ABZECO
Applied Botany, Zoology & Ecological Consulting

245 Distillery Creek Road, Aireys Inlet

Environment Protection & Biodiversity Conservation Act 1999 (2022/09343)

Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) Offset Management Plan

Report for GHD

Project: 23039, Version 1.9

12 March 2026

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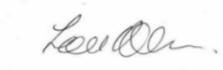
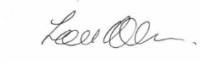
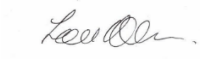
Contents

Glossary

Term	Definition
CaLP Act	*Conservation and Land Protection Act 1994*
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEECA	Department of Energy, Environment and Climate Action
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1988*
FFG Act	*Flora and Fauna Guarantee Act 1988*
HHa	Habitat Hectare
MNES	Matters of National Environmental Significance
NVCR	Native Vegetation Credit Register
NVOR	Native Vegetation Offset Register
OMP	Offset Management Plan
PD	Preliminary documentation (supplied to DCCEEW to inform the assessment and approvals process for a controlled action)
PMST	Protected Matters Search Tool
PV	Parks Victoria
Section 69 Agreement	A landowner agreement under Section 69 of the *Conservation, Forests and Lands Act 1987* that is signed by the landowner and the secretary to DEECA to secure an offset site on title.
VBA	Victorian Biodiversity Atlas
VQA	Vegetation Quality Assessment

Version Control

Version	Responsibility	Name	Date	Signature
1.0	Primary author	Louise Rodda	20/06/2023	
1.0	Author	Kylie Payze	5/06/2023	
1.0	Advice and internal review	David De Angelis	23/06/2023	
1.1	Text updates	Louise Rodda	23/06/23	
1.2	Update impact area extent	Louise Rodda	31/08/2023	
1.3	Minor text updates	Louise Rodda	14/09/2023	

Version	Responsibility	Name	Date	Signature
1.4	Addition of declaration information from Barwon Water, updated LnP species name, updated photos	Louise Rodda	27/02/24	
1.5	Inclusion of EPBC approval information and DEECA offset site number	Louise Rodda	09/04/2024	
1.6	Minor updates: Figure 2 (labels), Executive summary, Objectives, Appendix 2, Section 5.3.2, (text) and Attach 1, photo order	Louise Rodda	13/09/2024	
1.7	Updated site area (ha) in line with updated surveyed Title Plan	Louise Rodda	02/02/2026	
1.8	Updates to address client comments	Louise Rodda	10/03/26	
1.9	Updates to address client comments	Louise Rodda	12/03/26	

Cover photo: Heathy Woodland providing habitat for the Long-nosed Potoroo *Potorous tridactylus trisulcatus* (SE Mainland), 245 Distillery Creek Road, Aireys Inlet

Acknowledgements

Abzeco would like to acknowledge the following people for their assistance with this project:

- Lana Griffin – GHD, Senior Environmental Engineer – Planning and Approvals
- Jess Lamb – GHD, Senior Botanist/Project Manager.
- Craig Grabham – GHD, Senior Ecologist.
- Zoe Jellie – GHD, Flora Team Leader, Senior Botanist, Ecological Science Group, Women in GHD Chair, Victoria.
- Nathan Stones – Barwon Water, Senior Project Manager (until July 2025).
- Giles Flower – Barwon Water, Senior Approvals and Environmental Advisor – (Project Manager from July 2025).
- Clare Miller – Parks Victoria, Ranger West Coast District, Otway Ark Program, Project Officer.
- Aaron Ledden – Parks Victoria, Ranger in Charge, Fire and Emergency, West Coast.
- Michael Mackenzie – Parks Victoria, Regional Project Coordinator, Wild Otways.
- Andrew Murray – Department of Energy, Environment and Climate Action, Southern Ark Operations Manager.
- Carlie Bronk – Parks Victoria, West Region Deer Program Coordinator.
- Trevor Wood – Gallagher Fencing, Territory Manager, Southern Victoria.

Nomenclature and taxonomy

Plant taxonomy and the use of common names of vascular plants and mosses follow the online Victorian Biodiversity Atlas (VBA) (DEECA 2023a) and the Flora of Victoria online (VicFlora 2023). Where names differ between these sources, the VBA naming protocol is followed. Plant names include common name followed by the scientific name (in italics) when first mentioned in the text and thereafter referred to by the common name.

The use of scientific and common names for fauna follows the latest treatments for threatened species under state and federal legislation, and the latest taxonomic treatment (accepted by most taxonomic authorities) published in the peer-reviewed literature.

Plant origin follows the VBA. Where an asterisk (*) precedes a plant or animal name, it signifies non-native taxa, those species that have been introduced to Australia. A hash (#) is used to denote Australian (including Victorian) native plant or animal species that are not indigenous to the locality and may have the potential to become invasive.

Conservation status

Species conservation status is allocated in accordance with the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act).

Approval information

Approval holder/CAN	Colac Otway Shire Council
Proposed approved action	The removal of a MNES 7.81 ha of Long-nosed Potoroo *Potorous tridactylus trisulcatus* habitat associated with the Colac (water supply) Pipeline Upgrade Project
Location of action	Between the West Gellibrand and Olangolah Reservoirs, and Colac
EPBC approval conditions and key commitments related to this EPBC offset management plan.	To compensate for the residual significant impact of the Action on Long-nosed Potoroo (LnP), the approval holder must secure the LNP Offset site within 6 months of the commencement of the Action. The approval holder must ensure the LNP Offset remains secured at least until the expiry of this approval. The approval holder must not commence the Action unless the department has advised in writing that it has accepted a memorandum of understanding (MoU) that commits the relevant parties to secure the LNP Offset site. The approval holder must implement the 245 Distillery Creek Road, Aireys Inlet Offset Site Management Plan until the expiry date of this approval. See Notification of approval - Colac Pipeline Upgrade, Colac, VIC (EPBC ref 2022/09343) dated 17 January 2024 for further details on compliance, reporting and auditing.

Cover page

Item	**Details**
EPBC reference number	EPBC 2022/09343
Project name	Colac Pipeline Upgrade Sections 19,20,21,23 and 25(i)
Proponent/approval holder	Barwon Region Water Corporation
ACN/ABN	86 348 316 514
The proposed /approved action	To upgrade five sections of the existing pipeline totalling approximately 4.3 km, to provide the bulk water supply to Colac, Victoria [See EPBC Act referral 2002/09343 and request for variation of the proposed action dated 31 August 2023].
Location of the action	The northernmost point of the proposed action area is some 12 km south-southeast of Colac,

Item	Details
	Victoria, while the southernmost point is some 6 km west of Forrest. The sections of the existing Colac Pipeline that are to be replaced are in road reserve adjacent to the Otway Forest Park (approximately 1 km of pipeline) and in the Great Otway National Park (approximately 4 km of pipeline). The pipeline replacement works are proposed to occur across multiple parcels of mainly Crown Land. Specific street addresses are not available; however, the following locations may assist in map searching: • Pipeline Road, Barongarook VIC 3249 • Colac-Olangolah Pipeline Track, Kawarren VIC 3249 • Pipeline Road, Kawarren VIC 3249
Date of preparation of the environmental management plan	09/04/2024
Persons accepting responsibility for the environmental management plan	Nathan Stones Dr. Giles Flower

Providing false or misleading information to authorised officer etc.

(1) A person is guilty of an offence if the person:

(a) provides information or a document to another person (the recipient); and

(b) knows the recipient is:

(i) an authorised officer; or

(ii) the Minister; or

(iii) an employee or officer in the Department; or

(iv) a commissioner; performing a duty or carrying out a function under this Act or the regulations; and

(c) knows the information or document is false or misleading in a material particular.

(2) The offence is punishable on conviction by imprisonment for a term not more than 1 year, a fine not more than 60 penalty units, or both.

Note: Subsection 4B of the Crimes Act 1914 lets a court fine a body corporate up to 5 times the maximum amount the court could fine a person under this subsection.

Declaration of accuracy

In making this declaration, I am aware that section 491 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed Full name (please print)

Giles Eric Flower

Organisation (please print)

Barwon Region Water Corporation

Date

13 March 2026

Environmental management roles and responsibilities

Must include personnel responsible for undertaking the following roles for this project:

- Emergency contact.
- Reporting of environmental incidents and emergencies.
- Checking and keeping documented records of completion of site inductions, understanding and compliance with the OMP requirements.
- Monitoring results which exceed the trigger values for corrective action.
- Auditing compliance all personnel with this OMP requirements.
- Reporting non-compliance with approval conditions to the relevant authority.

Responsible personnel (Name and contact details)	**Title/position** (Including Barwon Water staff and subcontractors)	**Role/s**	**Responsibilities**
Nathan Stones 0448 500 520	Project Manager Enterprise Project Delivery, Barwon Water	Project Manager	Management of Contractors, project logistics, budget and timelines
Dr. Giles Flower	Senior Approvals	Project	Obtain Approvals, review

Responsible personnel (Name and contact details)	**Title/position** (Including Barwon Water staff and subcontractors)	**Role/s**	**Responsibilities**
0432 744 300	and Environment Adviser, Barwon Water	Environmental Adviser	and approval of contractor environmental documentation, including EMP, SEP, PRA etc, onsite environmental inspection and audit
Dr. Giles Flower 0432 744 300	Senior Approvals and Environment Adviser, Barwon Water	Project Environmental Adviser	Emergency contact
Dr. Giles Flower 0432 744 300	Senior Approvals and Environment Adviser, Barwon Water	Project Environmental Adviser	Reporting of environmental incidents and emergencies.
Dr. Giles Flower 0432 744 300	Senior Approvals and Environment Adviser, Barwon Water	Project Environmental Adviser	Checking and keeping documented records of completion of site inductions, understanding and compliance with the OMP requirements.
Dr. Giles Flower 0432 744 300	Senior Approvals and Environment Adviser, Barwon Water	Project Environmental Adviser	Monitoring results which exceed the trigger values for corrective action. Auditing compliance all personnel with this OMP requirements.
Dr. Giles Flower 0432 744 300	Senior Approvals and Environment Adviser, Barwon Water	Project Environmental Adviser	Reporting non-compliance with approval conditions to the relevant authority.

