

About this document

**Council Roadside Reserves Project**

REF Template – Major Works

<Project Name>

Prepared By:

Date:

This document is based on the REF template developed by EMAP Consulting for local councils in NSW as part of the Local Government NSW (LGNSW) Council Roadside Reserves Project. This Project, funded by the NSW Environmental Trust, worked to build the capacity of councils to improve the management of their roadside environments.

Guide to this template

The intention is that land managers will work directly into a copy of this template. Instructions and prompts are in grey text boxes. These should be deleted as you work through the template. The text in red is for guidance purposes only.

Standard writing examples are provided in one of two Excel Workbooks (prompts in green text boxes) that accompany this projects resource kit, which can be amended based on the needs of the project.

This template is for proposed activities identified as ‘Major Works’. The amount of assessment required is dependent on the nature of the proposed activity and the environmental values of the site, each REF should be prepared with this in mind.

The guidance in this REF template is for guidance purposes only and the author should undertake his/her own review of legislative changes and assessment of best practice.

Document Tracking

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version No. | Document Author | Reviewed By | Approved By | Last Saved on |
|  |  |  |  |  |
|  |  |  |  |  |

Acknowledgements

This document was prepared by Dr Emma McIntyre of EMAP Consulting for local councils in NSW as part of the Local Government NSW (LGNSW) Council Roadside Reserves Project (CRR). The CRR project is funded by the NSW Environmental Trust to build the capacity of councils and to improve the management of roadside environmental values in NSW.

4

Citation: EMAP Consulting (2019). Council Roadside Reserves Project: REF Template for Major Works. Prepared for LGNSW, September 2019.

September 2019

Cover: Roadside Works in Griffith LGA (Photo: LGNSW)

This project has been assisted by the New South Wales Government through its Environmental Trust.

Contents

[1. Introduction 6](#_Toc33007787)

[1.1. Project Description and Background 6](#_Toc33007788)

[1.1.1. Detailed Scope of Works 6](#_Toc33007789)

[1.1.2. Machinery and Equipment 6](#_Toc33007790)

[1.1.3. Access and Ancillary Works 7](#_Toc33007791)

[1.1.4. Duration and Working Hours 7](#_Toc33007792)

[1.2. Project Location and Context 7](#_Toc33007793)

[1.2.1. Location of the Proposed Activity 7](#_Toc33007794)

[1.2.2. Site Context 7](#_Toc33007795)

[1.2.3. Landuse and Ownership 7](#_Toc33007796)

[1.2.4. Project Justification and Consideration of Alternatives 8](#_Toc33007797)

[2. Statutory and Planning Context 9](#_Toc33007798)

[2.1. Environmental Planning and Assessment Act 1979 9](#_Toc33007799)

[2.2. State Environmental Planning Policy (Infrastructure) 2007 9](#_Toc33007800)

[2.3. Other Environmental Legislation 9](#_Toc33007801)

[3. Existing Environment and Impact Assessment 13](#_Toc33007802)

[3.1. Landform, Geology and Soils 13](#_Toc33007803)

[3.1.1. Existing Environment 13](#_Toc33007804)

[3.1.2. Impact Assessment 13](#_Toc33007805)

[3.2. Contaminated Land and Acid Sulfate Soils 13](#_Toc33007806)

[3.2.1. Existing Environment 13](#_Toc33007807)

[3.2.2. Impact Assessment 13](#_Toc33007808)

[3.3. Water Quality and Hydrology 14](#_Toc33007809)

[3.3.1. Existing Environment 14](#_Toc33007810)

[3.3.2. Impact Assessment 14](#_Toc33007811)

[3.4. Biodiversity 14](#_Toc33007812)

[3.4.1. Existing Environment 14](#_Toc33007813)

[3.4.2. Impact Assessment 15](#_Toc33007814)

[3.5. Aboriginal Heritage 17](#_Toc33007815)

[3.5.1. Existing Environment 17](#_Toc33007816)

[3.5.2. Impact Assessment 17](#_Toc33007817)

[3.6. Non-Aboriginal Heritage 18](#_Toc33007818)

[3.6.1. Existing Environment 18](#_Toc33007819)

[3.6.2. Impact Assessment 18](#_Toc33007820)

[3.7. Noise and Vibration 18](#_Toc33007821)

[3.7.1. Existing Environment 18](#_Toc33007822)

