

Appendix 9 – Ecology (Flora and Fauna) assessment



Australian Paper Energy from Waste Project

Australian Paper

Desktop Ecology Assessment

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Document history and status

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Appendix A. VBA search

- A.1 Threatened fauna
- A.2 Threatened flora

Appendix B. PMST search

Executive Summary

Jacobs Group (Australia) Pty Ltd (Jacobs) has been engaged by Australian Paper (AP) to undertake a preliminary desktop assessment of potential ecological constraints present within the project area of the proposed Australian Paper Energy from Waste Project (the Project). This assessment aims to determine ecological values that may occur within the project area, the potential legislative implications of these values if present, and to provide recommendations as to further assessment, permit requirements, and next steps required to progress the project. Ecological values with the potential to occur within the project area were determined using desktop techniques including database searches. No field work was undertaken as part of this assessment.

Ecological values

- The project area is likely to be predominantly clear of native vegetation, and therefore unlikely to contain any threatened ecological communities.
- Two threatened species have a moderate to high likelihood of occurring within the project area. Neither of these threatened species are expected to be impacted by the proposed works.

Relevant legislation/policy and associated permit/approval requirements

Legislation/policy	Project relevance	Permit/approval requirement/recommendations
EPBC Act	MNES protected under the EPBC Act are <u>unlikely</u> to be impacted by the proposed works.	It is <u>unlikely</u> that an EPBC referral will be required. A referral may be required if MNES protected under the EPBC Act are determined to be impacted.
EE Act	The project area is <u>unlikely</u> to meet the EES triggers in relation to flora and fauna requirements, that would require the project to be referred due being predominantly clear of native vegetation, and unlikely to constitute important habitat for threatened species.	An EES Referral will be submitted to DELWP to determine the necessity of an EES.
FFG Act	There is a moderate likelihood that FFG-listed threatened species may occur within the project area.	As the project area is in private property, a 'Permit to Take' under the FFG Act <u>will not</u> be required.
VicAdv lists	There is a moderate to high likelihood that VicAdv-listed species may occur within the project area.	VicAdv. Species habitat compensation will occur through the offset process <u>should</u> native vegetation be cleared under a moderate or high-risk pathway.
Planning and Environment Act	The project area has the potential to support native vegetation.	A permit will need to be obtained from Latrobe City Council <u>should</u> applicable native vegetation clearing be required.
Biodiversity Assessment Guidelines	The project area has the potential to support patches of native vegetation, including revegetation areas and scattered trees. Native vegetation as EVC is unlikely to persist given the level of disturbance the area has been subject to.	A permit will need to be obtained from Latrobe City Council, and appropriate vegetation offsets secured, <u>should</u> native vegetation clearing be required.
CaLP Act	There is potential for the project area to support listed noxious weeds. If present, these will need to be controlled project construction.	Manage noxious and environmental weeds within the site.

Next steps/actions required

- Undertake a site inspection to confirm threatened species determinations based on habitat availability and determine the extent and quality of any native vegetation present within the project area.
- Determine the necessity of permits and approvals detailed above through field assessment.

Important note about your report

The sole purpose of this report and the associated services performed by Jacobs Group (Australia) Pty Limited (Jacobs) is to assess the Flora and Fauna values and potential impact of the Australian Paper Energy from Waste Project in accordance with the scope of services set out in the contract between Jacobs and Paper Australia Pty. Ltd. (Australian Paper).

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change. In addition to the number of previous surveys undertaken, there are other reasons why species, including threatened species, may not have previously been recorded. For example, at the time of historical site visits some plant species may not have been flowering and therefore not identified as being present within the area surveyed. Also, the data collected is likely to consist of opportunistic observations only, and, therefore, listed fauna species moving in and out of the area may not have been observed or recorded.

Jacobs has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Jacobs for use of any part of this report in any other context.

This report has been prepared primarily to inform required permit applications and other environmental approvals. As such the report assumes the reader is familiar with the legislation and policy referred to in this report.

Spatial data layers assessed were the most current available at the time of assessment. Any changes to these layers may require this report to be updated.

Calculations and figures are based on design details available at the time of writing. Where design details change the outcomes of this report may require updating.

1. Introduction

Australian Paper has engaged Jacobs to undertake a preliminary desktop assessment of potential ecological constraints present within the project area of the proposed Australian Paper Energy from Waste project (the Project). This desktop assessment includes the identification of known or modelled records of flora and fauna values present, or within close proximity to the project site, as well as a consideration of ecological communities which are known or likely to occur. This data has not been validated in the field against site attributes at this stage. Also included in this desktop assessment is a review of legislation and policy considering ecological values that may be present at the project site.

1.1 Study objectives

The purpose of this assessment is to evaluate the existing flora and fauna attributes considered present or relevant to the project area. The specific objectives of this report are to:

- Conduct a desktop assessment to determine ecological values with the potential to be present within the project area including the likelihood of the presence of threatened species and their habitat, and the presence of native vegetation communities as Ecological Vegetation Class.
- Undertake a review of likely requirements under State and Commonwealth policies and legislation in relation to ecological issues.
- Provide recommendations as to further assessments that may need to be carried out, and approvals likely to be required.