Offset site details

Site details	
Address of offset site	245 Distillery Creek Road, Aireys Inlet, Victoria 3231
Land tenure	Freehold
Landowner	Barwon Region Water Corporation
Area of credit site (ha)	29.4266 ha
Assessor details	
Site assessor	Louise Rodda and Kylie Payze
Date of Assessment	2-4 May 2023
Details of the Land	
Parcel SPI	12M\PP2015
Parish	ANGAHOOK
Local Government Area	Surf Coast Shire
Catchment Management Authority	Corangamite Catchment Management Authority
Bioregion	Otway Plain
Planning scheme details	
Planning zones	Public Use Zone – Service and Utility (PUZ1)
Planning overlays	Bushfire Management Overlay (BMO)
Security mechanism	
Type of security agreement	Barwon Water have agreed to enter into a first party offset agreement with the Secretary to the Department of Energy, Environment and Climate Action (DEECA) under Section 69 of the *Conservation, Forests and Lands Act 1987* immediately upon signed approval of this Offset Management Plan by the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

Executive summary

Barwon Water are planning to upgrade the Colac water supply pipeline south Colac (the Colac Pipeline Upgrade project) (Colac Otway Shire Planning Permit No. PP259/2021-1). The works includes geotechnical investigations (now completed) and trenching works which will require the removal of approximately 7.81 ha of habitat for the Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) (LnP). LnP is listed as Vulnerable under the *Environmental Protection and Biodiversity Conservation* (EPBC) *Act 1999* and is protected under one of nine Matters of National Environmental Significance (MNES); 'nationally threatened species and ecological communities'.

Habitat for two other EPBC threatened fauna species Gang-gang Cockatoo (*Callocephalon fimbriatum*) and Yellow-bellied Glider (*Petaurus australis australis*) will also be impacted; the Offset Management Plan for these species is provided as a separate document.

As MNES are likely to be impacted, the project was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) which deemed that the project to be a controlled action as it would have a significant impact on MNES.

In addition to mitigation actions at the impact site, compensatory offsets (Environmental Offsets) are required to counterbalance the residual impacts on LnP. A potential Environmental Offset site for LnP was identified on a Barwon Water owned property at 245 Distillery Creek Road Aireys Inlet c. 43 km east of the impact site. The site is surrounded by the Great Otway National Park and Anglesea Heath. The 29.4266 ha site provides suitable LnP habitat and LnP was recorded onsite in March 2023.

Abzeco was commissioned by GHD on behalf of Barwon Water to prepare an Offset Management Plan (OMP) to protect, conserve and enhance habitat for LnP onsite to meet offset targets determined by the EPBC offsets guide. This OMP comprises part of the preliminary documentation submitted for the EPBC referral (EPBC Ref: 2019/8505) provided to DCCEEW for project assessment and approval.

Barwon Water have agreed to enter into a security Agreement with the Department of Energy, Environment and Climate Action (DEECA) under Section 69 of the *Conservation, Forest and Lands Act 1987* to permanently secure a first party environmental offset on title. This will require Barwon Water and any future landowners to meet all management commitments in the OMP.

The OMP includes management commitments, adaptive management, risk assessment and monitoring and reporting requirements to be completed to manage threats to LnP identified on site. The measures are specific, measurable, achievable relevant and time bound (SMART) and designed to enhance, protect and maintain habitat for both LnP and include:

- Management of illegal access (permanent track closure and interpretive signage);
- Control of high threat weeds;
- Control of pest animals;
- Track remediation and restoration (erosion management and revegetation);
- Maintaining appropriate fire regime;
- Management of Cinnamon Fungus *Phytophthora cinnamomi*;
- Removal of rubbish (old fencing material, general rubbish, and plastic water pipe); and

- Management of any new or emerging threats.

To provide environmental co-benefits, the monitoring results will be shared with Parks Victoria (PV) to assist with the management of LnP habitat and populations across the Great Otway National Park and Anglesea Heath.

1. Introduction

Abzeco was subcontracted by GHD on behalf of Barwon Water to undertake an offset site assessment and prepare a first party Offset Management Plan (OMP) for the nationally threatened Long-nosed Potoroo (*Potorous tridactylus trisulcatus)* (LnP) (South-East Mainland) listed as Vulnerable under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The offset site is required to address offset requirements for proposed impacts on 7.81 ha of LnP habitat that will result from planned upgrade works to the Colac water supply pipeline.

Environmental offsets are also required to address impacts on habitat for nationally threatened Gang-gang Cockatoo (*Callocephalon fimbriatum*) and Yellow-bellied Glider (*Petaurus australis australis*) which are listed as Endangered and Vulnerable respectively under the EPBC Act. The offset for those species is located on a different property and the OMP is provided in a separate document.

1.1 Background

Barwon Water plans to upgrade the Colac (water supply) Pipeline (the Colac Pipeline Upgrade project) and a planning permit has been issued by the Colac Otway Shire, Planning Permit No. PP259/2021-1.

As part of the planning approvals process, GHD undertook assessments of the impacts of the project on behalf of Barwon Water (GHD 2021). The results indicated that after considering all reasonable efforts to avoid and mitigate impacts, there will be significant residual impacts on protected matters including LnP, Gang-gang Cockatoo, and Yellow-bellied Glider.

As the proposed works may impact a matter of National Environmental Significance (MNES): 'nationally threatened species and ecological communities', the project was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) (EPBC referral No. 2022/09343).

The referral was considered by DCCEEW and on the 23rd of December 2022 it was deemed to be a 'controlled action' due to likely impacts on LnP (and Gang-gang Cockatoo and Yellow-bellied Glider) habitat. Discussions with DCCEEW indicate that an offset package will be required as a condition of approval for this project. Impacts on MNES must be offset in accordance with the EPBC Act offsets policy to compensate for the residual adverse impacts of the proposed action and the project must go through the assessment and approvals process.

Preliminary documentation (PD) that provides details of project impacts, mitigation measures planned at the impact site, calculations of offset requirements, the offset proposal and offset strategy need to be submitted to DCCEEW to inform the assessment and approvals process. This information is provided separately by GHD in the following documents:

- *Barwon Water Colac Pipeline Upgrade (W1426) Ecological Impacts* report (GHD 2021);
- *Proposed Offset Site, 245 Distillery Creek Road, Aireys Inlet: Target fauna and vegetation survey report* (GHD 2023); and
- Offsets assessment guide outputs (used to calculate offset site requirements).

The PD includes confirmation of the suitability of this offset site and appropriate management actions which are detailed in this OMP.

Barwon Water has identified a potential offset site on land they own at 245 Distillery Creek Road, Aireys Inlet. The site is located c. 43 km east of the proposed site of the controlled action. GHD calculated that at least 29.355 ha would need to be offset on this property to meet 100% of the offset requirements. The available offset area on the property is 29.4266 ha, and this will meet 100.25% of the offset requirements. The site supports suitable habitat for LnP and targeted surveys undertaken in 2023 recorded LnP onsite (GHD 2023), so the site is considered a suitable environmental offset for LnP.

Barwon Water are willing enter into a landowner agreement with the Secretary to DEECA under Section 69 of the *Conservation, Forests and Lands Act 1987* (Section 69 Agreement) to secure the offset site on title. They have agreed to fund the establishment and management of the site for LnP and meet the minimum management commitments required by the Victorian Native Vegetation Offset Register (NVOR) (maintained by DEECA) to establish a first party environmental offset[1].

During the preparation of the Section 69 Landowner Agreement it was identified that the offset site was subject to Crown Grant land title conditions including 'that the land be used solely for the treatment and disposal of waste water' which would make the property ineligible as an offset site. Barwon Water consulted with the Department of Energy, Environment and Climate Action (DEECA) who administer the Section 69 Landowner Agreement and at their suggestion, went through the process of updating the land title to remove this condition and to include a condition allowing the establishment of an native vegetation offset site secured under a Section 69 Agreement. These title updates were completed on 30 July 2025. This work required the property to be re surveyed and the survey results identified that the property was slightly smaller than indicated on the original title plan. The offset site area calculations and mapping have been updated in Version 7 (this version) of the OMP to reflect this.

1.2 Objectives

The main objective of this OMP is to deliver ongoing protection and conservation of LnP at the proposed offset site.

To achieve this the OMP provides:

- An assessment and documentation of vegetation condition on site;
- Specific measurable achievable, relevant, time bound (SMART) environmental management goals/outcomes to be achieved in the first 10 years then maintained in perpetuity;
- A site security mechanism, management methods and timing;
- Identification of responsible personnel/organisations;
- A monitoring program that collects quantitative comparable data including monitoring methods, timing, evaluation, and reporting requirements; and

[1] First party offsets are offsets that are established on land owned by the landholder proposing to remove native vegetation. The alternative is third party offsets which are established on land owned by a third party.

- A risk assessment matrix and adaptive management responses to ensure the OMP achieves the targets and standards required by DCCEEW and NVOR.

2. Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland)

2.1 Description

Long-nosed Potoroo are small marsupial mammals that are related to Kangaroos. They have powerful hind limbs, long hind feet, and a short tail. They weigh 660-1600 gm, their combined head and body length ranges from 34-40 cm and tails range between 18-25 cm long. They have a prominent nose, short round ears and grey, brown fur with paler underbellies (DEPI 2013).