[3.7.2. Impact Assessment 18](#_Toc33007823)

[3.8. Air Quality 18](#_Toc33007824)

[3.8.1. Existing Environment 18](#_Toc33007825)

[3.8.2. Impact Assessment 18](#_Toc33007826)

[3.9. Waste and Chemical Management 19](#_Toc33007827)

[3.10. Traffic 19](#_Toc33007828)

[3.11. Visual Amenity/ Landscape 19](#_Toc33007829)

[3.12. Socio-Economic Considerations 19](#_Toc33007830)

[3.13. Cumulative Impacts 19](#_Toc33007831)

[4. Clause 228 of the EP&A Regulation 20](#_Toc33007832)

[5. Environmental Safeguards and Mitigation Measures 22](#_Toc33007833)

[6. Consultation 24](#_Toc33007834)

[7. Conclusion 27](#_Toc33007835)

[8. REF Determination 28](#_Toc33007836)

[Appendix A 29](#_Toc33007837)

[8.1. Figures 29](#_Toc33007838)

[Appendix B 30](#_Toc33007839)

[Appendix C 34](#_Toc33007840)

[Appendix D 35](#_Toc33007841)

**List of Tables**

[Table 1: Proponent details 6](#_Toc32409103)

[Table 2: Project timeframes 7](#_Toc32409104)

[Table 3: Other environmental legislation 10](#_Toc32409105)

[Table 4: Threatened Species with potential to occur within the REF study area, and with potential to be impacted 16](#_Toc32409106)

[Table 5: Clause 228 assessment 20](#_Toc32409107)

[Table 6: Environmental safeguards and mitigation measures 22](#_Toc32409108)

[Table 7: Infrastructure SEPP consultation requirements 24](#_Toc32409109)

Executive Summary

Provide a summary of what the works are and why a REF is required.

The environmental assessment and determination of the proposal has been undertaken in accordance with Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

For this proposal, [Council Name] is both a public authority proponent (EP&A Act s5.3) and the determining authority (EP&A Act s5.1). The REF has been prepared in accordance with Clause 228 of the EP&A Regulation (2000).

Summarise the findings of the REF assessment and any further work required, such as management plans.

# Introduction

|  |
| --- |
| Provide a brief paragraph to describe the proposed activity to be undertaken, and who is responsible for undertaking it. |

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

Table 1: Proponent details

|  |  |
| --- | --- |
| Project Name |  |
| Proponent (Council) Name |  |
| Project Manager |  |
| Position |  |
| Contact Details |  |

## Project Description and Background

### Detailed Scope of Works

|  |
| --- |
| Provide a comprehensive description of the proposed works and methods, including activities pre and post works.   * + The size of the proposed activity footprint   + A description of all phases of the proposed activity including:     - Pre-construction     - Operation     - Post-construction/operation     - Decommissioning     - Remediation strategies   + Project plans   + A description of any future maintenance or additions |

### Machinery and Equipment

|  |
| --- |
| List and describe the type of machinery and equipment to be used. |

### Access and Ancillary Works

|  |
| --- |
| Provide a description of any ancillary activities such as new access roads and storage / compound areas.  Are any other ancillary works required? |

### Duration and Working Hours

The works are [short/long] term, as outlined in Table 2.

Table 2: Project timeframes

|  |  |
| --- | --- |
| Commencement Date | Estimated Commencement Date and Completion Date |
| Work Duration | What is the total timeframe of the proposed works?  If a staged approach, how long will each stage take? |
| Work Hours | What are the working hours?  Are the proposed hours in accordance with the [Interim Construction Noise Guideline](https://www.environment.nsw.gov.au/resources/noise/09265cng.pdf) or council working hours? |

## Project Location and Context

### Location of the Proposed Activity

|  |
| --- |
| Provide sufficient information to locate the site such as:   * + Street address;   + Lot and DP;   + Place names;   + Distance from main centres or localities;   + Coordinates as Latitude/Longitude or Easting/Northing. |

See Figures 1 and 2 in Appendix A.

