

Apply for a planning permit

Before you start



Department
of Transport
and Planning

- You will need these documents to submit this application:
 - A full, current copy of title information for each individual parcel of land forming the subject site.
 - A plan of existing conditions.
 - Plans showing the layout and details of the proposal.
 - Any information required by the planning scheme, requested by DTP or outlined in a DTP planning permit checklist.
 - If required, a description of the likely effect of the proposal.
 - If applicable, a current Metropolitan planning Levy certificate.
- Fees will apply for this application - [find out about fees for planning applications](#). You need to pay all fees or request a fee waiver before you submit. We accept Credit Card payments online and support EFT payments.
- This application will automatically save as you enter information.

Contact details

Applicant details

Is the applicant a person or organisation?

Organisation

Organisation name

AusNet Transmission Group Pty Ltd.

Business phone number

1300 360 795

Email

[REDACTED]

Address type

Street address

Street address

Unit type

Level number

29

Site or building name

Street number

2

Street name

Southbank Blvd

Suburb

Southbank

Postcode	3006
----------	------

State	VIC
-------	-----

Owner details

The owner is the applicant	No
----------------------------	----

Is the owner a person or organisation?	Organisation
--	--------------

Organisation name	ORIGIN ENERGY POWER LTD
-------------------	-------------------------

Business phone number	13 24 61
-----------------------	----------

Email	
-------	--

Address type	Street address
--------------	----------------

Street address

Unit type	
-----------	--

Level number	
--------------	--

Site or building name	
-----------------------	--

Street number	268-274
---------------	---------

Street name	George Street
-------------	---------------

Suburb	Sydney
--------	--------

Postcode	2000
----------	------

State	NSW
-------	-----

Preferred Contact

First name	Melody
------------	--------

Last name	Valentine
-----------	-----------

Mobile	
--------	--

Work phone	+61 3 9272 1454
Organisation	Beca Pty Ltd.
Job title	Principal Environmental Planner
Email	melody.valentine@beca.com
Address type	Street address
Street address	
Unit type	
Level number	4
Site or building name	
Street number	5
Street name	Queens Road
Suburb	Melbourne
Postcode	3004
State	VIC

Pre-application meeting details

Have you submitted a pre-application meeting request already for this site?

Yes

Enter the pre-application number

Land details

Planning scheme

Moyne

Location

Location type

Lot on plan

Lot on plan

Lot number	1
Plan type	Plan of Subdivision
Plan number	620663

Location

Location type	Lot on plan
---------------	-------------

Lot on plan

Lot number	2
Plan type	Plan of Subdivision
Plan number	620663

Application details

Describe your proposal	As part of the Victorian Renewable Energy Zones Development Plan, the Victorian Government is planning to turn the existing 500kV Tarrone to Moorabool line in at Mortlake Power Station (MOPS). AusNet is planning upgrade works at the terminal station, to facilitate the turn-in project. The upgrade works will involve extension of the Mortlake Terminal Station yard to the north, tower /foundation strengthening works, and an existing drain will be relocated. Temporary site amenities, parking and laydown areas will also be established to facilitate the works.
Please specify the provision or clause the application is required under (if known)?	37.01-4
Please select the application category	Extension to existing building or structure (other than dwelling)
Enter the estimated cost of any development for which the permit is required	Failed to convert value: 4526454900
Is there a metropolitan planning levy?	No
What is the current land use?	Utility Installation

Describe how the land is used and developed now	An established power station owned by Origin Energy is located on Lot 1. AusNet own and operate the terminal station to the east of the existing terminal station which is located on Lot 2.
--	--

Does this application look to change or extend the use of this land?	No
---	----

Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?	No
--	----

Additional details

Does this application involve the creation or removal of dwellings?	No
--	----

Does the application involve native vegetation removal?	No
--	----

Does this application involve the creation or removal of lots?	No
---	----

Does the activity require preparation of a Cultural Heritage Management Plan (CHMP)?	No
---	----

Supporting documents

The following supporting documents must be submitted with this application, preferably in PDF or Word format

- A full, current copy of title information for each individual parcel of land forming the subject site.
- A plan of existing conditions.
- Plans showing the layout and details of the proposal.
- Any information required by the planning scheme, requested by DTP or outlined in a DTP planning permit checklist.
- If required, a description of the likely effect of the proposal (for example, traffic, noise, environmental impacts).
- If applicable, a current Metropolitan planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used).

Supporting documents	22-260 Mortlake Ecology Report Final V1.0.pdf Jem Archaeology Letter of Advice 1154 Connewarren Lane Mortlake.pdf Copy of Title Lot 1.pdf Copy of Title Lot 2.pdf MOPS Site Layout - Preliminary - Rev 3.pdf Copy of Plan.pdf Mortlake Terminal Station Planning Application.pdf
-----------------------------	--

Fees and payment

[View planning and subdivision fees](#)

Fee

Fee type	Applications for permits under section 47 of the Planning and Environment Act 1987 (regulation 9)
Class	15
Fee amount	\$26489.90
Fee description	To develop land (other than a class 8 or a permit to subdivide or consolidate land) if the estimated cost of development is more than \$15,000,000 and not more than \$50,000,000
Total amount to pay	\$26489.90
Payment method	EFT
BSB	033-875
Account and reference number	170053841
EFT confirmation	I confirm that the fee has been paid via EFT

Submit

Applicant declaration	I declare that I am or represent the applicant; that all the information in this application is true and correct; and that the owner (if not myself) has been notified of the application
------------------------------	---

Privacy statement

The Department of Transport and Planning (DTP) is committed to protecting personal information provided by you in accordance with the principles of the Victoria privacy laws. The information you provide will be used for the following purposes:

- correspond with you about your application
- if necessary, notify affected parties who may wish to inspect your proposal so that they can respond
- if necessary, forward your application to a referral authority.

Your contact details may be used by DTP or its contracted service providers under confidentiality agreements to survey you about your experience with DTP.

The information you provide may be made available to:

- any person who may wish to inspect your proposal until the process is concluded
- relevant officers in DTP, other Government agencies or Ministers directly involved in the planning process
- persons accessing information in accordance with the Public Records Act 1973 or the Freedom of Information Act 1982.

If all requested information is not received, DTP may be unable to process your request.

You may access the information you have provided to DTP by contacting [Development approvals](#)

Mortlake Terminal Station Planning Application

1154 Connewarren Lane, Mortlake, 3272

Prepared for AusNet Services

Prepared by Beca Pty Ltd

ABN: 85 004 974 341

3 May 2023



**make
everyday
better.**

Contents

1	Introduction	1
1.1	Overview	1
1.2	Applicant	1
2	Subject Site	2
2.1	Site Description.....	2
3	Proposal	5
4	Site Assessments	6
4.1	Ecology	6
4.2	Aboriginal Cultural Heritage.....	7
5	Planning Assessment	8
5.1	Planning Context	8
5.2	Land Use Definition	8
5.3	Victorian Planning Policy Framework	8
5.4	Municipal Strategic Statement.....	9
5.5	Zoning	10
5.6	Overlays.....	11
5.7	Particular Provisions	12
5.8	Referrals	12
5.9	Other Legislation.....	13
6	Conclusion	15

Appendices

Appendix A – Copy of Title

Appendix B – Development Plans

Appendix C – Ecological Assessment

Appendix D – Letter of Advice – Aboriginal Cultural Heritage

Revision History

Revision N°	Prepared By	Description	Date
1	[REDACTED]	Draft for internal review	28/02/2023
2	[REDACTED]	Draft for client review	18/04/2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	[REDACTED]	[REDACTED]	3/05/2023
Reviewed by	[REDACTED]		3/05/2023
Approved by	[REDACTED]		3/05/2023
on behalf of	Beca Pty Ltd		

1 Introduction

1.1 Overview

As part of the Victorian Renewable Energy Zones Development Plan, the Victorian Government is planning to turn the existing 500kV Tarrone to Moorabool line in at Mortlake Power Station (MOPS). AusNet is planning upgrade works at the terminal station, to facilitate the turn-in project. The upgrade works will involve extension of the Mortlake Terminal Station yard to the north, tower/foundation strengthening works, and an existing drain will be relocated. Temporary site amenities, parking and laydown areas will also be established to facilitate the works.

This report has been prepared by Beca Pty Ltd (Beca) on behalf of AusNet Transmission Services Pty Ltd (AusNet) in support of an application for a planning permit for buildings and works at the Mortlake Terminal Station located at 1154 Connewarren Lane, Mortlake (the Site), with the official address in the Certificate of title listed as Connewarren Lane, Mortlake.

The proposed works will trigger a planning permit under Clause 37.01-4 of the Moyne Planning Scheme (The Planning Scheme). This report describes the proposed development and summarises potential impacts.

1.2 Applicant

AusNet is an Australian energy delivery services business, owning and operating more than \$11 billion of electricity and gas network assets. AusNet own and operate the Victorian electricity transmission network

The following table summarises the application details.

Table 1-1. Application Details.

Item	Application Details
Proposal	Upgrade works at the MOPS to facilitate the turn in project, involving: <ul style="list-style-type: none"> Extension of the MOPS yard to the north Two new transformer bays in the yard extension Structures to support the incoming line Temporary site amenities to facilitate works including parking and laydown areas
Subject Site	1154 Connewarren Lane, Mortlake, 3272 – Lot 1 of Subdivision PS620663 Connewarren Lane, Mortlake, 3272 – Lot 2 of Plan of Subdivision PS620663
Applicant	AusNet Services Pty Ltd
Land Use	Utility Installation as per Clause 73.03 of the MPS
Zoning	Special Use Zone – Schedule 1 (SUZ1)
Overlays	N/A
Other	Designated Bushfire Prone Area
Permit Triggers	37.01-4 – A permit is required to construct a building or construct or carry out works in a SUZ unless specified in a schedule. The Schedule to SUZ1 requires a permit for works that do not comply with the approved Development Plan.
Municipality	Moyne Shire Council

2 Subject Site

2.1 Site Description

The Site is located at Connewarren Lane, Mortlake, in the Shire of Moyne, approximately 230km from Melbourne CBD and 50km north-east of Warrnambool in western Victoria. The official location of the Site includes Lot 1 of Subdivision PS620663 and Lot 2 of Plan of Subdivision PS620663. The combined lots are approximately 99ha in size and the total development area for this project is approximately 4.77ha. An established power station, owned and operated by Origin Energy, is established on Lot 1. AusNet own and operate the terminal station, which is located on Lot 2, to the east of the existing Origin Energy power station.

The areas to the north, south, east, and west of the Site are generally rural in nature, with the Site surrounded entirely by land zoned for farming and agricultural related purposes. The Blue Gums substation is located immediately east of Lot 1. The closest residential property, based on aerial imagery, is located approximately 2.5km east of the Site.



Figure 2-1. Site location (Approximate Project Area in black outline). Source: NearMap

2.1.1 Waterways & Waterbodies

There are two dams (near eastern boundary of Lot 1) and constructed drainage channels throughout the Power Station property, as evident in the aerial photography in Figure 2-1 above and Figure 2-2 below. During the site visit undertaken during the ecological survey, the ecologists also acknowledged the existence of an ephemeral waterway that would require diversion as part of the works.

VicPlan includes a waterline that runs roughly northwest-southeast across the top north-eastern corner of the MOPS which connects to a wetland on the parcel of land immediately east (refer to Figure 2-2 below). It is noted that this mapping does not reflect the current landform of the site and the mapped waterway does not occur within the area of the MOPS or to its north.



Figure 2-2. Waterways & Waterbodies. Source: NatureKit (2023).

2.1.2 Topography

The site is generally flat with little to no incline or elevation.

2.1.3 Existing Infrastructure

There is already an existing terminal station at the site which consists of electrical switchyards, a control building, container storage, a driveway, and an access road.

2.1.4 Access

There is a dedicated site access to the site is south of the terminal station, from Connewarren Lane.

2.1.5 Flora and Fauna

An ecological assessment was undertaken by NGH Pty Ltd (NGH) for the proposed works (Refer to Appendix C). Further details on the flora and fauna on the Site can be found in Section 4 Site Assessments of this report.

2.1.6 Legal Description

The Project Site is the entirety of Lot 2 on Plan of Subdivision 620663R, with some extension works being undertaken within Lot 1 on Plan of Subdivision 620663R. This land is being leased from Origin Energy. A copy of the site plan can be found in Figure 2-3 below, and copy of title particulars can be found at Appendix A.

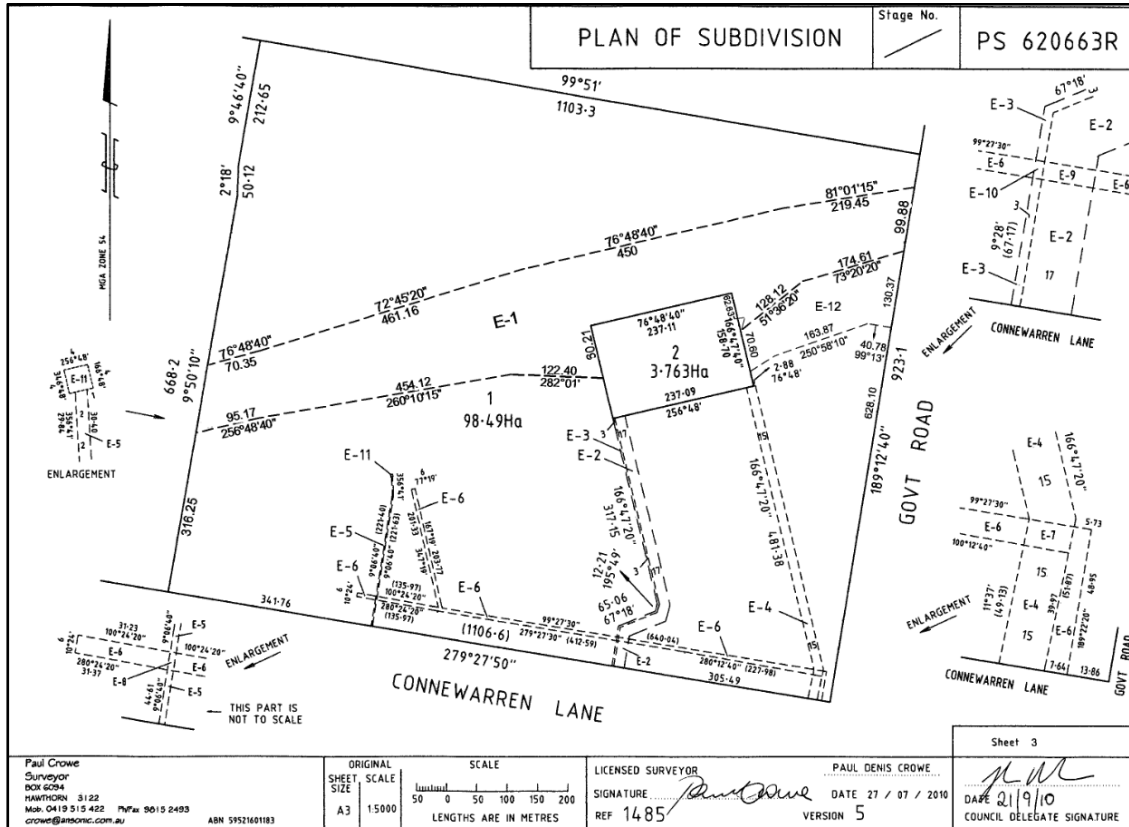


Figure 2-3. Copy of Plan. Source: LandData.

No easements exist within the site boundary of Lot 2 on Plan of Subdivision 620663R. However, as works will extend into Lot 1 on Plan of Subdivision 620663R (owned by Origin Energy), some works will be within the boundaries of E-1 (Transmission of Electricity) benefitting SPI Powernet Pty Ltd (a subsidiary of AusNet) and E-12 (Transmission of Electricity) benefitting AusNet Transmission Group Pty Ltd.

3 Proposal

AusNet is planning upgrade works at MOPS to facilitate the turn-in of its Tarrone to Moorabool transmission line. The upgrade works will involve extension of the MOPS yard to the north in order to accommodate two new transformer bays, as well as new structures to support the incoming line.

The development will include (Figure 3-1):

- Expansion of the terminal station yard to the north to accommodate new equipment and a perimeter road
- Installation of electrical infrastructure, including extension of existing cable trenches
- Overhead line works to facilitate the turn-in
- Strengthening of the existing towers/foundations
- Construction of a new perimeter road
- Extension/modification of storm water drains and the environment drainage system to suit the yard extension
- Replacement of the security fencing and access gate to align with the yard expansion
- Temporary site amenities to facilitate the works including parking, and laydown areas.

Development plans for the proposed works can be found at Appendix B.

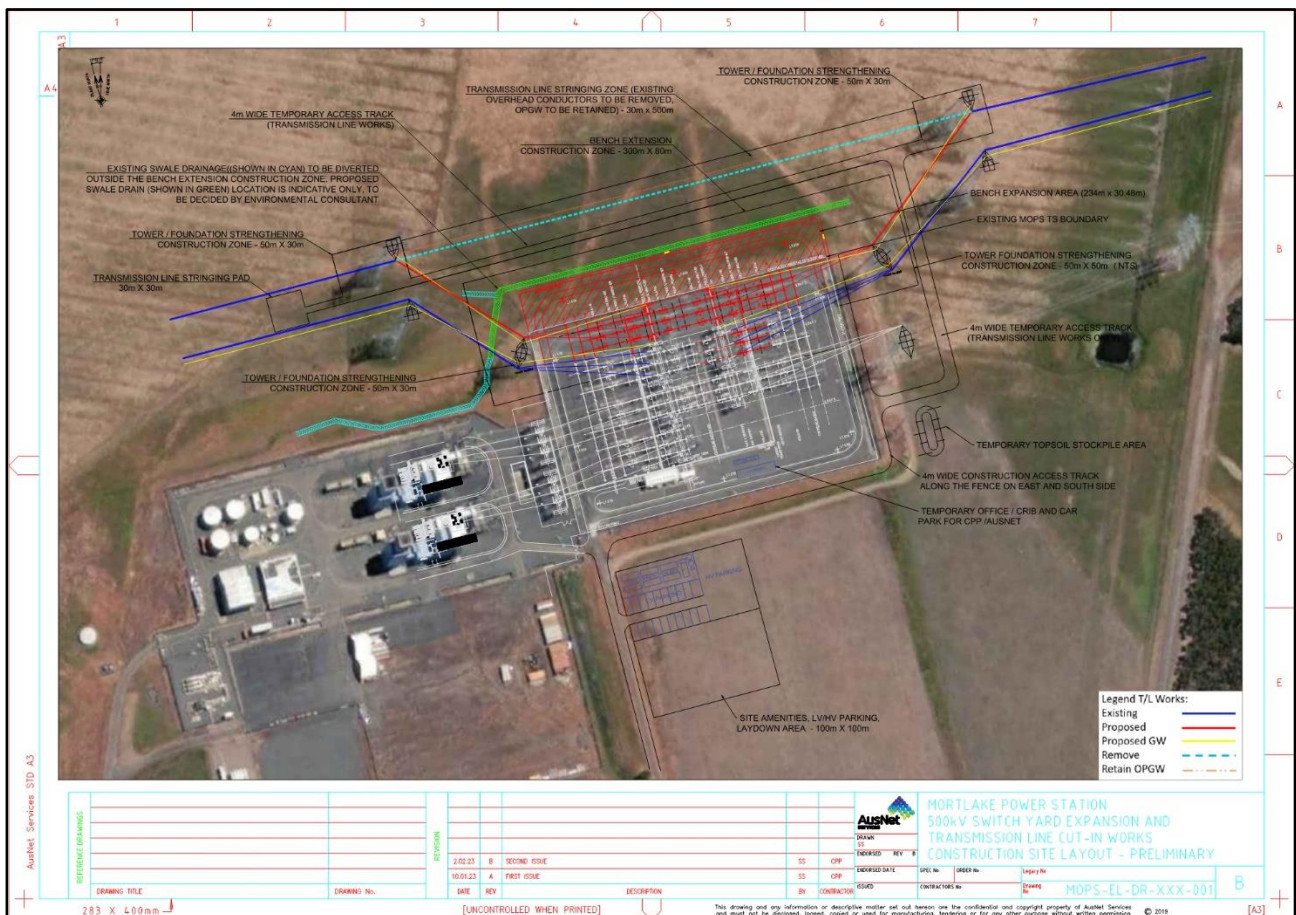


Figure 3-1. Site Plan. Source: AusNet.