2.2 Habitat

The known distribution of LnP is extends along the southeast coast of Australia from Gladstone in Queensland to Mount Gambier in South Australia (DEPI 2013), including Tasmania, some Bass Strait Islands and some isolated populations in western Victoria (OEH 2017). Records indicate that LnP was historically more widespread than present day and now only occurs in patchy fragmented populations intersected by large areas of unsuitable habitat (TSSC 2019, DAWE 2022).

The LnP inhabits coastal heaths and wet to drier sclerophyll forests and requires a mosaic of dense understorey to provide cover and space for foraging (OEH 2017, DAWE 2022). Typical understorey structure includes a dense cover of Grass-trees, ferns, sedges, heaths, low tea-trees or melaleucas (OEH 2017). They often occur in gullies and near creeks which may provide refuge during drought or fire (DAWE 2022). Studies indicate that they require large forest patches of 20 ha or more (DAWE 2022).

Low growing dense understorey is considered essential as it provides cover and protection from predators (OEH 2017, TSSC 2019). The open areas are used by LnP to forage for their main food source which includes over 70 species of mycorrhizal fungi as well as insects and larvae, fruits, seeds, roots, flowers, leaves and tubers (OEH 2017, TSSC 2019). They forage by scent, digging small cylindrical pits in the soil that look like bandicoot diggings (DEPI 2013, OEH 2017, TSSC 2019, DAWE 2022). Sandy-loam soils are preferred in areas with a rainfall of >760 mm (DAWE 2022).

Long-nosed Potoroo play an important role in ecosystem functioning by turning over the soil which improves soil condition and water penetration and dispersing fungal spores (TSSC 2019, DAWE 2022). Mycorrhizae fungi form symbiotic relationships with plants, colonising root systems assisting plants with water and nutrient uptake from the soil in exchange for carbohydrates from the plant (DAWE 2022). Studies have shown that fire stimulates short term increased fungal fruiting bodies which are dispersed by fungus eating species such as LnP that may assist new seedling recruitment (DAWE 2022). Regrowth forests tend to have a lower diversity and abundance of fungi compared to long unburnt vegetation, suggesting disturbance history, fire age as well as soil moisture, climate (including climate change) and season are important variables that influence fungal community diversity and nutrient content (DAWE 2022).

The species is mainly nocturnal, feeding at night and sheltering in dense vegetation by day, although LnP will sometimes forage during the day in winter (OEH 2017, TSSC 2019).

The LnP home range is 0.19 km^2 for females and 1 km^2 for males and they are generally solitary (OEH 2017, DAWE 2022). They live for up to seven years and are sexually mature from one year of age (DAWE 2022). They breed in late winter to early spring and late summer and can breed up to three times a year producing a single offspring per litter (OEH 2017, DAWE 2022).

In the Otways region, LnP are found in Heathy Woodland, Lowland Forest and Wet Forest (DEPI 2013). The vegetation typically consists of a canopy of Messmate Stringybark *Eucalyptus obliqua*, Brown Stringybark *Eucalyptus baxteri*, Swamp Gum *Eucalyptus ovata* and/or Manna Gum *Eucalyptus viminalis* (Menkhorst 1995), with an understorey of grass-trees, sedges, ferns and/or thickets of *Melaleuca* and *Leptospermum* species (DEPI 2013).

2.3 Threats

The main threats impacting LnP include:

- Habitat loss caused by clearing for residential and agricultural development and habitat fragmentation resulting from urbanisation (OEH 2017, TSSC 2019);
- Predation by foxes, wild dogs, domestic dogs and cats (OEH 2017, TSSC 2019);
- Toxoplasmosis which is a disease spread by cats that cause disease and death of Potoroo species (DAWE 2022);
- Inappropriate fire regimes:
    - Frequent low intensity fires can increase LnP mortality from fire effects, reduce soil fungi and the density and diversity of understorey vegetation (refuge habitats) and increase predation by foxes, cats and wild dogs (OEH 2017, DAWE 2022);
    - Very long unburnt vegetation may thicken up, removing open areas required by LnP for foraging (DAWE 2022); and
    - The highest populations of LnP are associated with a fire free period of more than 20 years.
- Logging and other disturbances which impact the diversity and availability of soil fungi and ground cover (OEH 2017);
- Degradation of habitat by feral herbivores (TSSC 2019, DAWE 2022);
- *Phytophthora cinnamomi* (*Phytophthora*)[2] which is a soil borne pathogen that causes destruction of root systems preventing plants from taking up water and nutrients, causing the death of plants and underground fungi (TSSC 2019, DAWE 2022) also referred to as

[2] A study by Burgess et al. (2021) reported 45 species of *Phytophthora* in Victoria from 639 *Phytophthora* records across the state, 121 of which were *Phytophthora cinnamomi* (the largest number of records of any one species in the study). This species is the most reported due to extensive sampling in natural vegetation. It is known to occur in the Anglesea Heathlands and studies have found it to be widespread there (Wilson et al. 2000). While species identification requires microscopic examination of soil and root samples, given its known history in the area, *Phytophthora cinnamomi* is assumed to be the *Phytophthora* species present on site (also commonly known as Cinnamon Fungus).

dieback. It has caused irreversible changes to vegetation communities in Australia, particularly woodlands and forests (Cahill et al. 2008 in Burgess et al. 2021). It is readily spread in by infected plant material, soil and water (CoA 2014);

- Weeds which can outcompete native plants and alter soil nutrients affecting the density and structure of understorey vegetation, soil fungi, and food availability for LnP (DAWE 2022); and
- Altered rainfall and climate, in particular drought and increased temperatures, which can cause loss of understorey vegetation and underground fungi and increased risks of frequent and severe bushfires (TSSC 2019, DAWE 2022).

3. Impact site

Full details of the project relating to the impact area are provided by GHD in the PD including:

- Identification, location and quantification of the potential impacts;

A discussion of:

- The relevant impacts of the project;
- The nature and extent of the potential short-term and long-term effects; and
- Any uncertainties regarding predicted impacts.

The following impact site description is a summary of information supplied to Abzeco for the preparation of this OMP by GHD which included:

- Draft text extract from the report titled: *Barwon Water Colac Pipeline Upgrade (W1426) Ecological Impacts* (GHD 2021); and
- *Proposed Offset Site 245 Distillery Creek Road, Aireys Inlet. Targeted fauna and vegetation survey report*, unpublished report prepared for Barwon Water (GHD 2023).

3.1 Proposed works

The impact site is located along the alignment of an existing pipeline that supplies water from West Gellibrand and Olangolah Reservoirs in the Otways to the township of Colac located c. 25 km northwest of the reservoirs (Figure 1). The pipeline needs to be upgraded as current and predicted future pipeline failures, associated water supply interruptions and maintenance requirements present risks to the main water supply to Colac.

Around 30% of the pipeline was replaced between 2003 and 2010 and now five different sections of the pipeline totalling 5 km in length have been identified as priority areas requiring immediate upgrades.

The construction zone consists of a 10 m wide, 5 km long construction corridor with a total area of 11.48 ha, some of which includes native vegetation and fauna habitat. The proposed works include pipeline trenching, construction of access roads and creation of construction lay down areas which will require vegetation and fauna habitat destruction and removal.

In the design phase, changes were made to reduce the extent of vegetation and habitat removal for native fauna (detailed in the PD). During construction, efforts to reduce the trench width will be employed including:

- The use of trench shields to minimise trench width (typically to 1.2 m), increasing the distance between the trenching and vegetation by 1.4 metres (m) either side of the trench.
- Engagement of an arborist to be onsite during construction to guide trenching, the placement of stockpile, laydown and storage locations and the micro alignment of the trench to avoid impacting tree protection zones (TPZs) where possible.

These actions may result in some vegetation being retained in situ but cannot be confirmed preconstruction, so a conservative approach has been taken and the trench width is assumed to be 4 m.

The proposed extent of native vegetation clearing and impacts on MNES habitat is 7.81 ha. This includes 0.151 ha of vegetation previously removed as part of the geotechnical investigation stage.

Presence of LnP was assumed in the majority of the impact area based on habitat surveys and assessment, and the proximity and number of recent historical records including records in and around the construction footprint. The species is likely to be impacted given the potential extent of impacts.

A schedule of commencement, completion and contingency dates are provided in a separate document included in the PD titled: *Colac Pipeline Upgrade- Preliminary Documentation Response-(EPBC 2022/09343)* (Barwon Water 2023).

3.2 Site description

The proposed impact area includes a 5-10 m wide corridor containing the pipeline easement and a vehicle track located within The Great Otway National Park.

The topography along the alignment is steeply undulating including steep slopes, gullies and ridges.

The vegetation is regularly slashed/mowed along the easement which contains some scattered large trees.

Intact remnant native vegetation occurs along the edge of the proposed construction corridor. It consists of a variably dense understorey and ground layer comprised of ecological vegetation communities and flora species that provide suitable habitat for LnP. This vegetation is contiguous with the rest of the vegetation in the national park which provides some 2000 ha of suitable LnP habitat.

The work area is located within the Corangamite Catchment Management Authority area and Colac Otway Shire and is located in the Otway Plain bioregion.

3.3 Site condition

Around 30% of the impact area was burnt in autumn 2022. Evidence suggests that the remainder of the impact site was last burnt more than five years ago.

The impact area may have been affected by opportunistic timber harvesting that occurred within the surrounding area 40+ years ago but evidence of recent logging was not observed.

Habitat hectare condition scores determined using the standard Victorian Vegetation Quality Assessment (VQA) method to assess vegetation condition and quality (DSE 2004) ranged from 0.60-0.76 out of a total score of 1.

There are no major barriers preventing movement of LnP throughout the project area and surrounding national park.

The proposed action area provides suitable habitat for LnP as defined in the conservation advice (DAWE 2022). Habitat required for the survival of the species includes occupied forested habitats larger than 0.1 km^2 and unoccupied forested areas larger than 0.1 km^2 if adjacent to, or near extant populations, as this provides suitable habitat for range expansion or translocation (DAWE 2022).

