



Council Roadside  
Reserves Project

REF Template – Minor Works

<Project Name>

Prepared By:

Date:

About this document

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 red text is for the author’s guidance only and should be deleted at the completion of the document.

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

This template is for proposed activities identified as ‘Minor 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 Minor Works. Prepared for LGNSW, September 2019.September 2019

Cover: Roadside Works in Boorowa LGA (Photo: Meredith Brainwood)

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

Contents

[1. Introduction 1](#_Toc33433617)

[1.1. Project Description and Background 1](#_Toc33433618)

[1.1.1. Detailed Scope of Works 1](#_Toc33433619)

[1.1.2. Machinery and Equipment 2](#_Toc33433620)

[1.1.3. Access and Ancillary Works 2](#_Toc33433621)

[1.1.4. Duration and Working Hours 2](#_Toc33433622)

[1.2. Project Location and Context 2](#_Toc33433623)

[1.2.1. Location of the Proposed Activity 2](#_Toc33433624)

[1.2.2. Site Context 2](#_Toc33433625)

[1.2.3. Landuse and Ownership 3](#_Toc33433626)

[1.2.4. Project Justification and Consideration of Alternatives 3](#_Toc33433627)

[2. Statutory and Planning Framework 4](#_Toc33433628)

[2.1. Environmental Planning and Assessment Act 1979 4](#_Toc33433629)

[2.2. State Environmental Planning Policy (Infrastructure) 2007 4](#_Toc33433630)

[2.3. Other Environmental Legislation 4](#_Toc33433631)

[3. Community and Agency Consultation 8](#_Toc33433632)

[4. Environmental Assessment 9](#_Toc33433633)

[5. Summary 23](#_Toc33433634)

[6. Certification, Review and Decision 24](#_Toc33433635)

[Appendix A 25](#_Toc33433636)

[Appendix B - Assessment of Significance 26](#_Toc33433637)

# 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? |

# Statutory and Planning Framework

## 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. Therefore, the activity has been assessed in accordance with 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. 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), and:*

*(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] |
| 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 or 3] |
| *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.  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](https://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx) 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. Check the [POEO Public Register](https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers/about-prpoeo) for any relevant Environment Protection Licences (EPLs).   |  | | --- | | [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. Therefore, approval under the WM Act is not required.   |  | | --- | | 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. This legislation is considered in Section 4.   |  | | --- | | 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 2018 | 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. |

# 

# Community and Agency Consultation

Table 4: Community and Agency Consultation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Community / agency consultation** | Have any community stakeholders been identified for the proposed works?  **Yes  No**   |  | | --- | | If yes, provide details of consultation undertaken and identify where comments received are considered in the REF. Attach any correspondence sent or received (if relevant such as approval for stockpiles on private land, property access, impact on business, etc). |   Is consultation with other authorities required under the requirements of Clauses 13-16 of the Infrastructure SEPP?  **Yes  No**  Are the works adjacent to a [national park, nature reserve or other area](https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU&runWorkflow=AppendLayerCatalog&CatalogLayer=SEED_Catalog.73.NPWS%20Estate) reserved under the *National Parks and Wildlife Act 1974*?  **Yes  No**  Are the works adjacent to a declared [aquatic reserve](https://www.dpi.nsw.gov.au/fishing/marine-protected-areas/aquatic-reserves) under the *Fisheries Management Act 1994*?  **Yes  No**   |  | | --- | | If yes, provide details of consultation carried out and identify where comments received are considered in the REF. Also include copies of any correspondence in the REF appendices. |  |  | | --- | |  |   **Other agency and community consultation:**   |  | | --- | | Provide details of any other agency or community consultation, including Aboriginal community consultation, carried out or proposed to be carried out for the proposed works. Include copies of all correspondence as an Appendix to the REF. If comments from other agencies or the community have been received regarding the proposed works, document the issues raised and provide a response or identify where in the Minor Works REF the issues have been addressed. This can be done in a table format if there are a large number of comments. |  |  | | --- | |  | |

# Environmental Assessment

This section describes in detail the potential key environmental impacts associated with the proposal during both construction and operation and includes identifying site-specific safeguards to ameliorate the identified potential impacts.