### Site Context

|  |
| --- |
| Describe the surrounding context of the site (urban, bushland, soil types, water catchment, drainage, topography, elevation). |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | For data sources, refer to the REF Methodology Workbook  “Data Sources” tab. |

### Landuse and Ownership

|  |
| --- |
| Describe:   * + Land use at the site and surrounds;   + The land zoning at the site according to the LEP;   + Land ownership- is it council, Crown, private?   + Do any works, including access requirements, impinge on a National Park or land owned by NPWS? |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | For data sources, refer to the REF Methodology Workbook  “Data Sources” tab. |

### Project Justification and Consideration of Alternatives

|  |
| --- |
| Describe:   * + Why the proposed activity needs to take place;   + Any alternatives that were explored, and why the proposed activity was selected as the preferred option;   + What is the ‘do-nothing’ option and repercussions of this?   8 |

# Statutory and Planning Context

## Environmental Planning and Assessment Act 1979

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

As council is the proponent, the works have been assessed as ‘development permissible without consent’ under Part 5 of the EP&A Act. Accordingly, council must satisfy Sections 5.5, 5.6 and 5.7 of that Act by examining, and taking into account to the fullest extent possible, all matters which are likely to affect the environment. This REF is intended to address council’s compliance with the EP&A Act including Sections 5.5, 5.6 and 5.7 and the requirements of clause 228 of the EP&A Regulation 2000. Environmental Planning Instruments made under the EP&A Act 1979 may also be relevant and are addressed below.

## State Environmental Planning Policy (Infrastructure) 2007

The *State Environmental Planning Policy (Infrastructure) 2017* (Infrastructure SEPP) aims to facilitate the delivery of infrastructure across NSW by identifying whether certain types of infrastructure require consent, can be carried out without consent or are exempt development.

Pursuant to clause 94 of the SEPP, development for the purpose of a road or road infrastructure facilities may be carried out by or on behalf of a public authority without consent on any land. The proposed works are therefore assessed under Part 5 of the EP&A Act.

Not all roadside vegetation management requires assessment under Part 5 of the EP&A Act. Section 97(1) of the infrastructure SEPP states:

*(1) Development for any of the following purposes is exempt development if it is carried out by or on behalf of a public authority in connection with a road or road infrastructure facilities and complies with clause 20:*

(f) *upgrading or maintenance of landscaping, or vegetation management (such as weed spraying, slashing and pruning), that:*

*(i) does not involve construction works, and*

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

Clause 20 in the SEPP (Infrastructure) limits when ‘exempt development’ applies, including a statement that it must not involve clearing of vegetation that would otherwise require a permit – unless the clearing is undertaken in accordance with the permit.

## Other Environmental Legislation

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

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | **Refer to the REF Methodology Workbook**  “Legislation Considerations” tab to complete this section. |