1.2 Investigation area

The project area assessed is located in Maryvale, approximately 130km south-east of the Melbourne CBD, as depicted in Figure 1.1. The area is within the within the Gippsland Plain bioregion and under the jurisdiction of the West Gippsland Catchment Management Authority and in the Latrobe City Council local government area. The project area is not subject to any additional planning overlays that modify the vegetation removal requirements of Clause 52.17 of the Victoria Planning Provisions.

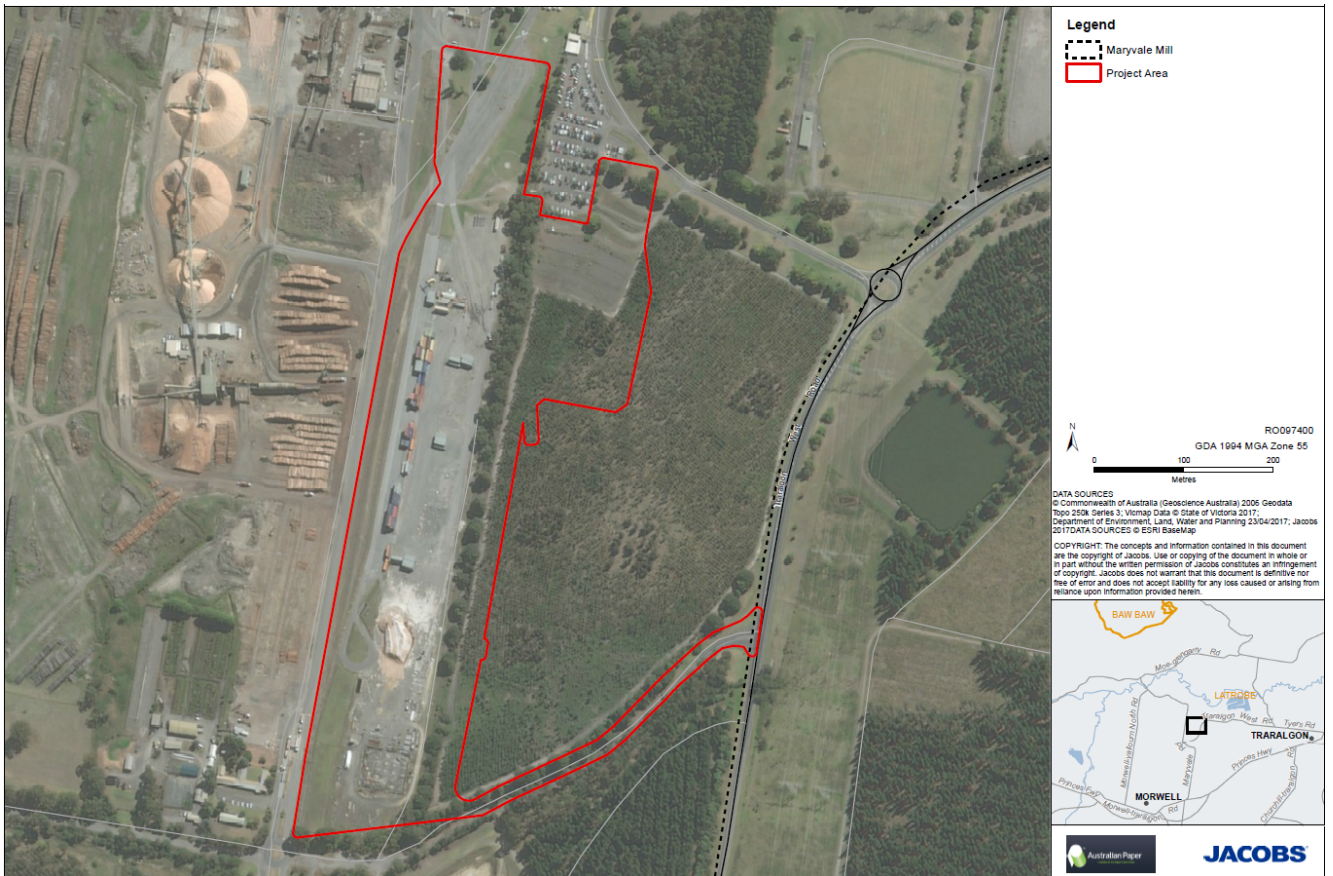


Figure 1.1 : The project area

2. Method

This desktop assessment has been completed through the determination of ecological values with the potential to occur in the vicinity of the project area, the determination of the likelihood of those ecological values occurring within the project footprint, and the determination of the potential policy and legislative implications of those ecological values occurring within the project area.