4 Site Assessments

4.1 Ecology

NGH Pty Ltd (NGH) completed an ecological assessment in April 2023 (Refer to Appendix C). As part of the ecology report, background searches and a site assessment were undertaken to determine the potential impacts on native vegetation communities, flora, and fauna. The threatened entities assessment included species listed under the Flora and Fauna Guarantee Act 1988 (FFG Act) and Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act).

4.1.1 Flora

The flora survey was completed on foot. The flora survey utilised the Habitat Hectares Assessment methodology. The entire Proposal Area was assessed (as required under Clause 52.17 – Native Vegetation), to determine patches of native vegetation, scattered trees, and any revegetation areas.

The native vegetation in the Proposal Area is reflected in Figure 4-1 below. Native vegetation on Lot 1 PS620663 includes one small, scattered tree, Silver Wattle (*Acacia dealbata*) and a linear drainage line which has been assessed as EVC 125 Plains Grassy Wetland in the southern half of the Site. There are two dams on the eastern boundary that are EVC 125 Plains Grassy Wetland. The southern boundary has remnant native vegetation present within the road reserve. The northern boundary has planted vegetation.

There is no native vegetation removal required for the proposed works therefore no planning permit trigger under Clause 52.17 – Native Vegetation of the Planning and Environment Act, 1987.

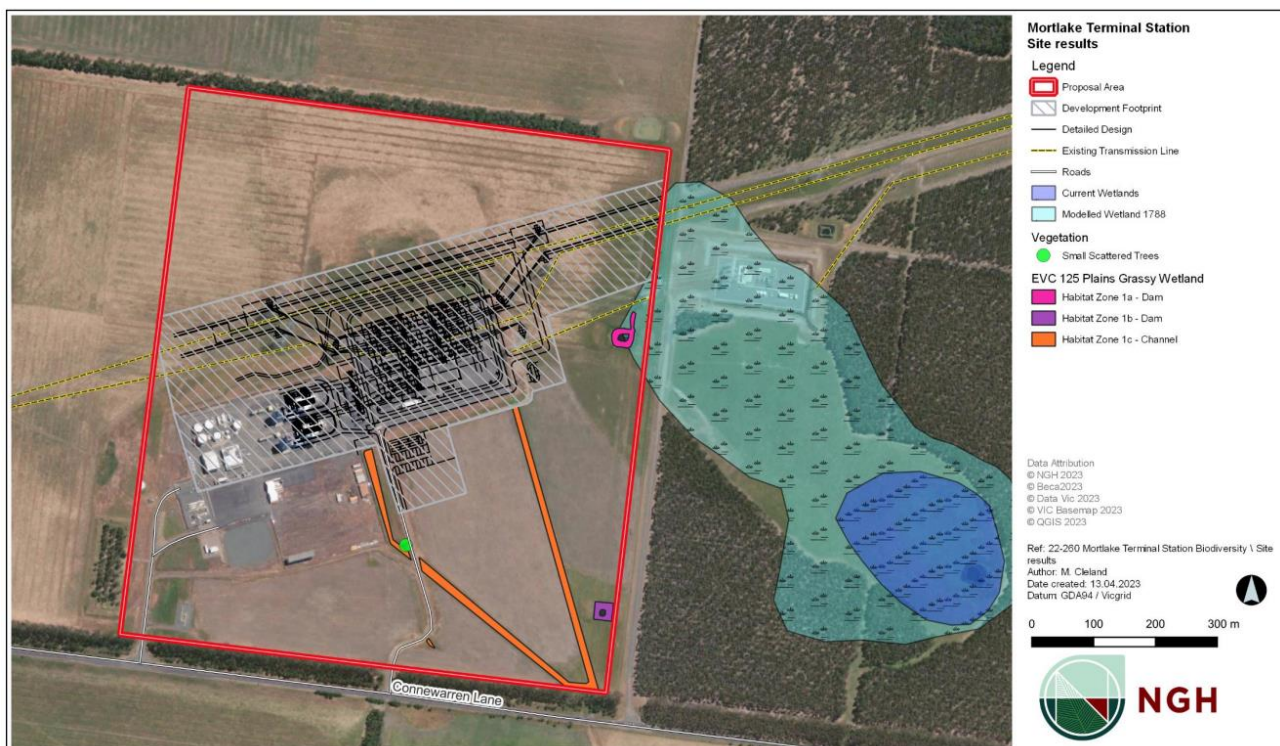


Figure 4-1. Vegetation in the Development Footprint. Source: NGH (April 2023).

4.1.2 Fauna

Targeted surveys were undertaken for the Growling Grass Frog (*Litoria raniformis*) as part of the ecological assessment. No Growling Grass Frogs were recorded during the 2023 site assessment, although a total of six other frog species were recorded across both dams, over the two nights the ecologists were on site.

Previous surveys for Growling Grass Frog were undertaken in 2010 by Ecology and Heritage Partners (EHP) and no individuals were recorded then. No further targeted surveys are recommended.

Incidental fauna observations whilst on site did not identify any FFG or EPBC listed species.

4.1.3 Ecology Conclusions

Overall, from the ecology assessment undertaken the following results were determined:

- The Ecological Vegetation Classes in the Proposal Area includes EVC 125 Plains Grassy Wetland
- No Growling Grass Frogs were recorded during the 2023 site assessment.
- There is no proposed native vegetation removal required for the proposed works therefore no planning permit trigger under Clause 52.17 – Native Vegetation of the Planning and Environment Act, 1987.
- No FFG or EPBC listed vegetation communities occur on site
- No threatened flora or fauna were observed
- No EPBC Referral is required.

4.1.4 Ecologist Recommendations

NGH has made the following recommendations for the proposed works:

- Erect fencing and 'no-go zone' signage to avoid access to drainage areas and the dams to the east of the development footprint
- Inform all staff and contractors on site of the EVC mapped areas, as areas to avoid.
- Establish an unexpected finds protocol for fauna management (particularly for large wildlife such as emus and kangaroos), including requirements that:
 - Details of a suitably qualified and local wildlife handler, ecologist or representative from Wildlife Victoria are available on site in the event that the project needs to carry out any relocation of wildlife.
 - Any injured or harmed wildlife are only managed by a suitably qualified wildlife handler, ecologist or a representative from Wildlife Victoria and to relocate the individual to an appropriate care facility.
 - Fencing is established around construction areas to exclude wildlife from works areas and minimise unnecessary harm or injury to wildlife.
- Prior to construction, implement appropriate sediment control measures to prevent sediment laden water from entering drainage lines and dams. This might include sediment fencing using geotextile fabric which should remain in-situ until vegetation has re-established post construction.
- Ensure no handling of amphibians, to prevent infection of frogs from chytrid fungus. The dam areas will be avoided, therefore a chytrid fungus protocol is not required, however if any dam disturbance is required, a protocol would need to be developed and all amphibian handling completed by a suitably qualified ecologist.

4.2 Aboriginal Cultural Heritage

JEM Archaeology were engaged to undertake a review of implications under the *Aboriginal Cultural Heritage Act 2006* and *Aboriginal Heritage Regulations 2018*. As per the letter of advice attached at Appendix D, the review found that while the proposed activity is considered a high impact activity under the Aboriginal Heritage Regulations 2018, the activity area is not situated within an area of cultural heritage sensitivity and therefore, there is no requirement under the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018 for a CHMP to be prepared for this project.

5 Planning Assessment

5.1 Planning Context

The Site is located within the municipal boundaries of Moyne Shire Council. The Moyne Planning Scheme (the Planning Scheme) is the principal planning framework guiding use and development of the Site.

5.2 Land Use Definition

The proposed works is defined as a **Utility Installation** under the land use definitions outlined in Clause 73.03 of the Planning Scheme:

‘To transmit, distribute or store power’.

5.3 Victorian Planning Policy Framework

The Victorian Planning Policy Framework (VPPF) contains overarching state level policies that apply across Victoria dealing with settlement, environment, housing, economic development, infrastructure, and particular uses for development. The following clauses in Table 5-1 are identified as applicable to this proposal and a brief response of each clause is provided in the right-hand column. The proposal is considered to comply with the relevant objectives of the VPPF.

Table 5-1. VPPF Assessment.

Clause	Objective	Response
12.01 Biodiversity	<i>To protect and enhance Victoria’s biodiversity.</i>	The ecological assessment by NGH (Appendix C) found no native vegetation within the development footprint. Recommendations made by NGH with respect to protecting biodiversity will be adopted by the project.
12.03 Water bodies and wetlands	<i>To protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands, and billabongs.</i>	The study area occurs within the Glenelg Hopkins CMA. The Hopkins River is the closest major waterway. It is located to the southwest of the proposal area and will not be impacted by the proposed works. The southern half of the site features a linear drainage line and there are two dams on the eastern boundary of Lot 1. A wetland is located on the property to the east of Lot 1. Sediment control measures will be employed to avoid run off of silt-laden water to any drainage lines and therefore there is no expected that the works will impact to the waterways or waterbodies in and around the site.
13.01 Climate Change Impacts	<i>To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.</i>	The upgrade, in part, is to respond to more renewable energy sources being added to the electricity network and

Clause	Objective	Response
		therefore is supportive of the overall response to climate change.
13.02-1S Bushfire Planning	<i>To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.</i>	The proposed development is located within a bushfire prone area. However, there will be no works within a Bushfire Management Overlay. Fire risk management measures will be incorporated to the design and construction of the upgrade works, minimising the risk of bushfire. Additionally, there are no settlements or dwellings located within or near the terminal station, therefore minimising risk to human life.
13.03 Floodplains	<i>To assist the protection of:</i> <ul style="list-style-type: none"> <i>Life, property and community infrastructure from flood hazard, including coastal inundation, riverine and overland flows.</i> <i>The natural flood carrying capacity of rivers, streams and floodways.</i> <i>The flood storage function of floodplains and waterways.</i> <i>Floodplain areas of environmental significance or of importance to river, wetland or coastal health.</i> 	The works are not within the 1-100-year flood extents and therefore not anticipated to impact on flood hazard.
19.01 Energy	<i>To facilitate appropriate development of energy supply infrastructure.</i>	The proposal seeks to upgrade the existing MOPS for the purpose of securing the Victorian transmission network and is therefore consistent with the objectives of this clause.

5.4 Municipal Strategic Statement

The Municipal Strategic Statement (MSS) sets out the overarching vision, strategic planning, land use and development objectives for Moyne Shire Council. Table 5-2 outlines clauses from the MSS which are applicable to this proposal. A response to each clause is provided in the right-hand column. The proposal is considered to comply with the relevant objectives of the MSS.

Table 5-2. MSS Assessment.

Clause	Objective	Response
21.04 Municipal Vision	<ul style="list-style-type: none"> To support and protect the agricultural base of the Shire, recognising the potential of improving primary production, adding value to primary products, and diversifying into other industries, in an effort to start new business, employment and increase economic wealth. 	The proposed development at the MOPS contributes towards the Victorian State Governments renewable energy goals and will contribute to the reliable supply of electricity to the Shire of Moyne and beyond. The proposed development at MOPS will protect the natural environment

Clause	Objective	Response
	<ul style="list-style-type: none"> To strive to have the cleanest environment in Victoria and to protect the natural environment. To have a balance between development and the protection of the natural environment. 	through following the mitigation measures provided in the ecological assessment prior to construction to avoid impacts to biodiversity. The land used for the upgrade is already used for the purpose of a Utility Installation and will not limit agricultural land in the Shire and will have a balance between development and protection of the natural environment.
21.06 Environment	<ul style="list-style-type: none"> To develop and implement sensible fire management solutions that reduce risks to the community and recognise the balance between fire safety and healthy natural environments. To apply principles of ecologically sustainable development within the Municipality wherever feasible. 	The design and construction of upgrades will incorporate fire risk management measures to minimise any potential threat of bushfire.
21.07 Economic Development	<ul style="list-style-type: none"> To support and facilitate the development of local employment opportunities. 	The proposed upgrade will result in a number of community benefits, including the capacity to provide energy to households, and create jobs on site during the construction phase.

5.5 Zoning

The site is zoned as a Special Use Zone (Schedule 1) (SUZ1) under the Planning Scheme (refer to 5).

Pursuant to Clause 37.0-4, A permit is required to construct a building or construct or carry out works unless the schedule to this zone specifies otherwise.

Under SUZ1 in the Planning Scheme, a Utility Installation is a Section 1 use, provided it meets the requirements of Sections 2.0 and 4.0 of the Schedule:

- Section 2.0 states a permit is not required to use land as a gas-fired power station, which for the purpose of the schedule includes “connection and export of the electricity into the high voltage transmission system”. While Section 2 requires the use must be consistent with the Development Plan for the site, it states that “This does not apply to the use land for a Utility Installation to transmit, distribute or store power”. Therefore, a permit is not required for Use. In addition, the proposal is an extension of the existing use, rather than establishment of a new use and therefore existing use rights apply.
- Section 4.0 states that “No permit is required to construct a building or construct or carry out works for the following:
 - Buildings and works that are in accordance with a Development Plan approved by the responsible authority.
 - Buildings and works that rearrange, alter, or renew existing plant if the area or height of the plant is not increased.
 - Buildings and works that are amenities provided for persons constructing and commissioning any plant on the land

It is assumed that the works will not be in accordance with the approved Development Plan and that they will increase the area of the plant. Therefore, a permit is required for buildings and works.

Therefore, this permit application has been prepared as per the requirements of Clause 37.01 SUZ. As Schedule 6 does not have any decision guidelines, the guidelines that apply are restricted to those outlined in 37.01:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.

Compliance with the Municipal Planning Strategy and the Planning Policy Framework are provided in section 5.4 above.

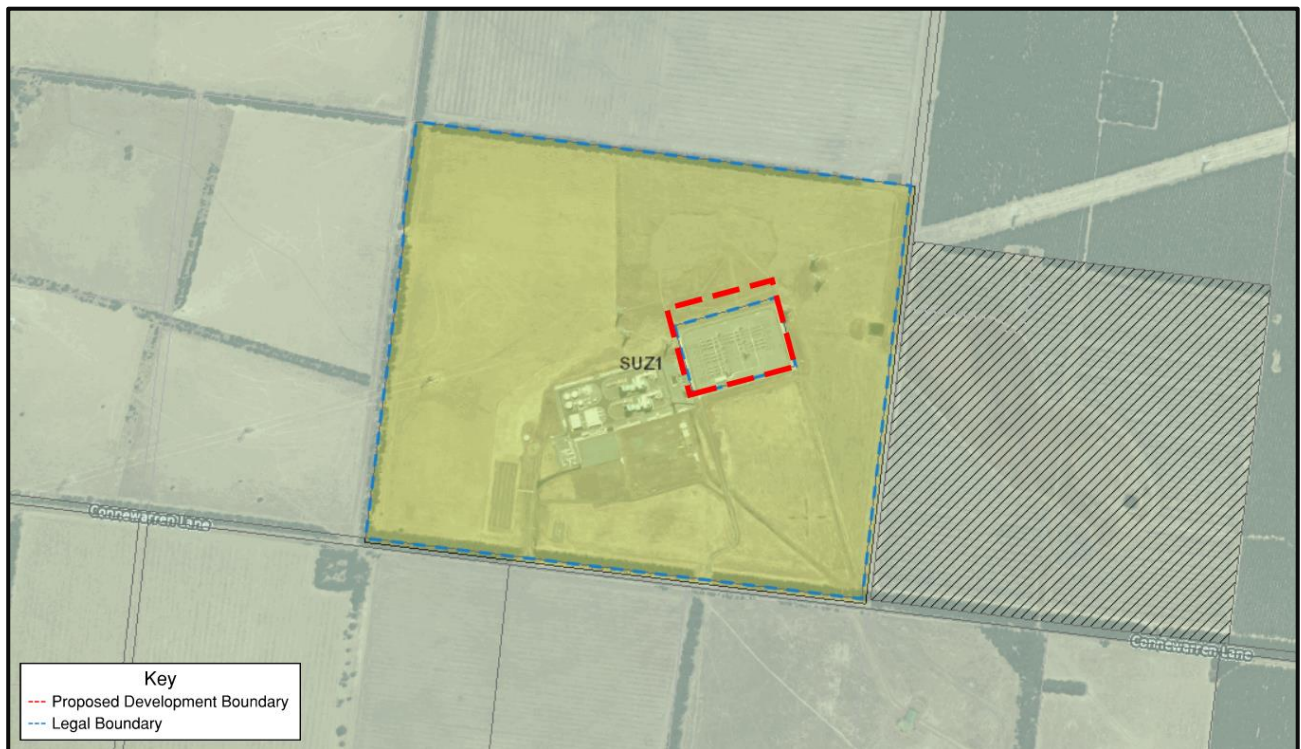


Figure 5-1. Zoning (Site in red outline). Source: VicPlan.

5.6 Overlays

No overlays apply directly to the site. However, it is acknowledged that the site is located nearby a Bushfire Management Overlay (BMO) and an Environmental Significance Overlay - Schedule 3 (ESO3) (Refer to Figure 5-2).



Figure 5-2. Overlays near the proposed development (in red dotted outline). Source VicPlan

5.7 Particular Provisions

5.7.1 Clause 52.17 Native Vegetation

An assessment was undertaken by NGH ecologists in February 2023 and determined no planning permit is required under Clause 52.17 – Native Vegetation as all native vegetation has been avoided in the development footprint.

5.8 Referrals

5.8.1 Designated Waterways Works

Referral to Glenelg Hopkins CMA is expected be required as the proposed works are within the vicinity of a mapped Designated Waterway. It is noted that the current mapping of designated waterways within the site does not reflect the current landform and the works are not anticipated to impact any current Designated Waterway. The drainage in the vicinity of the works area will be reconfigured to allow adequate drainage.

5.8.2 Clause 66.02 Use and Development Referrals

The below section outlines the anticipated use and development referrals required for this application.

66.02-2 Native Vegetation

There is no proposed native vegetation removal required for the proposed works therefore no use and development referral is required.

66.02-4 Major electricity line or easement

Any application to construct a building or construct or carry out works on land within 60 meters of a major electricity transmission line or an electricity transmission easement is required to be referred to the relevant electricity transmission authority as a determining referral authority. The proposed development is within 60m of an existing electricity line or easement and therefore a referral will be required to AusNet Services.

66.02-7 Industry, utility installation or warehouse

No referral to the determining authorities is required under this Clause because:

- The use of the land for a terminal station is not listed in the table at Clause 53.10
- The fire protection quantity will not be exceeded
- The area of buildings and works will not increase by more than 25 percent and none of the following apply to the MOPS:
 - No notification is required under the Occupational Health and Safety Regulations 2017.
 - No licence is required under the Dangerous Goods (Explosives) Regulations 2011.
 - No licence is required under the Dangerous Goods (HCDG) Regulations 2016 and the use is not associated with agriculture.