Table 3: Other environmental legislation

| Legislation | Relevance to the Proposed Activity |
| --- | --- |
| COMMONWEALTH LEGISLATION | |
| *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) | The EPBC Act protects matters of [National Environmental Significance](https://www.environment.gov.au/epbc/protected-matters-search-tool) (NES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others).  [TEXT OPTION 1, 2 or 3]  See Section 3.4. |
| STATE LEGISLATION | |
| *Biodiversity Conservation Act 2016* (BC Act) | Part 7 of the BC Act provides the environmental assessment requirements for activities being assessed under Part 5 of the EP&A Act 1979. If a significant impact is likely, a Species Impact Statement is required. A biodiversity development assessment report may also be required if the proponent elects for this. Section 7.2(1)(a) and 7.3 describe the assessment requirements and thresholds for what is considered a significant impact.  [TEXT OPTION 1, 2 3, or 4]  See Section 3.4. |
| *Local Land Services Act 2013* (LLS Act) | The objects of the LLS Act include ‘to ensure the proper management of natural resources in the social, economic and environmental interests of the State, consistently with the principles of ecologically sustainable development. The Act regulates the clearing of native vegetation, however section 60(O)(b)(ii) excludes the need for consent under the LLS Act where the clearing is an activity carried out by a determining authority within the meaning of Part 5 of the EP&A Act 1979. |
| *Fisheries Management Act 1995* (FM Act) | FM Act provides for the protection, conservation, and recovery of threatened species, populations and ecological communities of fish and marine vegetation and fish habitats, as well as promoting the development and sharing of fishery resources in NSW.  [TEXT OPTION 1 or 2] |
| *National Parks and Wildlife Act 1974* (NPW Act) | The NPW Act regulates the control and management of all national parks, historic sites, nature reserves, and Aboriginal areas.  [If the proposed activity is in or near any NPWS Estate land, state this here]  The main aim of the Act is to conserve the natural and cultural heritage of NSW. Where works will disturb Aboriginal objects, an Aboriginal Heritage Impact Permit (AHIP) is required.  [TEXT OPTION 1, 2 or 3] |
| *Heritage Act 1977* | The proposed activity [involves/does not involve] an item or place listed on the NSW State Heritage Register or the subject of an interim heritage order or listing and is therefore not a controlled activity. Approval of works on the site is therefore [(not) required] under Part 4 of the Heritage Act. |
| *Protection of the Environment Operations Act 1997* (POEO Act) | The POEO Act is the key environmental protection and pollution statute. The POEO Act is administered by the EPA and establishes a licensing regime for waste, air, water and pollution. Relevant sections of the Act are listed below:   * + Part 5.3 Water Pollution   + Part 5.4 Air Pollution   + Part 5.5 Noise Pollution   + Part 5.6 Land Pollution and Waste   Any work potentially resulting in pollution must comply with the POEO Act. Relevant licences must be obtained if required.   |  | | --- | | [No licences have been identified as being required including an Environmental Protection Licence (EPL).] | |
| *Water Management Act 2000* (WM Act) | The WM Act’s main objective is to manage NSW water in a sustainable and integrated manner that will benefit today’s generations without compromising future generations’ ability to meet their needs. Section 91E of the Act establishes an approval regime for controlled activities within waterfront land. However clause 41 of the Water Management  (General) Regulation 2018 provides an exemption for public authorities in relation to all controlled activities on waterfront land.   |  | | --- | | Note: Although formal approval under the WM Act is not required, if the proposed activity is within 40m of a waterway, an attempt should be made to comply with the requirements of controlled activities in order to reduce risks to waterways. | |
| *Roads Act 1993* | Section 88 of the *Roads Act* states that a roads authority may, despite any other Act or law to the contrary, remove or lop any tree or other vegetation that is on or overhanging a public road if, in its opinion it is necessary to do so for the purposes of carrying out road work or removing a traffic hazard. However, the environmental safeguards outlined in this REF still apply. |
| *Biosecurity Act 2015* | The *Biosecurity Act 2015* and regulations provide requirements for state level priority weeds. The Act regulates all plants, with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Section 4 considers the likelihood of encountering weeds and appropriate mitigation measures to reduce the risk of spreading.   |  | | --- | | Summarise findings from Section 4 regarding the likelihood of encountering weeds and appropriate mitigation measures to reduce the risk of spreading. | |
| State Environmental Planning Policy – Coastal Management | The *State Environmental Planning Policy (Coastal Management) 2018* provides controls for undertaking development and activities in coastal management areas. The four coastal management areas are:   * Coastal wetlands and littoral rainforests area – areas which display the characteristics of coastal wetlands or littoral rainforests that were previously protected by SEPP 14 and SEPP 26 * Coastal vulnerability area – areas subject to coastal hazards such as coastal erosion and tidal inundation * Coastal environment area – areas that are characterised by natural coastal features such as beaches, rock platforms, coastal lakes and lagoons and undeveloped headlands. Marine and estuarine waters are also included * Coastal use area – land adjacent to coastal waters, estuaries and coastal lakes and lagoons.   Under clause 10 of the SEPP, clearing native vegetation in the mapped ‘*Coastal wetland and littoral rainforest area*’ is permissible without consent when undertaken by or on behalf of a public authority and in accordance with a certified coastal management program, a plan of management under Division 2 of Part 2 of Chapter 6 of the *Local Government Act*, or a plan of management under Division 6 of the *Crown Land Management Act 2016*. In other cases, the clearing requires consent.  [TEXT OPTION 1, 2 or 3] |
| State Environmental Planning Policy Vegetation in Non-Rural Areas 2017 | Clause 8 of the SEPP states that an authority to clear vegetation under this policy is not required if it is a clearing authorised under s60(O) of the Local Land Services Act 2013. Section 60(O) provides an exemption for clearing under Part 5 of the EP&A Act and therefore consent is not required under the SEPP (Vegetation in Non-Rural Areas). |
| State Environmental Planning Policy (Koala Habitat Protection) 2019 | Koala Habitat Protection SEPP aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for *Phascolarctos cinereus* (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline.  Koala Habitat Protection SEPP applies to development under part 4 of the EP&A Act 1979. As the proposed activity is not ‘development’, Koala Habitat Protection SEPP doesn’t apply. Regardless, consideration of impacts to koala and koala habitat may still be relevant under the BC Act 2016. |

# Existing Environment and Impact Assessment

The size, complexity and impact of the proposed activity will dictate the amount of assessment required in this section. For complex issues contact the relevant department in council or a qualified consultant.