3.4 Threats

Threats within the proposed action area include illegal timber harvesting (felled and sawn trees) observed during the site assessments.

Fire has impacted part of the impact site but adequate areas of habitat remain that would provide refuge and shelter while the burnt areas vegetation regenerate. The flora species in the impact site are adapted to survive and recover after fire.

There are highly likely to be impacts from deer on habitat and cats and foxes predating LnP in the proposed action area as these pests are known to be present in the surrounding landscape but were not surveyed for during this assessment.

3.5 Offset opportunities

As the impact site is an existing pipeline easement which requires ongoing maintenance and upgrades and associated vegetation management, the establishment of an onsite offset is not a viable option. The pipeline easement and surrounding land is located in national park so there are no opportunities to establish environmental offsets nearby.

4. Offset site

The offset site is located within a 43.56 ha property c. 100 km southwest of Melbourne, between the coastal towns of Aireys Inlet (c. 3 km to the south) and Anglesea (c. 6 km to the east) and c. 45 km east of the impact site (Figure 2). The property is freehold land owned by Barwon Water. The offset site consists of 29.4266 ha of uncleared bushland across the northern, eastern and south west parts of the property (Figure 2).

A water reclamation plant is located in the southeast corner of the property and is fenced off from the offset site by a >2m high chain mesh fence (Figure 2). The reclamation plant water is used to water the blue gum plantation. Barwon Water also owns the land on the opposite (southern) side of Distillery Creek Road which it manages as a Blue-gum plantation (Figure 2).

The offset site boundary is set back 6 m from the property boundary on the north eastern, south eastern, south western, internal fenced water reclamation plant boundary and 50 m either side of Batson Track to accommodate potential fencing and fire protection activities that may be required along the property boundary in these areas as stipulated in the Section 69 Agreement (Figure 2). The offset site boundary is set back 2 m from the northern boundary and north western property boundary (apart from 50 m either side of Batson Track) as the vegetation in the offset site is contiguous with surrounding vegetation in the national park in these locations so fencing is not expected to be required (Figures 2).

To confirm the suitability of the offset site a preliminary site assessment was undertaken by GHD in March 2023 which identified structurally and floristically diverse vegetation including similar vegetation communities and flora species to those recorded at the impact site and suitable habitat for LnP (GHD 2023).

There are historic records of LnP in and around the offset site and camera trapping confirmed the presence of LnP on site in autumn 2023 (GHD 2023). Details are provided in the report '*Proposed Offset Site 245 Distillery Creek Road Aireys Inlet Targeted fauna and vegetation survey'* (GHD 2023).

4.1 Landscape context and location

The offset site is situated within the Otway Plain Bioregion and is under the jurisdiction of the Corangamite CMA and the Surf Coast Shire Council. The site is zoned Public Use Zone – Service and Utility (PUZ1) and is covered by a Bushfire Management Overlay (BMO).

The site is bounded by Distillery Creek Road, the Blue-gum plantation and water reclamation plant to the south and is surrounded by the Great Otway National Park and Anglesea Heath on the remaining boundaries (Figure 2).

There are two small ponds immediately northeast of the reclamation plant, adjacent to Distillery Creek Road that are excluded from the offset site (Figure 2, Image 1 and Image 2). They are fed by two drainage lines located in the offset site (Figure 2). The pond closest to the reclamation plant (Image 1) captures drainage runoff and diverts it through a pipe to drainage swales in the reclamation plant. At the time of the site assessment, it was noted that the area around this pond had recently been slashed for maintenance purposes (Image 1).

The pond closest to the reclamation plant has pipes connecting it to the Blue-gum plantation and reclamation plant to manage overflow from the Blue-gum Plantation. Barwon Water advise that these overflow pipes have not been required in the past. Neither of these ponds are currently fenced.

There is a small area of native vegetation between the ponds and the reclamation plant which is separated from the ponds by a retaining wall topped with a c. 1 m high concrete wall (Image 1). This area contains pipes and slashed areas of vegetation associated with the reclamation plant management activities and has been excluded from the offset site.

Image 1. One of two ponds (see Image 2, Figure 2) situated between the offset site and water reclamation plant. The two drainage lines in the offset site drain into this area which had recently been slashed (May 2023).

Image 2. Small pond located just off Distillery Creek Road (see Figure 2) next to the offset site and adjacent to the second pond (seen in background) shown in Image 1 (May 2023).

4.2 Site access

The offset area is not fenced and has two interconnected vehicle tracks that traverse the site. They exit onto Distillery Creek Road at two locations on the southeastern boundary of the offset site and at one location on the northwestern boundary of the site (Figure 2).

The northernmost exit on Distillery Creek Road is gated and allows management vehicle access only, it is signposted as Batson Track (Image 3). The other track entrance further south along Distillery Creek Road is mapped as Batson Track (but not signposted) and has been permanently closed (Image 4). The third entrance on the northwestern boundary is ungated and is the continuation of Batson Track which connects with No.2 Road to the north (Figure 2).

Large boulders have been placed next to the entrances on Distillery Creek Road in an effort to prevent illegal vehicle entry (Image 5 and 6).

The internal tracks are overgrown in places with some erosion points on steeper parts (Image 7 and Image 8).

The property has good management vehicles access to some of the northern parts of the site and is easily accessed on foot. There are no impediments for management such as fences, steep inaccessible slopes, or waterways and the landowner/contractors can access all areas of the site.

Image 3. Gated management vehicle access to the offset at northernmost track entrance from Distillery Creek Road (May 2023).

Image 4. Permanently closed site access track from Distillery Creek Road, south of northernmost track entrance shown in Image 3 (May 2023).

Image 5. Boulders have been installed either side of the northernmost gated track entrances from Distillery Creek Road (left hand side of gate shown here) to prevent illegal access. Trail bike tracks either side of boulder indicate that bikes are bypassing these boulders and the gate (also see Image 6) (May 2023).

Image 6. Trail bike tracks on either side of the boulder on the right-hand side of the northernmost gated entrance from Distillery Creek Road (also see Image 5) (May 2023).

Image 7. Sections of internal tracks in the centre of the offset site are overgrown and appear to no longer be in use (May 2023).

4.3 Topography

The site has a southerly aspect and undulating topography with higher elevations of c. 80 m ASL at the northern part of the site decreasing in altitude to approximately 40 m ASL in the southwestern section (Figure 2). The site is intersected by two main gullies (northern section) and two short shallow gullies (northwest section) with variably gentle to steep slopes (Figure 2). There are two ephemeral drainage lines that flow northeast to southwest and are contained wholly within the site (Figure 2).

4.4 Geology

The underlying geology consists of the Tertiary Ecocene Demons Bluff Formation which comprises marine silt, fine sand, clay, and carbonaceous pyrites (GA 2023).

4.5 Soil

The soils on site are sandy duplex gradational weak structured soils prone to sheet, gully and landslip erosion and surface compaction (VRO 2023) (Image 8).

Image 8. An example of one of multiple areas of erosion and sandy soils on internal tracks in the offset site (May 2023).

4.6 Climate

Climate data recorded from the Aireys Inlet weather station (ID 090180) located c. 3.5 km southwest of the offset site indicates the local area experiences warm summers and cool winters with higher rainfall occurring in winter and spring (BOM 2023). The mean annual rainfall at Aireys Inlet is 631.1 mm, ranging from a mean monthly rainfall of 32.1 mm in February to 68.0 mm in July (BOM 2023). The mean maximum temperature ranges from 13.4^{0}C in July to 23.1^{0}C in January and February (BOM 2023). As the climate records are not recorded on site, there could be some differences between the climate data recorded at Aireys Inlet and that experienced at the offset site.

4.7 Vegetation structure

The entire offset site supports native vegetation consisting of a variably open eucalypt canopy of multi trunked mallee form and single trunked eucalypts to 10 m tall on higher ground interspersed with patches of taller single trunk eucalypts at lower elevations.

An understorey of medium to tall shrubs (to c. 2 m high) and scattered sedges (≤1 m) dominate the majority of the drainage line areas which are located in the centre and northwestern areas of the offset site (Figure 2). The shrub cover is high and in combination with the canopy provides a generally high foliage cover creating shaded gullies (Images 9 to 12). In contrast, the drainage line in the southern area of the offset site adjacent to Distillery Creek Road has a more open canopy and closed understorey (Image 13). The ground storey across all the drainage line areas contains a variable cover of scattered small shrubs, forbs, graminoids, leaf litter and logs (Images 9 to 13).

Image 9. Sedgy Riparian Woodland at the northern end of the gully in the centre of the offset site supports an open eucalypt canopy, an understorey dominated by Manuka *Leptospermum scoparium* and a closed ground storey in some areas (Figure 2, HHa assessment point 2a) (May 2023).

Image 10. Sedgy Riparian Woodland in the gully in the centre of the offset site supports an open eucalypt canopy with an understorey dominated by Manuka and a fairly open ground storey (Figure 2, HHa assessment point 2b) (May 2023).

Image 11. Sedgy Riparian Woodland in the northern most gully in the northwest area of the offset site which supports a tall shrubby understorey of Manuka and a high cover of logs and large trees (Figure 2, Habitat Zone 1C photopoint) (May 2023).

Image 12. Sedgy Riparian Woodland in the southernmost gully the northwest area of the offset site that supports a tall shrubby understorey of Manuka and numerous large trees (Figure 2, Habitat Zone 1D photopoint).

Image 13. Sedgy Riparian Woodland in the gully along the southern boundary of the offset site has an open eucalypt canopy and dense shrubby understorey of Manuka and Prickly Tea-tree *Leptospermum continentale* (Figure 2, HHa assessment point 2c) (May 2023).

