that are relevant to these works are outlined in Appendix A.

Table 5-1 Environmental Assessment summary, summarising any updates that have been made in the current addendum REF additional to the Project REF.

Aspect	Existing environment	Potential impact	Mitigation Measures
Topography, geology, soils	<p>No change from Project REF.</p> <p>The proposal area includes:</p> <ul style="list-style-type: none"> Geology: Quaternary (<2.5-million-year-old) alluvial (river-derived) deposits. Lithology is comprised of current and recent silt, sand and gravel deposited by alluvial systems (Office of Environment and Heritage, n.d.). Soil landscapes: The proposal is located within the 'Pambula' soil landscape, characterised by infertile, hard setting, acidic, often non cohesive erodible soils 	<p>Construction</p> <p>The proposal would result in an impact area of approximately 25m², this would be for the path. The floating pontoon would also have minimal impact through the placement of two piles.</p> <p>As per the Project REF, the proposal has potential to impact on soils through disturbance and use of machinery and equipment. The potential impacts include:</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>subject to water (sheet) erosion hazard with seasonally high water tables (localised in drainage lines). Topography is characterised by undulating rises to rolling low hills. Local relief 0-40m. elevation range 0-49m broad (>300m) crests and long (300m) gently inclined (<10%) slopes.</p> <ul style="list-style-type: none"> Acid sulfate soils (ASS): The northern extent of the finger pontoon is mapped as class 1; acid sulfate soils are likely to occur here. Based on the geomorphological characteristics of the site, there is a possibility of encountering acid sulfate soils throughout the area of the pontoon jetty and boat ramp. <p>A search of the Environmental Protection Authority (EPA) <i>Contaminated Lands Record of Notices</i> for the Bega Valley Shire LGA as of 23 September 2021, did not reveal any sites. A review of EPA <i>List of NSW Contaminated Sites Notified to EPA</i> as of 23 September 2021 did not reveal any sites notified to the EPA related to the proposal site.</p>	<ul style="list-style-type: none"> Exposure of soils resulting in erosion could present a pollution risk to Blackfellows Lake due to a rapid run off potential and sedimentation. The manoeuvring of machinery and equipment laydown can affect physical and biological processes. Risk of pollution or contamination through concrete spills, leaks and spills from machinery and equipment. Concrete can alter turbidity and pH if not appropriately managed. Improper management of ASS would have water quality implications for the Blackfellows Lake and create ongoing management issues at the sites were the material was disturbed. <p>It is considered unlikely that contaminated land is encountered at the proposal site.</p> <p>Operation</p> <p>Post construction the impacts to soil would be largely concentrated to disturbed areas. Disturbed areas post-construction</p>	

Aspect	Existing environment	Potential impact	Mitigation Measures
		<p>would continue to erode without the re-establishment of vegetation.</p> <p>The proposed floating pontoon, gangway and pedestrian access path would not result in any additional construction or operational impacts than those outlined in the Project REF. The additional impact areas are considered minor and manageable via the implementation of measures outlined in the Project REF.</p>	
<p>Hydrology, catchment values and water quality</p>	<p>No change from Project REF.</p> <p>Part of the proposal extends into the Blackfellow Lake, which is part of the 3.8 km² Bega River estuarine system. The catchment for the system is 1934.8 km², and comprises of agricultural, residential and conservation areas.</p> <p>The Geoscience Australia OzCoasts assessments of non-pristine estuaries found the Bega River to be in 'modified condition'; having been modified by substantial catchment clearing, sedimentation, water quality impacts and agriculture.</p> <p>Part of the proposal is located within a <i>State Environmental Planning Policy (Coastal Management) 2018</i> coastal wetland and proximity areas. However, as above, a</p>	<p>Construction</p> <p>As per the Project REF, the proposal has potential to impact on waterways through:</p> <ul style="list-style-type: none"> • Pollution or contamination entering waterways through concrete spills, leaks and spills from machinery and equipment. • Exposure of soils resulting in erosion and sedimentation at Blackfellows Lake. • Contamination including acid sulfate soils has the potential to result in considerable impacts to water quality should it not be managed correctly during earthworks. 	<ul style="list-style-type: none"> • The access path would be designed to reduce the risk of materials entering Blackfellows Lake during a rainfall event. • Only clean rock or gravel (course materials) would be used for the exposed surface of the access path.

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>'significant' impact is not anticipated. As such, the preparation and approval of an EIS is not considered to be required (refer to Section 3.1).</p>	<p>Operation</p> <ul style="list-style-type: none"> • Impacts to downstream water quality due to potential run-off from the access pathway which may be sealed. The concreting of the path has potential to increase runoff due increased hard surface. • The use of gravel or diamond grid have potential to release contaminates into the water from runoff. However the contaminates are likely to be coarse materials rather than sediment. Coarse materials are less likely to mobilise in a rainfall event compared to sediment and result in sedimentation of Blackfellows Lake. The risk is further reduced with the option of using a diamond grid, which is designed to hold in materials. Additional mitigation measures have been included to further reduce the risk of runoff and impacting water quality of Blackfellows Lake from the proposed access path. 	

Aspect	Existing environment	Potential impact	Mitigation Measures
Biodiversity	<p>The following searches were undertaken 15 September 2021, in addition to review of the Project REF:</p> <ul style="list-style-type: none"> • EPBC Protected matters search • OEH BioNet Atlas Search • NSW Department of Primary Industries DPI Fisheries Threatened Species and aquatic Threatened ecological communities • DPI WeedWise searches. <p>From these searches two threatened species and three threatened ecological communities were identified additional to the counts from the Project REF. These species included:</p> <p>Threatened Ecological Communities:</p> <ul style="list-style-type: none"> • Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions • Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions • White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, 	<p>Construction</p> <p>The proposal would result in the removal of approximately 10m² vegetation (if required) adjacent to the lake where the access path is proposed. The vegetation to be removed is likely to be reeds that have grown on the edge or through the existing pathway. Neither of the identified PTCs are identified as a TEC.</p> <p>Due to the small works area and no presence of TECs or habitat it is unlikely that any threatened species of flora or fauna would be present or impacted by the proposed works.</p> <p>The floating pontoon would be located within Blackfellows Lake. The Project REF identified within the vicinity of the existing boat ramp there is no notable or unique key fish habitat for threatened species that would be impacted by the works. The absence of seagrass meadows further limits habitat for fish and smaller aquatic species within this specific area.</p> <p>As per the Project REF, the proposal has potential to impact on biodiversity through:</p> <ul style="list-style-type: none"> • Direct loss of native vegetation. • Loss of fauna habitat. 	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions</p> <p>Fauna:</p> <ul style="list-style-type: none"> • Striated Fieldwren <i>Calamanthus fuliginosus</i> • Large Bent-winged Bat <i>Miniopterus orianae oceanensis</i> <p>Appendix C provides a list of additional threatened species that have been recorded from database searches. In Appendix C, the habitat characteristics of these communities and species have been evaluated to determine their likelihood to occur within the study area.</p> <p>The vegetation adjacent to the Lake, where the access path is proposed is associated with the following two Plant Community Types (PCT):</p> <ul style="list-style-type: none"> • PCT 777 Coast Grey Box - Mountain Grey Gum - stringybark moist shrubby open forest in coastal gullies • PCT 1084 Red Bloodwood - Silvertop Ash - White Stringybark heathy open forest on coastal foothills. <p>Neither PCT is identified as a TEC.</p>	<ul style="list-style-type: none"> • Potential injury, mortality or disturbance to fauna. • Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands. • Potential to bring in weeds, pests and pathogens. <p>These additional impacts are considered manageable through the implementation of mitigation measures outlined in the Project REF.</p> <p>Operation</p> <p>There are no additional impacts post construction.</p> <p>The access path would additionally reduce vegetation and foreshore disturbance in the long term by providing a defined pathway. Currently visitors are making their own path to the lake.</p>	