## Landform, Geology and Soils

### Existing Environment

|  |
| --- |
| Describe soil and topography characteristics of the site:   * + Elevation, slope and topography across the site;   + Soil Landscape Units and description;   + Any salinity risk or erosion present? |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | **Refer to the REF Methodology Workbook**  “Data Sources” tab. |

### Impact Assessment

|  |
| --- |
| Describe any potential impacts of the proposed activity on this environment. |

|  |  |
| --- | --- |
|  | **Refer to the** **REF Safeguards and Mitigation Measures Workbook**  for types of impacts and example safeguards and mitigation measures. |

## Contaminated Land and Acid Sulfate Soils

### Existing Environment

|  |
| --- |
| Is the site at risk of potential acid sulfate soils or contamination? |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to the REF Methodology Workbook  “Data Sources” tab. |

### Impact Assessment

|  |
| --- |
| Describe any potential impacts of the proposed activity.  Outline if a detailed site investigation has been undertaken. |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Water Quality and Hydrology

### Existing Environment

|  |
| --- |
| Identify:   * + waterways mapped on the NSW Drainage 1:25,000 topographic maps;   + the water catchment the site is within;   + the waterway that the site eventually drains to;   + whether the works are likely to intercept a groundwater aquifer? |

### Impact Assessment

|  |
| --- |
| Describe any potential impacts of the proposed activity. |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Biodiversity

### Existing Environment

|  |
| --- |
| Step 1: Database Searches   * + Complete a threatened species search of the NSW Bionet Atlas - Refer to the REF Methodology Workbook, NSW Bionet Atlas Search tab   + Complete a search of the EPBC Protected Matters Database - Refer to the REF Methodology Workbook, EPBC Protected Matters Search tab   + Consult SVTM/VIS mapping for PCT types - Refer to the REF Methodology Workbook, “LGA SVTM Lookup” and “Links to veg data on SEED” tabs   Provide details here of the searches conducted, any other data sources (eg council threatened species records) and date of searches.   1. Threatened/ Endangered Ecological Communities   Compile a table of threatened ecological communities recorded within 10km search of the site from:   * + EPBC Protected Matters Search Report;   + VIS mapping attribution for EECs. |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to REF Methodology Workbook  “TECs” tab for table format. |

|  |
| --- |
| 1. Threatened Flora Species   Compile a table of threatened flora records recorded within 10km search of the site from:   * + NSW Bionet Atlas results   + EPBC Protected Matters Search Report. |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to REF Methodology Workbook  “Flora” tab for table format. |

|  |
| --- |
| 1. Threatened Fauna Species   Compile list of threatened fauna records recorded within 10km search of the site from:   * + NSW Bionet Atlas results   + EPBC Protected Matters Search Report. |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to REF Methodology Workbook  “Fauna” tab for table format. |

|  |
| --- |
| 1. Other MNES   List the other Matters of NES (other than threatened species and ecological communities) noted in the Protected Matters Search Report including:   * + World Heritage properties   + National Heritage properties     - Wetlands of international importance     - Migratory Species     - Commonwealth Marine areas |

### Impact Assessment

|  |
| --- |
| Describe:   * + The area of native vegetation to be cleared/ modified/ disturbed / impacted as part of the proposed activity;   + Are the impacts permanent (clearing) or temporary (pruning, trampling).   + Describe the ‘likelihood of occurrence assessment’ methodology applied [field survey/ desktop assessment only].   + If field survey, describe the field survey effort here (eg date of survey, who conducted the survey and their qualifications, number of hours in the field, methods used).   + If desktop assessment only, describe here. Conservative approach to likelihood of occurrence assessment is to be taken ie, if in doubt assume species is likely to be present/ has potential to occur on site. |

Consideration was given to the potential impact of the proposed activity on each species assessed as potentially occurring in the REF Study Area.