2.1 Ecological values potentially present within the project area

A review of the following databases and documents was undertaken to provide information on native vegetation, threatened ecological communities, and threatened flora and fauna species previously identified or modelled to occur within the project area:

- NatureKit: This database comprises large scale mapping and classification of native vegetation across Victoria. It also classifies areas of mapped native vegetation according to importance to biodiversity (DELWP 2017) [accessed 04/12/2017].
- Victorian Biodiversity Atlas: The Victorian Biodiversity Atlas (VBA) database comprises historical records of flora and fauna species from across the state. Records are added opportunistically, as flora and fauna surveys are conducted within Victoria for a variety of purposes. Records from a 5 km radius of the site have been assessed for this report (Appendix A) (DELWP 2017) [accessed 04/12/2017].
- Protected Matters Search Tool: The Protected Matters Search Tool (PMST) highlights any Matters of National Environmental Significance (MNES) relevant to the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) that are likely to occur within an area (Appendix B) (DEE 2017) [accessed 04/12/2017].

2.2 Likelihood of presence of ecological values within the project area

An assessment of the likelihood of threatened ecological communities and threatened species occurring within and adjacent to the project site has been made based on the species' preferred habitat (as detailed in relevant literature) in comparison to the habitat available at the project site and the frequency, timing and location of previous records. The criteria detailed in Table 2-1 and Table 2-2 below have been used to document the likelihood of each threatened ecological community being present at the project site and the likelihood of threatened communities being present.

Table 2-1 : Criteria for determining the likelihood of threatened ecological communities being present within the project area

Likelihood	Criteria
High	<ul style="list-style-type: none"> • Mapping by DELWP indicates that EVCs likely to be present at the project site are of a similar composition to the threatened ecological community • Review of aerial photography indicates that remnant vegetation is likely to be present at the project site • Review of literature and general knowledge of vegetation in the area indicates the project site is appropriate for this ecological community
Moderate	<ul style="list-style-type: none"> • Mapping by DELWP indicates that EVCs likely to be present at the project site are of a similar composition to the threatened ecological community • Review of literature and general knowledge of vegetation in the area indicates the project site is suitable for this ecological community • It is difficult to determine from aerial photography whether the community is present, such as grassland communities
Low	<ul style="list-style-type: none"> • Mapping by DELWP indicates that EVCs likely to be present at the project site are not of similar composition to the threatened ecological community or that no remnant vegetation is present • Review of aerial photography indicates that no remnant vegetation is likely to be present • Review of literature and general knowledge of vegetation in the area indicates that the vegetation community is unlikely to be present at the project site

Table 2-2 : Criteria for determining the likelihood of threatened species being present within the project area

Likelihood	Criteria
High	<ul style="list-style-type: none"> • Recent records of species from DELWP databases • Review of aerial photography indicates potential habitat on site • Review of habitat and distribution literature indicates the project site is appropriate for this species
Moderate	<ul style="list-style-type: none"> • Historic records of species from DELWP databases • Review of habitat and distribution literature indicates the project site is appropriate for this species • Review of aerial photography indicates limited habitat on site
Low	<ul style="list-style-type: none"> • Species has not been previously recorded within DELWP databases • Review of aerial photography indicates that no available habitat is present • Review of literature regarding habitat and distribution indicates the project site is unlikely to be utilised by this species

2.3 Legislative/policy implications of ecological values likely to be present

The implications of ecological values deemed likely to be present has been assessed under the relevant policy and legislation (summarised in table of the legislation and policies referred to throughout the document). Results of the assessment of the project area are assessed in relation to the legislation and policies described in Table 2-3

Table 2-3 : Summary of policy and legislation relevant to the proposed works

Policy/legislation	Description	Project relevance
Commonwealth		
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	<p>The EPBC Act has significant implications for natural resource and environmental management in Australia. This Act provides for the listing of threatened species, threatened ecological communities and key threatening processes. It also relates to actions likely to have a significant impact on Matters of National Environmental Significance (MNES). There are nine MNES:</p> <ul style="list-style-type: none"> • World Heritage Sites • National Heritage Places • Ramsar Wetlands • Nationally threatened species and ecological communities • Migratory species • Commonwealth marine areas • Nuclear actions • The Great Barrier Reef Marine Park • Water resources from coal seam gas development or large coal mining development 	<p>Determine whether any MNES are likely to be 'significantly' impacted by the proposed works.</p> <p>Recommend further assessment where required, such as targeted surveys. Where MNES may be impacted recommended mitigation measures to avoid and reduce impact. If impact cannot be avoided the project will need to be referred to the Commonwealth Department of the Environment and Energy (DEE).</p>
State		
Environment Effects Act 1978 (EE Act)	<p>The Environment Effects Act 1978 provides for the assessment of actions that are capable of having a significant environmental effect.</p> <p>Actions which might have a significant environmental effect should be referred to the Victorian Minister for Planning, who decides if an Environmental Effects Statement (EES) is required. An EES might be required where:</p> <ul style="list-style-type: none"> • 10 ha or more native vegetation is being cleared • There is a likelihood of regionally or state significant adverse environmental effects • There is a need for an integrated assessment of social and economic effects of a project or relevant alternatives • Normal statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment <p>This Act also allows an applicant to write to the Secretary of the Victorian Department of Environment Land Water and Planning (DELWP) to confirm no EES is required.</p>	<p>Determine whether the extent of removal of native vegetation and habitat for threatened species of state significance will trigger the need for a referral under the Environmental Effects Act.</p> <p>Recommended further assessment where required, such as targeted surveys. If a trigger for EES is met, recommend mitigation measures to avoid and reduce impact. If impact cannot be avoided an EES referral will need to be submitted.</p>