|  |  |
| --- | --- |
|  | Refer to the REF Environmental Safeguards and Mitigation Measures Workbook for examples. |

|  |
| --- |
| Impacts should consider:   * + The nature of impacts, including:     - The level of confidence in their prediction.     - The resilience of the environment to cope with the impacts.     - The permanency of the impacts or how reversible the impacts are.     - How adequately the impacts can be mitigated or managed.     - Compliance with performance criteria, standards, plans or policies.     - The anticipated extent of public interest in the impacts.     - Whether additional studies are needed to adequately assess impacts or to develop management measures.   + The extent of impacts (generally and in environmentally sensitive areas), including:     - The type of impacts.     - The size of impacts – considering amount, quantity, volume, mass or other relevant measure.     - The scope (both direct and indirect) of impacts – considering area, number, range or limits or other relevant measure.     - The intensity of impacts – considering power, vigour, force, strength, concentration, rate, ratio, proportion degree or other relevant measure.     - The duration and expected timing of impacts during construction, operation and any decommissioning proposals – considering time length, period, interval, term, continuation or other relevant measure.   **Safeguards**  Safeguards for the proposed works should be included.  Safeguards should be developed in consideration of the following:   * + The safeguards and management measures should be site-specific.   + The safeguards and management measures are to be written concisely, clearly and with a high level of detail with regard to dimensions and quantities, without specifying particular materials or methods to be used.   + The safeguards and management measures should make reference to relevant industry accepted standards, guidelines, policies, codes of practice, etc, where possible.   + The timing for implementation of safeguards and management measures should be specified where necessary, eg pre-construction, construction or operation. Safeguards should be grouped by the relevant timeframe that they are to be achieved.   + All safeguards should be SMARTA: specific, measurable, achievable, realistic, time-driven and auditable.   + Do not repeat safeguards. |