Beyond the gullies and drainage lines the vegetation is quite variable. The understorey ranges from one to two metres high and has a diverse flora. The shrub layer varies from open to closed with some areas dominated by a single species. Some areas have little canopy cover. There are few logs and large trees and there is a generally thin cover of leaf litter (Images 14 to 22).

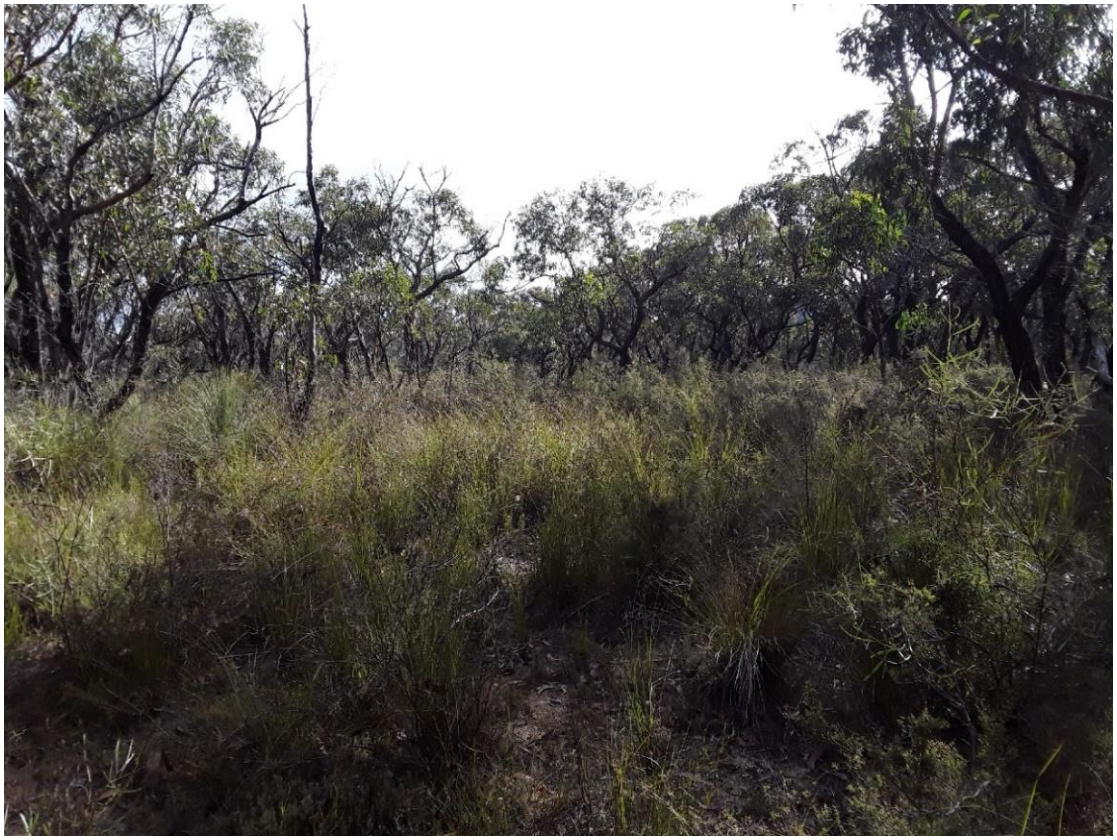


Image 14. Heathy Woodland in the northern area of the offset site showing open areas of canopy and varying cover cover of graminoids and shrubs (Figure 2, HHa assessment point 1a) (May 2023)

Image 15. Heathy Woodland in the northeastern area of the offset site with an open canopy of eucalypts over a stand of Myrtle Wattle *Acacia myrtifolia* (Figure 2, HHa assessment point 1b) (May 2023).

Image 16. Heathy Woodland in the center of the offset site in an open area a dense heathy understorey and little to no canopy cover (Figure 2, HHa assessment point 1c) (May 2023).

Image 17. Heathy Woodland in the north west corner of the offset site with a low canopy cover of scattered stands of eucalypts (with burnt trunks showing evidence of recent fire) and understorey dominated by Austral Grass-trees *Xanthorrhoea australis* with occasional Small Grass-trees *Xanthorrhoea minor* subsp. *lutea* to one metre high (Figure 2, HHa assessment point 1d) (May 2023).

Image 18. Heathy Woodland in the central-western area of the offset site with an open eucalypt canopy and high diversity of understorey species (Figure 2, HHa assessment point 1e) (May 2023)

Image 19. Heathy Woodland in the south-central area of the offset site with an open eucalypt canopy dominated by Austral Grass-trees *Xanthorrhoea australis* and Austral Bracken *Pteridium esculentum* subsp. *esculentum* (Figure 2, Habitat Zone photopoint) (May 2013).

Image 20. Heathy Woodland in the south-western area of the offset site with an open eucalypt canopy over an understorey dominated by Austral Bracken *Pteridium esculentum* subsp. *esculentum* (Figure 2, Habitat Zone photopoint) (May 2023).

Image 21. Heathy Woodland in the northeastern area of the offset site with a stand of Prickly Tea-tree *Leptospermum continentale* in the background (May 2023).

Image 22. Heathy Woodland along one of the tracks in the offset site dominated by a stand of *Acacia suaveolens* (May 2023).

4.8 Management

The property has been owned by Barwon Water since 1997 and retained as uncleared bush (apart from the reclamation plant and internal tracks). Prior to this it was State Park. Barwon Water advise that they did not construct the internal tracks and do not maintain them, and they were most likely established by public land managers when it was State Park or by recreational 4WD and trailbike activity.

Fox control is being undertaken in the surrounding Great Otway National Park and Anglesea Heath by Parks Victoria (PV). This consists of fox bait (1080) placed along tracks every 800 m – 1 km, with bait stations replenished every 4 weeks (Clare Miller pers. comm.). This is expected assist with the reduction of fox numbers in the offset site to some extent. Barwon Water advise that they have never undertaken pest plant or pest animal management onsite.

Barwon Water commissioned a detailed flora, fauna and native vegetation assessment in 2002 to explore the option of clearing 10 ha of the site and planting a Blue-gum plantation to utilise water discharge from the reclamation plant (EA 2003). However, it was decided that a better outcome would be achieved by constructing a pipeline between the reclamation plant and the adjacent pond to the northeast to augment water discharge capacity from the reclamation plant and the Blue-gum plantation was not established.

4.9 Disturbance

Based on records of disturbance from NatureKit (an online database maintained by DEECA) (DEECA 2023b) a planned burn was undertaken in the adjoining Great Otway National Park and Anglesea Heath in 2019, which burnt the northern section of the site (Image 17). Prior to this a

controlled burn was undertaken in 2010 which extended across the entire proposed offset. The entire site was burnt by wildfires in 1983 and the north eastern section was burnt by wildfire in 2000. Parks Victoria plan to burn the surrounding area every six years as part of their burn plan for asset protection and risk management in the adjoining national park (Aaron Ledden pers. comm.). These burns may encroach on the site as occurred in 2019.

Other disturbance includes vehicle tracks that intersect the site and contain some areas of erosion (Figure 2, Images 3 to 8 and Images 22 to 23).

Image 23: Recently burnt vegetation dominated by Austral Grass-tree *Xanthorrhoea australis* on the right-hand side of photo (burnt in 2019 and 2010) and vegetation last burnt in 2010 on the left-hand side of photo in the northwest area of the offset site (May 2023).

There is some evidence of past firewood collection or tree removal for some other purpose, with one cut stump observed on site (Image 24).

No evidence of flooding was observed along the drainage lines or around the two dams adjacent to the water reclamation plant.

The site is not located near any farmland and stock access does not pose a threat to the site.

A black plastic drainage pipe extends from Distillery Creek Road into the offset site. It is open ended and finishes in a swale containing a sedge dominated wetland immediately adjacent to Distillery Creek Road. The pipe is damaged, appearing to have been burnt (Image 25). There was no evidence of drainage occurring from the pipe at the time of the assessment. There are dead sedges around the end and downslope of the burnt pipe. Barwon Water have confirmed that they are unsure of its origin/purpose but assume it function is drainage and have agreed to have it removed as part of the management commitments for the offset site.

Image 24. Cut stump in the western area of the offset site (May 2023).

Image 25. Burnt plastic pipe located in the Sedge Wetland in the offset site (Figure 2, HHa assessment point 2d) (May 2023).

5. Site assessment

Abzeco undertook a field assessment of the offset site to describe the vegetation condition, quality and structure, the LnP habitat on site, identify the habitat management requirements for LnP and confirm the site's suitability in line with NVOR offset site standards.

5.1 Methods

5.1.1 Desktop review

A desktop review was undertaken to inform the field assessment, assist with interpretation of the results and for reporting. The following documents and online resources were accessed and reviewed:

DCCEEW documents:

- The *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (DSEWPC 2012);
- The *Environmental Management Plan Guidelines* (DoE 2014); and
- A review of the EPBC Threatened Species Scientific Committee Conservation Advice for *Potorous tridactylus trisulcatus* Long-nosed Potoroo (SE Mainland) (DAWE 2022).

DEECA and NVOR documents:

- A review of flora and fauna records within 5 km of the offset site held in the Victorian Biodiversity Atlas (VBA) online database maintained by DEECA to review floristic records (including threatened species listed under the EPBC Act and the *Victorian Flora and Fauna Guarantee Act 1988*) (FFG Act) to confirm the suitability of the site for LnP (2023a);
- A search for ecological communities and flora and fauna species listed under the EPBC Act within a 5 km radius of the offset site using the online EPBC Protected Matters Search tool (PMST) to consider the suitability of the habitat for LnP and other MNES that may need to be considered at the site (DCCEEW 2023a);
- A review of DEECA's NatureKit online interactive map for Ecological Vegetation Class (EVC)[3] modelled mapping of the area (both extant and pre-1750) disturbance history (including fire history) and administrative boundaries (DEECA 2023b);
- A review of relevant EVC benchmarks[4] maintained by DEECA and available online to assist with the field assessment of vegetation condition and quality including species diversity, lifeform cover and structure and how this meets the site and habitat requirements for the LnP (DEECA 2023c);

[3] Ecological vegetation classes (EVCs) are a way of classifying vegetation in Victoria based on floristics, lifeforms, habitat, ecological processes, biogeographic range and particular environmental characteristics.