Policy/legislation	Description	Project relevance
<p>Flora and Fauna Guarantee Act 1988 (FFG Act)</p>	<p>The FFG Act provides a framework for biodiversity conservation in Victoria.</p> <p>Threatened species and communities of flora and fauna, as well as threatening processes, are listed under this Act.</p> <p>A number of non-threatened flora species are also listed as protected under the FFG Act. A Permit to Take is required to remove these species from public land.</p> <p>N.B. The FFG Act is currently under review with changes expected in late 2017 or early 2018. This report has been prepared based on the current requirements of the report and these may change prior to the construction of the project</p>	<p>Determine if any FFG-listed flora or fauna species are likely to be affected or threatening processes occur by the proposed works within the Project area.</p> <p>Recommend further assessment where required, such as target surveys. Where listed flora and fauna species are identified or threatening processes likely, recommend mitigation measures to avoid and reduce impact. If listed flora and fauna species are to be removed a Permit to Take may need to be obtained.</p>
<p>DELWP Victorian Advisory Lists (VicAdv)</p>	<p>The DELWP Victorian Advisory Lists (VicAdv) are not a statutory list of threatened species, but rather list species for which conservation management is recommended by DSE. The VicAdv lists are comprised of the Advisory List of Rare or Threatened Plants in Victoria – 2014 (DEPI 2014), the Advisory List of Threatened Vertebrate Fauna in Victoria – 2013 (DEPI 2013), and the Advisory List of Threatened Invertebrate Fauna in Victoria – 2009 (DSE 2009).</p> <p>The presence, or likely presence, of a species listed on the VicAdv lists is used to determine whether species specific habitat is required to be offset and for other project sustainability measures.</p>	<p>Determine if any species present are listed on the VicAdv lists and likely to be affected by the proposed works within the project area.</p> <p>Recommend further assessment where required, such as targeted surveys. Where listed flora and fauna species are identified, recommend mitigation measures to avoid and reduce impacts. If listed flora and fauna species are to be impacted an offset will be prescribed for the project area that incorporates habitat for the affected species.</p>
<p>Planning and Environment Act 1987</p>	<p>Applications to remove, destroy, or lop native vegetation in Victoria invoke relevant municipal planning schemes and the Planning and Environment Act, which are given authority through the Victoria Planning Provisions (VPP). A range of exemptions apply under this Act.</p> <p>Depending on the scale of the native vegetation clearance, statutory referral to the DELWP may be required.</p> <p>Offset requirements for the clearances of native vegetation are determined by the Biodiversity Assessment Guidelines (BAG) (DEPI 2013) and the relevant Catchment Management Authority's Native Vegetation Plan.</p>	<p>Determine whether native vegetation is present and will require removal.</p> <p>Where native vegetation is present within the project area, recommend mitigation measures to avoid and minimise the removal of native vegetation. If native vegetation is to be removed, a permit will be required from the approval authority.</p> <p>Certain overlays (e.g. Environmental Significance Overlays) may modify the permit requirements for the removal of native vegetation.</p>
<p>Permitted Clearing of Native Vegetation – Biodiversity Assessment Guidelines (Guidelines)</p>	<p>The purpose of these Guidelines is to guide how impacts on biodiversity should be considered when assessing an application for a permit to remove, lop or destroy native vegetation. For the purpose of these Guidelines the term 'remove native vegetation' includes to lop or destroy native vegetation.</p> <p>N.B. The Native Vegetation regulations under the Planning and Environment Act are currently under review with changes expected in December 2017, including changes to the Biodiversity Assessment Guidelines. This report has been prepared based on the current requirements of the report and these may change prior to the construction of the project.</p>	<p>Determine whether native vegetation is present and will require removal.</p> <p>Where native vegetation is present within the project area, recommend mitigation measures to avoid and minimise the removal of native vegetation. If native vegetation is to be removed, prescribe an offset in accordance with the Guidelines.</p>