5.9 Other Legislation

Legislation	Relevance	Implications
Aboriginal Heritage Act 2006 / Aboriginal Heritage Regulations 2018	The <i>Aboriginal Heritage Act 2006</i> is the primary legislation providing for the protection of Aboriginal cultural heritage and Aboriginal intangible heritage in Victoria. The purpose of the <i>Aboriginal Heritage Regulations 2018</i> is to prescribe the circumstances in which a cultural heritage management plan is required for an activity.	The site is not in an area of known Aboriginal Cultural Heritage Sensitivity and the site has been subject to significant disturbance; therefore, no approval is expected to be required under the <i>Aboriginal Heritage Act/Regulations</i> .
Heritage Act 2017	The purpose of the <i>Heritage Act 2017</i> is to provide for the protection and conservation of the cultural heritage of Victoria. The <i>Heritage Act 2017</i> creates a framework to identify the most important non-aboriginal heritage in Victoria.	The site does not contain any items listed on the Victorian Heritage Register; therefore, no approval has been sort under <i>Heritage Act 2017</i> .
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The EPBC Act is the Australian Government's key piece of environmental legislation providing for the protection of the environment, especially matters of national environmental significance and conservation of heritage. Any actions that will or are likely to have 'significant impacts' on matters of national environmental significance require referral and approval from the Australian Government Environment Minister.	No Matters of National Significance listed under the EPBC Act occur within the Site or are considered likely to be impacted by the proposal. Therefore, referral and approval from the Australian Government Environment Minister is not required for this proposal.
Flora and Fauna Guarantee Act 1988 (FFG Act)	The FFG Act seeks to promote the conservation of Victoria's native flora and fauna. Pursuant to section 4B of the Act, a proponent is required to give proper consideration to the objectives of the Act, insofar is consistent with the proper exercise of its functions. In addition to the public authority duty, a permit is required to 'take' (including remove or destroy) any FFG Act listed protected flora from public land.	No threatened communities or species listed under the FFG Act occur on site.
Environment Protection Act 2017 (EP Act)	The EP Act ensures that Victoria's focus for environment protection and human health are from a prevention-based approach. The EP Act focuses on the general environmental duty which requires all Victorians to take reasonable and practical	A development license, operating license, permit, or registration is not required under the EP Act. AusNet has an obligation to discharge its General

Legislation	Relevance	Implications
	steps to reduce the human and environmental health risks of their activities.	Environmental Duty to minimise the risk of harm to human health and the environment as a result of pollution and waste relating to this proposal. AusNet has measures in place to discharge its Environmental Duty.
Works in waterways permit under the Water Act 1989	Works and activities in, under, on, or over the bed and banks of Designated Waterways Victoria require a Works on Waterways Permit from the relevant Catchment Management Authority. The permit is designed to protect rivers and creeks, and to ensure that new activities or works undertaken do not adversely affect the health of those waterways.	As the proposed development will include development within a Designated Waterway, a Works on Waterways approval will be sought from Glenelg Hopkins Catchment Management Authority, prior to construction. This approval will be sought following issue of the planning permit.

6 Conclusion

As part of the Victorian Renewable Energy Zones Development Plan, the Victorian government is planning to turn the existing 500kV Tarrone to Moorabool line in at Mortlake Power Station (MOPS). AusNet is planning upgrade works at the terminal station, to facilitate the turn-in project.

AusNet is planning upgrade works at the terminal station, to facilitate the turn-in project. The upgrade works will involve extension of the Mortlake Terminal Station yard to the north in order to accommodate two new transformer bays, as well as new structures to support the incoming line.

Environmental assessments were undertaken to inform design and assess potential environmental impacts of the project. The ecological assessment found that no native vegetation will be removed as part of the project and the project is not expected to impact any threatened ecological communities or species. The cultural heritage advice found that a CHMP is not required. The recommendations and mitigation measures of these assessments have been adopted by the project in order to reduce potential environmental impacts.

This application has found the proposal is in keeping with the intentions of the Shire's VPPF and MSS, and that the project contributes to the implementation of the strategic directives of the Moyne Planning Scheme. The project is consistent with the objectives of the applicable zoning and associated schedule.

In summary, the upgrade works are considered appropriate for the subject Site and is consistent with the statutory planning framework as well as the energy goals of the Victorian Government. Therefore, it is submitted that it is appropriate that Council grant planning approval for the proposed works.



Appendix A – Copy of Title

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 11230 FOLIO 337

Security no : 124105791151W
Produced 03/05/2023 09:05 AM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 620663R.
PARENT TITLE Volume 11083 Folio 496
Created by instrument PS620663R 11/10/2010

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
ORIGIN ENERGY POWER LTD of "LEVEL 45, AUSTRALIA SQUARE," 268-274 GEORGE
STREET SYDNEY NSW 2000
PS620663R 11/10/2010

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS620663R FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 1154 CONNEWARREN LANE MORTLAKE VIC 3272

DOCUMENT END

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 11230 FOLIO 338

Security no : 124103635651G
Produced 02/02/2023 01:13 PM

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 620663R.
PARENT TITLE Volume 11083 Folio 496
Created by instrument PS620663R 11/10/2010

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
AUSNET TRANSMISSION GROUP PTY LTD of 2 SOUTHBANK BOULEVARD SOUTHBANK VIC
3006
AN020808C 16/08/2016

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS620663R FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: CONNEWARREN LANE MORTLAKE VIC 3272

DOCUMENT END

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Secure Electronic Registries Victoria.

Document Type	Plan
Document Identification	PS620663R
Number of Pages (excluding this cover sheet)	4
Document Assembled	02/02/2023 13:14

Copyright and disclaimer notice:

© State of Victoria. This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act 1968 (Cth) and for the purposes of Section 32 of the Sale of Land Act 1962 or pursuant to a written agreement. The information is only valid at the time and in the form obtained from the LANDATA® System. None of the State of Victoria, LANDATA®, Secure Electronic Registries Victoria Pty Ltd (ABN 86 627 986 396) as trustee for the Secure Electronic Registries Victoria Trust (ABN 83 206 746 897) accept responsibility for any subsequent release, publication or reproduction of the information.

The document is invalid if this cover sheet is removed or altered.

PLAN OF SUBDIVISION

Stage No.

LTO use only

EDITION 4

PS620663R

Location of Land

PARISH CONNEWARREN

SECTION 11

CROWN ALLOTMENTS 3 AND PARTS OF 2 AND 4

Title Reference: Vol 11083 Fol 496

Last Plan References: PS543659K (Lot 1)

Postal Address: 1154 CONNEWARREN LANE
MORTLAKE 3272MGA Co-ordinates: E 646 370
(Of approx centre of plan) N 5 786 000 Zone 54

Vesting of Roads or Reserves

Identifier	Council/Body/Person
Nil	Nil

Council Certification and Endorsement

Council Name: MOYNE SHIRE COUNCIL

Ref: 80610/0030

1. This plan is certified under section 6 of the Subdivision Act 1988.

~~2. This plan is certified under section 11 (7) of the Subdivision Act 1988.~~~~Date of original certification under section 6~~

3. This is a statement of compliance issued under section 21 of the Subdivision Act 1988.

Open Space

(i) A requirement for public open space under section 18 Subdivision Act 1988 ~~has~~ has not been made.

(ii) The requirement has been satisfied.

(iii) The requirement is to be satisfied in Stage

Council Delegate
Council seal

Date 21/9/10

Notations

Depth Limitation: 15-24 metres below the surface

Staging

This is not a staged subdivision
Planning Permit No. PL10/118

Survey:- This plan is based on survey.

This survey has been connected to permanent marks no. 18 (CONNEWARREN)
In Proclaimed Survey Area No. —

Easement Information

Legend: E - Encumbering Easement or Condition in Crown Grant in Nature of an Easement
A - Appurtenant Easement R - Encumbering Easement (Road)

LR use only

Statement of Compliance
/ Exemption Statement

Received



Date 5/10/2010

Subject Land	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	TRANSMISSION OF ELECTRICITY	SEE DIAG.	AK259703K	SPI POWERNET PTY LTD
E-2, E-9	CARRIAGEWAY AND DRAINAGE	17	THIS PLAN	LOT 2 THIS PLAN
E-3, E-10	CARRIAGEWAY, DRAINAGE, GAS, TELECOMMUNICATIONS	3	THIS PLAN	LOT 2 THIS PLAN
E-3, E-10	POWERLINE	3	THIS PLAN- SEC 88 OF THE ELECTRICITY INDUSTRY ACT 2000	POWERCOR AUSTRALIA LTD
E-3	WATER SUPPLY	3	THIS PLAN	WANNON REGION WATER CORPORATION
E-4, E-7	DRAINAGE	15	THIS PLAN	LOT 2 THIS PLAN
E-5, E-8	POWERLINE	2	THIS PLAN- SEC 88 OF THE ELECTRICITY INDUSTRY ACT 2000	POWERCOR AUSTRALIA LTD
E-6, E-7, E-8, E-9, E-10	WATER SUPPLY	SEE DIAG	THIS PLAN	WANNON REGION WATER CORPORATION
E-11	POWERLINE	SEE DIAG	THIS PLAN- SEC 88 OF THE ELECTRICITY INDUSTRY ACT 2000	POWERCOR AUSTRALIA LTD

LR use only

PLAN REGISTERED

TIME 10:35 am

DATE 11/10/2010

R. W. Grimwood

Assistant Registrar of Titles

Sheet 1 of 3 sheets

Paul Crowe
Surveyor
BOX 6094
HAWTHORN 3122
Mob. 0419 515 422 P/Fax 9815 2493
crowe@arsonic.com.au

ABN 59521601183

LICENSED SURVEYOR

PAUL DENIS CROWE

SIGNATURE

REF 1485

DATE 27 / 07 / 2010

VERSION 5

DATE

COUNCIL DELEGATE SIGNATURE

Original sheet size

A3

B

Appendix B – Development Plans

C

Appendix C – Ecological Assessment



NGH



ECOLOGICAL ASSESSMENT

Mortlake Terminal Station

May 2023

Project Number: 22-260



Document Verification

Project Title:	Mortlake Terminal Station
Project Number:	22-260
Project File Name:	Mortlake Ecology Assessment Final V.1.0

Revision	Date	Prepared by	Reviewed by	Approved by
Draft V1.0	14/04/2023	Michael Cleland	D. Bambrick	Michelle Patrick
Final V1.0	2/05/2023	Michael Cleland	Beth Noel	Michelle Patrick

NGH Pty Ltd prints all documents on environmentally sustainable paper including paper made from bagasse (a by-product of sugar production) or recycled paper.



BEGA - ACT & SOUTH EAST NSW
Suite 11, 89-91 Auckland Street
(PO Box 470) Bega NSW 2550
T. (02) 6492 8333

BRISBANE
T3, Level 7, 348 Edward Street
Brisbane QLD 4000
T. (07) 3129 7633

CANBERRA - NSW SE & ACT
Unit 8, 27 Yallourn Street
(PO Box 62) Fyshwick ACT 2609
T. (02) 6280 5053

GOLD COAST
2B 34 Tallebudgera Creek Road
Burleigh Heads QLD 4220
(PO Box 424 West Burleigh QLD 4219)
T. (07) 3129 7633

MELBOURNE
Level 14, 10-16 Queen Street
Melbourne VIC 3000

NEWCASTLE: HUNTER & NORTH COAST
Level 1, 31-33 Beaumont Street
Hamilton NSW 2303
T. (02) 4929 2301

SUNSHINE COAST
Suite 101, Level 2/30 Main Drive
Birtinya QLD 4575
T. 13 54 93

SYDNEY REGION
Unit 17, 21 Mary Street
Surry Hills NSW 2010
T. (02) 8202 8333

TOWNSVILLE
Level 4, 67-75 Denham Street
Townsville QLD 4810
T. (07) 4410 9000

WAGGA WAGGA: RIVERINA & WESTERN NSW
35 Kincaid Street (PO Box 5464)
Wagga Wagga NSW 2650
T. (02) 6971 9696

WODONGA
Unit 2, 83 Hume Street
(PO Box 506) Wodonga VIC 3690
T. (02) 6067 2533

Table of Contents

Acronyms and Abbreviations	iv
Executive summary	vi
1. Introduction.....	1
1.1. Study Area.....	1
1.2. Development Proposal.....	2
1.3. Bioregion	2
1.3.1. Waterways and wetlands	2
2. Legislative requirements.....	6
2.1. <i>Planning and Environment Act, 1987 (P&E Act)</i>	6
2.1.1. Special Use Zone (SUZ)	7
2.1.2. Bushfire Management Overlay (BMO).....	7
2.1.3. Designated Bushfire Prone Area (BPA).....	7
2.2. Flora and Fauna Guarantee Act 1988 (FFG Act)	8
2.3. Wildlife Act 1975	8
2.4. Catchment and Land Protection Act 1994 (CaLP Act).....	8
3. Purpose of this assessment	10
3.1. Native vegetation assessment pathway	10
4. Methods.....	12
4.1. Threatened species database searches.....	12
4.1.1. Victorian threatened species and communities.....	12
4.1.2. Matters of National Environmental Significance (MNES)	12
4.1.3. Likelihood of occurrence	12
4.2. Site assessment	12
4.3. Flora	13
4.4. Native vegetation assessment	13
4.4.1. Native vegetation	13
4.4.2. Scattered and large trees within habitat zone.....	13
4.4.3. Ecological Vegetation Classes (EVC).....	14
4.4.4. EVC Conservation Status.....	14
4.4.5. Vegetation Quality Assessment (Habitat hectares) methodology	15
4.5. Fauna	15
4.5.1. Growling Grass Frog (<i>Litoria raniformis</i>).....	16

4.6. Mapping.....	17
5. Results.....	18
5.1. Ecological Vegetation Classes (EVCs).....	18
5.2. Scattered trees	19
5.3. Planted vegetation	19
5.4. Threatened Communities.....	21
5.5. Flora	21
5.5.1. Threatened flora records	21
5.6. Fauna	21
5.6.1. Fauna habitat features	22
5.6.2. Threatened fauna records	22
5.6.3. Growling Grass Frog Surveys	22
5.6.4. Recommended targeted surveys.....	23
5.7. Declared weeds and pest animals	24
5.7.1. Noxious weeds identified on site	24
5.7.2. Declared pest animals.....	24
5.8. Matters of National Environmental Significance	24
5.8.1. Threatened communities.....	24
5.8.2. RAMSAR wetlands.....	25
5.8.3. Threatened flora.....	25
5.8.4. Threatened fauna.....	25
6. Mitigation measures	26
7. Conclusions	27
8. References	28
Appendix A Flora Species List.....	A-I
Appendix B Threatened Species	B-I
Appendix C MNES PMST search results	C-I
Appendix D Guidelines for managing the endangered Growling Grass Frog in Urbanising landscapes – Aquatic vegetation cover	D-I
Appendix E Habitat monitoring for Growling Grass Frog.....	E-I

Figures

Figure 1-1. Location Map	4
Figure 1-2. Proposal Area Map	5

Figure 3-1. Native vegetation risk assessment pathway.....	11
Figure 5-1 EVC 125 Plains Grassy Wetland in the channels within the Proposal Area.....	18
Figure 5-2 Small scattered tree within the development footprint Silver wattle (<i>Acacia dealbata</i>)..	19
Figure 5-3. Vegetation in the Development Footprint	20
Figure 5-4 Aquatic and terrestrial vegetation on both dams.	23

Table

Table 2-1. Legislation requirements for the assessment of the proposal	6
Table 4-1 Likelihood of threatened species being observed on site	12
Table 4-2 Criteria for the conservation status for Ecological Vegetation Classes (Source: (DELWP, 2021))	14
Table 4-3 Survey effort for Growling Grass Frog (<i>Litoria raniformis</i>).....	17
Table 5-1. Fauna records during site visit.....	21
Table 5-2 MNES search results for Threatened Communities.....	24

Acronyms and Abbreviations

Item	Definition
AWS	Automatic weather station
BOM	Australian Bureau of Meteorology
CaLP Act	<i>Catchment and Land Protection Act 1994</i>
CE	Critically endangered
CMA	Catchment Management Authority
Cwth	Commonwealth
DAWE	Department of Agriculture, Water, and the Environment (Cwth)
DBH	Diameter at breast height
DCCEEW	Department of Climate Change, Energy, the Environment and Water (formerly DAWE)
DEECA	Department of Environment, Energy and Climate Action
DELWP	Department of Environment, Land, Water and Planning
DEPI	Department of Environment and Primary Industries
DSE	Department of Sustainability and Environment
DTP	Department of Transport and Planning (Vic)
E	Endangered
EEC	Endangered ecological community
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwth)
EVC	Ecological vegetation class
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i> (Vic)
ha	hectares
km	kilometres
LGA	Local government area
m	metres
MNES	Matters of national environmental significance

Item	Definition
P&E Act	<i>Planning and Environment Act 1987</i>
PMST	Protected matters search tool
REP	Regional Environmental Plan (Vic)
Sp/spp	Species/multiple species
TEC	Threatened ecological community
The guidelines	Guidelines for the removal, destruction or lopping of native vegetation
VBA	Victorian biodiversity atlas
VIC	Victoria
V	Vulnerable

Executive summary

NGH Pty Ltd has been engaged by Beca Pty Ltd to undertake an ecological assessment at 1154 Connewarren Lane, Mortlake, Victoria (see Figure 1-1), to assess the potential impacts to native vegetation and threatened entities if present on site and subsequent offset requirements.

AusNet proposes to upgrade infrastructure at the Mortlake Terminal Station to facilitate the turn-in of the existing 500kV Tarrone to Moorabool line (see Figure 1-2) and associated line works. The line upgrade will involve extension of the Mortlake Terminal Station yard to the north to accommodate new electrical infrastructure, strengthening of the existing towers/foundations, and diversion of existing drainage. Temporary site amenities, parking and laydown areas will also be established to facilitate the works. Mortlake substation encompasses two parcels (Lot 1 PS620663 and Lot 2 PS620663) encompassing the existing substation, surrounding paddocks, channel drainage lines and two farm dams.

The native vegetation on site (Lot 1 PS620663) includes one small, scattered tree, Silver Wattle (*Acacia dealbata*) and a linear drainage line which has been assessed as EVC 125 Plains Grassy Wetland in the southern half of the Proposal Area. There are two dams on the eastern boundary that are EVC 125 Plains Grassy Wetland. The southern boundary has remnant native vegetation present within the road reserve. The northern boundary has planted vegetation.

The development site is in the Moyne Shire Council. The Proposal Area is zoned SUZ1 – Special Use for Mortlake Power Station.

A site assessment was undertaken by two NGH ecologists on 21st - 23rd February 2023 and determined no planning permit is required under Clause 52.17 – Native Vegetation of the *Planning and Environment Act, 1987* (P & E Act) as all native vegetation has been avoided in the development footprint. It is anticipated no offsets are required.

As part of this ecology report, background searches and a site assessment were undertaken to determine the potential impacts on threatened vegetation communities, flora, and fauna. The threatened entities assessment included species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) and *Commonwealth Environment Protection and Biodiversity Conservation Act, 1999* (EPBC).

The FFG and EPBC matters regarding other threatened entities are as follows:

- All FFG and EPBC Act listed flora and fauna have a low likelihood of occurring on site.
- No EPBC Act or FFG Act listed vegetation communities are present on site.
- EVC 125 Plains Grassy Wetland has a Biogeographical Conservation Status of Endangered, however this EVC will not be impacted by the proposal.
- No threatened flora were recorded on site.
- No threatened fauna was recorded on site. Targeted surveys for the Growling Grass Frog (*Litoria raniformis*) were conducted by NGH in 2023 as part of the ecology assessment. No Growling Grass Frogs were recorded.

Mitigation measures and recommendations are included in Section 6.

1. INTRODUCTION

NGH Pty Ltd has been engaged by Beca Pty Ltd to undertake an ecological assessment for the proposed terminal station upgrades at 1154 Connewarren Lane, Mortlake, Victoria. This ecological assessment would support a planning report for the proposed development.