See **Appendix B** for the full likelihood of occurrence assessment and consideration of potential impacts for each flora and fauna species identified in the 10km search of the NSW Bionet Atlas and EPBC Protected Matters Search Tool. The species that were considered to potentially occur or use habitats in the REF Study Area and have the potential to be impacted by the proposed activity, are listed in Table 4. An Assessment of Significance as per s7.3 of the *Biodiversity Conservation Act* *2016* was undertaken for each of these species. Note that if an Assessment of Significance determines that an impact is likely, a Species Impact Statement is required.

Table 4: Threatened Species with potential to occur within the REF study area, and with potential to be impacted

| Threatened Species  List Alphabetically | Assessment of Significance Conclusions  EXAMPLE TEXT |
| --- | --- |
| FLORA |  |
|  |  |
|  |  |
| BIRDS – Raptors | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Similar or higher-quality habitat is widespread in the region;   + Breeding resources will be retained and similar habitats are widespread in the locality;   + These species are highly mobile and will forage over large areas, therefore would not be restricted to the habitats in the proposal area. |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| BIRDS – Ground/ understorey | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Similar or higher-quality habitat is widespread in the region;   + Breeding resources will be retained and similar habitats are widespread in the locality. |
|  |
|  |
|  |
|  |
|  |
|  |
| BIRDS – Canopy/ Aerial | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Similar or higher-quality habitat is widespread in the region;   + Breeding resources will be retained and similar habitats are widespread in the locality;   + These species are highly mobile and will forage over large areas, therefore would not be restricted to the habitats in the proposal area. |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| MAMMALS – Ground dwelling | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Breeding resources such as logs and burrows will be retained and similar habitats are widespread in the locality;   + A significant area of foraging resources will be retained and similar resources are widespread in the locality. |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| BATS | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Roosting and sheltering resources, will be retained within the study area;   + Similar resources are widespread in the locality;   + These species are highly mobile and will forage over large areas, therefore would not be restricted to the habitats in the proposal area. |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| REPTILES | An Assessment of Significance conducted for these species concluded that there is unlikely to be a significant impact based on the following:   * + Breeding resources such as logs and burrows will be retained and similar habitats are widespread in the locality;   + A significant area of foraging resources will be retained and similar resources are widespread in the locality;   + These species are highly mobile and will forage over large areas, therefore would not be restricted to the habitats in the proposal area. |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| AMPHIBIANS |  |
|  |  |
|  |  |

See **Appendix C** for Assessments of Significance.

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Aboriginal Heritage

### Existing Environment

|  |
| --- |
| Results of AHIMS search |

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to the REF Methodology Workbook  “AHIMS Search” tab. |

### Impact Assessment

|  |
| --- |
| Is the proposed activity likely to result in any impacts to listed/known Aboriginal objects or items? |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Non-Aboriginal Heritage

### Existing Environment

|  |
| --- |
| Results of State Heritage Register, Register of National Estate and LEP Heritage |

### Impact Assessment

|  |
| --- |
| Is the proposed activity likely to result in any impacts to listed/known non-Aboriginal heritage items? |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Noise and Vibration

### Existing Environment

|  |
| --- |
| Comment on the general noise levels in the immediate vicinity of the proposed works. |

### Impact Assessment

|  |
| --- |
| Identify any potential impact of the proposed activity on noise levels in the immediate surrounds.  Are these impacts short term or long term?  Construction hours? |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Air Quality

### Existing Environment

|  |
| --- |
| Comment on the general air quality in the immediate vicinity of the proposed works. |

### Impact Assessment

|  |
| --- |
| Identify any potential impact - short term or long term |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Waste and Chemical Management

|  |
| --- |
| Describe all potential sources of waste including excess soil, contaminated soil, asbestos containing materials, chemical waste, drilling muds etc., and detail how these will be managed. |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Traffic

|  |
| --- |
| Consider if the proposed activity will affect traffic? How will this be addressed? |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Visual Amenity/ Landscape

|  |
| --- |
| Will the proposed works affect visual amenity and have these impacts been considered? |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Socio-Economic Considerations

|  |
| --- |
| Identify all factors affecting the community |

|  |  |
| --- | --- |
|  | Refer to the REF Safeguards and Mitigation Measures Workbook  for types of impact and example safeguards and mitigation measures. |

## Cumulative Impacts

|  |
| --- |
| Describe any other works happening in the area. What is the cumulative effect on the region? |

# Clause 228 of the EP&A Regulation

Clause 228 of the EP& A Regulation sets out 16 factors that need to be considered when assessing environmental impact under Part 5 of the EP&A Act.