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>The floating pontoon would be located within Blackfellows Lake. The Project REF identified within the vicinity of the existing boat ramp there is no notable or unique key fish habitat for threatened species that would be impacted by the works. The absence of seagrass meadows further limits habitat for fish and smaller aquatic species within this specific area.</p> <p>Habitat is limited for many shorebirds, especially threatened species, due to the lack of wide mudflats and sandflats. Nesting or breeding habitat is not available for shorebirds or waders, but marginal foraging habitat is available on the Lake's margins within the reedland during low tides. Habitat is also limited for migratory shorebirds for the reasons stated above.</p>		
Community and socioeconomics	<p>No change from Project REF.</p> <p>Tourism is an important economic activity in the Bega Valley Region.</p> <p>Recreational opportunity is important for residents. The site is an important location for recreational fishing. The Blackfellows Lake boat ramp provides boating access to the Bega River and numerous locations seaward from this estuary.</p>	<p>Construction</p> <p>As per the Project REF, the proposal has potential to impact on community and socioeconomics through:</p> <ul style="list-style-type: none"> • Water quality impacts may result in impacts for aquaculture leases within the Bega River system. • Pollution issues may also reduce the ecological productivity of the system which in turn may impact 	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>A few aquaculture leases occur within the Bega River estuarine system. The primary commodity is shellfish, which are highly susceptible to water quality both in terms of output and quality.</p>	<p>the quality of the fisheries of the area.</p> <ul style="list-style-type: none"> • Temporary closure of the site to undertake the works. <p>Operation</p> <p>The proposal is expected to generate increased visitation via improvement of infrastructure and access to the jetty and foreshore.</p> <p>The floating pontoon and pedestrian access path would improve the accessibility of the facility for all users.</p> <p>These additional impacts are considered manageable through the implementation of mitigation measures outlined in the Project REF.</p>	
<p>Amenity: visual, air quality, noise, and vibration</p>	<p>No change from Project REF.</p> <p>The proposal site is adjacent to two types of receivers:</p> <ul style="list-style-type: none"> • Rural residences, closest receiver is 20m away. • Public foreshore recreational users, which is located within the proposal site. 	<p>Construction</p> <p>As per the Project REF, the proposal has potential to impact on community and socioeconomics through:</p> <ul style="list-style-type: none"> • Construction machinery may generate noise, vibration, air quality impacts. • During construction, moderate visual impacts as a result of 	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>All receivers would be expected to have high air quality sensitivity. Existing noise at the site is expected to be very low.</p> <p>No sensitive receivers, such as schools or hospitals, are located near the works areas.</p>	<p>construction works (machinery, fencing, stockpiles etc.) are expected to be visible to the residential receivers.</p> <ul style="list-style-type: none"> • During construction, the existing boat ramp would not be accessible. While access would be restricted there are not expected to be any amenity impacts for recreational users. <p>Operation</p> <p>The proposal has potential to impact the amenity of the site through the following:</p> <ul style="list-style-type: none"> • Operational noise and traffic impacts may occur as a result of increased usage of the site. • The addition of the floating pontoon and gangway would be visible from multiple outlooks. <p>The extent of the pedestrian access pathway proposal is relatively minor. The access path is anticipated to improve aesthetics by its formalisation.</p> <p>These additional impacts are considered manageable through the implementation</p>	

Aspect	Existing environment	Potential impact	Mitigation Measures
<p>Traffic and access</p>	<p>Access to the Blackfellows Lake boat ramp was upgraded as part of the Project REF. Access is provided via Blackfellows Lake Road, a two-lane road that has recently been sealed, followed by an unnamed single lane road that has recently been sealed. A formal turnaround and parking area has also been constructed and lighting has been installed.</p>	<p>of mitigation measures outlined in the Project REF.</p> <p>Construction</p> <p>The proposal has potential to impact the traffic and access of the site through the following:</p> <ul style="list-style-type: none"> • The plant and equipment required to construct the floating pontoon would obstruct access to navigable waters. • The plant and equipment required to construct the access path would obstruct pedestrian access to the jetty and foreshore. <p>Operation</p> <p>The proposal would improve the usability of infrastructure for maritime users at the proposal site and increase accessibility of the jetty and to the foreshore.</p> <p>These additional impacts are considered manageable through the implementation of mitigation measures outlined in the Project REF.</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
Climate change	<p>No change from Project REF.</p> <p>BMT WBM (2015) published a <i>Bega Valley Shire Coastal Processes and Hazards Definition Study – Volume 1: Final Report</i> that Identify, assess and maps the potential extent of coastal hazards for the current year, 2050 and 2100 timeframes. The study identifies areas of inundation during storms as provided in the Project REF.</p>	<p>Construction</p> <p>No change from Project REF.</p> <p>The proposal works are expected to be subject to some inundation. The effect is likely to be negligible to minor, given the high local relief of the proposal site.</p> <p>The site is expected to be subject to the effects for more severe weather events, however, the relatively sheltered location of the proposal is expected to minimise these effects.</p> <p>Operation</p> <p>No change from Project REF.</p> <p>The proposal works are expected to be subject to some inundation. The effect is likely to be negligible to minor, given the high local relief of the proposal site.</p> <p>The site is expected to be subject to the effects for more severe weather events, however, the relatively sheltered location of the proposal is expected to minimise these effects.</p> <p>These impacts are considered manageable through the implementation</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
<p>Indigenous heritage</p>	<p>An updated AHIMS (Aboriginal heritage information management system) search was undertaken using the following parameters:</p> <ul style="list-style-type: none"> GDA Zone: 55, Eastings: 760025 - 765025, Northings: 5928025 - on 16/09/2021. <p>The search identified 49 Aboriginal heritage sites recorded in the area, one of these are related to the proposal site, AHIMS 62-6-0798.</p> <p>AHIMS 62-6-0798 or <i>Blackfellows Lagoon AFT 1</i> was identified during the site inspection for the Project REF by a qualified archaeologist. The site was a scatter of stone artefacts spread for 120m from the edge of the drop-off south along the access road. Artefacts were found on the edge of the road cutting near the termination of the spur and also along the unsealed section of the access track. Artefacts were observed in the run-off channels along the edge of the track as well as in the middle of the track. Thirteen artefacts were recorded in detail but the site is estimated to contain about 20 artefacts. It is unlikely that there would be substantial subsurface deposit</p>	<p>of mitigation measures outlined in the Project REF.</p> <p>Construction</p> <p>As per the Project REF, the potential for finding archaeological material during construction is low.</p> <p>There is a low possibility for heritage items to occur in the proposal site.</p> <p>Unexpected finds procedure is to be implemented if any potential items are located. Works should stop and NSW Heritage notified.</p> <p>Operation</p> <p>No additional impacts.</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
	<p>remaining on the access track but some may exist within the undisturbed spur crest.</p> <p>BVSC prepared an Aboriginal Cultural Heritage Assessment Report (ACHAR) and received an Aboriginal Heritage Impact Permit for the site. Based on the ACHAR the proposed works assessed in this Addendum REF would not impact on this scatter or any areas of archaeological significance.</p>		
<p>Non-indigenous heritage</p>	<p>Heritage searches were undertaken on 16/09/2021 including:</p> <ul style="list-style-type: none"> • The Australian Heritage Database (for items listed in the National and Commonwealth Heritage Lists and World Heritage List). • The NSW State Heritage Inventory (SHI) (for items listed on the State Heritage Register, Heritage and Conservation Registers of State Government agencies and local heritage items on the Bega Valley Shire Council Heritage Schedule). • The local heritage listings (for items listed on <i>the Bega Valley Local Environmental Plan 2013</i>). <p>The searches identified two additional listing in the Bega Valley LEP making a total of 480</p>	<p>Construction and Operation</p> <p>There are unlikely to be any impacts on heritage as a result of this addendum.</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
Waste minimisation and management	<p>Locally listed heritage places in the council area. None of the additional listings occur within the Kalaru area.</p> <p>The remaining heritage searches are consistent with the Project REF.</p> <p>No change from Project REF.</p> <p>Legal requirements for the management of waste are established under the Protection of the <i>Environment Operations (POEO) Act 1997</i> and the <i>POEO (Waste) Regulation 2005</i>. Unlawful transportation and deposition of waste is an offence under section 134 of the POEO Act. Littering is an offence under section 145 of the POEO Act.</p>	<p>Construction</p> <p>The proposal has potential to impact the waste minimisation and management at the site through the following:</p> <ul style="list-style-type: none"> • Loss of potentially recoverable resources. • Site contamination such as concrete washout (including potential visual and ecological impacts). • Contamination of the site has potential to spill into Blackfellows Lake. • Offsite contamination due to inappropriate disposal or handling by unlicensed operators. <p>These potential impacts are considered manageable through the implementation of mitigation measures outlined in the Project REF.</p>	<p>No additional mitigation measures are required.</p>

Aspect	Existing environment	Potential impact	Mitigation Measures
		<p>Operation</p> <p>No additional impacts.</p>	
Cumulative	<p>As this REF is an addendum to the original Project REF, the cumulative impacts of all works undertaken during the Blackfellows Lake boat ramp upgrade are relevant to this addendum.</p>	<p>Construction</p> <p>The increased construction site footprint has potential to:</p> <ul style="list-style-type: none"> • Increase traffic. • Increase erosion risks. • Increase in waste generation. <p>Operation</p> <p>No additional impacts.</p>	<p>No additional mitigation measures are required</p>

6. Conclusion

This REF addendum assessed the potential construction and operational impacts associated with the following proposed works:

- The construction of a 6 metre by 1.4 metre gangway.
- The construction of a 6 metre by 2.5 metre floating pontoon.
- The construction of a pedestrian access path to the west of the boat ramp.