Table 5: Impacts, environmental safeguards and mitigation measures

|  |  |
| --- | --- |
| Issue | Description |
| Landform, geology and soils | Does the project involve the disturbance of large areas (eg >2ha) for earthworks?  **Yes  No**  Does the site have constraints for erosion and sedimentation controls such as steep gradients, narrow corridors or is located on private property?  **Yes  No**  Are there any sensitive receiving environments that are located in or nearby the likely project footprint or that would likely receive stormwater discharge from the project?  Sensitive receiving environments include (but are not limited to) wetlands, state forests, national parks, nature reserves, rainforests, drinking water catchments).  **Yes  No** |
| Potential Impacts | Any disturbance of groundcover presents a potential risk for erosion, this risk can be minimised through implementation of the following safeguards. |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the REF Environmental Safeguards and Mitigation Measures Workbook and/or the list below, and add your own specific for your proposed works: |  * + Site management will incorporate best management erosion and sediment control practices such as those found in the Landcom’s “[Blue Book (4th Edition](https://www.environment.nsw.gov.au/research-and-publications/publications-search/managing-urban-stormwater-soils-and-construction-volume-1-4th-editon)) on erosion and sediment control.   + Construct temporary drainage structures in accordance with the 'Technical Guideline - Temporary Stormwater Drainage for Road Construction' (RMS 2011)   + Linear silt stop fencing to be installed down slope of all affected areas and stockpiles. Silt fencing will be installed before excavation begins.   + Sandbags, hay bales wrapped in geotextile fabric etc. will be used to slow water flow and trap sediment. No straw bales are to be used.   + Overburden will be placed in the form of a bund upslope of the site where necessary to reduce surface water entering the site.   + All erosion and silt control devices will be visually inspected weekly to ensure effectiveness as well as after each rainfall event.   + Stockpiles will be designed, established, operated and decommissioned in accordance with the RMS Stockpile Site Management Guidelines 2015.   + The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with:     - [Landcom’s “Blue Book (4th Edition) on sediment and erosion control](https://www.environment.nsw.gov.au/research-and-publications/publications-search/managing-urban-stormwater-soils-and-construction-volume-1-4th-editon)     - [RMS Landscape Guidelines](https://www.rms.nsw.gov.au/business-industry/partners-suppliers/documents/centre-for-urban-design/landscape-guideline.pdf)     - [RMS Guidelines for Batter Stabilisation Using Vegetation](https://www.rms.nsw.gov.au/documents/about/environment/guideline-for-batter-surface-stabilisation-using-vegetation.pdf) |
| Contaminated Land and Acid Sulfate Soils | Is the project located within an area mapped as Potential Acid Sulfate Soils?  **Yes  No**  Are there any known occurrences of acid sulfate soils in the area?  **Yes  No**   |  | | --- | | Provide details |   Is the project located within an area mapped as Potential Contaminated Land?  **Yes  No**   |  | | --- | | Provide details | |
| Potential Impacts | Disturbance of acid sulfate soils can generate large amounts of sulfuric acid leachate which can impact on the surrounding environment.  Potential impacts include water quality impacts and impacts on flora and fauna. |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the REF Environmental Safeguards and Mitigation Measures Workbook and/or the list below, and add your own specific for your proposed works: |  |  | | --- | | If it is anticipated that Potential Acid Sulfate Soils will be disturbed, an Acid Sulfate Management Plan will be prepared. | |
|  | If contaminated areas are encountered during construction, appropriate control measures will be implemented to manage the immediate risks of contamination. All other works that may impact on the contaminated area will cease until the nature and extent of the contamination has been confirmed and any necessary site-specific controls or further actions identified in consultation with relevant government agencies. |
| Water Quality and Hydrology | Are the works located within or adjacent to a waterbody or wetland, or within 40m of a waterway?  **Yes  No**   |  | | --- | | If yes, provide details: |   If yes, the NSW DPI Water or DPI Fisheries should be notified. Have they been notified?  **Yes  No**   |  | | --- | | If yes, is a permit required? Provide details: |   Will the proposed works be undertaken on a bridge?  **Yes  No**   |  | | --- | | If yes, name the bridge: |   Is the location known to flood or be prone to water logging?  **Yes  No**   |  | | --- | | If yes, provide details: | |
| Potential Impacts | Does the project pose any potential risk to the surrounding water quality?  **Yes  No**   |  | | --- | | Describe the potential impact |   Disturbance of groundcover, use of chemicals and generation of waste all have the potential to impact on the surrounding waterways via runoff. This risk can be minimised through implementation of the following safeguards. |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the REF Environmental Safeguards and Mitigation Measures Workbook and/or the list below, and add your own specific for your proposed works: |  * + Visual monitoring of local water quality (ie turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls.   + Water quality control measures are to be used to prevent any materials (eg. concrete, grout, sediment etc) entering drain inlets or waterways.   + Wash down should use potable water and excess debris removed using hand tools. Wash down waste must be filtered before release, and away from all waterways.   + No dirty water may be released into drainage lines and/or waterways.   + Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets.   + Reduce water velocity and capture sediment on site.   + Minimise the amount of material transported from site to surrounding pavement surfaces.   + Divert clean water around the site.   + Store fuels, chemical and hazardous materials in secure, bunded areas within temporary construction ancillary facilities, and at least 50m from all waterways.   + Capture and dispose of spill and contaminated materials from temporary construction ancillary facilities at a licensed facility.   + Provide spill kits around temporary construction ancillary facilities.   + Measures to control pollutants from stormwater and spills will be investigated and incorporated in the pavement drainage system at locations where it discharges to the receiving drainage lines. Measures aimed at reducing flow rates during rain events and potential scour will also be incorporated in the design of the pavement drainage system. |