Policy/legislation	Description	Project relevance
<p>Catchment and Land Protection Act 1994 (CaLP Act)</p>	<p>The CaLP Act defines requirements to:</p> <ul style="list-style-type: none"> • Avoid land degradation; • Conserve soil; • Protect water resources; and • Eradicate and prevent the spread and establishment of noxious weed and pest animal species. <p>The Act defines four categories of noxious weeds: State Prohibited Weeds, Regionally Prohibited Weeds, Regionally Controlled Weeds and Restricted Weeds. Noxious weeds species and the category they are placed in is specific to individual CMA regions</p>	<p>Determine whether any pest plant or animal species are present within the project area.</p> <p>Recommend mitigation measures to control pest plant and animal species and to prevent any increase in the population of the species as a result of proposed works.</p>

3. Results

3.1 Native vegetation

The project area is likely to be predominantly clear of native vegetation. EVC mapping indicates that the majority of the project area is clear of native vegetation albeit with areas of the project area modelled as supporting EVC 151: Plains Grassy Forest (Figure 3.1). However, review of aerial imagery (visible in Figure 1.1) suggests that areas modelled as Plains Grassy Forest are likely to be areas of plantation timber, as indicated by the uniform nature of the vegetation present. Thus, the project area is likely to be predominantly highly disturbed in nature, with little native vegetation present. Any indigenous trees will require permit and offsetting requirements, however, these will require field assessment.

3.1.1 Risk-based pathway of the project

Under the Native Vegetation Permitted Clearing Guidelines, this project is likely to follow a low risk-based pathway. The risk-based pathway of the project area is determined by considering the location risk associated with areas of native vegetation clearing within the project area, as well as the extent of vegetation clearing expected to occur within the project area. This information has been considered using the matrix below (Table 3-1).

- *Location Risk:* The project area contains only areas of location risk A
- *Extent of vegetation clearing:* Likely to be minimal, with the much of the vegetation on site having been planted, and therefore not requiring a permit or contributing toward the extent of vegetation to be cleared.

Based on the absence of areas of Location Risk B and C within the project area and the limited extent of native vegetation evident from aerial photography and modelled mapping, it is likely that the project will be assessed under the low risk pathway. Projects assessed under low risk-based pathways require a lesser level of detail in the assessment of the vegetation to be removed than projects which are assessed under the moderate or high risk pathways.

Table 3-1 : Matrix used to determine

Extent of vegetation clearing	Location risk		
	Location A	Location B	Location C
< 0.5 ha	Low	Low	High
≥ 0.5 ha and < 1 hectare	Low	Moderate	High
≥ 1 ha	Moderate	High	High