The proposed works would improve the accessibility of the jetty and to the foreshore for pedestrians and site users.

The works would be additional to those assessed in the *Blackfellows Lake Boat Ramp Upgrade REF* (NGH, 2020) however the Project REF provided important existing environment for the proposal and is relevant to cumulative impacts at the site.

The works assessed in this addendum relate to the extent of impact, not the nature of the impact. The receiving environment and nature of the impacts remain the same as described in the REF and have been used as key source information for this assessment.

The key environmental risks of the works have been identified as soil and water, community and socioeconomics, amenity and traffic and access. The mitigation measures outlined in the Project REF are appropriate for this addendum proposal. Two additional mitigation measures are considered to be required for this additional scope of work.

The REF mitigation measures, applied to manage the proposal scope of works, would ensure that the negative impacts of the proposal are prevented, mitigated, or limited as far as practical. The mitigations measures are provided in Appendix A. Of benefit, the upgrades would provide improved accessibility to the jetty and foreshore for site users and on balance are considered justified.

7. References

- Bega Valley Shire Council, 2013, *Bega Valley Local Environment Plan*, viewed online July 2015, http://www.begavalley.nsw.gov.au/CLEP_info/Info.htm
- BMT WBM, 2015, *Bega Valley Shire Coastal Processes and Hazards Definition Study – Volume 1: Final Report*, access online August 2018 from https://www.begavalley.nsw.gov.au/attachments/FINAL_Coastal_Processes_Hazards_Definition_Study.pdf
- Department of Environment and Climate Change, 2009, *Interim Construction Noise Guideline*, Sydney: Department of Environment and Climate Change.
- Department of Environment and Climate Change, 2010, *Due diligence Code for Practice for the Protection of Aboriginal Objects in New South Wales*, Sydney.
- DPE, 2021, *State Environmental Planning Policy (Coastal Management) 2018 – map*, accessed September 2021 , from: http://webmap.environment.nsw.gov.au/PlanningHtml5Viewer/?viewer=SEPP_CoastalManagement
- NGH, 2020, *Blackfellows Lake Boat Ramp Upgrade REF*. Report prepared for BVSC.
- NSW Government, 2021a, *Contaminated sites notified to EPA*, accessed September 2021, from <http://www.epa.nsw.gov.au/clm/publiclist.htm>
- NSW Government, 2021b, *NSW OEH contaminated site register*, accessed September 2021, from <http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>
- OEH, n.d., *eSPADE*, accessed online July 2018 from <https://www.environment.nsw.gov.au/eSpade2Webapp>

Appendix A Summary of mitigation measures

The new mitigation measures are shown in *italics and bold*.

Impact Category	Safeguard
Topography, geology, soils and contamination	<ul style="list-style-type: none"> • A site-specific sediment erosion control plan would be prepared. The plan would: <ul style="list-style-type: none"> ○ Be developed consistent with the Blue Book (Landcom 2004). ○ Be specific to the area of construction, reflecting different gradients, catchment sizes and sensitive features. ○ Detail the type and location of all sediment erosion controls to be installed.
	<ul style="list-style-type: none"> • Sediment erosion controls would be maintained during works and adapted if required to ensure the objectives of the Blue Book are met. They would be removed only when soils have been deemed stable (i.e. considering grade or surface treatment / success of revegetation).
	<ul style="list-style-type: none"> • Construction works should not be carried out in periods of forecast heavy rains or strong/gale wind warnings.
	<ul style="list-style-type: none"> • Stockpile sites would be managed in accordance with the Blue Book (Landcom 2004), including location: <ul style="list-style-type: none"> ○ On Council owned existing hard stand areas, requiring no additional native vegetation clearing. ○ At least 40 metres away from the nearest waterway. ○ On relatively level ground. ○ Outside the 1 in 10 year Average Recurrence Interval (ARI) floodplain.
	<ul style="list-style-type: none"> • A spill management plan would be developed including: <ul style="list-style-type: none"> ○ Requirements for spill kits will be kept on site during works ○ Hazardous chemicals (including fuels, paints etc.) should be stored in the smallest practical quantity, in accordance with the MSDS, in bunded areas, at least 50 meters from water bodies. ○ Emergency spill procedures.
	<ul style="list-style-type: none"> • No concrete waste or excavated material it to be disposed of onsite or in adjacent waterways. Concrete waste includes excess concrete, concrete washout and similar.
	<ul style="list-style-type: none"> • Access would be managed to minimise traffic on non-hardstand areas.
	<ul style="list-style-type: none"> • The smallest practical machinery would be used for works, to minimise areas of disturbance and compaction impacts.
	<ul style="list-style-type: none"> • All areas disturbed by works would be rehabilitated progressively to ensure stable surfaces are obtained as soon as practical. Species selection would be appropriate to the area of works – sterile cover crops and native mulching (thinly spread so germination from the seed bank is not impeded) is considered appropriate in this area. Monitoring will be required. Follow up seeding and mulching may be required to ensure that surfaces are stabilised.
	<ul style="list-style-type: none"> • Coordination would be undertaken with Council and other service providers to manage impacts to other services.
<ul style="list-style-type: none"> • Acid sulfate soils are to be managed in accordance with the <i>Acid Sulfate Soil Manual</i> (Acid Sulfate Soil Management Advisory Committee, 1998). Contractors should demonstrate they have protocols to manage this impact 	

Impact Category	Safeguard
	<ul style="list-style-type: none"> If contaminated or suspicious material is encountered during works, a suitably qualified professional would be engaged to determine risks and management strategies
Hydrology, catchment values and water quality	<ul style="list-style-type: none"> Design carpark and road in accordance with the NSW Government Roads and Maritime Services Water sensitive urban design guideline (2017). The key design principal is to capture and treat pollution prior to it entering the Bega River estuarine system by implementing control devices appropriate for sensitive receiving waters identified in Table 2 of the Guideline. Obtain a permit from NSW Fisheries prior to the works taking place. This should include development of detailed measures to manage works in waterways, such as booms and machinery wash down protocols. <i>The access path would be designed to reduce the risk of materials entering Blackfellows Lake during a rainfall event.</i> <i>Only clean rock or gravel (course materials) would be used for the exposed surface of the access path.</i>
Biodiversity	<ul style="list-style-type: none"> Obtain a permit from NSW Fisheries prior to the works taking place. A Construction Environmental Management Plan (CEMP) should be developed detailing measures to manage works in waterways, such as booms and machinery wash down protocols. Additional issues for consideration include: <ul style="list-style-type: none"> Containment of debris during in water works Machinery access to the water Monitoring Prior to the commencement of work, a physical clearing boundary at the approved clearing limit is to be demarcated and implemented. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar. Clearly mark the vegetation to be retained as a no-go zone using temporary fencing, flagging tape, parawebbing or similar before works commence, including exclusion of stored materials and machinery during construction. Retain the hollow-bearing stag and associated island vegetation within the turnaround area to safeguard hollow resources in the locality. <ul style="list-style-type: none"> If the tree cannot be retained, such as for safety reasons, undertake pre-clearance surveys for the Barking Owl, Masked Owl, Powerful Owl, Eastern False Pipistrelle, Eastern Freetail-bat, and Yellow-bellied Glider during their known breeding seasons to confirm if the tree is used by any of these species. Develop a removal protocol depending on these results to assess: <ul style="list-style-type: none"> suitable timing for removal to minimise impacts whether replacement habitat should be installed. A weed, pest and pathogen management plan would be developed for inclusion in the CEMP prior to works to reduce the likelihood of introducing or exacerbating this risk. <ul style="list-style-type: none"> Weed-free fill would be used for on-site earthworks. Species used for replanting and landscaping must not comprise noxious weeds. Machinery would be cleaned before site access. Post construction, BVSC to consider installing signage at boat launching sites to educate users about: <ul style="list-style-type: none"> Their biosecurity obligations