This ecological assessment aims to address the following information:

- A background assessment of threatened entities listed under *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* and *Flora and Fauna Guarantee 1998 (FFG Act)* to determine the likelihood of occurrence on site.
- A site assessment of native vegetation (including wetlands) in the Proposal Area as required under Clause 52.17 of the *Planning and Environment Act 1987 (P&A Act)* to determine:
 - Areas of native and non-native vegetation
 - Define any Ecological Vegetation Classes
 - Complete habitat hectare assessments
 - Record any scattered trees.
 - Record any threatened ecological communities, flora or fauna observed on site or determine if the presence of suitable habitat.
- Outline targeted surveying efforts and results for Growling Grass Frog (*Litoria raniformis*)
- Determination of any offset requirements and associated offset strategy.

Report definitions

For the purpose of this report, the following terms will be used:

Development Footprint is defined as the maximum potential impact area of the proposed works covering 22.5 hectares.

Proposal Area is the land encompasses all of Lot 1 PS620663 and Lot 2 PS620663 and all areas surveyed for the ecological assessment covering 69.8 hectares.

Study area encompasses a 10km radius of the Proposal Area.

1.1. Study Area

The Proposal Area is located approximately 12.5km west of Mortlake, Victoria. The Proposal Area encompasses Lot 1 PS620663 and Lot 2 PS620663, and is in the Moyne Shire Council Area, within Glenelg Hopkins Catchment Management Area (CMA). The Proposal Area is zoned SUZ – Special Use. All areas on the boundaries of the Proposal Area are zoned FZ – Farming Zone (DTP, 2023).

The area studied for the proposed works; the 'Proposal Area' is located at the Mortlake Substation adjacent to Connewarren Lane. The substation is situated in a rural landscape utilised for livestock and cropping, with hardwood forestry plantations east and south-east of the Proposal Area. An assessment of aerial imagery details the presence of native vegetation along Connewarren Lane and along the western and northern boundary of the Proposal Area.

Mortlake Commons Flora Reserve exists between the Proposal Area and Mortlake. Mortlake N16 and N17 Lake Reserves are located Southeast of the Proposal Area, with Cobra Killuc Wildlife Reserve to the north-west.

Figure 1-1 shows the Study Area and location map.

1.2. Development Proposal

AusNet is planning upgrade works at the Mortlake terminal station to facilitate the turn-in of the existing 500kV Tarrone to Moorabool line. As well as line works, the upgrade will involve extension of the Mortlake Terminal Station yard to the north to accommodate new electrical infrastructure, strengthening of the existing towers/foundations, and diversion of existing drainage.

The Development Footprint is in the northern section of the existing substation, and a small section added on the southern section, covering 22.6 hectares (see Figure 1-2). The vegetation consists of exotic pasture grasses and legumes and a scatter of native grasses.

1.3. Bioregion

Bioregions are determined by climate, geomorphology, soils, and vegetation to classify the environment at a landscape scale (DELWP, 2021). Victoria has 28 bioregions. The Proposal Area is in the Victorian Volcanic Plains Bioregion (DSE, 2004).

The Victorian Volcanic Plains (VVP) bioregion is characterised by DELWP (2021) as *'dominated by Cainozoic volcanic deposits. These deposits formed an extensive flat to undulating basaltic plain with stony rises, old lava flows, numerous volcanic cones and old eruption points and is dotted with shallow lakes both salt and freshwater. Numerous volcanic cones dot the landscape with scoria cones being the most common (e.g., Mt Elephant, Mt Napier, and Mt Noorat) although some basalt cones are present'*.

This is a list of Ecological Vegetation Classes that are found within the study area.

Woodland and Grasslands EVCs are as follows:

- EVC 55 Plains Grassy Woodland
- EVC 68 Creekline Grassy Woodland
- EVC 651 Plains Swampy Woodland
- EVC 652 Lunette Woodland

Wetland EVCs are as follows:

- EVC 132 Heavier-soils Plains Grassland
- EVC 56 Floodplain Riparian Woodland
- EVC 125 Plains Grassy Wetland
- EVC 641 Riparian Woodland
- EVC 717 Saline Lake Aggregate

1.3.1. Waterways and wetlands

The western portion of the VVP bioregion is characteristically known for several wetlands and brackish lakes. DELWP (2021) describe the VVP wetland systems as *'wetland formations including inland salt marshes, permanent and intermittent freshwater and saline/brackish lakes, permanent freshwater ponds and marshes and inland, subterranean karst wetlands. The region is characterised by a rainfall of 450-840mm per annum, with a relatively even distribution throughout the year'*.

The study area occurs within the Glenelg Hopkins CMA, with several unnamed wetlands interconnected by ephemeral creeks. These creeks form part of the Hopkins River Catchment. The Hopkins River is located to the southwest of the proposal area and occurs in the study area. The Hopkins River flows south to Warrnambool and enters the Hopkins River estuary. Blind Creek is located to the south of the Proposal Area running in an east to west direction. These waterways will not be impacted by the proposed works.

The DELWP wetland modelling (see Figure 1-1) shows many wetlands in the region, which is characteristic of this bioregion, however it is likely that many persist in a modified state and may no longer support native vegetation. Many of these are likely to have been modified due to agricultural practices. The modelled wetland to the southeast of the proposal area shows a smaller dam surrounded by the forestry plantation. It is evident from aerial imagery that this area has been modified, however a smaller dam persists.

In the proposal area, as part of the site assessment two dams and a drainage line were identified as EVC 125 Plains Grassy Wetland (refer to Figure 5-3). These areas are outside of the development footprint and will not be impacted. Other drainage lines that were once present have been modified by the development of the substation and no longer occur.

Ecological Assessment Mortlake Terminal Station

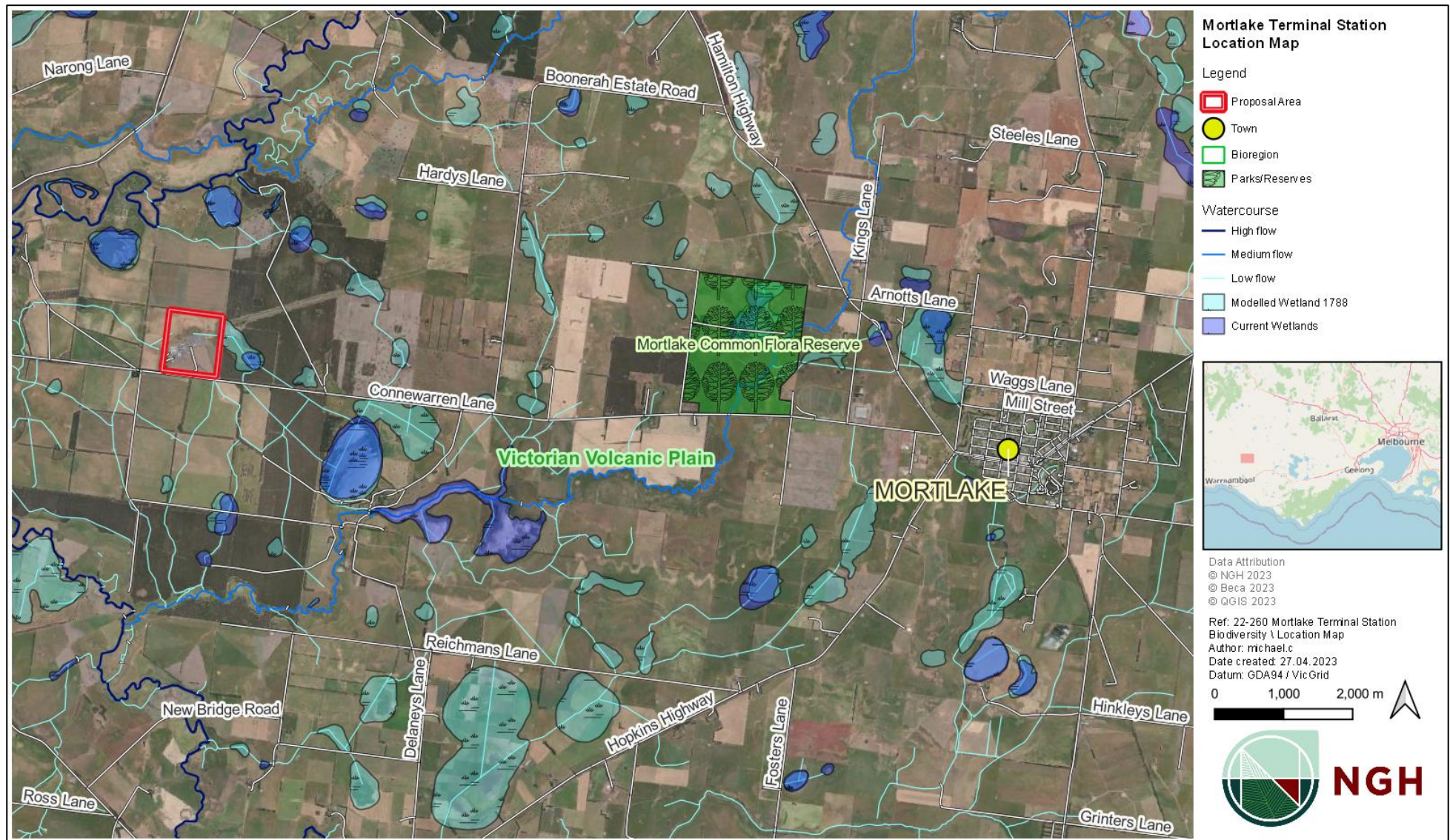


Figure 1-1. Location Map

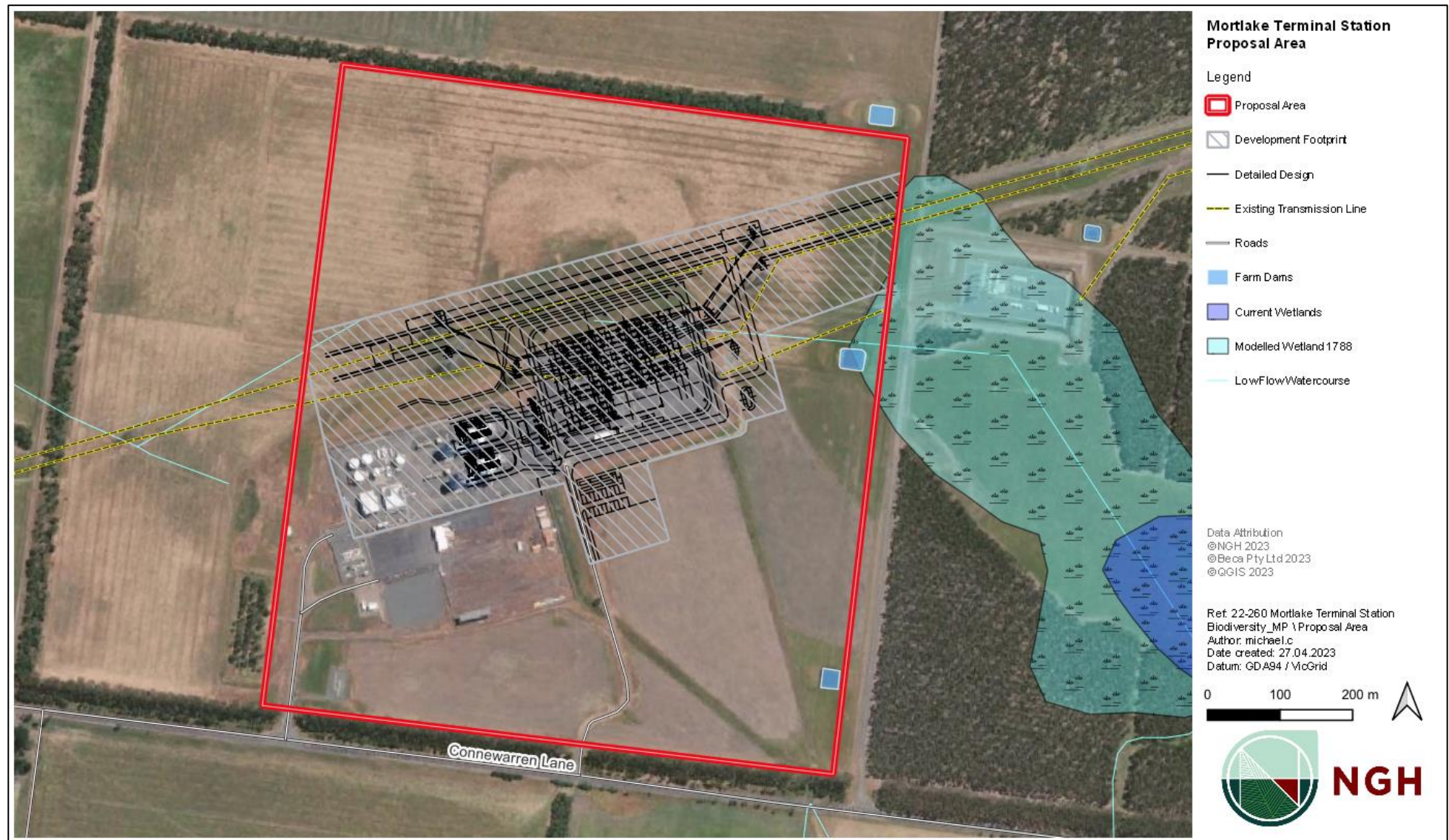


Figure 1-2. Proposal Area Map

2. LEGISLATIVE REQUIREMENTS

This section details the legislative requirements in relation to the assessment of the proposal. Table 2-1 details the legislation and the section of the report that addresses the legislation.

Table 2-1. Legislation requirements for the assessment of the proposal

Legislation	Requirements	Section of this Report
<i>Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 (EPBC)</i>	Matters of National Environmental Significance for threatened entities and RAMSAR wetlands	Section 5.8
<i>Victorian Planning and Environment Act, 1987 (P&E)</i>	Municipal Planning Schemes including Planning Zones and Overlays Clause 52.17 – Native Vegetation	Section 2.1
<i>Victorian Flora and Fauna Guarantee Amendment Act, 2019 (formerly Flora and Fauna Guarantee Act 1988) (FFGA)</i>	Threatened entities and critical habitat listed in Victoria	Section 5.5
<i>Victorian Wildlife Act 1975</i>	Protection of native fauna	Section 2.3
<i>Victorian Catchment and Land Protection Act 1994 (CaLP Act)</i>	Declared noxious weeds and pest animals	Section 5.7

2.1. Planning and Environment Act, 1987 (P&E Act)

The P&E Act was introduced in Victoria in 1987. The purpose of this Act is to establish a framework for planning for the use, development, and protection of land in Victoria in the present and long-term interests of all Victorians. Each municipality has a Local Planning Scheme setting out policies and clauses specific to zones and overlays that relate to an area or parcel of land (DELWP, 2022).

The Proposal Area is in the Moyne LGA and the Moyne Planning Scheme applies to this proposed development.

The zones and overlays that apply to the proposal area are listed below.

- The lots are zoned as Special Use (SUZ and Schedule 1 (SUZ1)).
- The lots are partially covered by a BMO – Bushfire Management Overlay

- The lot is entirely covered by the Designated Bushfire Prone Area layer.

2.1.1. Special Use Zone (SUZ)

The Proposal Area is in a Special Use Zone (SUZ). The objectives of this Zone are:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To recognise or provide for the use and development of land for specific purposes as identified in a schedule to this zone.

Schedule 1 Special Use Zone (SUZ1) for Mortlake Power Station

The purpose of this schedule for this zone is to:

- To facilitate the development and use of a gas-fired power station in a manner which recognises the character and amenity of the surrounding area.
- To provide for electricity generation using natural gas.
- To provide for the transmission, distribution, and storage of power.

There are no planning permit triggers for biodiversity matters under this zoning therefore no further consideration is required as part of this report.

2.1.2. Bushfire Management Overlay (BMO)

The Bushfire Management Overlay (BMO) covers the eastern edge of Lot 1 PS620663. The objectives of this overlay are:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.
- To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.
- To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

There are no specific bushfire vegetation management requirements that will impact native vegetation as part of the proposed development. Therefore, there are no further considerations regarding bushfire and native vegetation impacts required as part of this application.

2.1.3. Designated Bushfire Prone Area (BPA)

Designated bushfire prone areas were determined by the Minister for Planning and came into effect from 8 September 2011. The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

The lots and the surrounding areas are all Designated Bushfire Prone Areas.

No further assessment is required for native vegetation regarding building in a designated bushfire prone area.

2.2. Flora and Fauna Guarantee Act 1988 (FFG Act)

The *Flora and Fauna Guarantee Act 1988* (FFG Act). The purpose of the FFG Act is to establish a legal framework to conserve Victoria's native flora and fauna. The flora and fauna conservation and management objectives are:

- a) to guarantee that all taxa of Victoria's flora and fauna, other than taxa specified in the excluded list, can persist, and improve in the wild and retain their capacity to adapt to environmental changes; and
- b) to prevent taxa and communities of flora and fauna from becoming threatened and to recover threatened taxa and communities so their conservation status improves; and
- c) to protect, conserve, restore and enhance biodiversity, including -
 - a. flora and fauna and their habitats; and
 - b. genetic diversity; and
 - c. ecological communities; and
 - d. ecological processes; and
- d) to identify and mitigate the impacts of potentially threatening processes to address the important underlying causes of biodiversity decline; and
- e) to ensure the use of biodiversity as a natural resource is ecologically sustainable; and
- f) to identify and conserve areas of Victoria in respect of which critical habitat determinations are made.

No threatened community listed under the FFG Act occur on site. Threatened flora and fauna are assessed in Section 5 (Results) of this report.

2.3. Wildlife Act 1975

Under the *Wildlife Act 1975* all native wildlife is protected in Victoria. It is an offence to kill, take, control or harm wildlife under the Wildlife Act 1975. It is also an offence to use poisons to kill, destroy or take wildlife. Severe penalties (including imprisonment and fines) apply to those found guilty of an offence under the Wildlife Act.

It is unlikely a wildlife permit will be required. If the proposal is approved, the impact would be on wildlife habitat and not wildlife. An unexpected finds protocol for fauna management has been included in Section 6 of this report.

2.4. Catchment and Land Protection Act 1994 (CaLP Act)

Under the *CaLP Act, 1994*, control of declared noxious weeds and pest animals will be ongoing management requirement prior, during and post construction. Weed and pest animal management should consider best practice methods.

The weeds and pest animals recorded during the site assessment are addressed in Section 5.7.

State Prohibited weeds

State Prohibited Weeds may not occur in Victoria, or any known infestations are very small. The Victorian Government is responsible for eradicating State Prohibited Weeds and all known infestations should be eradicated. State prohibited weeds are the highest category of declared

noxious weeds in Victoria. These weeds are considered a significant threat if introduced (Agriculture Victoria, 2020).

Regionally prohibited weeds

Regionally prohibited weeds are capable of spreading across a region and the aim should be to eradicate them. Regionally prohibited weeds are not widely distributed so landowners must take all reasonable steps to eradicate these weeds to prevent them spreading further. Landowners (including public authorities) are responsible for the eradication of these weeds on their land (Agriculture Victoria, 2020).

Regionally controlled weeds

These regionally controlled weeds are usually widespread and highly invasive. Landowners need to take all reasonable steps to prevent the growth and spread of regionally controlled weeds on their land (Agriculture Victoria, 2020).

Restricted weeds

Restricted weeds cannot be traded, and this includes plants, seeds or propagules or contaminants. Restricted weeds are at risk of spreading within Victoria or other States or Territories of Australia. It is a landowner's responsibility to prevent the spread of these weeds (Agriculture Victoria, 2020).

3. PURPOSE OF THIS ASSESSMENT

The proposal must consider the requirements under Clause 52.17 – Native Vegetation under the *P&E Act*. The first part of this assessment must consider the native vegetation assessment pathway and the triggers for removing native vegetation.