| Biodiversity | Have relevant database searches been carried out?   * + NSW Bionet   + Threatened species profile search ([www.environment.nsw.gov.au/threatenedspeciesapp/](http://www.environment.nsw.gov.au/threatenedspeciesapp/))   + Commonwealth EPBC   + Fisheries?   **Yes  No**  **Date searches undertaken:**  Are the proposed works likely to impact on any vegetation including, shrubs, trees?  **Yes  No**  Did the database searches identify any endangered ecological communities, populations, threatened flora and/or threatened or protected fauna, or migratory species within the vicinity of the proposed works? Both Federal and State listed matters must be considered.  **Yes  No**   |  | | --- | | Complete Threatened Species tables in Appendix B. |   Are the works taking place in a roadside area designated as high conservation value vegetation?  **Yes  No**   |  | | --- | | If yes, provide details: |   Will the proposed works require the removal of any other vegetation?  **Yes  No**   |  | | --- | | If yes, provide details: |   Do the proposed works involve pruning, trimming or removal of any tree/s?  **Yes  No**   |  | | --- | | If yes, provide details: |   Will the proposed works affect any tree hollows or hollow logs?  **Yes  No**   |  | | --- | | If yes, provide details: |   Will the proposed works disturb any crevices or other locations (such as on bridges and culverts) for potential bat habitat?  **Yes  No**   |  | | --- | | If yes, provide details: |   Are there any known areas of Areas of Outstanding Biodiversity Value (formerly known as critical habitat), Directory of Important Wetlands in Australia within the vicinity of the proposed works?  **Yes  No**   |  | | --- | | If yes, provide details: |   Will the proposed works disturb any natural waterways or aquatic habitat?  **Yes  No**   |  | | --- | | If yes, provide details: |   Do the trees form part of a streetscape, an avenue or roadside planting?  **Yes  No**   |  | | --- | | If yes, provide details: |   Have the trees been planted by a community group, Landcare group or by council or is the tree a memorial or part of a memorial group eg. has a plaque?  **Yes  No**   |  | | --- | | If yes, provide details: |   Do the trees form part of a heritage listing or have other heritage value?  **Yes  No**   |  | | --- | | If yes, provide details: |   Are there any significant weeds present?  **Yes  No**   |  | | --- | | If yes, provide details: | |
| Potential Impacts | Does the project pose any potential risk to the biodiversity within the vicinity of the site?  **Yes  No**   |  | | --- | | If yes, describe the potential impacts:  If there are impacts on threatened species, complete Assessment of Significance- under Section 7.3 of the BC Act (2016) to determine if there is a significant impact. | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the REF Environmental Safeguards and Mitigation Measures Workbook and/or the list below, and add your own specific for your proposed works: |   General:   * + Prepare a Vegetation Management Plan (VMP) to:     - Identify measures to manage vegetation within the road reserve;     - Detail restoration, regeneration and rehabilitation of areas of native vegetation that will be removed to accommodate the proposed works.     - Detail appropriate management for the potential habitat of threatened flora and fauna species that will be indirectly impacted by the proposal. This may include fencing and signage.     - Identify weed management strategies.   + As part of the site induction process, provide all site personnel with information on the biodiversity values of the study area, including threatened species, no-go areas and responsibilities under relevant environmental legislation, including but not limited to the EP&A Act, BC Act and EPBC Act and associated management plans for individual species.   + Should unexpected threatened fauna be located at any time during construction, cease work immediately in the area to prevent further harm to the individual. Contact Council's Environmental Officer and a suitably qualified ecologist to determine if further assessment or management plans are required.   Clearing of Vegetation: Pre-clearing:   * + Qualified fauna experts are required to conduct pre-clearing surveys and undertake fauna handling if required. This may include:     - Hollow bearing tree survey;     - Stag-watching survey (targeted threatened bird species, arboreal mammals and microbats) in order to identify the number and type of nest boxes required and appropriate locations to install them.   + Where clearing is required, establish exclusion zones in accordance with Guide 2 Exclusion Zones of Roads and Maritime Biodiversity Guidelines (RTA 2011) to ensure clearing does not extend beyond the approved area.   + Trees that are to be trimmed (or removed if necessary) will be clearly marked. Any vegetation to be protected adjacent to the work area will be protected with exclusion fencing.   + Exclusion fencing will be placed at or beyond the drip lines of the protected vegetation so as to prevent damage to their root systems.   + Any trees with hollows are to be checked for native fauna prior to being removed. If any fauna is found, works will stop and WIRES will be contacted. Refer to any Council specific policy requirements for hollow bearing trees and amend mitigation measures accordingly.   Clearing of vegetation – general safeguards   * + Remove minimum required vegetation and minimise disturbance to remaining vegetation   + If any damage occurs to vegetation outside of the boundaries of the work site as a result of the implementation of the proposal, the Project Manager will be notified and will establish strategies for mitigation of impacts and site restoration.   Loss of threatened species and their habitats:   * + Minimise removal of native vegetation and fauna habitat.   + Implement exclusion zones to protect threatened ecological communities and threatened species habitat.   + Remove trees in accordance with Guide 4: Clearing of Vegetation and Removal of Bushrock of Roads and Maritimes Biodiversity Guidelines (RTA, 2011) and in the presence of a qualified ecologist or wildlife expert experienced in the rescue of fauna.   + Where reasonable and feasible, retain mature and hollow bearing habitat trees, including dead stags.   + If hollow bearing trees are being removed, provide nest boxes to mitigate impacts, as determined by the pre-clearing survey.   + Works are not to harm threatened fauna.   + Works are not to create a barrier to fauna movement.   Aquatic habitats and Riparian Zones:   * + Manage riparian areas in accordance with Roads and Maritime’s ‘Biodiversity Guidelines Guidance Note 10: Aquatic Habitats and Riparian Zones' (RTA 2011).   + Should alteration of fish passage occur during construction consult with NSW Department of Primary Industries to determine if a permit under Section 219 of the FM Act is required.   Invasion of Exotic Species:   * + Manage vegetation within the road reserve and adjacent to areas of vegetation clearing in accordance with Guide 6 Weed Management and Guide 10 Aquatic Habitats and Riparian Zones of Roads and Maritime’s Biodiversity Guidelines (RTA, 2011) to reduce invasion of noxious weed species.   + Use weed-free topsoil in landscaping and revegetate disturbed sites with locally indigenous species.   + Construction machinery should be washed prior to entering and leaving site to ensure weed propagules are not transported.   Stockpiling:   * + Only place stockpiles in low value vegetation, where cleared sites are unavailable.   + Stockpiles should be no taller than 2m height.   + Use existing stockpiles before creating new ones.   Site Restoration:   * + The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with:     - Landcom’s “Blue Book (4th Edition) on sediment and erosion control;     - RMS Landscape Guidelines;     - RMS Guidelines for Batter Stabilisation Using Vegetation. |
| Aboriginal Heritage | Are the works likely to disturb previously undisturbed areas of the landscape?  **Yes  No**  Has an AHIMS register search been conducted?  **Yes  No**  Are there any known Aboriginal artefacts/sites within the vicinity of the work site?  **Yes  No**   |  | | --- | | If yes, provide details:  (You may need a permit under s90 of the NP&W Act) |   <https://www.environment.nsw.gov.au/topics/aboriginal-cultural-heritage/protect-and-manage/impact-permits>  Would the proposal involve the removal of mature native trees?  **Yes  No**   |  | | --- | | If yes, provide details of whether the trees have been checked to see if they are scarred or are of Aboriginal cultural significance. | |
| Potential Impacts | Does the project pose any potential risk to Aboriginal heritage?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook,** and/or the list below, and add your own specific for your proposed works: |   Awareness:   * + All personnel working on site will receive training to ensure awareness of location of existing Aboriginal objects within the Study Area and immediate surrounds, and relevant statutory responsibilities.   Management of existing (known) items:   * + Exclusion fencing will be placed around existing known Aboriginal objects to prevent damage to these objects.   + Works to be carried out in accordance with the approved Conservation Management Plan for the heritage item (where available).   Unexpected Finds:   * + If Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Project Manager contacted immediately, and the Standard Management Procedure - Unexpected Heritage Items (RMS, 2015) will be followed. |
| Non-Aboriginal Heritage | Complete online heritage database searches   * + NSW Heritage database   + Commonwealth EPBC heritage list   + Australian Heritage Places Inventory   + Local Environmental Plan(s) heritage items   Are there any items of Non-Aboriginal heritage located within the vicinity of the proposed works?  **Yes  No**   |  | | --- | | If yes, list the item(s) and their heritage significance.  Include details of any approvals that may be required. | |
| Potential Impacts | Does the project pose any potential risk to Non-Aboriginal heritage?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |   Awareness:   * + All personnel working on site will receive training to ensure awareness of location of existing heritage items within the Study Area and immediate surrounds, and relevant statutory responsibilities.   Management of existing (known) items:   * + Exclusion fencing will be placed around existing known heritage items to prevent damage to these objects.   + Works to be carried out in accordance with the approved Conservation Management Plan for the heritage item (where available).   Unexpected Finds:   * + If heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Project Manager contacted immediately, and the Standard Management Procedure - Unexpected Heritage Items (RMS, 2015) will be followed. |
| Noise | Are there any noise sensitive areas near the location of the proposed works that may be affected by the works (i.e. church, school, hospital, residences)?  During construction?  **Yes  No**  During Operation?  **Yes  No**   |  | | --- | | If yes, provide details including a map to show proximity to proposed works. |   Are the proposed works going to be undertaken during standard working hours detailed below?  **Yes  No**   |  |  |  | | --- | --- | --- | | *Standard working hours* |  |  | | *Monday – Friday* |  | *7:00am to 6:00pm* | | *Saturday* |  | *8:00am to 1:00pm* | | *Sunday and Public Holidays* |  | *No work* |   Would operation of the proposal alter the noise environment for sensitive receivers? This might include, but not be limited to, altering the line or level of an existing carriageway, changing traffic flow, increasing traffic speeds by more than 10km/hr or installing audio-tactile line markings.   |  | | --- | | If yes, provide details | |
| Potential Impacts | Does the project pose any potential risk to the surrounding noise quality?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |   Notification:   * + All sensitive receivers (eg local residents) likely to be affected will be notified at least five working days prior to the start of any works associated with the activity that may have an adverse noise or vibration impact.   Standard Hours of Operation:   * + Works to be carried out during normal work hours (i.e. 7am to 6pm Monday to Friday; 8am to 1pm Saturdays). Any work that is performed outside normal work hours or on Sundays or public holidays may not be permitted and, if permitted, works are to minimise noise impacts.   Out of hours:   * + Where out-of-hours activities are required, a Noise and Vibration Management Plan will be prepared and implemented in consultation with sensitive receivers. |