Impact Category	Safeguard
	<ul style="list-style-type: none"> ○ Methods for users reduce the risk of weed and pest introduction
Community and socioeconomics	<ul style="list-style-type: none"> ● Keep local community informed regarding duration, timing of construction works and associated disruptions. Ensure the justification and benefits of the project is communicated clearly. ● Notification to local industry groups regarding duration, timing of works and disruptions.
Amenity: visual, air quality and noise	<ul style="list-style-type: none"> ● Activities would be completed in the shortest practical time. ● Safe access to recreation areas would be maintained where practical. ● A qualitative noise assessment in accordance with NSW Interim Construction Noise Guideline (DECC, 2009) would be required if the works exceed 3 weeks. ● Comply with the Interim Construction Noise Guideline (DECC, 2009) by restricting work to standard works hours: <ul style="list-style-type: none"> ○ Between 7am and 6pm Monday to Friday, ○ Between 8am and 5pm on Saturday, ○ No works would be permitted on Sundays or public holidays. ● Equipment would be maintained in good condition so that excessive noise is not emitted. Noise attenuation methods may be used on particularly noisy equipment if required. ● Machinery should be turned off while not in use (where possible). ● Machinery should be in good working order and compliant with the relevant air emissions regulations . ● During dry conditions, exposed soils should be wetted down and stockpiles covered if not in use. ● Lighting to be constructed in such a way as to no directly shine into residential dwellings or significantly illuminate residential areas or outlooks (consider location, direction and cowals where necessary; consult with neighbours if impacts cannot be avoided). ● Materials should be selected to be consistent with the surrounding environment, unnecessarily bright and reflective surfaces should be avoided where possible.
Traffic and access	<ul style="list-style-type: none"> ● A Traffic Management Plan would be prepared prior to construction, which would identify the need for, and extent of traffic controls for the works area. The Traffic Management Plan would include, but not be limited to consideration of: <ul style="list-style-type: none"> ○ Signage to indicate the works areas and any hazards. ○ Speed limit reductions, where required. ○ Parking of machinery and vehicles where this is required close to the works areas. ○ Staging and timing of works to provide access to residential sites ● Notification of any changed traffic conditions would be advertised to the local community in advance of the works commencing. A contact number would be provided for community queries in relation to the works. ● Installation of safety fences around works area where public access must be restricted.

Impact Category	Safeguard
	<ul style="list-style-type: none"> The works program should be scheduled to be as short as practical to minimise access impacts, outside of holiday periods.
Climate change	<ul style="list-style-type: none"> The development would be engineered in consideration of current and future coastal hazards.
	<ul style="list-style-type: none"> The development would not be located where it is likely they will become inundated within their lifespan (unless inundation doesn't diminish their usefulness, e.g. a boat ramp).
	<ul style="list-style-type: none"> Measures should be taken to ensure that the developments don't increase the overall risk posed by climate change, for example by building in locations that will subsequently become unstable.
Indigenous heritage	<ul style="list-style-type: none"> No activity including road upgrades, grading, gravelling or other earthworks can occur in the identified site Blackfellows Lake AFT 1 until an Aboriginal Heritage Impact Permit (AHIP) from OEH to impact the site has been granted.
	<ul style="list-style-type: none"> To obtain an AHIP, BVSC will require a suitably qualified heritage consultant to undertake an Aboriginal Cultural Heritage Assessment (ACHA) including consultation with the Aboriginal community. The ACHA would need to support the issue of an AHIP and be submitted with an application to OEH.
	<ul style="list-style-type: none"> If the proposed work is confined to the existing road disturbance area, no subsurface testing is considered necessary but an AHIP will still be required.
Non-Indigenous heritage	<ul style="list-style-type: none"> If any items suspected of being of historic value are uncovered during the works, works must cease in the vicinity of the find and advice would be sought from a heritage consultant as to whether the NSW Division Branch (OEH) must be notified in accordance with the NSW Heritage Act 1977. In this case, works would proceed only under direction of the Heritage Division.
Waste minimisation and management	<ul style="list-style-type: none"> Waste would be managed according to the following hierarchy: <ul style="list-style-type: none"> Reuse as much as possible. Recycle as much as possible of the remainder. Dispose appropriately of waste that cannot be reused or recycled.
	<ul style="list-style-type: none"> Liquid waste from paved area cleaning should be managed in accordance with the relevant guidelines.

Appendix B Threatened species Evaluations

The tables below evaluate the potential for threatened species, ecological communities and endangered populations that are known to occur within a 10 km radius surrounding the study area which may be affected by the works. Candidate species and communities for evaluation were determined using the following online database search tools:

- NSW OEH Bionet Atlas database for species, populations and communities listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- NSW Department of Primary Industries DPI Fisheries Threatened Species website for species and communities listed under the *Fisheries Management Act 1994* (FM Act); and
- Commonwealth EPBC Act *Protected Matters Search Tool* and SPRAT database for threatened species and communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The likelihood of occurrence is based on presence of habitat, proximity of nearest records and mobility of the species. The assessment of potential impact is based on the nature of the proposal, the ecology and sensitivity of the species and its likelihood of occurrence. The evaluation table includes key ecological information about the threatened entity and how the proposal may impact on it.

The following categories and terms are used:

Presence of habitat:

- Present: Potential or known habitat present in the study area
- Absent: No potential or known habitat present in the study area
- Marginal: Some habitat elements present in the study area, potential affected by site disturbance factors or distant from known distribution range

Likelihood of occurrence

- Unlikely: Species known or predicted within the locality but unlikely to occur in the study area based on habitat quality and/or field investigations
- Possible: Species could occur in the study area based on habitat and distribution range
- Present: Species was recorded during the field investigations, or previous records exist for the study area

Possibility of impact

- No: The proposal would not adversely impact this species or its habitats. No Assessment of Significance (AOS) is necessary
- Yes: The proposal could adversely impact this species or its habitats. An AOS may be required.

The distribution and habitat information used in the evaluation has been sourced from species profiles in the online OEH threatened species database, Commonwealth Species

Profiles and Threats database (SPRAT) or relevant listing determinations unless otherwise stated.

Acronyms and abbreviations

BC Act	NSW <i>Biodiversity Conservation Act 2016</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
FM Act	NSW <i>Fisheries Management Act 1994</i>
CE	Listed as Critically Endangered (species or ecological community)
E	Listed as Endangered
P	Listed as Priority Species
V	Listed as Vulnerable

Additional Threatened species and communities not covered by the Project REF

Threatened Ecological Community	BC Act	EPBC Act	Presence of habitat	Likelihood of occurrence	Potential for impact
Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E		Absent	None	No
Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions	E		Absent	None	No
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions	E	CE	Absent	None	No

Common Name	Species Name	BC Act	EPBC Act	Presence of Habitat	Likelihood of Occurrence	Potential for Impact
Aves						
Striated Fieldwren	<i>Calamanthus fuliginosus</i>	E		Absent	Unlikely	No
Mammals						
Large Bent-winged Bat	<i>Miniopterus orianae oceanensis</i>	V		Absent	Unlikely	No

Appendix C Clause 228 Checklist

A checklist of factors that should be considered in the assessment of impacts prior to its determination is included within Clause 228 of the Environmental Planning and Assessment Regulation 2000. This clause identifies sixteen issues that need to be addressed. The following text provides summary details of each of the issues, the majority of which have been addressed within the body of this document.