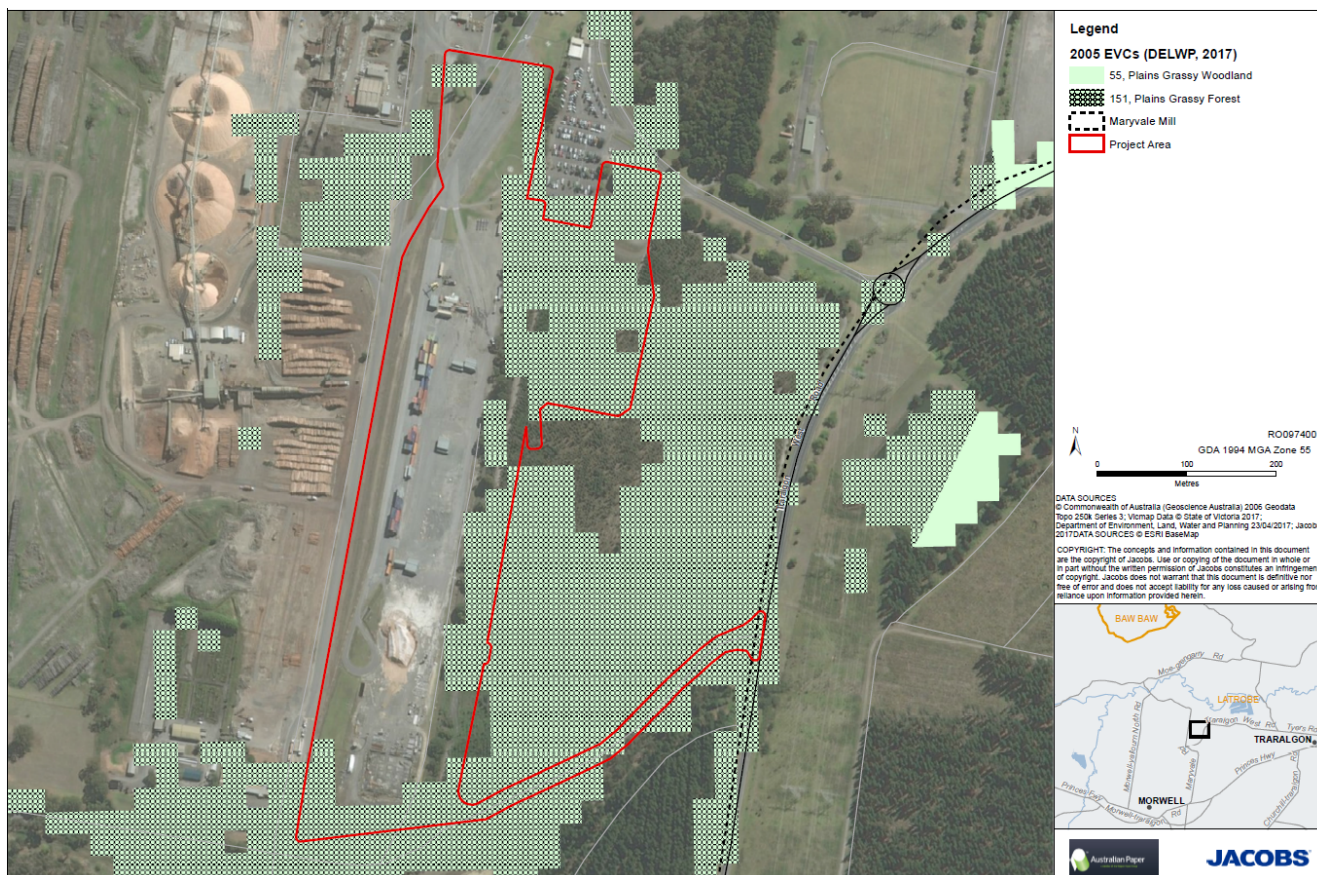


Figure 3.1 : Ecological Vegetation Classes modelled to occur within the project area.

3.2 Threatened ecological communities

The project area is unlikely to support any threatened ecological communities listed under the FFG Act (FFG-listed communities), or any threatened ecological communities listed under the EPBC Act. (EPBC-listed communities).

3.2.1 FFG-listed communities

The study area is unlikely to support any FFG-listed communities. At the desktop level, the potential presence of FFG-listed communities is indicated by the presence of EVCs that correspond to FFG-listed communities, as modelled in NatureKit (DELWP 2017). The project area is not modelled to support any EVCs that correspond to any FFG-listed community. It is therefore unlikely that the project area will support any FFG-listed communities.

3.2.2 EPBC-listed communities

The study area is unlikely to support any EPBC-listed communities. At the desktop level, the potential presence of EPBC-listed communities is indicated by the PMST (DEE 2017). The PMST modelled the potential presence of one EPBC-listed community within the project area. This community is detailed in

Table 3-2 : EPBC-listed communities modelled as potentially occurring within the project area

EPBC-listed community	Conservation status	EPBC-modelled likelihood of occurrence	Jacobs-determined likelihood of occurrence
Gippsland Red Gum (<i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>) Grassy Woodland and Associated Native Grassland	Critically Endangered	Community likely to occur within area	Low: The project area is unlikely to support areas of remnant native vegetation, and thus unlikely to constitute this threatened vegetation community. It is also noted the Gippsland Red Gum community is generally associated with floodplain areas.

3.3 Threatened species

There is a high likelihood that one threatened flora species and a moderate likelihood that one threatened fauna species will occur in the project area. There is a low likelihood that either of these species will be impacted by the proposed works. Flora and fauna species with the potential to occur within the project area were determined by a review of the VBA (Appendix A), and through a PMST search (Appendix B). Threatened species with a moderate to high likelihood of occurring within the project area is detailed in Table 3-3. In this case, the PMST did not return any threatened species additional to those returned by the VBA that were deemed to have a moderate to high likelihood of occurring.

Table 3-3 : Threatened species with a moderate to high likelihood of occurring within the project area

Species	Conservation status			Likelihood of occurrence	Likelihood of impact
	EPBC	VicAdv	FFG		
Fauna					
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	-	vu	L	Moderate	Low: although this species may occur in the airspace over the project area, this species is unlikely to make significant use of the limited habitat within the project area.
Flora					
<i>Eucalyptus globulus</i> subsp. <i>Globulus</i> Southern Blue-gum	-	r	-	High	Low: Outside the geographic range of this species. Individuals present are likely to be either planted, or wildlings derived from planted individuals.

3.4 Additional relevant Matters of National Environmental Significance

No additional MNES listed under the EPBC act (those in addition to threatened ecological communities and threatened species as discussed in Sections 3.2, and 3.3) are likely to be impacted by the proposed works. Additional MNES modelled as potentially relevant within the project area by the PMST (DEE 2017) are detailed in Table 3-4 below.

Table 3-4 : Other MNES modelled as relevant to or within the project area, and their likelihood of being impacted by the proposed works

Matter of National Environmental Significance	Likelihood of impact
Wetlands of International Importance (Ramsar wetlands)	
Gippsland lakes (project area is 50 km – 100 km upstream)	Low: The terrestrial nature of these works and the remote location of works in relation to the Gippsland lakes makes it unlikely that this Ramsar wetland will be impacted by the proposed works.

Other	
13 listed migratory species	Low: The project area represents poor quality habitat for migratory species, and thus migratory species are considered to be unlikely to be impacted by the proposed works.