| Air quality | Are the proposed works likely to result in large areas (>2ha) of exposed soils?  **Yes  No**  Are there any dust sensitive receivers located within the vicinity of the proposed works during the construction period (i.e. church, school, hospital, residences)?  **Yes  No**  Is there likely to be an emission to air of dust, smoke, steam or vehicle emissions?  **Yes  No** |
| Potential Impacts | Does the project pose any potential risk to the surrounding air quality?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |  * + Measures to minimise or prevent air pollution or dust are to be used including watering or covering exposed areas.   + Works are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely   + Vegetation or other materials are not to be burnt on site.   + Vehicles and vessels transporting waste or other materials that may produce odours or dust are to be covered during transportation   + Vehicles and equipment are to be maintained in good working order.   + Monitor work areas and stockpiles for dust generation and seed/cover/spray to suppress.   + Measures (including watering or covering exposed areas) are to be used to minimise or prevent air pollution and dust   + Do not leave vehicles idling |
| Waste and Chemical Management | Are the proposed works likely to generate >200 tonnes of waste material (contaminated and /or non-contaminated material)?  **Yes  No**  Are the proposed works likely to require a [licence from EPA](https://www.epa.nsw.gov.au/licensing-and-regulation/licensing)?  **Yes  No**  Is waste being transported off site to another location?  **Yes  No**  Does the project pose any potential risk to the surrounding environment as a result of waste generated?  **Yes  No**  **If YES to any of these items, you need to prepare a Waste Management Plan** |
| Potential Impacts | |  | | --- | | Describe the potential impacts: | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |  * + A Waste Management Plan will be prepared as part of the CEMP, in accordance with [RMS Environmental Procedures- Management of Waste on Roads and Maritime Services Land](https://www.rms.nsw.gov.au/documents/about/environment/environment-waste-on-rms-land-procedure.pdf)   + All surplus material, off cuts, and other debris resulting from the work shall be removed from site and disposed of by a licensed contractor to a licensed waste management facility.   + Waste material, other than vegetation and tree mulch, is not to be left on site once the works have been completed.   + Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day. |
| Traffic and transport | Are the proposed works likely to result in detours, disruptions or delays to traffic flow (vehicular, cycle and pedestrian) or access to properties or businesses?  During construction **Yes  No**  During Operation **Yes  No** |
| Potential Impacts | Are the proposed works likely to affect any other transport nodes or transport infrastructure (eg bus stops, bus routes) in the surrounding area? Result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during operation?  **Yes  No**   |  | | --- | | Describe the potential impacts | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |  * + Where possible, current traffic movements and property accesses are to be maintained during the works. Any disturbance is to be minimised to prevent unnecessary traffic delays.   + If traffic disturbance is unavoidable, a Traffic Management Plan (TMP) will be prepared in accordance with the RMS Traffic Control at Work Sites Manual RTA 2010) and QA Specification G10 Control of Traffic (RTA 2008).   + Comply with Council requirements regarding traffic control, access and road/ pedestrian access.   + Erect signs regarding proposed works, temporary road closures, diversions etc. |
| Visual Amenity/ Landscape | Will the project have any potential impact on visual amenity of the site and surrounding landscape?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Potential Impacts | |  | | --- | | Describe the potential impacts | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |  * + Contain all work within the boundaries designated on the site plan   + Restore work sites to as close to their original condition as possible   + Minimise spread of stockpiles, waste, and parking |
| Socio-economic | Are the proposed works likely to impact on local business?  **Yes  No**   |  | | --- | | If yes, provide details |   Are the proposed works likely to require any property acquisition?  **Yes  No**   |  | | --- | | If yes, provide details |   Are the proposed works likely to alter any access for properties (either temporarily or permanently)?  **Yes  No**   |  | | --- | | If yes, provide details |   Are the proposed works likely to alter any on-street parking arrangements (either temporarily or permanently)?  **Yes  No**   |  | | --- | | If yes, provide details |   Are the proposed works likely to change pedestrian movements or pedestrian access (either temporarily or permanently)?  **Yes  No**   |  | | --- | | If yes, provide details |   Are the proposed works likely to impact on any items or places of social value to the community (either temporarily or permanently)?  **Yes  No**   |  | | --- | | If yes, list details. This might include parks, community centres, places of public worship, recreational facilities and the like. |   Are the proposed works likely to reduce or change visibility of any businesses, farms, tourist attractions or the like (either temporarily or permanently)?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Potential Impacts | Does the project pose any potential risk to the socio-economic factors?  **Yes  No**   |  | | --- | | If yes, provide details | |
| Safeguards | |  |  | | --- | --- | |  | Select the relevant EXAMPLE safeguards and mitigation measures from the **REF Environmental Safeguards and Mitigation Measures Workbook**, and/or the list below, and add your own specific for your proposed works: |  * + Contain all work within the boundaries designated on the site plan   + Restore work sites to as close to their original condition as possible   + Display public information signs until site restoration is complete   + Carry out community and stakeholder consultation before works start   + Notify the Works Supervisor and Asset Manager immediately of any complaints or any accidental damage to property   + Locate services on DBYD search and peg out no-go areas to avoid service-disruption   + All Council staff will exercise courtesy in dealing with the community |