Factor	Impact
<p>a. Any environmental impact on a community? The works are located within a public reserves of Kalaru. There would be some minor and temporary impacts on the community through amenity and traffic impacts. These impacts have been assessed in Section 5. Positive impacts would be achieved for the community through improved accessibility.</p>	<p>Short term negative Long term positive</p>
<p>b. Any transformation of a locality? The proposed works would not transform the locality. The proposal site is an existing public reserve. These would be just upgraded.</p>	<p>Nil</p>
<p>c. Any environmental impact on the ecosystems of the locality? There is potential for impacts to local ecosystems, as discussed in Section 5. Safeguards have been recommended to manage risks.</p>	<p>Short term negative</p>
<p>d. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? Construction impacts would be temporary and would not result in long term adverse effects to aesthetics, recreational, scientific, or environmental quality. Improved access is considered a positive community impact.</p>	<p>Short term negative Long term positive</p>
<p>e. Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? Heritage impacts are investigated in Sections 5. The proposed works are unlikely to impact on any heritage items. Mitigation measures are recommended.</p>	<p>Nil</p>
<p>f. Any impact on the habitat of protected fauna (within the meaning of the <i>Biodiversity Conservation Act 2016</i>)? There is potential for impacts to threatened entities, as discussed Section 5. Safeguards have been recommended to manage potential impacts</p>	<p>Short term negative</p>
<p>g. Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? There is potential for impacts to threatened entities, as discussed in Section 5. Safeguards have been recommended to manage potential impacts</p>	<p>Short term negative</p>
<p>h. Any long-term effects on the environment? The proposed works would have no adverse long-term effect on the environment.</p>	<p>Nil</p>

Factor	Impact
<p>i. Any degradation of the quality of the environment? The proposed works would potentially degrade the quality of the environment in the short-term until the site is stabilised, however the potential impacts would be minimised with the implementation of the safeguards of this REF.</p>	Short term negative
<p>j. Any risk to the safety of the environment? Machinery pose a safety hazard to pedestrians, cyclists and vehicles within the area but measures such as fencing or signage would be implemented to minimise this risk during construction. The proposed works would not have any risks to the safety of the environment in the long term.</p>	Short term negative
<p>k. Any reduction in the range of beneficial uses of the environment? There may be some inconvenience and altered traffic and access conditions temporarily during works. Ongoing impacts would not result.</p>	Short term negative
<p>l. Any pollution of the environment? The proposed works could generate pollution risks for soils and water during construction works. These risks would be confined to the construction phase, and are manageable with implementation of the safeguards outlined in Section 5 which include monitoring until stable land surfaces are obtained.</p>	Short term negative
<p>m. Any environmental problems associated with the disposal of waste? Section 5 discusses the waste products associated with the proposal. Specific protocols are set out to manage waste and waste disposal.</p>	Nil
<p>n. Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The proposal does not require resources that are in short supply.</p>	Nil
<p>o. Any cumulative environmental effect with other existing or likely future activities? The cumulative impacts of the proposal are discussed in Section 5. The proposal may contribute to an accumulation of amenity and traffic impacts, however the effects of this would be minimal due to the temporary nature of the works.</p>	Short term negative
<p>p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? Investigation and management of acid sulfate soils is recommended. Design measures are recommended based on projected storm tide events.</p>	Short term negative

Appendix D Background searches

Nghenvironmental-Bega

Date: 16 September 2021

PO 470

Bega New South Wales 2550

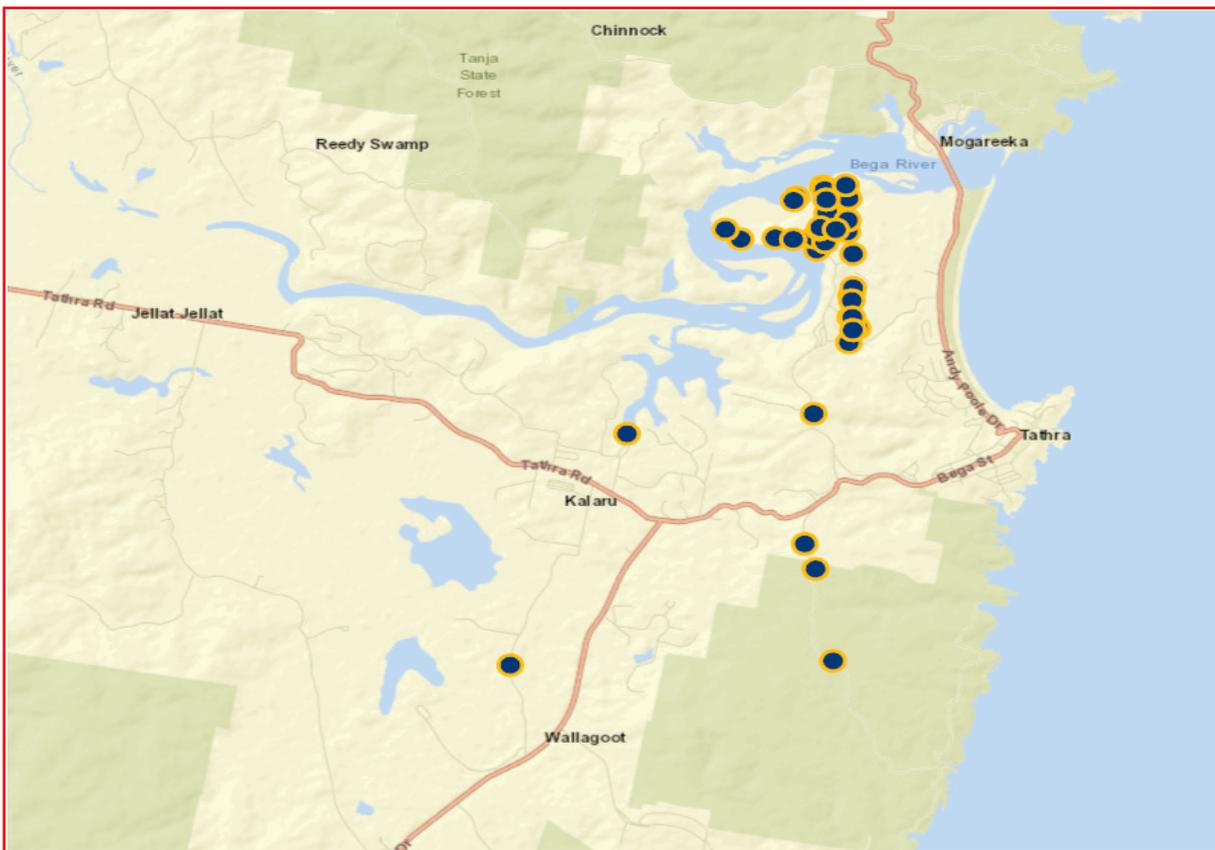
Attention: Jane Blomfield

Email: jane.b@nghenvironmental.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 760025.0 - 765025.0, Northings : 5928205.0 - 5934025.0 with a Buffer of 0 meters, conducted by Jane Blomfield on 16 September 2021.

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



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

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

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

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

Important information about your AHIMS search

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

Search Results

92 results found.

Acacia Constablei Site, East Boyd State Forest	Eden, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)
Barn at Penders Haighs Rd	Tanja, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)
Bega Boer War Memorial Upper St	Bega, NSW, Australia (Indicative Place) Register of the National Estate (Non-statutory archive)
Bega Courthouse Carp St	Bega, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)
Bega General Cemetery Princes Hwy	Bega, NSW, Australia (Indicative Place) Register of the National Estate (Non-statutory archive)
Bega Primary School Group 25-33 Auckland St	Bega, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)
Bega Race Course East St	Bega, NSW, Australia (Indicative Place) Register of the National Estate (Non-statutory archive)
Bell Bird Creek Nature Reserve Princes Hwy	Eden, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)
Ben Boyd National Park Princes Hwy	Eden, NSW, Australia (Registered) Register of the National Estate (Non-statutory archive)

Bermagabee Nature Reserve Head of Cuttagee Rd	Bermagui, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Bittangabee Ruins Bittangabee Bay	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Bournda National Park	Tathra, NSW, Australia	(Interim List) Register of the National Estate (Non-statutory archive)
Bournda National Park and Bournda Nature Reserve Sapphire Coast Dr	Tura Beach, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List
Bournda Nature Reserve Kalaru Merimbula Rd	Wolumla, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Box Range Shrub Community Sites	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Boyds Tower Fish Fossils	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Boydton Group 87 Boydton Park Rd	Boydton, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Bridge House Group Princes Hwy	Brogo, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Brogo Wilderness	Bemboka, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Bundian Way Area Monaro Hwy	Bombala, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List

Cathcart Forest Area Mt Darragh Rd	Rocky Hall, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Church Ruins 87 Boydtown Park Rd	Boydtown, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Cobargo Soldiers Memorial Moruya St	Cobargo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Coolangubra Forest Area Inlay Rd	Bombala, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Coolangubra Forest Area Extensions	Bombala, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Courthouse / Police Station and Cell Block (former) 26-30 Toalla St	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Courunga House, Grounds and Trees Monaro St	Tura Beach, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Deua - Tuross - Brogo National Park Proposal	Araluen, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Devils Creek Catchment Area	Candelo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Dr George Mountain	Bega, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