4. Relevance of legislation

Relevant policy and legislation has been considered in light of the ecological values that are likely to occur within the project area. A summary of the potential implications of legislation and policy is detailed in Table 4-1 including required next steps to progress the project.

Table 4-1 Legislative requirements

Policy / legislation	Project relevance	Actions required
Commonwealth		
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Low likelihood that the project area supports MNES protected under the EPBC Act.	<ul style="list-style-type: none"> Field assessment to confirm presence/absence of threatened species and/or their habitat. Where habitat is likely to be impacted, further targeted assessment for threatened species may be required.
State		
<i>Environment Effects Act 1978</i> (EE Act)	Project area is likely to support little native vegetation, and unlikely to impact threatened species.	<ul style="list-style-type: none"> Field assessment to confirm presence/absence of threatened species and/or their habitat as well as the extent of native vegetation. Where habitat is likely to be impacted, further targeted assessment for threatened species may be required.
<i>Flora and Fauna Guarantee Act 1988</i> (FFG Act)	<p>Low likelihood that the project area supports threatened species protected under the FFG Act. Many species not listed as threatened are also protected under the FFG Act and require a Permit to Take in order to be removed. This includes all Ferns other than bracken, daisies, heaths and orchids. It is highly likely that protected species will be present within the project area.</p> <p>In this case, the project area is within private land, whereas the FFG Act applies to areas of public land.</p>	<ul style="list-style-type: none"> As the project area is within private land, a Permit to Take will not be required. No further action required.
DELWP Victorian Advisory Lists (VicAdv)	Moderate-high likelihood that the project area supports threatened species listed on the VicAdv. However, the presence of these species is assessed using modelled datasets.	<ul style="list-style-type: none"> Field assessment required to map the extent of native vegetation present within the project area. Impacts to VicAdv species will be determined based on the extent of native vegetation removal that correlates to modelled threatened species habitat.
<i>Planning and Environment Act 1987</i>	Native vegetation removal will require a Planning Permit in accordance with Clause 52.17. This includes trees that are located outside of the project area, but where greater than 10% of the TPZ will be impacted.	<ul style="list-style-type: none"> Complete field assessment to map scattered trees and remnant vegetation. Determine the location extent of native vegetation and scattered tree removal required. Where native vegetation and scattered trees are to be removed a permit will need to be obtained from the Latrobe City Council.

Policy / legislation	Project relevance	Actions required
Permitted Clearing of Native Vegetation – Biodiversity Assessment Guidelines (Guidelines)	Project area has the potential to support small areas of native vegetation.	<ul style="list-style-type: none"> • Complete field assessment to map scattered trees and remnant vegetation (if present). • Determine the extent of native vegetation to be removed and scattered trees 'lost'. • Identify offset requirements. • Apply for a Permit to remove native vegetation from the Latrobe City Council.
<i>Catchment and Land Protection Act 1994</i> (CaLP Act)	Potential for the Project to support listed noxious weeds.	<ul style="list-style-type: none"> • Field assessment required to confirm the presence of listed noxious weeds. • Where noxious weeds identified, control measures to be included within the Environmental Management Plan to prevent the spread of weeds.

5. Conclusions and next steps

A desktop assessment was completed to determine the likely presence of significant ecological values within the Project area. The desktop assessment has identified the following:

Ecological values

- The project area is likely to be predominantly clear of native vegetation, and therefore highly unlikely to support any native vegetation, threatened species and/or threatened species habitat or threatened ecological communities.
- There is a moderate to high likelihood that two threatened species, the White-bellied Sea-Eagle (*Haliaeetus leucogaster*), and the Southern Blue-gum (*Eucalyptus globulus* subsp. *globulus*) may occur, based on relevant records and models. The likelihood of either of these species being impacted by the proposed works is low.
- In the case of the White-bellied Sea-Eagle, the species may roam over the site, however, the site is unlikely to provide breeding sites or otherwise significant habitat.
- The Southern Blue-gum is outside of its natural range.

Next steps

- A site inspection will be required to:
 - Finalise threatened species determinations.
 - Determine the presence, extent and quality of any native vegetation within the project area in accordance with the Permitted Clearing Guidelines, including the recording of indigenous scattered trees.

Permits and environmental approvals

- An EPBC referral is unlikely to be required as it is highly unlikely that the project area will support any MNES.
- An EES Referral will be submitted to DELWP to determine the necessity of an EES.
- An FFG 'Permit to Take' will not be required as the project area is within private land.
- A permit will need to be obtained from the Latrobe City Council for the removal of native vegetation should the removal of native vegetation be required.
- Additional permits and approvals may be required pending the results of the site visit.