# Summary

Table 6: Summary of environmental safeguards to be implemented

|  |  |
| --- | --- |
| **Safeguards for the proposed work** | |
| General | If the scope of the works changes at any time, review this REF to determine any new measures to take.  An environmental management plan is prepared and implemented prior to the commencement of works.  No new access tracks to be created for the works.  Parking of vehicles and storage of plant/equipment is to occur on existing paved areas. Where this is not possible, vehicles and plant/equipment are to be kept away from environmentally sensitive areas and outside the dripline of trees.  All project staff and contractors will be inducted on the environmental sensitivities of the work site(s) and relevant safeguards prior to commencement.  The Project Manager will be notified immediately of any complaints relating to management of environmental issuesTo ensure compliance with Section 148(3) of the Protection of the Environment Operations Act 1997, the Council’s Health and Building Manager must be notified of any pollution incidents that have caused or threaten material harm to the environment  The Asset Manager will be notified if damage occurs to an area (vegetation, etc) outside of the nominated work area |
| Soil | [Insert safeguards] |
| Waterways and water quality | [Insert safeguards] |
| Air quality | [Insert safeguards] |
| Non-Aboriginal Heritage | [Insert safeguards] |
| Aboriginal Heritage | [Insert safeguards] |
| Biodiversity | [Insert safeguards] |
| Traffic and transport | [Insert safeguards] |
| Noise and vibration | [Insert safeguards] |
| Socio-economic | [Insert safeguards] |
| Landscape character and visual amenity | [Insert safeguards] |
| Waste | [Insert safeguards] |

# Certification, Review and Decision

|  |
| --- |
| This Review of Environmental Factors provides a true and fair review of the proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposal. It identifies the likely impacts of the proposal on the environment and details the environmental safeguards and mitigation measures to be implemented to minimise the potential impact to the environment. In light of the above assessment of the proposed activity, it is considered that the overall impact on the environment is likely to be minimal and therefore acceptable. The long-term benefits of the activity will have a cumulative positive impact on the safety of road users and the activity should proceed accordingly. |