East Boyd Bay Area Edrom Rd	East Boyd via Eden, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Eastern Monaro - Bega Valley Escarpment Trails	Bemboka, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Eden Courthouse 233 Imlay St	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Eden Geological Site Bramble St	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Edrom Lodge Edrom Road	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Egan Peaks Nature Reserve Fire Rd	Towamba, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Family Hotel Auckland St	Bega, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Green Cape Lighthouse and Residences Group	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
House 21 Auckland St	Bega, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Indigenous Place	Bermagui, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Indigenous Place	Bermagui, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Indigenous Place	Pambula, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Indigenous Place	Tathra, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Jellat Jellat Tathra Rd	Bega, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Kameruka Estate Bega Rd	Candelo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Kianinny Bay Acacia Georgensis Site	Tathra, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Letts Mountain, Mount Poole and Waalimma Range Area Nungatta Rd	Cathcart, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Mimosa Rocks National Park (1980 boundary) Aragunnu Beach Rd	Bega, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Montreal Goldfield Wallaga Lake Rd	Bermagui, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Mount Imlay National Park Mt Imlay Rd	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Mount Poole Area, Yambulla State Forest	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Mumbulla Coast	Bermagui, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Mumbulla Mountain (Biamanga) Fieldbuckers Forrest Rd	Quaama, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Murunna Point Coastal Area	Bermagui, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Nadgee Nature Reserve Faunal Reserve Rd	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Nadgee Nature Reserve Greenslades Rd	Wonboyn Lake, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List
Nadgee Wilderness Area	Wonboyn Lake, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Nalbaugh National Park Mines Rd	Bombala, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Narrabarba Hill Area, Nadgee State Forest	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Nethercote Waterfall and Associated Rhyolite Outcrops	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Nullica State Forest Pseudanthus Site	Nethercote, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Nungatta National Park Cann River Rd	Bombala, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Old Candelo Cemetery Candelo Kameruka Rd	Candelo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Old Hut Creek Phebalium Site 2 Back Creek Fire Rd	Nethercote, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
PS Mimosa Shipwreck	Tanja, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Panbula Goldfield	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Pomaderris sp nov Site, Yambulla State Forest	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Post Office (former) 155-157 Imlay St	Eden, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Robert Kidman Grave Tantawangalo La	Candelo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Rosevear Jewellers Shopfront 165 Carp St	Bega, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

School and Residence (former) 85-87 Main St	Merimbula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Sea Horse Inn 87 Boydtown Park Rd	Boydtown, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Shrub Community Sites, Nullica State Forest Back Creek Trl	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Soldiers Memorial Gates Carp St	Bega, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
South East Forests National Park and Egan Peaks Nature Reserve Mt Darragh Rd	Wyndham, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List
St John the Evangelist Anglican Church Hall Church St	Bega, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
St Pauls Anglican Church Bermagui Rd	Tanja, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Swamp Road Area, Nadgee State Forest	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Tantawangalo Creek Catchment Tantawangalo Mountain Road	Bemboka, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Tantawangalo Koala Nature Reserve Tantawangalo Mountain Rd	Tantawangalo, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)

Tarraganda Bridge Tarraganda La	Bega, NSW, Australia	(Destroyed) Register of the National Estate (Non-statutory archive)
Tathra Wharf and Reserve Wharf Rd	Tathra, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
The Black-Allan Line Border Cairns	Delegate, VIC, Australia	(Nomination now ineligible for PPAL) National Heritage List
Wadbilliga National Park Bourkes Rd	Bemboka, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Wallaga Lake National Park Princes Hwy	Bermagui, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Wog Wog Invertebrate Habitat Study Area	Bombala, NSW, Australia	(Interim List) Register of the National Estate (Non-statutory archive)
Woolingubrah Inn	Cathcart, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Wyndham General Cemetery Glencairn Rd	Wyndham, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Yowaka Forest Area / Egan Peaks Extension Area Burragate Fire Rd	Eden, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Yowaka Reserve Proposal Nethercote Rd	Pambula, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)

Zieria Sp Box Range North Site	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Zieria Sp Nov Site (Lochiel)	Pambula, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Thu Sep 16 09:59:11 2021



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 31/07/18 12:02:56

[Summary](#)

[Details](#)

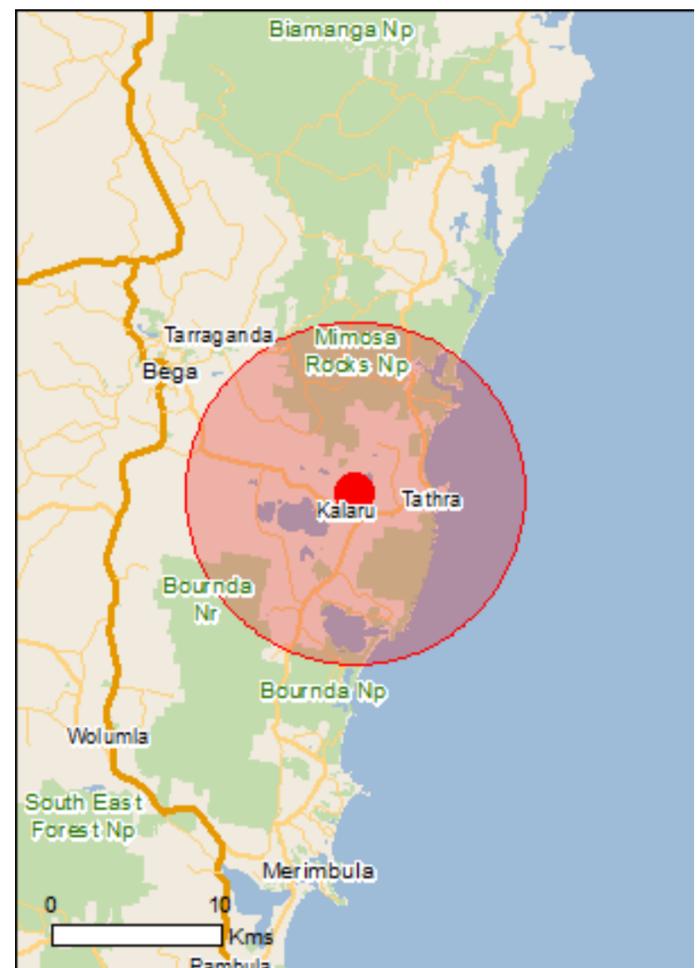
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

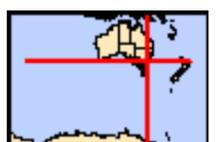
[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

[Buffer: 10.0Km](#)



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	68
Listed Migratory Species:	52

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	83
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	5
Regional Forest Agreements:	1
Invasive Species:	37
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	1

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area
Lowland Grassy Woodland in the South East Corner Bioregion	Critically Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species

[\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely

Name	Status	Type of Presence
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	to occur within area Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding known to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Thalassarche cauta_steadii White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis_rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Fish		
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat known to occur within area
Frogs		
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
Litoria littlejohni Littlejohn's Tree Frog, Heath Frog [64733]	Vulnerable	Species or species habitat may occur within area
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Dasyurus maculatus_maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Isodon obesulus_obesulus Southern Brown Bandicoot (eastern), Southern	Endangered	Species or species

Name	Status	Type of Presence
Brown Bandicoot (south-eastern) [68050]		habitat known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat known to occur within area
Pseudomys fumeus Smoky Mouse, Konoom [88]	Endangered	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
Acacia georgensis Bega Wattle [9848]	Vulnerable	Species or species habitat known to occur within area
Astrotricha crassifolia Thick-leaf Star-hair [10352]	Vulnerable	Species or species habitat may occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
Correa baeuerlenii Chef's Cap [17007]	Vulnerable	Species or species habitat likely to occur within area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Zieria tuberculata Warty Zieria [56736]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known

Name	Status	Type of Presence
		to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Sharks		
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely

Name	Threatened	Type of Presence
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	to occur within area Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Species or species habitat known to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Name	Threatened	Type of Presence
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Foraging, feeding or related behaviour may occur within area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land - Australian Telecommunications Commission

Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Foraging, feeding or related behaviour may occur within area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Sterna albifrons Little Tern [813]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche sp. nov. Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or

Name	Threatened	Type of Presence
Thinornis rubricollis Hooded Plover [59510]		related behaviour likely to occur within area Species or species habitat known to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Fish		
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus minotaur Bullneck Seahorse [66705]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat may occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area
Kimblaeus bassensis Trawl Pipefish, Bass Strait Pipefish [66247]		Species or species habitat may occur within area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area
Mitotichthys tuckeri Tucker's Pipefish [66262]		Species or species