6. References

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Appendix A. VBA search

A.1 Threatened fauna

Species	Conservation status*			Year of last record	Habitat	Likelihood of occurrence
	EPBC	VicAdv	FFG			
<i>Anas rhynchos</i> Australasian Shoveler	-	vu	-	1991	Larger waters, fresh and saline lakes, well-vegetated freshwater wetlands, coastal inlets sewage ponds, floodwaters. ⁸	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Ardea modesta</i> Eastern Great Egret	-	vu	L	2001	Shallows of rivers, estuaries, tidal mudflats, freshwater wetlands; sewage ponds, irrigation areas, larger dams etc. ⁸	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Aythya australis</i> Hardhead	-	vu	-	1991	Deep, permanent wetlands, large open waters, brackish coastal swamps, farm dams, ornamental lakes , sewage ponds. ⁸	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Biziura lobate</i> Musk Duck	-	vu	-	1995	Well-vegetated swamps, wetlands, both brackish and fresh, lakes, reservoirs, shallow bays, inlets; occasionally at sea. ⁸	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Galaxiella pusilla</i> Dwarf Galaxis	vu	en	L	2012	Amongst marginal vegetation in still or gently flowing water of roadside ditches, swamps and backwaters of creeks. Occupies both ephemeral and permanent habitats. ¹²	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	-	vu	L	2001	Coasts, inlands, estuaries, inlets, large rivers, inland lakes, reservoirs. ⁸	Moderate: potential to be present in the airspace over the project footprint due to suitable foraging habitat for this species in the surrounding landscape.
<i>Oxyura australis</i> Blue-billed Duck	-	en	L	1995	Found on temperate, fresh to saline, terrestrial wetlands including sewerage ponds, rivers, salt lakes and salt pans. Preferring deep, permanent open water within or near dense vegetation. ¹⁰	Low: appropriate aquatic habitat for this species not present within the project area.
<i>Platalea regia</i> Royal Spoonbill	-	nt	-	2005	Larger shallow waters, inland and coastal, well-vegetated shallow freshwater wetlands, saltfields, mangroves, islands, farm dams occasionally. ⁸	Low: appropriate aquatic habitat for this species not present within the project area.

<p><i>Prototroctes maraena</i> Australian Grayling</p>	<p>vu</p>	<p>vu</p>	<p>L</p>	<p>2010</p>	<p>Clear, moderate to fast-flowing water in the upper reaches of rivers. Typically found in gravel-bottom pools. Often form aggregations below barriers to upstream movement.¹²</p>	<p>Low: appropriate aquatic habitat for this species not present within the project area.</p>
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⁸(Pizzey and Knight 2012); ¹²(Allen, Midgley et al. 2002)

*cr=critically endangered, en=endangered, vu=vulnerable nt=near threatened, L=Listed

A.2 Threatened flora

Species	Conservation status*			Year of last record	Habitat	Likelihood of occurrence
	EPBC	VicAdv	FFG			
<i>Cardamine tenuifolia</i> Slender Bitter-cress	-	en	-	1997	Moist to wet soils subject to inundation, such as swamp margins, plains grasslands valley sclerophyll forest. Flowers Oct-Mar ⁴	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Craspedia canens</i> Grey Billy-buttons	-	en	L	2015	From grassland often bordering swamps at low altitude between Cranbourne and Traralgon. ³	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Cyathea cunninghamii</i> Slender Tree-fern	-	vu	L	1997	Wet sclerophyll forests. ⁴	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Eucalyptus crenulata</i> Buxton Gum	en	en	L	2006	Swampy sites in foothills just north and south of great dividing range, near Buxton, Narbethong and Yarra Glen. ¹	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Eucalyptus fulgens</i> Green Scentbark	-	r	-	2001	Occurs east from Healesville and Worri Yallock to the Latrobe Valley near Driffield. ⁴	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Eucalyptus globulus</i> subsp. <i>Globulus</i> Southern Blue-gum	-	r	-	2012	Along roadsides or in disturbed areas. ⁴	High: This is a plantation species and thus is highly likely to present. The site however is outside the natural range of this species.
<i>Eucalyptus strzeleckii</i> Strzelecki Gum	vu	vu	L	2001	Favours ridges, slopes and streambanks, and deep fertile soils. Flowers Spring. ²	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Platysace ericoides</i> Heath Platysace	-	r	-	2003	Confined to the coastal plain and foothills mostly between Moe and Orbost, usually occurring in dryish forest, often with shallow, rocky soils. ³	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Senecio glomeratus</i> subsp. <i>Longifructus</i> Annual Fireweed	-	r	-	2012	Occurs near streams and swamps throughout the south and north east of the state ²⁵	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.
<i>Triglochin minutissima</i> Tiny Arrowgrass	-	r	-	2012	Scattered on damp saline soils near salt-lakes, and forming part of herbfield in coastal saltmarshes. Fruits Aug-Nov. ¹	Low: project area is highly disturbed, and unlikely to support suitable habitat for this species.

¹(Walsh and Entwisle 1994); ²(Walsh and Entwisle 1996); ³(Walsh and Entwisle 1999); ⁴(Bull 2014); ²⁵(RBGV 2017)

*cr=critically endangered, en=endangered, vu=vulnerable nt=near threatened, L=Listed

Appendix B. PMST search