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 - Assessment of Significance

|  |
| --- |
| The assessment of significance must be completed when a threatened species may be impacted in accordance with the requirements of section 1.7 of the *Environmental Planning and Assessment Act 1979:* the Assessment of Significance under Section 7.3 the *Biodiversity Conservation Act* 2016 and the Federal *Environmental Protection and Biodiversity Conservation Act 1999.*  The area was assessed according to the impact of the proposed works on habitat and potential habitat for threatened species that may or are likely to utilise the subject site and study area.  **Assessment of Significance (NSW BC Act 2016)**  As per section 7.3 the *Biodiversity Conservation Act 2016*, the following factors must be taken into account when making a determination of an activity or development:   1. in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction, 2. in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: 3. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or 4. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction, 5. in relation to the habitat of a threatened species, population or ecological community:    1. the extent to which habitat is likely to be removed or modified as a result of the action propose, and    2. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and    3. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality, 6. whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly), 7. whether the proposed development or activity constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.   **Conclusion regarding significance under the NSW BC Act listed species, ecological communities or populations**  Please include the conclusion derived from assessments in 5.(a)-(e).  Note if the Assessment concludes that an impact is likely, a Species Impact Statement is required. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **Assessment of Significance (Commonwealth EPBC Act 1999)**   As per Part 3 of the Environment Protection and *Biodiversity Conservation Act 2016,* the following factors must be taken into account when making considering whether the matter is a controlled activity and whether the matter needs to be referred to the Commonwealth Minister for the Environment:   1. Are there any matters of national environmental significance located in the area of the proposed action 2. Considering the proposed action at its broadest scope (that is, considering all stages and components of the action, and all related activities and infrastructure), is there potential for impacts, including indirect impacts, on matters of national environmental significance? 3. Are there any proposed measures to avoid or reduce impacts on matters of national environmental significance (and if so, is the effectiveness of these measures certain enough to reduce the level of impact below the ‘significant impact’ threshold)? 4. Are any impacts of the proposed action on matters of national environmental significance likely to be significant impacts (important, notable, or of consequence, having regard to their context or intensity)?  |  | | --- | | Significant Impact Criteria for Critically Endangered and Endangered Species | | * 1. Is the action likely to have a significant impact on a vulnerable species | | * 1. Will it lead to a long-term decrease in the size of a population of a species | | * 1. Will it reduce the area of occupancy of the species | | * 1. Will it fragment an existing important population into two or more populations | | * 1. Will it adversely affect habitat critical to the survival of a species | | * 1. Will it disrupt the breeding cycle of a population | | * 1. Will it modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline | | * 1. Will it result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species’ habitat | | * 1. Will it introduce disease that may cause the species to decline, or | | * 1. Will it interfere substantially with the recovery of the species. |  |  | | --- | | Significant Impact Criteria for Vulnerable Species | | 1. Is the action likely to have a significant impact on a vulnerable species | | 1. Will it lead to a long-term decrease in the size of an important population of a species | | 1. Will it reduce the area of occupancy of an important population | | 1. Will it fragment an existing important population into two or more populations | | 1. Will it adversely affect habitat critical to the survival of a species | | 1. Will it disrupt the breeding cycle of an important population | | 1. Will it modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline | | 1. Will it result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species’ habitat | | 1. Will it introduce disease that may cause the species to decline, or | | 1. Will it interfere substantially with the recovery of the species. |  |  | | --- | | Significant Impact Criteria for Critically Endangered and Endangered Communities | | 1. Is the action is likely to have a significant impact on a critically endangered and endangered community | | 1. Will it reduce the extent of an ecological community | | 1. Will it fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines | | 1. Will it adversely affect habitat critical to the survival of an ecological community | | 1. Will it disrupt the breeding cycle of an important population | | 1. Will it modify, destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community’s survival. including reduction of groundwater levels, or substantial alteration of surface water drainage patterns | | 1. Will it cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting | | 1. Will it cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to | | 1. Assisting invasive species, that are harmful to the listed ecological community, to become established, or | | 1. Causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or | | 1. Will it interfere with the recovery of an ecological community. |   **Conclusion regarding significance under the Commonwealth EPBC Act listed species, ecological communities or populations**  Please include the conclusion derived from assessments in 6.(a)-(d).  Note if the Assessment concludes that an impact is likely, referral to the Commonwealth is required. |