3.1. Native vegetation assessment pathway

The development footprint is located in assessment pathway Location 1 and 2 (see Figure 3-1). The native vegetation guidelines (DELWP, 2017) identify assessment pathways as basic, intermediate, and detailed and these are divided into three location categories across the state of Victoria. These assessment pathways are determined to reduce overall impacts to Victoria's biodiversity. However, no native vegetation will be impacted by this proposal. Therefore, no further consideration is required regarding the native vegetation assessment pathway and there are no planning permit triggers under Clause 52.17.



Figure 3-1. Native vegetation risk assessment pathway.

4. METHODS

4.1. Threatened species database searches

4.1.1. Victorian threatened species and communities

A desktop search for threatened species was undertaken on the 1st of March 2023 using the Victorian Biodiversity Atlas (VBA). The VBA search included the Proposal Area and a buffer area of 10km. The search results are summarised in the following section of the report.

An assessment of the threatened communities was undertaken comparing the characteristics of threatened communities' summary report (DSE, no date) with the vegetation in the Proposal Area.

4.1.2. Matters of National Environmental Significance (MNES)

A Matters of National Significance (MNES) Protected Matters Search Tool (PMST) desktop search was undertaken on the 1st of March 2023, with a 10km buffer for nationally threatened flora, fauna, and vegetation communities. The results are summarised in Section 5.8. The PMST report is in Appendix C.

4.1.3. Likelihood of occurrence

The likelihood of occurrence (Table 4-1) is a broad way to categorise the likelihood of threatened flora and fauna presence at the study site based on the MNES results, VBA records and habitat features observed on site. Likelihood of occurrence for each species is detailed within Appendix B.

Table 4-1 Likelihood of threatened species being observed on site.

Likelihood of Occurrence	Reasoning
Nil/Absent	Suitable habitat is not present within the Proposal Area.
Low	Considered unlikely to occur due to older records, unsuitable or degraded habitat.
Moderate	Potential habitat occurs on site. Low record numbers or species not recorded in the area for many years. Considered that the species may occur infrequently.
High	Observed on site. Important habitat occurs onsite (i.e., nesting sites, suitable habitat).

4.2. Site assessment

The site assessment was completed by accredited Senior Ecologist, Dimity Bambrick and Ecologist John Harris on 21st -23rd of February.

Weather observations for the site assessment included:

- Mostly sunny.

- Windy conditions averaging 13.6km/hr.
- Minimum temperature of 11°C, maximum temperature of 35°C.

The site assessment methods used are outlined in the following sections.

4.3. Flora

Flora survey was completed on foot. The flora survey utilised the Habitat Hectares Assessment methodology. The entire Proposal Area was assessed (as required under Clause 52.17 – Native Vegetation), to determine patches of native vegetation, scattered trees, and any revegetation areas.

Further information about the native vegetation assessment methods is included in each section below.

4.4. Native vegetation assessment

4.4.1. Native vegetation

The native vegetation assessment was undertaken based on the Guidelines of Clause 52.17 for the removal, destruction or lopping, of native vegetation, (DELWP, 2017). The guidelines state native vegetation is assessed to ensure it meets the following criteria:

- An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native; or
- Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy; or
- Any mapped wetland included in the current wetlands map, available in Department of Environment, Land, Water and Planning (DELWP) systems and tools.

During this site assessment, any native vegetation patch determined to have greater than 25% perennial ground cover; the habitat hectare method was applied.

Any native vegetation that meets these criteria in the Proposal Area has been described in the results section of this report.

4.4.2. Scattered and large trees within habitat zone

Based upon the criteria in the guidelines (DELWP, 2017), a scattered tree is defined as a tree that is Indigenous to the area which is:

- A native canopy tree (large or small in size) that does not form part of a patch; or
- A large, scattered tree that is greater than or equal to the diameter at breast height (DBH) as determined by the EVC benchmark.

All large trees within a habitat zone were recorded where the tree was greater than the EVC benchmark DBH. All stags (dead canopy trees) were recorded if they were greater than 40 cm DBH. Within the habitat zone, only tree stags that are greater than the EVC benchmark DBH are recorded.

For each scattered tree, large tree or stag the following information was recorded:

- Plant species identified (including scientific and common name).
- Location recorded using a handheld GPS.

- DBH measured and recorded.
- Tree health.
- Presence of habitat features such as hollows or nests.

4.4.3. Ecological Vegetation Classes (EVC)

The vegetation communities found in the Victorian Volcanic Plains Bioregion are termed Ecological Vegetation Classes (EVCs). These EVCs were mapped by the Victorian Government based on landscape attributes to determine the pre-European native vegetation extent (DSE, 2004). Each Bioregion consists of several EVCs. Each EVC has pre-determined benchmarks which are used in the habitat hectare assessment to determine the site condition score (DSE, 2004).

The Ecological Vegetation Classes identified in the Proposal Area are in the following results section of this report.

4.4.4. EVC Conservation Status

Each EVC has a Bioregional Conservation Status based on the extent cleared or remaining since European settlement. Table 4-2 lists the criteria for the conservation status for Ecological Vegetation Classes (DELWP, 2021).

The conservation status for each EVC found onsite is listed in the following results section of this report.

Table 4-2 Criteria for the conservation status for Ecological Vegetation Classes (Source: (DELWP, 2021))

Category	Status Code	Criteria
Presumed Extinct	X	Probably no longer present in the bioregion (the accuracy of this assumption is limited using remotely - sensed 1:100 000 scale woody vegetation cover mapping to determine depletion - grassland, open woodland and wetland types are particularly affected).
Endangered	E	<p>Contracted to less than 10% of former range, OR</p> <p>Less than 10% pre-European extent remains, OR</p> <p>Combination of depletion, degradation, current threats, and rarity is comparable overall to the above:</p> <ul style="list-style-type: none"> • 10 to 30% pre-European extent remains and severely degraded over a majority of this area; or • naturally restricted EVC reduced to 30% or less of former range and moderately degraded over a majority of this area; or • rare EVC cleared and/or moderately degraded over a majority of former area.

Category	Status Code	Criteria
Vulnerable	V	<p>10 to 30% pre-European extent remains; OR Combination of depletion, degradation, current threats, and rarity is comparable overall to the above:</p> <ul style="list-style-type: none"> greater than 30% and up to 50% pre-European extent remains and moderately degraded over a majority of this area; or greater than 50% pre-European extent remains and severely degraded over a majority of this area; or naturally restricted EVC where greater than 30% pre-European extent remains and moderately degraded over a majority of this area; or rare EVC cleared and/or moderately degraded over a minority of former area.
Depleted	D	<p>Greater than 30% and up to 50% pre-European extent remains, OR Combination of depletion, degradation and current threats is comparable overall to the above and:</p> <ul style="list-style-type: none"> greater than 50% pre-European extent remains. and moderately degraded over a majority of this area.
Rare	R	Rare EVC (as defined by geographic occurrence) but neither depleted, degraded nor currently threatened to an extent that would qualify as Endangered, Vulnerable or Depleted.
Least Concern	LC	Greater than 50% pre-European extent remains and subject too little to no degradation over a majority of this area.

4.4.5. Vegetation Quality Assessment (Habitat hectares) methodology

The habitat hectare methodology compares the EVC benchmark with site attributes and landscape components to determine the vegetation site condition (DELWP, 2017).

Each area defined as native vegetation, where the perennial ground cover is more than 25% or three or more canopy trees driplines touch forming a canopy, a habitat hectares assessment is required to be undertaken. These areas are defined as habitat zones and are identified throughout the Proposal Area. The habitat zones are divided by similarities in their habitat components and vegetation condition.

The habitat hectares results are included in the following results section of this report.

4.5. Fauna

Incidental fauna observations were recorded. These observations included habitat features observed on site as well fauna activity such as sightings, scats, burrows, warrens, hollows, logs, and

rocky areas. However due to the timing of the surveys, not all fauna species that may occur within the Proposal Area are likely to have been detected. Pest animal activity or sightings were included in this assessment.

4.5.1. Growling Grass Frog (*Litoria raniformis*)

Growling Grass Frog (*Litoria raniformis*) are listed as vulnerable under *EPBC Act* and the *FFG Act*. Growling Grass Frog are distributed across south-eastern Australia. It is a large diurnal frog that was common and widespread across its range but declined quite suddenly from about 1990 and is now uncommon and threatened (SWIFFT, 2023). Distinguishing features are bright to olive-green colour, warty back (with brown blotches in the adult), and distinct tympanum (ear).

The Growling Grass Frog needs still or slow-moving water with emergent vegetation around the edges and mats of floating and submerged plants. They can live in artificial waterbodies, such as farm dams, irrigation channels and disused quarries (SWIFFT, 2023). Favourable habitat features include abundant aquatic vegetation, minimal tree canopy cover, waterbodies with salinity less than 7.0 mS/cm or (7000 EC) which hold water for at least six months of the year (SWIFFT, 2023).

Breeding begins in August when calling males begin to attract females, although females usually do not start egg laying until October – November (SWIFFT, 2023). Males will continue calling until the end of March, but females do not usually respond unless the season is very wet and warm. Eggs are laid in spring, so the frogs need water that lasts over the summer for their tadpoles to develop. Females lay up to 4000 eggs in floating, foamy jelly rafts which sinks into submerged vegetation within twelve hours. Tadpoles develop from the same spawn over a wide time frame. Some are fully developed and emerge from the water at 16 weeks. In Victoria, most tadpoles have emerged as frogs by the end of May.

Growling Grass Frogs are actively calling from August to February (DCCEEW, 2010) and have a very distinct call. Larval periods are from September to February.

Survey Effort

The survey methods were completed following *Survey guidelines for Australia's threatened frogs* (DEWHA, 2010) in accordance with the *EBPC Act*, and *Guidelines for managing the endangered Growling Grass Frog in urbanising landscapes* (DSE, 2010), and *Frogs in the Grass; Community Monitoring of the Growling Grass Frog at City of Whittlesea Quarry*, in accordance with the *FFG Act*.

Ecology and Heritage Partners conducted surveys in 2010 for this species and no individuals were recorded. Due to the timeframe between the 2010 surveys, and the higher-than-average rainfall and flooding events in 2022, additional targeted surveys for Growling Grass Frog were completed by NGH ecologist and John Harris (Ecology and Wildlife Pty Ltd) to determine presence or absence.

The following survey methods were undertaken:

- A habitat assessment as part of the native vegetation assessment
- Two nocturnal surveys – visual searching, call detection - listening and recording, spotlight

Surveys for Growling Grass Frog were completed from 21st-22nd of February 2023. There were two dams located on the site that may support Growling Grass Frog. Frog survey data collection included recording weather conditions during surveying, Growling Grass Frog records, and recording other frog species. Results can be found in Appendix E. Surveys were conducted under conditions thought to be suitable for activity by *L. raniformis* (night-time air temperatures above 12°C with little or no wind) (Heard, 2010) and when the species is vocal (until March).

Call play back was conducted 21st and 22nd February at both the north dam and south dam in suitable habitat. The call playback method included five minutes silence, five minutes call played through a portable Bluetooth speaker utilising verified calls from, the FrogID app, followed by five minutes listening for frog calls. Twenty minutes of spotlighting and active searching around each dam following call playback. The entire circumference of each dam was walked during active searching.

The survey effort and timing are shown in the Table 4-3 below.

Table 4-3 Survey effort for Growling Grass Frog (*Litoria raniformis*)

Survey number	Number of Ecologists	Number of days	Number of hours	Survey timing	Timing
1	2	2	Habitat assessment completed over 4 survey hours by two ecologists for both dams Nocturnal survey completed over a total of 6 survey hours by two ecologists on both dams	Habitat Assessment Nocturnal survey: <ul style="list-style-type: none"> • Call playback • Spotlighting 	21/02/2023
2	2	2	Nocturnal survey completed over a total of 6 survey hours by two ecologists on both dams	Second nocturnal survey <ul style="list-style-type: none"> • Call playback • Spotlighting 	22/02/2023

Habitat assessment

Habitat assessment and monitoring data for Growling Grass Frog included recording the aquatic and terrestrial vegetation following the Guidelines (DSE, 2010). Both dams contained emergent vegetation and water during the driest period of the year showing suitable habitat for the species. The results of the aquatic and terrestrial vegetation are included in Section 5.6.3. and Appendix D.

Water Quality Testing

Water quality testing was carried out simultaneously to the Growling Grass Frog surveys. The water quality testing measured Dissolved Oxygen, Oxidation Reduction Potential (ORP), temperature Copper (Cu) (Hardness), and pH. The results can be found in Appendix E.

4.6. Mapping

NGH uses Samsung Android GIS devices, and all site data collection is recorded via a mapping app Mergin Maps - a GIS collection program. ESRI aerial imagery base map was utilised for the field assessment. All data layers were sourced from the layers publicly available from the Victorian Government (DataSmart) or provided from the client. Mapping accuracy is within 3 metres. All layers collected were georeferenced to Geographic Datum of Australia (GDA) 94 VicGrid.

5. RESULTS

The results of the site assessment including defining and mapping ecological vegetation classes (EVCs), mapping and documentation of any scattered trees, site observations of flora and fauna and assessment of habitat within the Proposal Area for threatened flora and fauna is provided in the following sections.

5.1. Ecological Vegetation Classes (EVCs)

Ecological Vegetation Class (EVC) 125 Plains Grassy Wetland was recorded on site. EVC 125 was found in three locations. Habitat Zones 1a and 1b occur on the two dams on the eastern boundary within the Proposal Area (see Figure 5-3). Habitat zone 1c occurs in a small linear strip to the south of the Mortlake Terminal Station (see Figure 5-3). EVC 125 is described by DSE (2004) as *'usually treeless, but in some instances can include sparse River Red Gum Eucalyptus camaldulensis or Swamp Gum Eucalyptus ovata. A sparse shrub component may also be present. The characteristic ground cover is dominated by grasses and small sedges and herbs. The vegetation is typically species-rich on the outer verges but is usually species-poor in the wetter central areas.'*

The vegetation is shown in Figure 5-1.

A flora species list from the site assessment can be found in Appendix A.



Figure 5-1 EVC 125 Plains Grassy Wetland in the channels within the Proposal Area

5.2. Scattered trees

There are no large, scattered trees in the Proposal Area. There are trees in the road reserve, but these will not be impacted by the proposed development and therefore there is no planning permit requirement or offset requirements.

There is one small, scattered tree Silver Wattle, (*Acacia dealbata*) (see Figure 5-2) which is adjacent to Habitat zone 2a. This individual has a DBH of 30, and a height of approximately 5m. As the tree is not being removed this tree does not trigger a planning permit or offset for removal.



Figure 5-2 Small scattered tree within the development footprint silver wattle (*Acacia dealbata*)

5.3. Planted vegetation

There are no planted trees within the Proposal Area. There are planted trees in the adjacent block and road reserve to the east and south of the Proposal Area, made up of a eucalyptus plantation, with Blue Gum (*Eucalyptus globulus*) and Spotted Gum (*Corymbia maculata*).

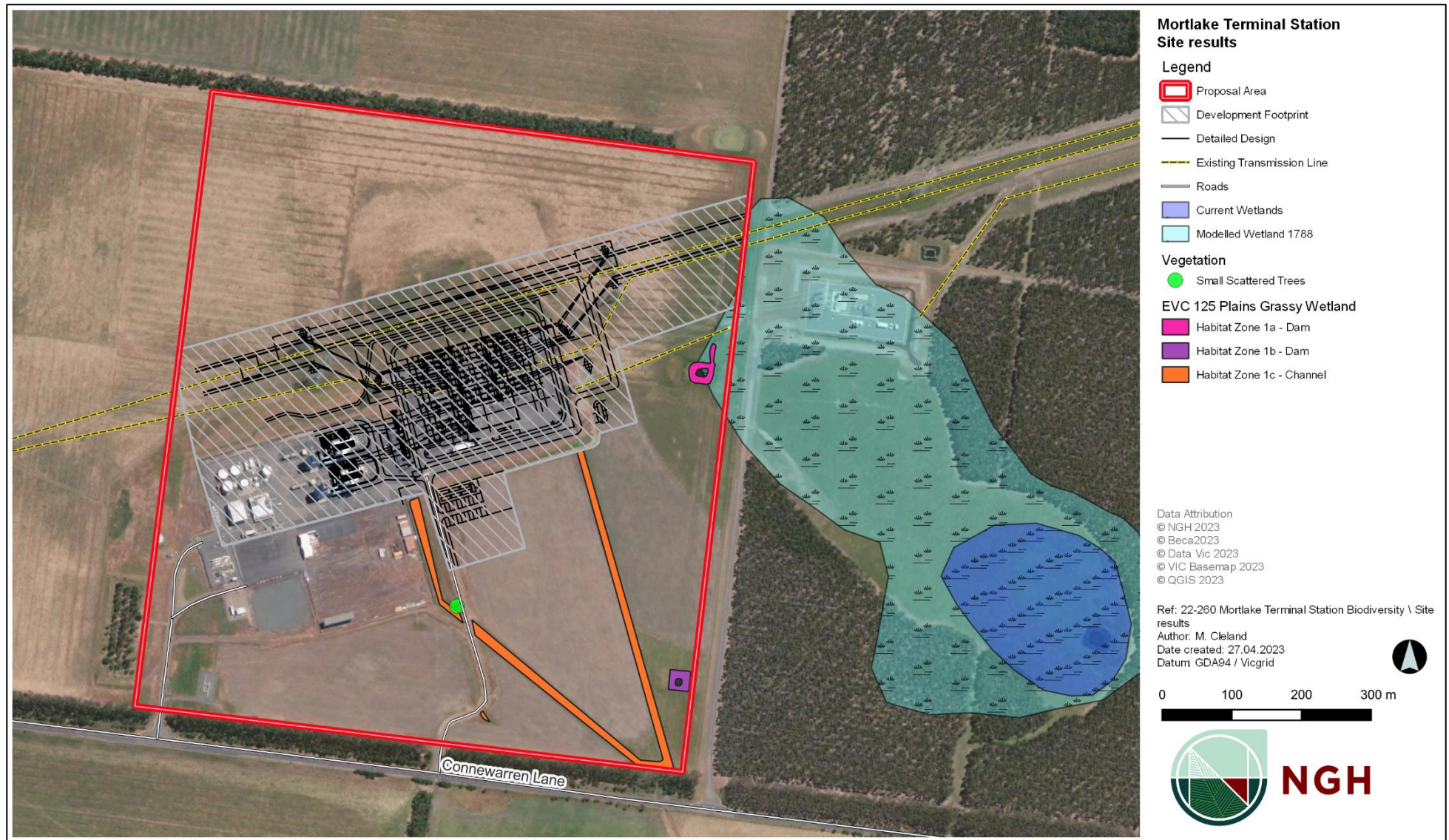


Figure 5-3. Vegetation in the Development Footprint

5.4. Threatened Communities

In the Victorian Volcanic Plains Bioregion, each EVC has a bioregional conservation status. The EVC on site was EVC 125 Plains Grassy Wetland has a bioregional conservation status of Endangered (DSE, n.d.). However, the ecological community will not be impacted by the proposal.

No threatened FFG listed communities were identified within the Proposal Area.

The proposal will not impact any FFG threatened vegetation communities.

5.5. Flora

The results of the list of flora species identified whilst on site, are listed in Appendix A. The flora observations documented a total of 25 species. There were 14 native species and 11 exotic plants which included no high threat weed species.

Paddocks ranged from dominated by Cocksfoot (*Dactylis glomerata*), to recently tilled with germinating and establishment of exotic species. Native species cover was <10% of the area.

5.5.1. Threatened flora records

From the Victorian Biodiversity Atlas results recorded seven threatened flora species within 10km of the Proposal Area. These included: three herbaceous species, two grasses, and two orchids.