[4] EVC benchmarks are specific to a particular bioregion and were developed to assess vegetation quality and condition against the benchmark condition of a mature undisturbed EVC of the same type. Benchmark scoring components include species diversity, vegetation structure, health and cover, recruitment, organic litter, logs, and landscape connectivity.

- The Victorian *Guidelines for the removal, destruction or lopping of native vegetation* (DEEECA 2025a) which includes information about eligibility requirements for offset sites;
- *Native Vegetation: sustaining a living landscape, Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method, Version 1.3* (DSE 2004) (the method used to score vegetation condition and quality on site);
- NVOR templates and guidance information (required to be used for the establishment of offset sites in Victoria):
    - First party offset site templates and forms;
    - Management Standards and information sheets for native vegetation offset sites;
    - QA submission forms; and
    - Shapefile templates.
- *The Assessor's Handbook, Applications to remove, destroy or lop native vegetation, version 1.2 June 2025*. Department of Energy, Environment, and Climate Action, East Melbourne DEECA (2025b);
- The *First party offset guide* (DELWP 2018); and
- *Action Statement No. 254, Long-nosed Potoroo Potorous tridactylus, Flora and Fauna Guarantee Act 1988* (DSE 2013).

Other documents and online tools:

- Examination of GIS data and aerial photography relevant to the offset site to assist with interpreting the vegetation, habitat and features (e.g. tracks) on site;
- A review of publicly available reports and unpublished reports and data provided by GHD for the subject site including:
    - GHD (2023) *Proposed Offset Site 245 Distillery Creek Road Aireys Inlet – Targeted fauna and vegetation survey report*. Unpublished report prepared for Barwon Water;
    - Draft text extract from the report titled: *Barwon Water Colac Pipeline Upgrade (W1426) Ecological Impacts* (GHD 2021); and
    - Ecology Australia (2003). *Aireys Inlet Sewage Treatment Plant: Flora and Fauna Assessment*. Unpublished report prepared for Barwon Water.
- A review of the property planning reports generated by the Victorian Department of Transport and Planning (DTP) online platform to determine zoning and overlays, and associated legal and policy obligations for the site (DTP 2023a);
- A review of the Landata Victoria online title information to identify easements and other encumbrances that may affect the eligibility and management of the offset site (provided by Barwon Water);
- Consideration of relevant obligations under legislation, government policies and strategies, based on the review of the abovementioned information which need to be considered in assessing the offset site's eligibility and management; and
- Other publicly available documents and studies on LnP.

Parks Victoria

Parks Victoria were also consulted regarding their programs including small mammal monitoring (the Otway Ark project) (which includes LnP), controlled burning and pest control methods in the surrounding Great Otway National Park and Anglesea Heath (Michael Mackenzie and Andrew Murray pers. comm.). Parks Victoria have conducted studies on LnP and their response to pest animal control (mainly foxes) and controlled burns in the surrounding areas, (these findings are not yet published). The information provided by PV was used to develop the management actions in this OMP as collaborative and consistent landscape scale management generally produces better outcomes and more efficient use of resources to achieve the same goals, i.e. conservation of LnP, as pest animals and native fauna are mobile so need to be managed at the landscape scale.

The management methods in the OMP were provided to PV for review so that data collected is consistent with PVs Otway Ark monitoring program and can be shared with PV to inform and assist with the management of LnP in the greater landscape and the offset site.

5.1.2 Field assessment

A field assessment was undertaken by two qualified and experienced ecologists from the 2-4 May 2023. The site was traversed on foot to assess vegetation, LnP habitat components, identify threats and determine the location of permanent monitoring points.

The field assessment included collection of the following:

- An inventory of vascular plant species including native and exotic species and their percentage covers (this included weeds recorded by GHD in March 2023 (GHD 2023);
- Determination and mapping of EVCs;
- Habitat Hectare (HHa) assessments of vegetation condition in each EVC. A total of nine HHa assessments were undertaken in 50 m x 50 m plots to record variation in structural composition, quality and condition across the site and extrapolated out across each EVC (as per the Vegetation Quality Assessment Manual, V1.3, DSE 2004) (Figure 2), this included:
    - Five plots in Heathy Woodland EVC 48;
    - Three plots in Sedgy Riparian Woodland EVC 198; and
    - One plot in Sedge Wetland EVC 136 (Figure 2).
- A detailed description of suitable LnP habitat on site;
- Evidence and locations of threats impacting the site such as high threat weed species, disturbance by pest animals, *Phytophthora*, erosion, firewood collection, rubbish dumping, vegetation impacts following flood, and public access;
- Representative photos including:
    - Locations where HHa assessments were undertaken to illustrate different habitat and vegetation condition, quality and structural diversity;
    - Identified threats; and
    - Baseline monitoring photos for annual reporting.
- Coordinates of permanent photo points and baseline photos of identified threats requiring management.

5.2 Survey limitations

The flora list was compiled during a single survey in autumn, and some annuals and seasonal species such as lilies, orchids and grasses may not have been evident during the survey. In addition, spring flowering shrubs may not have been identifiable due to the lack of fertile material. However, the timing and length of the survey was considered adequate enough to determine and assess the quality of the habitat for LnP and to identify threats.

5.3 Vegetation description

A total of 114 plant species were recorded across the offset site including 105 native indigenous species, seven weed species and two Victorian native species that are considered invasive in this location (Appendix 1).

Vegetation consistent with three EVCs was identified on site including:

5.3.1.1 Heathy Woodland (EVC 48)

The majority of the vegetation (c. 25 ha) is consistent with Heathy Woodland EVC 48 which is modelled by DEECA as occurring over the northern half of the site and typically occurs on sandy soils.

Lowland Forest EVC 16 is modelled as occurring across the southwestern half of the site. The vegetation in this area has some structural affinities with Lowland Forest including some single trunk canopy trees taller than 10 m and a dominant canopy that is more closed in some areas than typically seen in Heathy Woodland. However, the vegetation here also includes shorter trees to 10 m tall with multiple trunks which typifies Heathy Woodland. No Narrow-leaf Peppermint *Eucalyptus radiata* which is a characteristic canopy species in Lowland Forest were recorded on site. Both EVC benchmarks have similar understorey species, covers and lifeforms so there are no clear differences in the understorey that can be used to define which EVC is present. There are however some areas with a higher cover of Austral Bracken *Pteridium esculentum* subsp. *esculentum* which is typical of Heathy Woodland in response to fire (Image 19 and Image 20). The vegetation is probably ecotonal between Heathy Woodland and Lowland Forest but is considered to be more consistent with Heathy Woodland structure, so vegetation condition was assessed against the Heathy Woodland EVC 48.

The vegetation is largely dominated by a low variably open canopy of Messmate Stringybark *Eucalyptus obliqua* interspersed with Brown Stringybark *Eucalyptus baxteri*, many of which are multi trunked mallee form to 10 m high. These are characteristic canopy species of this EVC. It was noted that there are areas that have a dense understorey but low to no canopy trees (Image 14 and 16).

The understorey is comprised of a dense to very dense shrubby layer, lacking a secondary tree layer which is typical of this EVC, interspersed with more open areas (Images 14 to 22). While the species composition is diverse and similar across the site, there are dense stands of individual species in some areas. For example, in the northwest area that was burnt in 2019, the canopy cover is low, and the understorey is dominated by Austral Grass-tree *Xanthorrhoea australis* with occasional Small Grass-trees *Xanthorrhoea minor* subsp. *lutea* to 1 m high (Image 17). In the northern parts of the site there are dense stands of Myrtle Wattle *Acacia myrtifolia* (Image 15) to 1.5 m high, Prickly Tea-tree *Leptospermum continentale* (Image 21) to 2 m high, Sweet Wattle *Acacia suaveolans* (Image 22) to 1 m high and Austral Bracken 1-1.5 m high. The highest species diversity was recorded around HHa assessment point 1e located at the top of a rise in the northwest-

central area of the site (Figure 2 [HHa assessment point 1e], Image 18). Across the site, Heath Tea-tree *Leptospermum myrsinoides* was a dominant understorey species.

Other common understorey and ground storey species included Common Aotus *Aotus ericoides*, Parrot-peas *Dillwynia* species, Guinea-flowers *Hibbertia* species, Common Heath *Epacris impressa*, *Goodenia* species, Pink Bells *Tetratheca ciliata*, Rice-flowers *Pimele*a species, Broom Spurge *Amperea xiphoclada* var. *xiphoclada*, Hairy Rice-grass *Tetrarrhena distichophylla*, Tassel Rope-rush *Hypolaena fastigata*, Dodder-laurels *Cassytha* species, *Xanthosia* species, Common Raspwort *Gonocarpus tetragynus*, and Hidden Violet *Viola cleistogamoides.*

Weeds

The main weeds recorded were numerous mature and juvenile plants of Coast Wattle #*Acacia longifolia* subsp. *sophorae* scattered throughout the site with the occasional plant of Sallow Wattle #*Acacia longifolia* subsp. *longifolia* (Figure 3). There are also a few scattered plants of Pampas Grass **Cortaderia selloana* subsp. *selloana* largely along the gullies near the drainage lines (Figure 3). Young plants of African Boneseed * *Chrysanthemoides monilifera* subsp. *monilifera* were scattered throughout, particularly along the tracks. These weeds are all considered high threat weeds due to their invasive capacity which can alter the structure of vegetation and reduce understorey diversity. During the GHD assessment one plant of Bluebell Creeper **Billardiera heterophylla* was recorded (Figure 3). Weeds were recorded opportunistically during field surveys and mapped in Figure 3. There are likely to be some additional specimens of these species that were not detected during this survey.