Name	Threatened	Type of Presence
Notiocampus ruber Red Pipefish [66265]		habitat may occur within area Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known

Name	Threatened	Type of Presence
Natator depressus Flatback Turtle [59257]	Vulnerable	to occur within area Breeding likely to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Bournda	NSW
Bournda	NSW
Mimosa Rocks	NSW
Mumbulla	NSW
Tanja	NSW

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
Eden RFA	New South Wales

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
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Birds

Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
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Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
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Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
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Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
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Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
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Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
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Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
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Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
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Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
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Mammals

Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
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Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
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Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur
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Name	Status	Type of Presence
Feral deer Feral deer species in Australia [85733]		within area Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus scandens Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass		Species or species

Name	Status	Type of Presence
Tussock, Nassella Tussock (NZ) [18884]		habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Nationally Important Wetlands [\[Resource Information \]](#)

Name	State
Bondi Lake	NSW
Nelson Lagoon	NSW
Wallagoot Lagoon (Wallagoot Lake)	NSW

Key Ecological Features (Marine) [\[Resource Information \]](#)

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Upwelling East of Eden	South-east

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-36.72899 149.9412

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) ,Commonwealth listed ,CAMBA listed ,JAMBA listed or ROKAMBA listed Communities in selected area [North: -36.68 West: 149.89 East: 149.99 South: -36.78] returned 0 records for 15 entities.

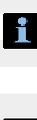
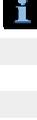
Report generated on 15/09/2021 5:24 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Community				<i>Araluen Scarp Grassy Forest in the South East Corner Bioregion</i>		Araluen Scarp Grassy Forest in the South East Corner Bioregion	E3		K	
Community				<i>Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions</i>		Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions	E3		K	
Community				<i>Brogo Wet Vine Forest in the South East Corner Bioregion</i>		Brogo Wet Vine Forest in the South East Corner Bioregion	E3		K	
Community				<i>Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	V	K	
Community				<i>Dry Rainforest of the South East Forests in the South East Corner Bioregion</i>		Dry Rainforest of the South East Forests in the South East Corner Bioregion	E3		K	
Community				<i>Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3		K	
Community				<i>Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	CE	K	
Community				<i>Lowland Grassy Woodland in the South East Corner Bioregion</i>		Lowland Grassy Woodland in the South East Corner Bioregion	E3	CE	K	
Community				<i>Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</i>		Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions	E3	E	K	
Community				<i>River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	CE	K	
Community				<i>Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	E	K	
Community				<i>Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3		K	
Community				<i>Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions</i>		Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions	E3		P	

Community	<i>Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions</i>	Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions	E4B			K	
Community	<i>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and</i>	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and	E4B	CE		K	

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) ,Commonwealth listed ,CAMBA listed ,JAMBA listed or ROKAMBA listed Entities in selected area [North: -36.68 West: 149.89 East: 149.99 South: -36.78] returned a total of 975 records of 70 species.

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Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Amphibia	Hylidae	3039	<i>Litoria littlejohni</i>		Littlejohn's Tree Frog	V,P	V	1	
Animalia	Reptilia	Cheloniidae	2008	<i>Eretmochelys imbricata</i>		Hawksbill Turtle	P	V	1	
Animalia	Aves	Anseranatidae	0199	<i>Anseranas semipalmata</i>		Magpie Goose	V,P		1	
Animalia	Aves	Anatidae	0216	<i>Oxyura australis</i>		Blue-billed Duck	V,P		1	
Animalia	Aves	Apodidae	0335	<i>Apus pacificus</i>		Fork-tailed Swift	P	C,J,K	1	
Animalia	Aves	Apodidae	0334	<i>Hirundapus caudacutus</i>		White-throated Needletail	P	V,C,J,K	25	
Animalia	Aves	Diomedidae	0091	<i>Thalassarche cauta</i>		Shy Albatross	V,P	V	1	
Animalia	Aves	Procellariidae	0069	<i>Ardenna pacifica</i>		Wedge-tailed Shearwater	P	J	1	
Animalia	Aves	Procellariidae	0071	<i>Ardenna tenuirostris</i>		Short-tailed Shearwater	P	C,J,K	11	
Animalia	Aves	Procellariidae	0929	<i>Macronectes giganteus</i>		Southern Giant Petrel	E1,P	E	1	
Animalia	Aves	Ardeidae	0197	<i>Botaurus poiciloptilus</i>		Australasian Bittern	E1,P	E	3	
Animalia	Aves	Ardeidae	0196	<i>Ixobrychus flavicollis</i>		Black Bittern	V,P		1	
Animalia	Aves	Accipitridae	0226	<i>Haliaeetus leucogaster</i>		White-bellied Sea-Eagle	V,P		129	
Animalia	Aves	Accipitridae	0225	<i>Hieraetus morphnoides</i>		Little Eagle	V,P		5	
Animalia	Aves	Accipitridae	0230	^^ <i>Lophoictinia isura</i>		Square-tailed Kite	V,P,3		3	
Animalia	Aves	Accipitridae	8739	^^ <i>Pandion cristatus</i>		Eastern Osprey	V,P,3		1	
Animalia	Aves	Haematopodidae	0131	<i>Haematopus fuliginosus</i>		Sooty Oystercatcher	V,P		8	
Animalia	Aves	Haematopodidae	0130	<i>Haematopus longirostris</i>		Pied Oystercatcher	E1,P		77	
Animalia	Aves	Charadriidae	0139	<i>Charadrius mongolus</i>		Lesser Sand-plover	V,P	E,C,J,K	1	
Animalia	Aves	Charadriidae	T453	<i>Thinornis cucullatus cucullatus</i>		Eastern Hooded Dotterel	E4A	V	27	
Animalia	Aves	Scolopacidae	0157	<i>Actitis hypoleucos</i>		Common Sandpiper	P	C,J,K	1	
Animalia	Aves	Scolopacidae	0163	<i>Calidris acuminata</i>		Sharp-tailed Sandpiper	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0161	<i>Calidris ferruginea</i>		Curlew Sandpiper	E1,P	CE,C,J,K	4	
Animalia	Aves	Scolopacidae	0162	<i>Calidris ruficollis</i>		Red-necked Stint	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0168	<i>Gallinago hardwickii</i>		Latham's Snipe	P	J,K	4	
Animalia	Aves	Scolopacidae	0153	<i>Limosa lapponica</i>		Bar-tailed Godwit	P	C,J,K	4	
Animalia	Aves	Scolopacidae	0149	<i>Numenius madaqascariensis</i>		Eastern Curlew	P	CE,C,J,K	7	
Animalia	Aves	Scolopacidae	0150	<i>Numenius phaeopus</i>		Whimbrel	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0158	<i>Tringa nebularia</i>		Common Greenshank	P	C,J,K	4	
Animalia	Aves	Scolopacidae	0159	<i>Tringa stagnatilis</i>		Marsh Sandpiper	P	C,J,K	1	
Animalia	Aves	Stercorariidae	0128	<i>Stercorarius parasiticus</i>		Arctic Jaeger	P	C,J,K	2	
Animalia	Aves	Laridae	0109	<i>Chlidonias leucopterus</i>		White-winged Black Tern	P	C,J,K	1	
Animalia	Aves	Laridae	0112	<i>Hydroprogne caspia</i>		Caspian Tern	P	J	26	
Animalia	Aves	Laridae	0953	<i>Sterna hirundo</i>		Common Tern	P	C,J,K	2	
Animalia	Aves	Laridae	0117	<i>Sternula albifrons</i>		Little Tern	E1,P	C,J,K	78	
Animalia	Aves	Laridae	0115	<i>Thalasseus bergii</i>		Crested Tern	P	J	61	
Animalia	Aves	Cacatuidae	0268	^^ <i>Callocephalon fimbriatum</i>		Gang-gang Cockatoo	V,P,3		30	
Animalia	Aves	Cacatuidae	0265	^^ <i>Calyptorhynchus lathami</i>		Glossy Black-Cockatoo	V,P,2		143	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>		Little Lorikeet	V,P		8	
Animalia	Aves	Psittacidae	0309	^^ <i>Lathamus discolor</i>		Swift Parrot	E1,P,3	CE	21	
Animalia	Aves	Psittacidae	0302	^^ <i>Neophema pulchella</i>		Turquoise Parrot	V,P,3		1	
Animalia	Aves	Psittacidae	8913	^^ <i>Pezoporus wallicus wallicus</i>		Eastern Ground Parrot	V,P,3		2	
Animalia	Aves	Strigidae	0246	^^ <i>Ninox connivens</i>		Barking Owl	V,P,3		6	
Animalia	Aves	Strigidae	0248	^^ <i>Ninox strenua</i>		Powerful Owl	V,P,3		16	
Animalia	Aves	Tytonidae	9924	^^ <i>Tyto tenebrosa</i>		Sooty Owl	V,P,3		22	
Animalia	Aves	Acanthizidae	0500	<i>Calamanthus fuliginosus</i>		Striated Fieldwren	E1,P		1	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>		Regent Honeyeater	E4A,P	CE	2	
Animalia	Aves	Meliphagidae	0448	<i>Epthianura albifrons</i>		White-fronted Chat	V,P		5	
Animalia	Aves	Neositidae	0549	<i>Daphoenositta chrysoptera</i>		Varied Sittella	V,P		10	
Animalia	Aves	Pachycephalidae	0405	<i>Pachycephala olivacea</i>		Olive Whistler	V,P		1	