No threatened flora were recorded during the site visit.

Due to the site being highly modified, all threatened flora were considered a low likelihood of occurring on site.

See Appendix B for details of the threatened flora assessment.

5.6. Fauna

The results of the incidental fauna observations, collected whilst on site, are listed in the Table 5-1 below.

Table 5-1. Fauna records during site visit.

Scientific Name	Common Name	FFG Act	EPBC Act
<i>Gymnorhina tibican</i>	Australian Magpie	Not listed	Not listed
<i>Dromaius novaehollandiae</i>	Emu	Not listed	Not listed
<i>Litoria ewingii</i>	Southern Brown Tree Frog	Not listed	Not listed
<i>Limnodynastes dumerilii</i>	Pobblebonk	Not listed	Not listed
<i>Phascolarctos cinereus</i>	Koala	Not listed	Not listed
<i>Limnodynastes peronii</i>	Striped Marsh Frog	Not listed	Not listed
<i>Crinia parinsignifera</i>	Eastern Sign-Bearing Froglet	Not listed	Not listed

Scientific Name	Common Name	FFG Act	EPBC Act
<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog	Not listed	Not listed
<i>Anas superciliosa</i>	Pacific Blue Duck	Not listed	Not listed
<i>Tachybaptus novaehollandiae</i>	Australasian Grebe	Not listed	Not listed
<i>Gambusia holbrooki</i>	Eastern Gambusia	Not listed, considered invasive	Not listed considered invasive

5.6.1. Fauna habitat features

The habitat features recorded on site and the immediate area included the following:

- Open paddocks suitable for foraging for birds of prey
- Two farm dams and the linear drainage area providing habitat for aquatic fauna and flora
- Boundary tree plantings which are a mixture of eucalypts and shrubs providing roosting and nesting areas, shelter, and insects for smaller birds
- Large trees and canopy connection in the road reserve

5.6.2. Threatened fauna records

From the Victorian Biodiversity Atlas results search results, there were 19 species that were either recorded within 10km of the Proposal Area or are likely to occur in the study area. These species included:

- Eleven birds (including migratory birds)
- Three mammals
- Two amphibians
- Two reptiles
- One invertebrate.

Of these 19 threatened fauna species, it was determined that all fauna species have a low likelihood of being impacted by the proposal based on the habitat suitability on site, except for Growling Grass Frog (*Litoria raniformis*). This species is considered a low-moderate likelihood of occurring on site as there is potential habitat in the farm dams. Especially the northern-most dam, located adjacent to mapped wetland, crossing over the perimeter of the Proposal Area.

No threatened fauna was recorded during the site assessment.

The likelihood of these species occurring at the site is evaluated in Appendix B.

5.6.3. Growling Grass Frog Surveys

No Growling Grass Frogs were observed during the nocturnal surveys although a total of six other frog species were recorded across both dams, over the two nights. These species are listed in Table 5-1 above. The survey details are included in Appendix E.

The aquatic vegetation and terrestrial vegetation for each dam is summarised below and images of the dam habitat can be found in Figure 5-4:

Dam 1

- Aquatic flora survey results: *Eleocharis acuta*, *Potamogeton tricarinatus*, *Potamogeton ochreatus* and algae
- Terrestrial flora survey results (5 metres from the water's edge): *Eleocharis acuta*, *Juncus flavidus*, exotic pasture grasses

Dam 2

- Aquatic flora survey results: *Eleocharis acuta*, *Alternanthera denticulata*, *Typha orientalis*, *Juncus flavidus*, *Cyperus eragrostis*, *Potamogeton ochreatus* and algae
- Terrestrial flora survey results (5 metres from the water's edge): *Juncus flavidus*, exotic pasture grasses



Figure 5-4 Aquatic and terrestrial vegetation on both dams.

Further vegetation results and water quality testing results can be found in Appendix E.

5.6.4. Recommended targeted surveys

No further targeted surveys are recommended.

5.7. Declared weeds and pest animals

5.7.1. Noxious weeds identified on site

There were no noxious weeds, as determined by *CALP Act* 1994, were found on site. A list of weed species can be found in Appendix A.

5.7.2. Declared pest animals

There was no evidence of declared pest animals observed on site. However, it is likely that the Red Fox (*Vulpes vulpes*) and European Rabbit (*Oryctolagus cuniculus*) are present within the area.

5.8. Matters of National Environmental Significance

Under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), actions that have, or are likely to have, a significant impact on a Matter of National Environmental Significance require approval from the Australian Government Minister for the Environment (the Minister). The Minister will decide whether assessment and approval is required under the EPBC Act.

The nine matters of national environmental significance protected under the EPBC Act are:

- a) world heritage properties
- b) national heritage places
- c) wetlands of international importance (listed under the Ramsar Convention)
- d) listed threatened species and ecological communities
- e) migratory species protected under international agreements
- f) Commonwealth marine areas
- g) the Great Barrier Reef Marine Park
- h) nuclear actions (including uranium mines)
- i) a water resource, in relation to coal seam gas development and large coal mining development

The matter relevant to the site is (d) listed threatened species and ecological communities. These matters are discussed below.

5.8.1. Threatened communities

There were four threatened ecological communities identified in the Matters of National Significance search. These communities are listed in Table 5-2 below.

Table 5-2 MNES search results for Threatened Communities

Vegetation Community	EPBC Status	VBA / MNES	Likelihood of Occurrence	Reasoning	Potential Impact
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	CE	MNES	Nil / Absent	Community may occur within 10 km of site; however, the site is does not contain any of these species	None

Natural Temperate Grassland of the Victorian Volcanic Plain	CE	MNES	Nil / Absent	Community may occur within 10 km of site; however, the site is disturbed, and non-native dominated.	None
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	CE	MNES	Nil / Absent	Community may occur within Proposal Area. However, the site is disturbed, and non-native dominated.	None
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE	MNES	Nil / Absent	Community occurs within 10 km of site; None of these species were recorded on site	None

5.8.2. RAMSAR wetlands

There are no RAMSAR sites within the Proposal Area study area. Lake Corangamite is a RAMSAR wetland more than 60km west of the Proposal Area in the Western District Lakes (DCCEE, 2019). The proposal will not impact any RAMSAR wetlands.

5.8.3. Threatened flora

The MNES search shows there were seventeen flora species found within the 10 km buffer. None of these species were recorded on site and all were determined to have a low likelihood of occurring on site (Appendix C).

5.8.4. Threatened fauna

From the MNES search results, the following records of nationally threatened fauna are:

- Birds (including migratory) – 22
- Fish – 3
- Amphibians – 1
- Invertebrates – 1
- Mammals – 7
- Reptiles – 1

The EPBC listed species with a low likelihood of occurring on site. Appendix B includes the likelihood of these species occurring within the Proposal Area. See Appendix C for the full list of MNES species.

6. MITIGATION MEASURES

The following mitigation measures are recommended prior to construction to reduce impacts to biodiversity.

The mitigation measures include:

- Erect fencing and 'no-go zone' signage to avoid access to drainage areas and the dams to the east of the development footprint
- Inform all staff and contractors on site of the EVC mapped areas, as areas to avoid.
- Establish an unexpected finds protocol for fauna management (particularly for large wildlife such as emus and kangaroos), including requirements that:
 - Details of a suitably qualified and local wildlife handler, ecologist or representative from Wildlife Victoria are available on site in the event that the project needs to carry out any relocation of wildlife.
 - Any injured or harmed wildlife are only managed by a suitable qualified wildlife handler, ecologist, or a representative from Wildlife Victoria and to relocate the individual to an appropriate care facility.
 - Fencing is established around construction areas to exclude wildlife from works areas and minimise unnecessary harm or injury to wildlife.
- Prior to construction, implement appropriate sediment control measures to prevent sediment laden water from entering drainage lines and dams. This might include sediment fencing using geotextile fabric which should remain in-situ until vegetation has re-established post construction.

Ensure no handling of amphibians, to prevent infection of frogs from chytrid fungus. The dam areas will be avoided, therefore a chytrid fungus protocol is not required, however if any dam disturbance is required, a protocol would need to be developed and all amphibian handling completed by a suitably qualified ecologist.

7. CONCLUSIONS

From the ecology assessment undertaken the following results were determined:

- The Ecological Vegetation Classes in the Proposal Area includes EVC 125 Plains Grassy Wetland.
- No Growling Grass Frogs were recorded during the 2023 site assessment.
- There is no proposed native vegetation removal required for the proposed works therefore no planning permit trigger under Clause 52.17 – Native Vegetation of the Planning and Environment Act, 1987.
- No FFG or EPBC listed vegetation communities occur on site.
- No threatened flora or fauna were observed.
- No EPBC Referral is required.

8. REFERENCES

- Agriculture Victoria (2020). *Invasive plant classifications*. Retrieved from <https://agriculture.vic.gov.au/biosecurity/weeds/invasive-plant-classifications>
- ALA (2023). Open access to Australia's biodiversity data. Retrieved from Atlas of Living Australia: <https://www.ala.org.au/>
- Birdlife Australia (2023). *Birds in backyards. Bird finder*. Retrieved from Birds in Backyards: <https://www.birdsinbackyards.net/finder>
- DEWHA (2010). *Survey guidelines for Australia's threatened frogs*. Department of the Environment, Water, Heritage and the Arts, Commonwealth of Australia.
- DCCEEW (2023). *Species Profile and Threats Database*. Department of Climate Change, Energy, the Environment and Water, Commonwealth of Australia. Retrieved from <https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>
- DELWP (2016). *Habitat Hectares Assessment: Fact Sheet*. Department of Land Water and Planning, Victorian Government.
- DELWP (2017). *Guidelines for the removal, destruction or lopping of native vegetation*. Department of Land Water and Planning, Victorian Government.
- DELWP (2021). *Bioregions and EVC Benchmarks*. Department of Land Water and Planning, Victorian Government. Retrieved from <https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks>
- DEWHA (2010). *Survey guidelines for Australia's threatened frogs*. Department of the Environment, Water, Heritage and the Arts, Australian Government .
- DSE (n.d.). Department of Sustainability and Environment, Victorian Government. Retrieved from [Bioregional-Conservation-Status-for-each-BioEVC.pdf \(environment.vic.gov.au\)](#)
- DSE (2004). *Ecological Vegetation Class Benchmarks of the Victorian Volcanic Plain Bioregion*. Department of Sustainability and Environment, Victorian Government.
- DSE (2010). *Guidelines for managing the endangered Growling Grass Frog in urbanising landscapes*. Department of Sustainability and Environment, Victorian Government.
- DTP (2023). *1154-Connewarren-Lane-Mortlake-(ID130213260)-Vicplan-Planning-Property-Report*. Department of Transport and Planning, State Government of Victoria
- DTP (2023). *Moyne Planning Scheme*. Department of Transport and Planning, State Government of Victoria, 2023.
- Heard, G., Scroggie, M. P., & Clemann, N. (2010). *Guidelines for managing the endangered Growling Grass Frog in urbanising landscapes*. Heidelberg, Germany: Arthur Rylah Institute for Environmental Research. OEHL (2023). *Threatened biodiversity profile search*. Retrieved March 2023 from <https://www.environment.nsw.gov.au/threatenedspeciesapp/>
- RBG Victoria (2023). *Flora of Victoria*. Royal Botanic Gardens Victoria. Retrieved on 30/03/2023 from <https://vicflora.rbg.vic.gov.au/>
- SWIFFT (2023). Retrieved from Threatened Species Profiles. Retrieved on 31/03/2023, from https://www.swiff.net.au/cb_pages/threatened_species_profiles.php

SWIFFT (2023). *Growling Grass Frog* . Retrieved from Threatened species profiles. Retrieved on 31/03/2023, from https://www.swifft.net.au/cb_pages/sp_growling_grass_frog.php

Van Praagh, B. (2018). Threatened Burrowing Crayfish of West Gippsland. Retrieved from Threatened Burrowing Crayfish of West Gippsland: <https://www.burrowingcrayfish.com.au/>

Appendix A Flora Species List

E – Exotic; P- Planted; RC – Regionally Controlled under the *Catchment and Land Protection Act, 1994*

Scientific Name	Common Name	Status
<i>Alternanthera denticulata</i>	Lesser Joyweed	N
<i>Brassica</i> sp.	Brassica	E
<i>Chloris truncata</i>	Windmill-grass	N
<i>Cynodon dactylon</i>	Couch	N
<i>Cyperus eragrostis</i>	Drain Flat sedge	E
<i>Dactylis glomerata</i>	Cocksfoot	E
<i>Eleocharis acuta</i>	Common Spike-rush	N
<i>Eleocharis pusilla</i>	Small Spike-rush	N
<i>Fagopyrum esculentum</i>	Buckwheat	E
<i>Hypochaeris radicata</i>	Cat's-ear	E
<i>Juncus flavidus</i>	Juncus	N
<i>Juncus holoschoenus</i>	Joint-leaved Rush	N
<i>Juncus ingens</i>	Giant Rush	N
<i>Lythrum hyssopifolia</i>	Lesser Loosestrife	N
<i>Medicago sativa</i> subsp. <i>sativa</i>	Lucerne	E
<i>Mentha pulegium</i>	Pennyroyal	N
<i>Nasturtium officinale</i>	Water Cress	E
<i>Paspalidium</i> sp.	Brigalow grass	Uncertain
<i>Paspalum distichum</i>	Water Couch	E
<i>Potamogeton ochreatus</i>	Blunt Pondweed	N
<i>Potamogeton tricarinatus</i>	Floating pondweed	N
<i>Solanum nigrum</i>	Black Nightshade	E
<i>Sonchus</i> sp.	Common Sowthistle	E

Scientific Name	Common Name	Status
<i>Typha orientalis</i>	Broadleaf Cumbungi	N

Appendix B Threatened Species

B.1 Threatened Flora

EPBC Status – E: Endangered; V: Vulnerable, CE: Critically Endangered.

FFG Status – Listed (Listed under the FFG Act and the Victorian Advisory List includes the threatened status for each species. The Victorian Advisory List: E: Endangered; V: Vulnerable, R: Rare, NT: Near Threatened.

(NT = did not meet the criteria to be officially listed under the FFG Act, but they could possibly qualify or are close to qualifying in the near future)

Th = threatened on the FFG Threatened List but no status provided.

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Found mostly in permanent swamps, lagoons, billabongs, dams, and roadside ditches. Requires moderately fertile soils with some bare ground, caused by seasonally fluctuating water levels.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	Widespread throughout the state except for the north-west and the alpine and adjacent mountainous areas, and usually at low elevations (under c. 100 m) where mostly in grasslands and riverine <i>Eucalyptus camaldulensis</i> woodland on soils that are prone to inundation.	CE	CE	VBA/MNES	4	13/12/2013	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Dianella amoena</i>	Matted Flax-lily	Largely confined to drier grassy woodland and grassland communities south of the Dividing Range.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Dodonaea procumbens</i>	Trailing Hopbush	Typically, in low lying, winter wet areas in woodland, low open forest, heathland, and grasslands. Populations have been found in sedge wetland, healthy woodland, and damp heathland in eastern Victoria.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Glycine latrobeana</i>	Clover Glycine, Purple Clover	Found in native grasslands, dry sclerophyll forests, woodlands, and low open woodlands with a grassy ground layer. Soils generally have a sandy component, and grasslands are typically dominated by Themeda triandra.	V	V	VBA/MNES	1	04/11/1998	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Lachnagrostis adamsonii</i>	Adamson's Blown-grass, Adamson's	Occurs in and around saline depressions on the Volcanic Plain were recorded from Portarlinton west almost to the South Australian border.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
	Blown grass									
<i>Lachnagrostis semibarbata</i> var. <i>filifolia</i>	Purple Blown grass	Virtually co-extensive with the nominate variety but known further east near the Gippsland Lakes east of Sale.	E	E	VBA	2	30/06/2009	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Lachnagrostis semibarbata</i> var. <i>semibarbata</i>	Purple Blown grass	Scattered from near Melbourne to the South Australian border, mainly in grassland, occasionally woodland communities in somewhat saline depressions of the volcanic plain, but also known from seasonal, slightly brackish swampy sites east of Melbourne (e.g., Cranbourne, Safety Beach, Giffard, Sale areas).	E	E	VBA	1	15/12/1995	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Lepidium aschersonii</i>	Spiny Peppercreess	Mostly on heavy clay soil near salt lakes on volcanic plain, but with outlying records from near Lake Omeo (in 1940 &1981) and the Grampians (In 1893).	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	Hoary Sunray, Grassland Paper-daisy	The Hoary Sunray occurs in a wide variety of grassland, woodland, and forest habitats, generally on relatively heavy soils. In lowland areas, the most common habitat type is grassy woodland of Manna Gum Eucalyptus viminalis, Swamp Gum Eucalyptus ovata and/or Snow Gum Eucalyptus pauciflora, with a grassy layer of Themeda triandra, Spear grasses Austrostipa spp. and Long-hair Plume-grass Dichelachne crinita. Between the grass tussocks is a rich herb flora. Some shrubs are present, including Bossiaea spp. and Hibbertia hirsuta. The Hoary Sunray also grows in woodlands of E. viminalis or Black Peppermint Eucalyptus amygdalina with a diverse heathy and grassy understorey. In Victoria, the Hoary Sunray occurs almost exclusively on acidic clay soils derived from basalt, occasionally on nearby sandy-clay soils derived from sedimentary material.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Microseris scapigera</i> s.s.	Plain's Yam Daisy	Formerly widespread in moist depressions on the basalt plains of western Victoria, but now very rare due to loss of habitat.	CE	CE	VBA	1	30/06/2009	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Pimelea spinescens</i> subsp. <i>spinescens</i>	Plains Rice-flower, Spiny Rice-flower, Prickly	Endemic in Victoria. Grows in grassland, open shrubland and occasionally woodland, often on basalt-derived soils. Mostly west of Melbourne (to near Horsham) but extending as far north as Echuca.	CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
	Pimelea									
<i>Poa sallacustris</i>	Salt-lake Tussock-grass	Endemic in Victoria. Known only from margins of brackish to salt lakes in the western district (Lakes Corangamite and Terangpom near Cressy, Black Lake near Skipton, Lake Linlithgow near Hamilton) although generally occurring above the level of significant saline influence. Regarded as threatened by grazing and encroachment of exotic pasture species.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Prasophyllum</i> sp. aff. <i>Correctum</i> (Mortlake)	Western Gaping Leek-orchid	Endemic to Victoria were known only from grassland in the Mortlake area west of Melbourne.	CE	CE	VBA	5	29/11/2020	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Prasophyllum spicatum</i>	Dense Leek-orchid	Grows in coastal heath and sandhills. Flowers Aug.-Nov. Localised across southern Victoria in coastal heathland and near-coastal heathy forest on sandy soils. Flowers freely after fire or similar disturbance.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Prasophyllum viretrum</i>	Basalt Leek-orchid	Restricted to a few sites in south-western Victoria growing in moist to wet grassland on dark basaltic loam.	CE	CE	MNES	5	13/12/2013	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	Grows in heathy and shrubby forests near the Victorian coast between Yarram and Edenhope.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Rutidosis leptorhynchoides</i>	Button Wrinklewort	In Victoria confined to basaltic grasslands between Rokewood and Melbourne where endangered due to loss of habitat (formerly occurring as far west as Casterton, and on the Gippsland Plain near Newry).	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Senecio macrocarpus</i>	Large-fruited Fireweed, Smooth-fruited	In Victoria largely confined to remnant Themeda grasslands on loamy clay soils derived from basalt from near Melbourne west to Skipton area. Also known from auriferous ground near Stawell. Formerly recorded from near Horsham and Casterton, but apparently long extinct from these areas.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
	Groundsel									
<i>Senecio psilocarpus</i>	Swamp Fireweed, Smooth-fruited Groundsel	Restricted in Victoria to a few herb-rich winter-wet swamps throughout the south of the state, west from Sale, growing on volcanic clays or peaty soils.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Thelymitra epipactoides</i>	Metallic Sun-orchid	This species occurs from the Eyre Peninsula (in South Australia) to East Gippsland west of Bairnsdale (Victoria), found growing in mesic coastal heathlands, open forests, and woodlands.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Thelymitra matthewsii</i>	Spiral Sun-orchid	Widely distributed but rare, in coastal sandy flats or slightly elevated sites (to 400 m) in well-drained soils (sandy loams to gravelly limestone soils) in open forest. Plants colonise disturbed sites and slowly disappear as these sites stabilise.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Xerochrysum palustre</i>	Swamp Everlasting, Swamp Paper Daisy	Found in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay soils.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
Threatened Ecological & Vegetation Communities										
<i>Grassy Eucalypt Woodland of the Victorian Volcanic Plain</i>	The structure of the Grassy Eucalypt Woodland of the Victorian Volcanic Plain is an open eucalypt woodland with a predominantly grassy understorey. The ecological community exhibits a degree of natural variation in its appearance and composition across its range due to variations in rainfall and landscape features such as changes in elevation, drainage patterns and the presence of rocky outcrops. The ecological community also exhibits a degree of seasonality characterised by a peak spring to early summer flowering period, particularly of ground layer herbs. Geophytic and other, less apparent plant species only become evident when they emerge and produce flowers. Seasonal conditions may further influence the ecological community as its appearance can vary markedly between long-term drought and a season with good rainfall.		CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Ecological community unlikely to occur
<i>Natural Temperate Grassland of the Victorian Volcanic Plain</i>	This ecological community can vary greatly depending on the time of year and the history of the site, such as intensity of grazing and recent fire history. The native		CE		MNES			Nil/Absent	No records within locality and no suitable habitat	No Ecological