Table 5: Clause 228 assessment

| Relevant Clause | Impact Assessment (Positive/Negative/Neutral) | Reason |
| --- | --- | --- |
| 1. Any environmental impact on a community? |  |  |
| 1. Any transformation of a locality? |  |  |
| 1. Any environmental impact on the ecosystem of the locality? |  |  |
| 1. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? |  |  |
| 1. 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? |  |  |
| 1. Any impact on the habitat of protected animals (within the meaning of the *Biodiversity Conservation Act 2016*)? |  |  |
| 1. Any endangering of any species of animal, plant or other form of life whether living on land in water or in the air? |  |  |
| 1. Any long-term effects on the environment? |  |  |
| 1. Any degradation of the quality of the environment? |  |  |
| 1. Any risk to the safety of the environment? |  |  |
| 1. Any reduction in the range of beneficial uses of the environment? |  |  |
| 1. Any pollution of the environment? |  |  |
| 1. Any environmental problems associated with the disposal of waste? |  |  |
| 1. Any increased demand on resources (natural or otherwise) which are, or are likely to become, in short supply? |  |  |
| 1. Any cumulative environmental effect with other existing or likely future activities? |  |  |
| 1. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? |  |  |

# Environmental Safeguards and Mitigation Measures

Table 6: Environmental safeguards and mitigation measures

| Impact Type | Description of Potential Impact | Mitigation Measures | Responsibility for Implementation |
| --- | --- | --- | --- |
| Soils- Erosion | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Contaminated Land/  Acid Sulfate Soils | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Water Quality/  Hydrology | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Biodiversity | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Aboriginal Heritage | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Historic Heritage | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Noise and Vibration | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Air Quality | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Waste/ Chemical Management | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Traffic | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Visual Amenity/ Landscape | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |
| Socio-Economic Factors | Summarise from Section 3 | See REF Environmental Safeguards and Mitigation Measures workbook for examples |  |

# Consultation

|  |
| --- |
| Identify stakeholders that are required to be consulted. Internal council consultation with environmental officer should be undertaken when dealing with council related infrastructure or items. |

Division 1 of the Infrastructure SEPP Provides recommendations for consultation with affected stakeholders (Table 7).

Table 7: Infrastructure SEPP consultation requirements

| **ISEPP Clause** | **Clause Reference** | **Consultation Required** |
| --- | --- | --- |
| Clause 13 | **Impacts on council-related infrastructure or services**  Consultation is required if the public authority is of the opinion that the development:  *(a) will have a substantial impact on stormwater management services provided by a council, or*  *(b) is likely to generate traffic to an extent that will strain the capacity of the road system in a local government area, or*  *(c) involves connection to, and a substantial impact on the capacity of, any part of a sewerage system owned by a council, or*  *(d) involves connection to, and use of a substantial volume of water from, any part of a water supply system owned by a council, or*  *(e) involves the installation of a temporary structure on, or the enclosing of, a public place that is under a council’s management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential, or*  *(f) involves excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which a council is the roads authority under the Roads Act 1993 (if the public authority that is carrying out the development, or on whose behalf it is being carried out, is not responsible for the maintenance of the road or footpath).* |  |
| Clause 14 | **Impacts on local heritage**  Consultation is required if the development:  *(a) is likely to have an impact that is not minor or inconsequential on a local heritage item (other than a local heritage item that is also a State heritage item) or a heritage conservation area, and*  *(b) is development that this Policy provides may be carried out without consent.* |  |
| Clause 15 | **Impacts on flood liable land**  *In this clause, flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled Floodplain Development Manual: the management of flood liable land published by the New South Wales Government and as in force from time to time.* |  |
| Clause 16 | ***Consultation with public authorities other than councils***  *Consultation is required if the development is:*  *(a) development adjacent to land reserved under the National Parks and Wildlife Act 1974 or to land acquired under Part 11 of that Act— the Office of Environment and Heritage,*  *(b) development on land in Zone E1 National Parks and Nature Reserves or in a land use zone that is equivalent to that zone—the Office of Environment and Heritage,*  *(c) development adjacent to an aquatic reserve or a marine park declared under the Marine Estate Management Act 2014—the Department of Industry,*  *(d) development in the foreshore area within the meaning of the Sydney Harbour Foreshore Authority Act 1998—the Sydney Harbour Foreshore Authority,*  *(e) development comprising a fixed or floating structure in or over navigable waters—Roads and Maritime Services,*  *(f) development for the purposes of a health services facility, correctional centre or group home, or for residential purposes, in an area that is bush fire prone land (as defined by the Act)—the NSW Rural Fire Service,*  *g) development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map—the Director of the Observatory,*  *(h) development on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument—the Secretary of the Commonwealth Department of Defence development on land in a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961—the Mine Subsidence Board.*  *Note. The Act defines bush fire prone land, in relation to an area, as land recorded for the time being as bush fire prone land on a map certified as referred to in section 146 (2) of the Act.*  *Note. When carrying out development of a kind referred to in paragraph (f), consideration should be given to the publication of the NSW Rural Fire Service Planning for Bush Fire Protection 2006.*  *(g) (Repealed)*  *Note. Clause 18A (2) of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 requires public authorities (or persons acting on their behalf) to consult with the Department of Planning and Infrastructure before carrying out any development comprising the clearing of native vegetation on certain land within a growth centre (within the meaning of that Policy). The land concerned is land other than the subject land (within the meaning of Part 7 of Schedule 7 to the Threatened Species Conservation Act 1995). The subject land is generally land to which precinct plans apply under that Policy.* |  |