Animalia	Aves	Artamidae	8519	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V,P		9	
Animalia	Aves	Petroicidae	0380	<i>Petroica boodang</i>	Scarlet Robin	V,P		10	
Animalia	Aves	Petroicidae	0382	<i>Petroica phoenicea</i>	Flame Robin	V,P		4	
Animalia	Aves	Petroicidae	0383	<i>Petroica rodinogaster</i>	Pink Robin	V,P		1	
Animalia	Aves	Estrildidae	0652	<i>Stagonopleura guttata</i>	Diamond Firetail	V,P		1	
Animalia	Mammalia	Dasyuridae	1008	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E	8	
Animalia	Mammalia	Peramelidae	1710	<i>Isodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern)	E1,P	E	3	
Animalia	Mammalia	Phascolarctidae	1162	<i>Phascolarctos cinereus</i>	Koala	V,P	V	15	
Animalia	Mammalia	Burramyidae	1150	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V,P		2	
Animalia	Mammalia	Petauridae	1136	<i>Petaurus australis</i>	Yellow-bellied Glider	V,P		66	
Animalia	Mammalia	Pseudocheiridae	1133	<i>Petauroides volans</i>	Greater Glider	P	V	3	
Animalia	Mammalia	Potoroidae	1175	<i>Potorous tridactylus</i>	Long-nosed Potoroo	V,P	V	2	
Animalia	Mammalia	Pteropodidae	1280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V,P	V	20	
Animalia	Mammalia	Molossidae	1329	<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	V,P		1	
Animalia	Mammalia	Miniopteridae	3330	<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	V,P		1	
Animalia	Mammalia	Otariidae	1882	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal	V,P		2	
Animalia	Mammalia	Balaenidae	1561	<i>Eubalaena australis</i>	Southern Right Whale	E1,P	E	2	
Plantae	Flora	Fabaceae (Faboideae)	3008	<i>Pultenaea pedunculata</i>	Matted Bush-pea	E1		23	
Plantae	Flora	Fabaceae (Mimosoideae)	3782	<i>Acacia georgensis</i>	Bega Wattle	V	V	33	
Plantae	Flora	Violaceae	9499	^^ <i>Viola cleistogamoides</i>	Hidden Violet	E1,3		1	

Appendix E Schedule 3, part 2 matters for consideration

Schedule 3 Part 2 of the Environmental Planning and Assessment Regulation 2000, provides that for alterations and additions to existing development, where it can be demonstrated that the project will not “significantly increase environmental impacts of the total development”, designated development (and subsequent assessment under Part 4 of the EP&A Act) is not triggered. Matters for consideration listed under Schedule 3 Part are addressed explicitly for the proposal below.

E.1 Part 2 Are alterations or additions designated development?

35 Is there a significant increase in the environmental impacts of the total development?

Development involving alterations or additions to development (whether existing or approved) is not designated development if, in the opinion of the consent authority, the alterations or additions do not significantly increase the environmental impacts of the total development (that is the development together with the additions or alterations) compared with the existing or approved development. Note— Development referred to in this clause is not designated development for the purposes of section 4.10 of the Act. This means that section 8.8 of the Act (Appeal by an objector) will not extend to any such development even if it is State significant development.

At the existing boat ramp, Lot 7313 DP 1164453, the existing recreational facilities are informal. They consist of a gravel access road and limited unsealed pullover areas, which is proposed to be upgraded as part of the Project REF. The boat ramp and pontoon as proposed within the Project REF has already been completed. The site is well utilised for boat access to the lake. There are no other recreational facilities at the site; the area is small and water is turbid, so it doesn't currently encourage other uses such as swimming.

The proposed infrastructure would include:

- The construction of a 6m by 1.4m gangway.
- The construction of a 6m by 2.5m floating pontoon.
- The construction of a pedestrian access path to the west of the boat ramp access

The proposed infrastructure above will be within the disturbed area of the existing infrastructure onsite. The gangway and floating pontoon is an addition to the existing jetty. The path is an alteration to an existing informal path next to the access track. Therefore, the additional infrastructure is unlikely to significantly increase the environment impacts of the total development at the site. The proposed works would also improve accessibility to the lake and foreshore, therefore potentially reducing any unnecessary vegetation impacts by visitors trying access the lake.

36 Factors to be taken into consideration

In forming its opinion as to whether or not development is designated development, a consent authority is to consider—

(a) the impact of the existing development having regard to factors including—

(i) previous environmental management performance, including compliance with the conditions of any consents, licences, leases or authorisations by a public authority and compliance with any relevant codes of practice, and

There is no formal approval/ permit/ consent in place for the operation of the existing informal boat ramp, it is an historical use of the site. There hasn't been any notifiable pollution incidents.

(ii) rehabilitation or restoration of any disturbed land, and

The mitigation measures set out in the Project REF require all areas disturbed by works would be rehabilitated progressively to ensure stable surfaces are obtained as soon as practical. Species selection would be appropriate to the area of works – sterile cover crops and native mulching (thinly spread so germination from the seed bank is not impeded) is considered appropriate in this area. Monitoring will be required. Follow up seeding and mulching may be required to ensure that surfaces are stabilised.

(iii) the number and nature of all past changes and their cumulative effects, and

It is likely that past works have included only periodic road upgrades, including limited sealing of the access, and subsequent repair to this area, which is now again in need of repair. The works are assumed to have been incremental, barely improving the sediment and erosion issues at the site. Cumulative effects are negligible in comparison to the ongoing operational impact of the unsealed areas and sediment they contribute to the lagoon; the proposed works would improve this situation.

(b) the likely impact of the proposed alterations or additions having regard to factors including—

(i) the scale, character or nature of the proposal in relation to the development, and

The proposed works do not change the character or nature of the existing development which is a boat access, with limited space for other activities. However, with the installation of a path and the pontoon, the scale of the works will affect the character *of the site*. The site will change from being an informal access to a more formal upgraded facility. The change will be noticeable, but in the context of the key values of users is expected to be perceived as positive.

(ii) the existing vegetation, air, noise and water quality, scenic character and special features of the land on which the development is or is to be carried out and the surrounding locality, and

The works would affect limited areas of native vegetation. Air and noise impacts would be similar. Water quality would be improved. The upgrade is likely to be perceived as positive by the users of the site.

(iii) the degree to which the potential environmental impacts can be predicted with adequate certainty, and

The works scope is straight forward. The impacts are considered highly predictable.

(iv) the capacity of the receiving environment to accommodate changes in environmental impacts, and

The works make good use of existing clearings, minimising further clearing. The site is screened from most receivers and can therefore accommodate the changes.

(c) any proposals—

(i) to mitigate the environmental impacts and manage any residual risk, and

Environmental safeguards are part of the proposal and include those to address:

- Topography, geology, soils and contamination
- Hydrology, catchment values and water quality
- Biodiversity
- Community and socioeconomics
- Amenity: visual, air quality and noise

Refer to Appendix A of this Addendum REF.

(ii) to facilitate compliance with relevant standards, codes of practice or guidelines published by the Department or other public authorities.

The safeguards above include relevant standards including:

- Landcom, 2004, Managing Urban Stormwater: soils and construction vol.1, 4th ed.
- Construction Noise Guideline (DECC, 2009)
- NSW Government Roads and Maritime Services *Water sensitive urban design guideline* (2017)
- *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee, 1998)