5.3.1.2 Sedgy Riparian Woodland (EVC 198)

Vegetation consistent with Sedgy Riparian Woodland EVC 198 was recorded in the gullies and drainage lines across the site (Figure 2, Images 9 to 13). The combined mapped area of this EVC is 4 ha (including Sedge Wetland described below) and is more extensive than the DEECA modelling which has it confined to the centre of the site.

The vegetation is characterised by an open canopy of Messmate Stringybark with scattered Brown Stringybark including scattered large trees[5]. The understorey is dominated by Manuka *Leptospermum scoparium* with scattered shrubs of Prickly Moses *Acacia verticillata* subsp. *verticillata*, Scrub Sheoak *Allocasuarina paludosa,* Rusty Pomaderris, *Pomaderris ferruginea*, Hop Goodenia *Goodenia ovata* and Snowy Daisy-bush *Olearia lirata* (Images 9 to 13). The ground storey is dominated by Thatch Saw-sedge *Gahnia radula* to one metre high with occasional tufts to 1.5 m. There are scattered Grass-trees and a few scattered herbs such as Bent Goodenia *Goodenia geniculata*, Screw Fern *Lindsaea linearis,* and Common Raspwort. The ground storey is ranges from quite open to closed with a variably high litter cover and occasional logs (Images 9 to 13).

Sedge Wetland EVC 136 (within the Sedgy Riparian Woodland EVC)

At the northeast end of the Sedgy Riparian Woodland EVC there is a swale near Distillery Creek Road (HHa assessment point 2d in Figure 2) where Sedgy Riparian Woodland grades into a small area c. 0.1 ha of vegetation that resembles wetland EVC 136 Sedge Wetland (Image 26) This EVC does not have a bioregional conservation status in the Otway Plain (Frood and Papas 2016, DELWP 2022). Wetland EVC benchmarks are not designed to be used for HHa assessments, and

[5] Large Trees are trees with a diameter at breast height (1.3 m from the ground) equal to or greater than the large tree benchmark.

this vegetation does not fit the description of any EVC benchmarks used for HHa condition assessments, so a HHa assessment was not able to be conducted (DELWP 2022).

The vegetation is consistent with the Sedge Wetland EVC description which includes a seasonally, shallowly (< 30cm) inundated (for between 1-6 months), freshwater sedgeland of depressions (Frood and Papas 2016). It typically occurs within swales amidst soils with a substantial sand component, clearly dominated by tall sedges and lacking the diversity of broad-leaved herbs typically seen in other EVCs.

At the time of the assessment, the wetland contained shallow standing water in places ≤ 5 cm deep. The vegetation is dominated by a dense cover of Pithy Sword-sedge *Lepidosperma longitudinale* which is one of the main indicator species of this EVC (Frood and Papas 2016) (Image 26). This is interspersed with other sedges and occasional herbs including Joint-leaf Rush *Juncus holoschoenus*, Running Marsh-flower *Ornduffia reniformis*, Austral Brooklime *Gratiola peruviana*, Shiny Swamp-mat *Goodenia radicans*, Shining Pennywort *Hydrocotyle sibthorpiodes* and occasional Swamp Gums around the edges.

In a previous site survey undertaken in summer (EA 2003), other indicator species were recorded in this area of Sedge Wetland (referred to then as Wetland Formation) including Fine Twig-sedge *Baumea arthrophylla* and Soft Bog Sedge *Schoenus tesquorum*. While not recorded during the latest assessment, these species flower in spring/summer so may not have been identifiable in late autumn. Some patches of dead sedges/rushes were observed during the latest assessment that could not be identified due to the lack of live and fertile material (Image 27).

Image 26: Small swale supporting Sedge Wetland dominated by Pithy Sword-sedge *Lepidosperma longitudinale* near the south east boundary of the offset site (Figure 2, HHa assessment point 2d) (May 2023).

Image 27. Areas of dead plant sedges/rushes in the Sedge Wetland (Figure 2, HHa assessment point 2d) (May 2023).

Weeds

Scattered plants of one weed Bulbous Rush **Juncus bulbosus* were recorded in the Sedge Wetland and scattered plants of *Pampas Grass, #Coast Wattle and #Sallow Wattle were recorded throughout the Sedgy Riparian Woodland and immediately adjacent to the Sedge Wetland. *Bulbous Rush was recorded in the same location in 2002 and the cover does not appear to have increased. It is a typical weed of disturbed wet areas e.g. roadside drains, damp pastures and soakage areas (EA 2003, VicFlora 2023).

5.3.2 Vegetation condition and quality (Habitat Hectare Assessment)

In Victoria, vegetation quality assessments (VQAs) utilize the HHa assessment method to calculate vegetation quality of native vegetation that is planned to be removed or to calculate proposed Victorian native vegetation offset site gains. The HHa method involves the assessment of vegetation condition against the relevant DEECA EVC benchmark. The EVC benchmark describes vegetation in a mature, undisturbed state under standard categories including:

- The number of Large Trees (number/ha and % cover);
- Tree Canopy % Cover and Health;
- Lack of Weeds (% cover including high threat weeds);
- Understorey (number of species in each life form and % cover);
- Organic Litter (% cover of native/exotic origin);
- Logs (log length);
- Recruitment (% and diversity); and
- Landscape Context Score (measure of habitat connectivity and level of disturbance as a measure of viability and functionality of a site).

Habitat Hectare assessments are not designed to be used as a monitoring tool but were undertaken for this project to provide an indication of vegetation quality and condition at the time of the site assessment [6].

A HHa assessment was undertaken for each EVC to define habitat zones following the *Vegetation Quality Assessment Manual, version 1.3* (DSE 2004) and the *Assessors Handbook, Applications to remove, lop or destroy native vegetation, version 1.1* (DEECA 2025b) (Appendix 2, Figure 2). A habitat zone is defined as a single contiguous patch of vegetation of the same EVC (DEECA 2025b).

The cover and height of different vegetation species in the understorey was quite variable and patchy in the Heathy Woodland EVC, so five HHa assessments were undertaken in different locations to show the range in habitat and vegetation condition for LnP (Figure 2, Appendix 2). A single average condition score was then calculated for the entire area of Heathy Woodland (Appendix 2) which is a requirement when multiple HHa assessments have been undertaken in one habitat zone (DEECA 2025b)[7].

Three HHa assessments were undertaken across the Sedgy Riparian Woodland to assess variability in LnP habitat including vegetation species mix, cover and structure. The habitat here was not as variable as the Heathy Woodland EVC. A single average condition score was also calculated (Figure 2, Appendix 2) in line with DEECA (2025b) requirements.

The closer the HHa assessment vegetation quality score is to 1, the closer the vegetation is to a mature intact undisturbed state (DEECA 2025b). Habitat hectare assessment scores are considered high when greater than 0.6 (DEECA 2025b).

The habitat hectare assessments scores for Heathy Woodland (except the section burnt in 2019) ranged from 0.56 to 0.72 and the Sedgy Riparian Woodland score was 0.66 (Appendix 2) so the vegetation condition ranged from medium to high across the offset site.

A habitat zone should be split if the site condition score (out of 75) varies by at least 15 points and the extent of the contiguous patch of vegetation is >1ha (DEECA 2025b). The scores varied by more than 15 points in some locations within the Heathy Woodland EVC, these areas were small, patchy and scattered throughout the EVC (they were each <1ha). In addition, the vegetation scores were not being used to calculate Victorian native vegetation losses or offset credits so the habitat zone was not split.

The northern section of Heathy Woodland that was burnt in 2019 scored 0.47. The score was low due to low species diversity and structural diversity scores (see HHa assessment point 1d, Figure 2, Image 17, and Appendix 2). This may be attributed to early post fire recovery (4 years post burn) which is a shorter fire interval than the rest of the site (which was burnt in 2010 – an interval of 13 years). The Heathy Woodland EVC benchmark desirable fire period is 20 years to maintain vegetation condition and quality.

The flora assessment undertaken in 2003 recorded a higher cover of canopy Eucalypts in the part of the site burnt in 2019 (20%-50% each for Brown Stringy Bark *Eucalyptus baxteri* s.l. and

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[6] Native vegetation is defined as plants that are indigenous to Victoria including trees, shrubs, herbs and grasses in Victoria's planning schemes (DEECA 2025a)

[7] If multiple vegetation quality assessments (HHa assessments) are completed in a single habitat zone then a single HHa assessment score should be calculated based on the average percentage cover of lifeforms, weeds, canopy and organic litter across the entire habitat zone. This should be based on a review of the raw data combined, not simply averaged site condition scores (DEECA 2025b).

Messmate Stringybark *Eucalyptus obliqua*) and a greater species diversity (an additional 35 native species and an additional seven weed species) (EA 2003). At the time of the 2002 assessment the site had not been burnt for 25 years, so was more representative of a long unburnt ecosystem. The additional weed species were largely annuals and may not have been detectable at the time of the latest assessment.

The HHa assessment scores for the species number and cover of medium tufted graminoids were generally lower than the EVC benchmark for Heathy Woodland. It is possible that HHa assessment vegetation condition scores may have been higher if the assessment was undertaken in late winter, spring, or early summer. Many orchids, lilies and native grasses emerge are only detectable during their active growing season (typically late winter to early summer). A higher number of species were recorded in the 2002 assessment (undertaken in summer) which included rushes, sedges, orchids, and grasses that would be detectable at that time but may not have been visible in other seasons.

The diversity and/or cover of woody shrubs was lower than the benchmark in some parts of the Heathy Woodland. This may be due to the impact of *Phytophthora*, or overbrowsing by herbivores.