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
		grasses that usually dominate are kangaroo-grass (<i>Themeda triandra</i>), wallaby-grasses (<i>Austrodanthonia</i> species), spear-grasses (<i>Austrostipa</i> species) or tussock-grasses (<i>Poa</i> species). Wildflowers and herbs grow among the tussocks, including daisies, lilies, peas, and orchids.							present within study area	community unlikely to occur
<i>Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains</i>		The ecological community described in this assessment covers elements from both nominations. The name of the national ecological community is: Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains. The name reflects that these wetlands are characterised by a particular hydrology, geographical position, and vegetation structure. These are isolated, freshwater wetlands that are usually inundated on a seasonal basis through rainfall, then dry out, so surface water is not permanently present. They occur on the lowland plains of temperate south-eastern Australia and have a vegetation structure that is open, i.e., woody cover is absent to sparse, and the ground layer is dominated by herbs (grasses, sedges, and forbs) adapted to seasonally wet or waterlogged conditions.	CE		MNES			Present	Permanent water sources on site and does not fit the characteristics	No Ecological community unlikely to occur
<i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>		This ecological community can occur as either a woodland or a derived grassland (a grassy woodland from which the trees have been removed). It has a ground layer of native tussock grasses and herbs, and a sparse, scattered shrub layer. White Box (<i>E. melliodora</i>) or Blakeley's Red Gum (<i>E. blakelyi</i>) dominate the ecological community, where a tree layer still occurs, with other trees species co-occurring with these dominant species.	CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Ecological community unlikely to occur

B.2 Threatened Fauna

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
Amphibians										
<i>Litoria raniformis</i>	Growling Grass Frog	Emergent vegetation in or at the edges of still or slow-flowing water bodies such as lagoons, swamps, lakes, ponds, and farm dams. Submerged vegetation is an important provider of egg-laying sites, calling stages, and food/shelter for tadpoles. Large and relatively permanent waterbodies with a high proportion of emergent vegetation cover are more likely to be occupied.	V	V	VBA/MNES	9	19/11/2018	Low-Moderate	Recorded within locality and some suitable habitat present	No No aquatic habitat to be impacted
<i>Pseudophryne bibronii</i>	Brown Toadlet	Utilises dry forests, woodland, shrubland, grassland, coastal swamps, heathland, and sub-alpine areas. They live in areas that are likely to be inundated after rain. They shelter in damp areas under leaf litter, logs, or other forms of cover. Eggs are deposited terrestrially either under moist leaf litter, in sphagnum moss, or under stones or logs, near water. (ref. SWIFFT.net.au)	E	E	VBA/MNES	3	18/05/1962	Low	Historic record within locality and some suitable habitat present. Unlikely to be present as it is an old record	No Species unlikely to occur
Birds										
<i>Antigone rubicunda</i>	Brolga	During the breeding period between July to December the main habitat is freshwater meadows or shallow freshwater marshes, although they have been known to nest in deep freshwater marshes and in the shallows of permanent open water in association with vegetation. During the non-breeding period from late December to early May habitat comprises deep freshwater marshes, vegetated areas in permanent open water and feeding areas in pasture, seed, and stubble crops. (ref. SWIFFT.net.au)	E	E	VBA/MNES	54	15/11/2020	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Ardeotis australis</i>	Australian Bustard	The habitat favoured by the species is open grasslands, perhaps with some trees, spinifex plains and low shrublands. This bustard will enter denser areas of vegetation after fire and is observed on artificial cleared areas such as golf courses and farmland.	CE	CE	VBA/MNES	1	23/06/1876	Low	Historic record present within locality however, no suitable habitat present	No Species unlikely to occur
<i>Aythya australis</i>	Hardhead	Hardheads are found in freshwater swamps and wetlands and occasionally in sheltered estuaries. They are rarely seen on land and tend to roost on low branches and stumps near the water. They prefer deep, fresh open water and densely vegetated wetlands for breeding.	V	V	VBA/MNES	8	27/07/2020	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Biziura lobata</i>	Musk duck	Musk Ducks tend to be found in deep freshwater lagoons, with dense reed beds. They are normally seen singly or in pairs but may form medium to large groups in the winter. Flight usually takes place at night. The birds' bulky size means a	V	V	VBA	9	3/02/2001	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
		large distance is required for take-off, and the landing is often quite clumsy.								occur
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Freshwater wetlands and swamps with tall reeds or sedges. Occasionally in brackish wetlands.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	During summer, the Gang-gang Cockatoo is found in tall mountain forests and woodlands, with dense shrubby understoreys. In winter, Gang-gangs will move to lower altitudes into drier, more open forests and woodlands. At this time, they may be seen by roadsides and in parks and gardens of urban areas. They require tall trees for nest hollows.	E		VBA/MNES	1	27/08/1980	Low	Historic record present within locality however, no suitable habitat present	No Species unlikely to occur
<i>Falco hypoleucos</i>	Grey Falcon	Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey. Like other falcons it utilises old nests of other birds of prey and ravens, usually high in a living eucalypt near water or a watercourse.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Falco subniger</i>	Black Falcon	The Black Falcon is found along tree-lined watercourses and in isolated woodlands, mainly in arid and semi-arid areas. It roosts in trees at night and often on power poles by day.	CE	CE	VBA/MNES	2	28/11/2011	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Grantiella picta</i>	Painted Honeyeater	Found predominantly in woodlands and forests which contain <i>Eucalyptus</i> and <i>Acacia</i> species, their movement is not completely understood but has been connected to the presence of mistletoe and the role of that plant as a food source. Their migration south-north is believed to be because of mistletoe berry availability at certain times of the year.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Hieraaetus morphnoides</i>	Little Eagle	Coastal forest, woodland, open scrub, tree-lined watercourses of the interior. It tends to avoid rainforest and heavy forest.	V	V	VBA/MNES	2	26/10/2018	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Pedionomus torquatus</i>	Plains-wanderer	the preferred habitat of the Plains-wanderer consists of hard, red-brown soils with sparse native vegetation: a mosaic of grasses and herbs (40%), leaf litter (10%) and bare ground (50%). Grasses rarely exceeds 30cm in height, with the majority (94%) reaching less than 10cm, allowing for easy movement and	CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
		foraging for seeds and ground-dwelling insects. However, some taller growth is essential for concealment from predators. Low crops and cereal stubble occasionally offer temporary shelter.								occur
<i>Oxyura australis</i>	Blue-billed Duck	The Blue-billed Duck inhabits fresh to saline, deep permanent open wetlands, and deep, densely vegetated lakes. During the breeding season (November - March) there is a tendency to disperse to deep freshwater wetlands that have abundant aquatic and emergent vegetation although many birds remain on large wetlands.	V	V	VBA/MNES	1	29/05/1992	Low	Historic record present within locality however, no suitable habitat present	No Species unlikely to occur
<i>Spatula rhynchotis</i>	Australasian Shoveler	A migratory species that moves between Australia and New Zealand. Mating will occur in New Zealand as early as August, though nesting rarely happens until at least October. It lives in heavily vegetated swamps. They occur in southwestern and south-eastern Australia, Tasmania, and New Zealand.	V	V	VBA/MNES	8	28/11/2011	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
Fish										
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias, Dwarf Galaxias	Frequently found among vegetation along the edge of still or slow-running waters like swamps, drainage ditches and backwaters of creeks. Adults live in both ephemeral and permanent habitats. A short-lived fish, reaching maturity in the first year of life and perishing shortly after spawning. Fish occupying ephemeral water possibly aestivate or shelter in crayfish burrows when surface water evaporates during summer.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Nannoperca obscura</i>	Yarra Pygmy Perch	Inhabits streams and small lakes; prefers flowing water with abundant cover in the form of aquatic vegetation. Occurs in creeks and lakes, usually among aquatic weeds.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Prototroctes maraena</i>	Australian Grayling	Inhabits creeks and rivers, usually in cool, clear waters over gravel bottoms in sections alternating between pools and rapids.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
Mammals										
<i>Antechinus minimus maritimus</i>	Swamp Antechinus	Swamp Antechinus habitat is typically wet heath, heathy woodland, sedgeland and dense tussock grassland, rarely above 200m. It was found that although Swamp Antechinus (SE mainland) were found in a variety of vegetation communities with different dominant floristic groups these communities had a	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
		consistently high percentage of understorey cover across them. The spatial distribution of these communities is thought to be important for the preservation and dispersal of the species and the species is considered a habitat specialist at the microhabitat level, preferring dense, closed heathland.								
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll	The Spot-tailed Quoll occupies a range of forest habitats, particularly wet eucalypt forests associated with rocky outcrops, extensive riparian vegetation and high levels of ground dwelling prey. They have a large home range more than 580ha but could be up to 2200 hectares, which is influenced by the quality of habitat and availability of den sites. Den sites can be made in hollow logs, hollow trees, rock crevices and caves.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot	Woodland and forest with heath or shrub understorey, also coastal heath, and scrub. In Victoria, they are more common, being found along the whole length of the coast and at up to 1,000 m (3,300 ft) in the Grampian and Dandenong mountains.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Miniopterus Orianae bassanii</i>	Southern Bent-winged Bat (southern ssp.)	The Southern Bent-wing Bat is a cave-dependant bat with a limited distribution. It is only found in south-western Victoria and south-eastern South Australia in a limited number of caves with suitable microclimate.	CE	CE	VBA/MNES	8	31/03/2011	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)	The yellow-bellied glider inhabits forests and woodlands in eastern Australia and is found at a range of altitudes from sea level to 1400 metres. This species is dependent on a home range with a variety of eucalyptus species for feeding and hollow bearing trees for nesting.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Potorous tridactylus trisulcatus</i>	Long-nosed Potoroo (southern mainland)	The Long-nosed Potoroo inhabits coastal heaths and eucalypt forests generally on nutrient-poor sandy or light soils where there is dense groundcover that provides microhabitat for shelter and protection from introduced predators. Whilst dense groundcover is an essential component of Long-nosed Potoroo habitat it does not seem to favour any discrete floristic group, it does however utilise a range of both dense and more open vegetation within a home range.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	The Grey-headed Flying-fox is typically found near a permanent water source and exist in a range of habitats, including riparian forest, mangroves, urban, or suburban areas. Camps are often in gullies, near water, and in habitats with a dense tree cover and are likely to be found in parks.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
<i>Saccolaimus flaviventris</i>	Yellow-bellied, Sheathtail Bat	This species occupies most wooded habitats, including both wet and dry sclerophyll forest, mallee, and <i>Acacia</i> shrubland, desert, and open woodland. They are a hollow-roosting species, so tend to be found in proximity of adequate old-growth trees.	V	V	VBA/MNES	15	31/03/2011	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Sminthopsis crassicaudata</i>	Fat-tailed Dunnart	Fat-tailed dunnarts occupy a variety of open habitats, including open woodland, low shrublands and arid shrublands. Populations can also be found living in areas of agricultural land such as unimproved pasture, they have been found in old hay sheds, amongst rock piles and old logs. Cracking clay soils such as those found on the Volcanic Plain in western Victoria provide suitable habitat where animals can shelter and forage for food. (ref. SWIFFT.net.au)	V	V	VBA/MNES	3	04/10/2010	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
Reptiles										
<i>Delma impar</i>	Striped Legless Lizard	The Striped Legless Lizard lives predominantly in native grasslands dominated by tussock forming grasses such as Kangaroo Grass <i>Themeda triandra</i> or Spear Grass <i>Stipa</i> spp. and is mostly found on the Victorian Volcanic Plains. It has been found it in areas consisting of exotic grasses such as Phalaris, Serrated Tussock, and pasture grasses but it is unknown how long it can persist in these exotic habitats. It shelters in soil cracks, in crevices under rocks, or in the base of grass tussocks.	V	E	VBA/MNES	12	15/11/2013	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Pseudemoia pagenstecheri</i>	Tussock Skink	Among medium to long grass tussocks in open grasslands where trees are absent or sparse.	E	E	VBA/MNES	30	01/10/2013	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
Migratory Species										
<i>Calidris ferruginea</i>	Curlew Sandpiper	Inhabits and forages on intertidal mudflats such as estuaries, bays, inlets and lagoons, and around non-tidal swamps, lakes, and lagoons near the coast. Roosts on bare dry shingle, shell, or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands.	CE	CE	VBA/MNES	2	05/02/1988	Low	Two recorded within the locality however no suitable habitat for this species present within study area	No Species unlikely to occur
<i>Hirundapus caudacutus</i>	White-throated Needletail	Migratory and usually seen in eastern Australia from October to April. Breeds in forests in south-eastern Siberia, Mongolia, the Korean Peninsula, and northern Japan June-August. Most often seen in eastern Australia before storms, low pressure troughs and approaching cold fronts and occasionally bushfire. These conditions are often used by insects to swarm (e.g., termites and ants) or tend to	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
		lift insects away from the surface which favours sighting of White-throated Needletails as they feed. More common in coastal areas, less so inland.								
<i>Lathamus discolor</i>	Swift Parrot	Swift Parrots spend most of the year in Tasmania and have been recorded there from August to April, the main breeding season being from October – December. Migration across Bass Strait can commence anytime from late February onwards. Records suggest the birds make the Bass Strait crossing in small flocks during daylight hours without stopping, a journey which could take about five hours. By May the Swift Parrot is distributed mainly in Victoria and to a lesser extent New South Wales and sometimes southern Queensland where they remain until mid-August to September when they begin their return journey back to breeding areas in Tasmania. Whilst in Victoria, the over-wintering habitat of the Swift Parrot is eucalypt forests and woodlands, particularly the box ironbark woodlands of central Victoria. Areas used by Swift Parrots can change differently from one year to the next and small remnant patches down to 10 ha can become significant elements in the landscape for the over-wintering	CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	Coastal mudflats and estuaries.	CE		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Rostratula australis</i> as <i>Rostratula benghalensis</i> (sensu lato)	Australian Painted Snipe	The Australian Painted Snipe is endemic to Australia, though its distribution is patchy and its presence in any area is unpredictable. A previous stronghold was the Riverina. It frequents shallow, freshwater wetlands with a thick cover of low vegetation, disappearing when conditions become unsuitable.	E		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur
<i>Tringa nebularia</i>	Common Greenshank	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves, or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats, and rock platforms. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes, and inundated floodplains, claypans and salt flats. It will also use artificial wetlands, including sewage farms and saltworks dams, inundated rice crops and bores.	E	E	VBA/MNES	6	15/12/2010	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
Invertebrates										

Scientific Name	Common Name	Habitat	EPBC Status	FFG Status	VBA / MNES	Total Count	Most recent survey date	Likelihood of Occurrence	Reasoning	Potential Impact
<i>Engaeus sericatus</i>	Hairy Burrowing Crayfish	These crayfish are considered terrestrial crayfish, living most of their lives on the land in a labyrinth of underground burrows. They make their presence known by their architectural prowess, building soil chimneys that stand like earthen totem poles surrounding the entrance to their burrows.	V	V	VBA/MNES	1	01/01/2008	Low	Records within locality however, no suitable habitat present within study area	No Species unlikely to occur
<i>Synemon plana</i>	Golden Sun Moth	The Golden Sun Moth occurs in native grasslands dominated by species from the genus <i>Rytidosperma</i> (formerly <i>Austrodanthonia</i>) Wallaby Grass, in particular <i>Rytidosperma carphoides</i> , <i>R. auriculata</i> , <i>R. eriantha</i> , and <i>R. setacea</i> . These plants are found on a range of soil types in a variety of environmental conditions.	V		MNES			Nil/Absent	No records within locality and no suitable habitat present within study area	No Species unlikely to occur

Appendix C MNES PMST search results



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 01-Mar-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	40
Listed Migratory Species:	12

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	8
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[Resource Information]

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

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	Critically Endangered	Community known to occur within area	In feature area
Natural Temperate Grassland of the Victorian Volcanic Plain	Critically Endangered	Community likely to occur within area	In feature area
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	Critically Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area	In buffer area only

Listed Threatened Species

[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
FISH			
Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat known to occur within area	In feature area
Nannoperca obscura Yarra Pygmy Perch [26177]	Vulnerable	Species or species habitat may occur within area	In feature area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat known to occur within area	In feature area
FROG			
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat known to occur within area	In feature area
INSECT			
Synemon plana Golden Sun Moth [25234]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
MAMMAL			
Antechinus minimus maritimus			
Swamp Antechinus (mainland) [83086]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Isoodon obesulus obesulus			
Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat may occur within area	In feature area
Miniopterus orianae bassanii			
Southern Bent-wing Bat [87645]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Potorous tridactylus trisulcatus			
Long-nosed Potoroo (southern mainland) [86367]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
PLANT			
Amphibromus fluitans			
River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area	In feature area
Dianella amoena			
Matted Flax-lily [64886]	Endangered	Species or species habitat may occur within area	In buffer area only
Dodonaea procumbens			
Trailing Hop-bush [12149]	Vulnerable	Species or species habitat may occur within area	In feature area
Glycine latrobeana			
Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lachnagrostis adamsonii Adamson's Blown-grass, Adamson's Blowngrass [76211]	Endangered	Species or species habitat likely to occur within area	In feature area
Lepidium aschersonii Spiny Pepper-cress [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
Leucochrysum albicans subsp. tricolor Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat may occur within area	In buffer area only
Pimelea spinescens subsp. spinescens Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea [21980]	Critically Endangered	Species or species habitat may occur within area	In feature area
Poa sallacustris Salt-lake Tussock-grass [24424]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat may occur within area	In feature area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat may occur within area	In feature area
Rutidosis leptorhynchoides Button Wrinklewort [67251]	Endangered	Species or species habitat likely to occur within area	In feature area
Senecio macrocarpus Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat may occur within area	In feature area
Senecio psilocarpus Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thelymitra epipactoides Metallic Sun-orchid [11896]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thelymitra matthewsii Spiral Sun-orchid [4168]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Delma impar Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]		Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]		Species or species habitat likely to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

Regional Forest Agreements	[Resource Information]
----------------------------	--

Note that all areas with completed RFAs have been included.