# Conclusion

|  |
| --- |
| Provide a brief summary of the findings of the REF.  List any further works/ management plans required. |

# REF Determination

This Review of Environmental Factors has assessed the likely environmental impacts of a proposal by [Council] for [Project Name/brief description of proposed activity].

[Council] has considered the potential environmental effects of the proposal and the effectiveness and feasibility of measures for reducing or preventing detrimental effects. It is determined that:

1. The proposed mitigation measures will be adopted and implemented;
2. Implementation of these mitigation measures will reduce the potential environmental impact of the proposed activity;
3. An Environmental Impact Statement is (not) required for the proposed works if all mitigation measures in this REF are implemented by [Council].

REF Author

Signature: XXX

Name: XXX

Title: XXX

Date: XXX

Reviewed and endorsed by:

Signature: XXX

Name: XXX

Title: XXX

Date: XXX

Authorising Manager’s approval

Signature: XXX

Name: XXX

Title: XXX

Date: XXX

|  |
| --- |
| Independence should be maintained between the above roles. This is to ensure that an independent and professional evaluation is made as to whether the REF adequately addresses the impacts of the proposal, whether additional assessment is required and whether adequate controls are proposed. |

Appendix A

## Figures

Figure 1: Location - Regional Context

Figure 2: Site Proposed Activity(ies)

|  |
| --- |
| (plus others if required, eg Vegetation Communities). |

Appendix B

Threatened Species Tables

|  |
| --- |
| Copy Tables from REF Methodology Workbook:   * + Threatened Flora tab   + Threatened fauna tab   + TECs tab |

Table B-1: Evaluation of the likelihood and impact on Threatened Flora within 10km of subject site

Status: CE = Critically Endangered; E = Endangered; V = Vulnerable; M = Migratory (CAMBA, JAMBA or ROKAMBA)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scientific Name | Common Name | NSW Status | Commonwealth Status | Likelihood of Occurrence | Potential Impacts |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Table B-2: Evaluation of the Likelihood and Impact on Threatened Fauna within 10km of Subject Site

Status: CE = Critically Endangered; E = Endangered; V = Vulnerable; M = Migratory (CAMBA, JAMBA or ROKAMBA)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | NSW Status | Commonwealth Status | Likelihood of Occurrence | Potential Impacts |
| BIRDS | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| MAMMALS | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| REPTILES | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| AMPHIBIANS | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| FISH | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Table B-3: Evaluation of the likelihood and impact on Threatened Ecological Communities within 10km of subject site

Status: CE = Critically Endangered; E = Endangered; V = Vulnerable; M = Migratory (CAMBA, JAMBA or ROKAMBA)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Community Name | NSW Status | Commonwealth Status | Likelihood of Occurrence | Potential Impacts |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Appendix C

Assessments of Significance

|  |  |
| --- | --- |
| A picture containing pool ball  Description automatically generated | Refer to REF Methodology Workbook  “BC s7.3 Test” tab |

Appendix D

AHIMS Report