RFA Name	State	Buffer Status
West Victoria RFA	Victoria	In feature area

EPBC Act Referrals	[Resource Information]
--------------------	--

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Hexham Wind Farm	2022/09287		Assessment	In buffer area only

Controlled action				
Dundonnell Wind Farm, VIC	2012/6557	Controlled Action	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Mt Fyans Wind Farm	2019/8589	Controlled Action	Assessment Approach	In feature area
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Victorian Generator Project	2005/1984	Not Controlled Action	Completed	In feature area
Water pipelines, Mortlake Power Station	2006/2881	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

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

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

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

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

[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

Appendix D Guidelines for managing the endangered Growling Grass Frog in Urbanising landscapes – Aquatic vegetation cover

Guidelines for managing the endangered Growling Grass Frog in urbanising landscapes

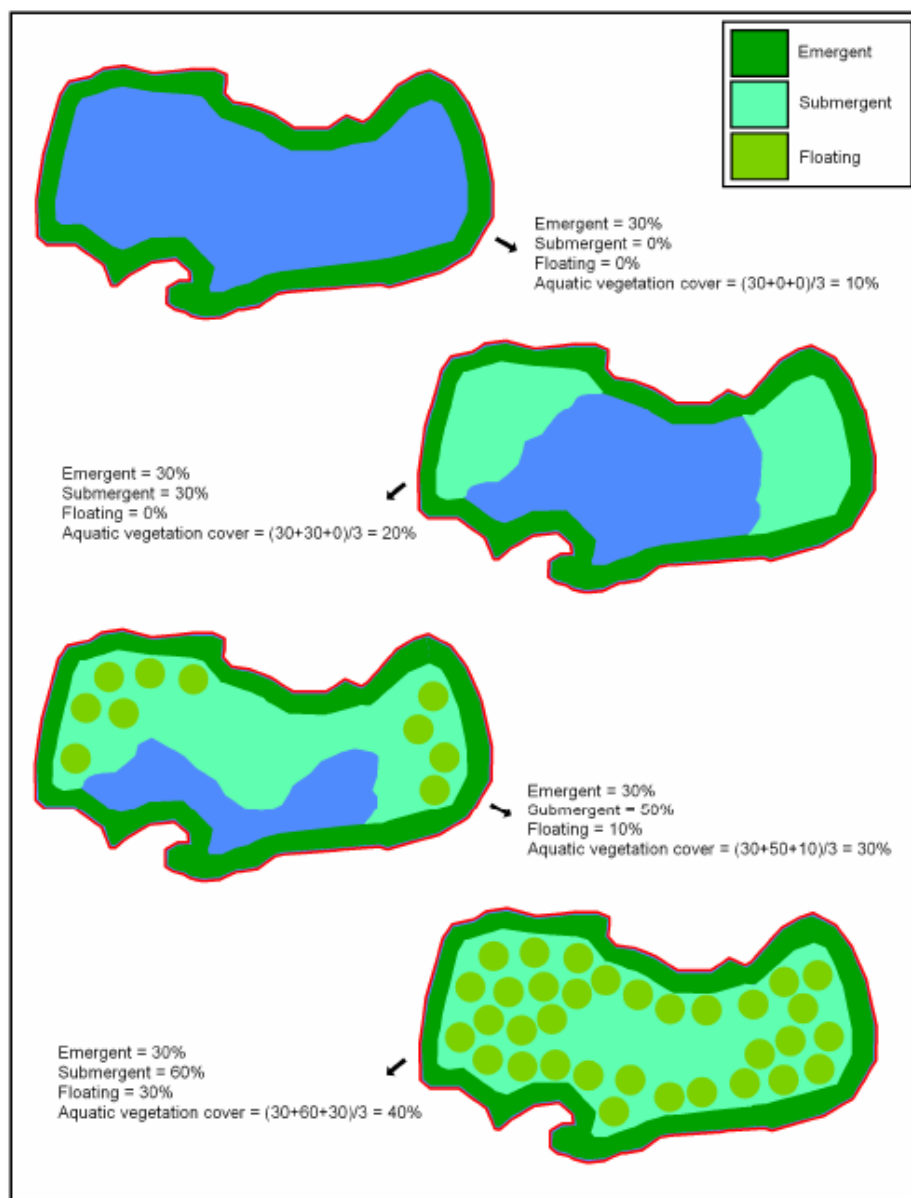


Figure 6. Diagram of wetlands with increasingly favourable aquatic vegetation cover for *Litoria raniformis*. Aquatic vegetation cover is the mean cover of emergent, submergent and floating vegetation, where each may range between 0–100% (see Table 1). Table 1 also provides definitions of each vegetation type. The Appendix provides a list of plant species that are characteristic of each vegetation type.

Appendix E Habitat monitoring for Growling Grass Frog

E.1 Habitat monitoring data for Growling Grass Frog.

Dam 1 – North		
Aquatic vegetation		
Habitat measurement	Percentage	Detail
Emergent vegetation cover	15	Dominant species <i>Eleocharis acuta</i>
Floating vegetation cover	15	Dominant species Algae and <i>Potamogeton tricarinatus</i>
Submergent vegetation cover	15	Dominant species <i>Potamogeton ochreatus</i> and algae
Total aquatic vegetation cover (average)	15	
Terrestrial vegetation (fringing vegetation within 5m of waterbody edge)		
Habitat measurement	Percentage	Detail
Grass cover	80	<i>Eleocharis acuta</i> , <i>Juncus flavidus</i> , exotic pasture grasses
Shrub cover	0	Absent
Rock/Log cover	<1	One small log, 1m in length. No rocks.
Water quality		
Measurement	Results	
Time of measurement	8:51pm, 21/02/2023	

Dam 1 – North		
Dissolved oxygen	9.13 mg/L	
Oxidation reduction potential	95.1 mV	
Temperature	25.3°C	
Copper Testing (Cu) (hardness)	611 micro-Siemens/cm	
pH	7.4	
Dam 2 – South		
Aquatic vegetation		
Habitat measurement	Percentage	Detail
Emergent vegetation cover	10	Dominant species <i>Eleocharis acuta</i> , Joyweed (<i>Alternanthera denticulata</i>), <i>Typha orientalis</i> , <i>Juncus flavidus</i> , <i>Cyperus eragrostis</i>
Floating vegetation cover	30	Dominant species Algae and <i>Potamogeton tricarinatus</i> ,
Submergent vegetation cover	15	Dominant species <i>Potamogeton ochreatus</i> and algae
Total aquatic vegetation cover (average)	18.33	
Terrestrial vegetation (fringing vegetation within 5m of waterbody edge)		
Habitat measurement	Percentage	Detail
Grass cover	60	<i>Juncus flavidus</i> , exotic pasture grasses
Shrub cover	0	Absent

Dam 1 – North		
Rock/Log cover	<1	No logs, some small bare ground patches with small basalt rock flecking
Water quality		
Measurement	Results	
Time of measurement	8:30pm +22/02/2023	
Dissolved oxygen	10.49 mg/L	
Oxidation reduction potential	104.1 mV	
Temperature	24.2°C	
Copper Testing (Cu) (hardness)	367.5 micro-Siemens/cm	
pH	7.57	

E.2 Survey data sheets

Frog survey data sheets.

Site/Location	Dam 2 – South – Mortlake terminal Station								
Date	21/2/2023		Assessors		DB/JH	GPS Datum	GDA 94 VicGrid		
Start time	21:45				End time		22:15		
Weather conditions at start of survey									
Air temperature °C	16	Water temperature °C	24.2	Wind Km/h	3.8	Cloud cover (%)	0	Humidity (%)	60.5
Weather conditions at end of survey									
Air temperature °C	16.3	Water temperature °C	24.5	Wind Km/h	1.3	Cloud cover (%)	0	Humidity (%)	49.3
Growling Grass Frog Records									
GPS waypoint	Male/Female		Life history stage (juv, ad, sub-ad)		Observer	Time	Notes		
							None identified		
Other species									
Common name	Scientific Name						Abundance		
Southern Tree Frog	<i>Litoria ewingii</i>						50+		
Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>						30+		
Pobblebonk/ Eastern Banjo Frog	<i>Limnodynastes dumerilii</i>						1+		
Striped March Frog	<i>Limnodynastes peronii</i>						5+		
Clicking Froglet	<i>Crinia signifera</i>						5+		
Common Yabby	<i>Cherax destructor</i>						1+		
Eastern Gambusia	<i>Gambusia holbrooki</i>						50+		
Site/Location	Dam 2 – South – Mortlake terminal Station								
Date	22/2/2023		Assessors		DB/JH	GPS Datum	GDA 94 VicGrid		
Start time	21:44				End time		22:14		
Weather conditions at start of survey									
Air temperature °C	22	Water temperature °C	24.2	Wind Km/h	2.9	Cloud cover (%)	20	Humidity (%)	57
Weather conditions at end of survey									
Air temperature °C	22.8	Water temperature °C	24	Wind Km/h	3	Cloud cover (%)	0	Humidity (%)	57.2
Growling Grass Frog Records									
GPS waypoint	Male/Female		Life history		Observer	Time	Notes		

Site/Location			Dam 2 – South – Mortlake terminal Station						
				stage (juv, ad, sub-ad)					
								None identified	
Other species									
Common name		Scientific Name					Abundance		
Southern Tree Frog		Litoria ewingii					50+		
Striped March Frog		Limnodynastes peronii					5+		
Beeping Froglet		Crinia parainsignifera					5+		
Date	21/2/2023		Assessors		DB/JH	GPS Datum	GDA 94 VicGrid		
Start time		21:05			End time		21:36		
Weather conditions at start of survey									
Air temperature °C	15.2	Water temperature °C	24.5	Wind Km/h	3.6	Cloud cover (%)	10	Humidity (%)	58.4
Weather conditions at end of survey									
Air temperature °C	16	Water temperature °C	24	Wind Km/h	1.2	Cloud cover (%)	0	Humidity (%)	54.7
Growling Grass Frog Records									
GPS waypoint		Male/Female		Life history stage (juv, ad, sub-ad)		Observer	Time	Notes	
								None identified	
Other species									
Common name		Scientific Name					Abundance		
Southern Tree Frog		Litoria ewingii					50+		
Pobblebonk/ Eastern Banjo Frog		Limnodynastes dumerilii					1+		
Clicking Froglet		Crinia signifera					5+		
Site/Location			Dam 1 – North – Mortlake terminal Station						
Date	22/2/2023		Assessors		DB/JH	GPS Datum	GDA 94 VicGrid		
Start time		8:45pm			End time		9:15pm		
Weather conditions at start of survey									
Air temperature °C	23.5	Water temperature °C	25.3	Wind Km/h	6.4	Cloud cover (%)	50	Humidity (%)	47.8
Weather conditions at end of survey									
Air temperature °C	23	Water temperature °C	25.3	Wind Km/h	5.9	Cloud cover (%)	10	Humidity (%)	54.2

Site/Location					
Dam 2 – South – Mortlake terminal Station					
Growling Grass Frog Records					
GPS waypoint	Male/Female	Life history stage (juv, ad, sub-ad)	Observer	Time	Notes
					None identified
Other species					
Common name	Scientific Name			Abundance	
Southern Tree Frog	<i>Litoria ewingii</i>			50+	
Striped March Frog	<i>Limnodynastes peronii</i>			15+	



Appendix D – Letter of Advice – Aboriginal Cultural Heritage



JEM ARCHAEOLOGY

Moyne Shire Council
attn: Planning Department
PO Box 51, Princes Street
Port Fairy VIC 3284

4 March 2023

To whom it may concern,

RE: Planning Permit Application for Proposed Utility Installation, 1154 Connnewarren Lane, Mortlake - Matters relating to the *Aboriginal Heritage Act 2006*

Beca Pty Ltd, on behalf of AusNet Services, has requested Jem Archaeology Pty Ltd to provide you with clarification regarding the legislative requirements under the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018* for a proposed utility installation at 1154 Connnewarren Lane, Mortlake (hereafter referred to as the 'activity area').

Under the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018*, the preparation of a Cultural Heritage Management Plan (CHMP) is mandatory for any project in which the proposed activity is a high impact activity, and the activity area is situated within a mapped area of cultural heritage sensitivity.

The activity area is approximately 65ha in size and comprises land contained within 1154 Connnewarren Lane, Mortlake (Figure 1). The activity area is located approximately 1.1km south of Hopkins River and is bounded by Connnewarren Lane to the south and private properties to the north, east and west. The activity area comprises the Mortlake Power Station and associated infrastructure in the centre and service roads to the southwest and southeast, surrounded by cleared land and minimal vegetation.

It is my understanding that the applicant is proposing to conduct upgrade works to the switchyard and transmission infrastructure at the existing power station. Under the *Aboriginal Heritage Regulations 2018*, the proposed activity is considered to be a high impact activity, specifically as it involves the construction or carrying out of works for a utility installation affecting an area greater than 25m² (r.46[xxvii][d]).

Under the *Aboriginal Heritage Regulations 2018*, the activity area is *not* located within a mapped area of Aboriginal cultural heritage sensitivity (Figure 1).

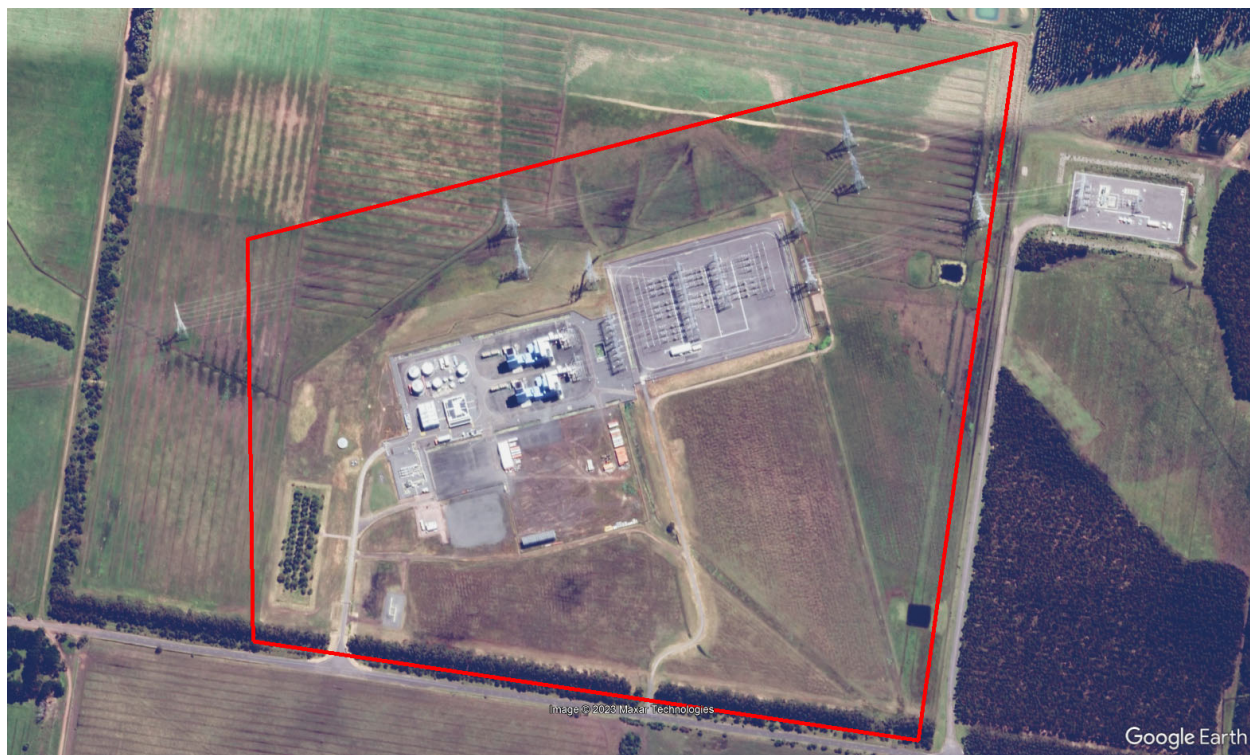


Figure 1: Satellite image dated to 3 December 2022. Activity area shown in red (Google and Maxar Technologies 2023).

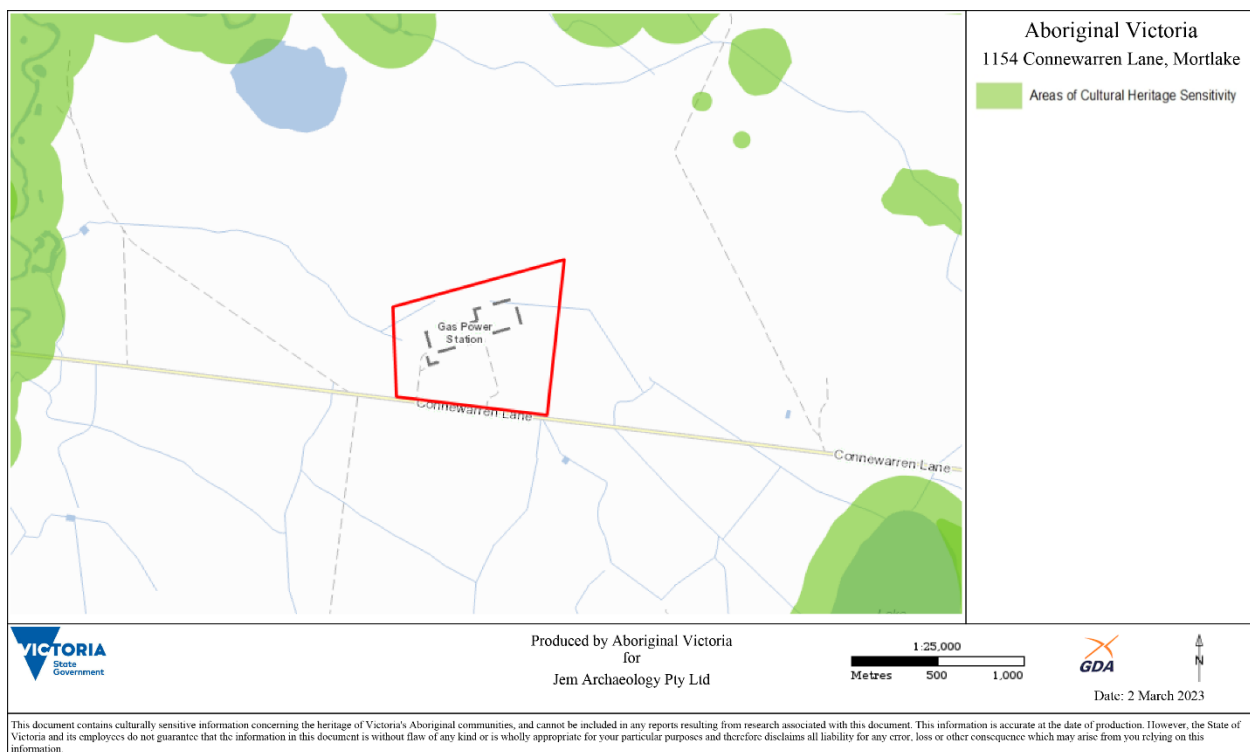


Figure 2: Activity area shown in red, and area of mapped cultural heritage sensitivity highlighted in green. Note the absences of areas of sensitivity within the activity area.

The proposed activity is considered a high impact activity under the *Aboriginal Heritage Regulations 2018*, however the activity area is not situated within an area of cultural heritage sensitivity. Therefore, there is no requirement under the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018* for a CHMP to be prepared for this project.

Should you wish to discuss this matter further, please do not hesitate to contact me directly.

[REDACTED]

[REDACTED]

[REDACTED])

Director/Archaeologist/Heritage Advisor
Jem Archaeology Pty Ltd