During the current assessment, evidence of likely *Phytophthora* infection was detected which may be impacting vegetation health. Grass-trees *Xanthorrhoea* species are particularly susceptible to *Phytophthora* infection and dieback and are used as disease indicators (Wilson et al. 2000). Some Grass-trees had yellowing foliage, particularly in the area burnt in 2019, which is a sign of dieback.

The two dominant canopy species, Brown Stringybark and Messmate Stringybark are susceptible to *Phytophthora* (DEH 2009). Many understorey species that have been recorded on site in the 2002 (EA 2003) and current assessment including species of epacrids, banksias (Cahill et al. 2008), Myrtle Wattle and Horny Cone-bush *Isopogon ceratophyllus* are also susceptible to *Phytophthora* (DEH 2009). The presence of these species suggests that the vegetation on site is still in reasonable condition.

Phytophthora is now largely ubiquitous throughout the landscape and the accepted means of management is a focus on limiting its spread via footwear, vehicles and machinery by implementing good hygiene practices.

A number of the plants recorded on site are known to be resistant to *Phytophthora* such as Heath Tea-tree, Prickly tea-tree, Manuka, Narrow-leaf Wattle *Acacia mucronata* subsp. *longifolia*, Sweet Wattle *Acacia suaveolens*, Furze Hakea *Hakea ulicina*, Thatch Saw-sedge, Common Raspwort, Running Postman *Kennedia prostrata* and Bent Goodenia *Goodenia geniculata* (Groves et al. 2009). If understorey cover is reduced by *Phytophthora* dieback, then *Phytophthora* resistant indigenous species can be used to undertake supplemental plantings to maintain LnP habitat.

There was no evidence of native herbivores such as macropods impacting the site through overgrazing or overbrowsing, and no scats or hip holes were observed.

One wallaby was seen moving through the site during the field assessment[8]. There was evidence of deer including deer

[8] Overbrowsing by macropods may be controlled after consultation with DEECA to discuss options and requirements for control. Shooting is likely to be the most effective method in the offset site. Landowners

browsing, game trails, prints and scats observed across the site. Parks Victoria have confirmed that Sambar Deer and Fallow Deer are present in increasing numbers in the surrounding landscape and Red Deer are also increasing in numbers (Michael Mackenzie pers. Comm.). Parks Victoria are undertaking deer control in the Great Otway National Park and Anglesea Heath and deer control will be an important part of the site management.

With the effective implementation of management actions outlined in this OMP, the vegetation condition is expected to be maintained or improved across the site.

5.3.3 Threatened species and vegetation communities

A review of the VBA found past records of 26 threatened flora and fauna species listed under the EPBC Act and 82 flora and fauna species listed under the FFG Act within 5 km of the offset site.

The PMST report identified 79 flora and fauna species listed under the EPBC Act that either 'may' occur, are 'likely' to occur or are 'known' to occur within a 5 km radius of the study area.

A review of the PMST report for threatened communities within a 5 km radius of the offset site indicated some likelihood of threatened communities occurring onsite including:

- Giant Kelp Marine Forests of South East Australia;
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland;
- Natural Damp Grassland of the Victorian Coastal Plains; and
- Assemblages of species associated with open-coast salt-wedge estuaries of western and central Victoria ecological community.

However, the field assessment did not detect vegetation consistent with any EPBC or FFG listed threatened communities on site.

None of the species identified in the abovementioned searches, or additional EPBC or FFG listed threatened species, were recorded onsite during the site survey. This does not mean that there are no threatened species in the offset site, as some plants are seasonal (e.g. orchids), and some fauna species are highly mobile or are seasonally restricted in their activity so may not have been detected at the time of the survey.

5.4 Habitat suitability for LnP

Camera trapping was undertaken in March 2023 by GHD which confirmed the presence of LnP at the offset site (GHD 2023).

The offset site assessment confirmed that the vegetation on site is consistent with the documented descriptions of suitable habitat for LnP including:

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must obtain an authority to control wildlife (ATCW) from DEECA and engage a trained, experienced, licensed wildlife controller to shoot in accordance with *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-commercial Purposes* (Commonwealth of Australia 2008). Shooters must also have a firearms licence and, depending on where shooting occurs, a populous place permit from Victoria Police. Removing access to artificial water sources (such as fencing the two dams in the southwest corner of the property) may also assist with macropod control. Further information is available at: https://www.vic.gov.au/wildlife-management-and-control-authorisations

- Connectivity with surrounding LnP habitat in the Great Otway National Park and Anglesea Heath allowing safe movement, adequate-sized home ranges and food and forging resources for LnP;
- Vegetation in moderate to good condition with a diversity of species and dense understorey cover for shelter with some open spaces for foraging;
- Coastal Heath vegetation (Heathy Woodland EVC) with a canopy dominated by Messmate Stringybark and Brown Stringybark with the occasional Swamp Gum;
- Damp gullies and drainage lines supporting Sedgy Riparian Woodland EVC which may offer shelter in denser, damper vegetation during drought and bushfires;
- An understorey which includes thickets of *Leptospermum* species including Prickly Tea-tree in some areas and Manuka in others, dense stands of Austral Bracken, areas dominated by a high cover of Austral Grass-trees, open and closed areas of Thatch Saw-sedge (particularly in the Sedgy Riparian Woodland) and a variety of low shrubs including a high cover of Heath tea-tree throughout most of the Heathy Woodland; and
- Sandy soils.

5.5 Threats

5.5.1 Vehicle access

There was evidence of vehicles (trail bike tyre tracks) illegally accessing the tracks within the offset site in the form of informal tracks made through native vegetation around boulders, the locked gate and the wooden fence at site at entrances on the south side of the site from Distillery Creek Road (Image 5 and Image 6). Illegal vehicle access is resulting in crushed, trampled vegetation and soil disturbance impacting LnP habitat in these areas (Image 28).

Image 28: Access track through vegetation from Distillery Creek Road used by trail bikes (May 2023).

The internal tracks are growing over in places but are open, and passable in other places (Figure 2, Image 7).

5.5.2 Erosion

Areas of erosion have formed in steeper parts of existing tracks within the offset site (Figure 3). This is the result of historical vegetation clearing along tracks exposing the soil to wind and water erosion (Image 29). Soil disturbance caused by erosion reduces understorey vegetation cover across the site reducing shelter and food sources (e.g. soil fungi) in the offset site.

Image 29: Example of erosion along internal tracks (May 2023).

5.5.3 High threat weeds

Weed cover is generally low, however four high threat weeds are present on site.

Weeds can impact LnP habitat through alteration and simplification of species diversity and structure by competing with native species for light, water, and nutrients. This in turn can impact the food supply of soil fungi, roots, tubers, insects, and larvae that are dependent on native vegetation. Weeds also alter the structure and density of understorey cover.

#Coast Wattle and #Sallow Wattle

'*Loss of biodiversity as a result of the spread of #Coast Wattle (Acacia longifolia* subsp. *sophorae) and #Sallow Wattle (Acacia longifolia* subsp. *longifolia) into areas outside its natural range'*; is listed as a threatening process under the FFG Act (DEECA 2023d).

#Coast Wattle (Image 30) and #Sallow Wattle (Image 31) were observed scattered throughout the site but in greater numbers along the tracks and road (Image 32). These species are native to Victoria, however, they occur outside their natural range here. #Coast Wattle naturally occurs along the coastal dunes but is invading vegetation further inland (VicFlora 2023). #Sallow Wattles natural distribution is in the coastal hinterland of eastern Victoria extending as far west as west East Gippsland (Willd 2001). These species can form dense stands and change the nutrient balance in the soil which reduces the regeneration of other native species (Surf Coast Shire 2013).

This can result in reduced understorey species diversity and structure, potentially impacting LnP habitat (e.g. foraging resources and level of shelter).

Disturbance by fire will promote mass germination of both these species which could pose a greater threat to the site in future. Immediate weed control to limit further increase in the soil seed bank is required. Ongoing intense weed control post-fire to eradicate seedlings before the reach maturity and set seed will be a priority at this site.

#*Acacia longifolia* (unspecified subspecies) is noted as being resistant to *Phytophthora* (Groves et al. 2009) so it is even more important to control it as other species on site that are susceptible to dieback may decrease in cover, freeing up more resources (water, space, nutrients) for this species to expand and impact habitat quality.

Image 30. Coast Wattle # *Acacia longifolia* subsp. *sophorae* (note wider leaves than Sallow Wattle, see Image 31) (May 2023).

Image 31. Sallow Wattle #*Acacia longifolia* subsp. *longifolia* (note narrower leaves than Coast Wattle, see Image 30) (May 2023).

Image 32. Large mature plant of Coast Wattle # *Acacia longifolia* subsp. *sophorae* along internal track in the centre of the offset site (May 2023).

*African Boneseed

*African Boneseed is listed as a Noxious Weed under the *Conservation and Land Protection* (CaLP) *Act 1994* (AV 2023d) and is classified as a Weed of National Significance (WONS) due to its ability to spread into a range of vegetation types, particularly coastal areas and outcompete native species (Muyt 2001). Fire can stimulate the germination of *Boneseed (AV 2024) and adult

plants can also resprout post fire (Muyt 2001). There were a small number of seedlings observed within the site which were removed. No mature individuals were observed so ongoing removal of seedlings would be the focus at this site.

***Bluebell Creeper**

*Bluebell Creeper is a hardy, vigorous, subshrub/creeper that can overtop and smother native understorey plants and tolerates a range of soils and conditions (Muyt 2001). Mass germination post fire has been reported for *Bluebell Creeper (GSA undated). One plant was observed along the southernmost track near Distillery Creek Road (GHD 2023).

***Pampas Grass**

*Pampas Grass was recorded at a few locations within the offset site (Image 33). It forms very dense tussocks that may offer minimal protective cover for LnP but also prevents other understorey species from growing and may hinder the recruitment of canopy species (impacting species and structural diversity). It favours sites that are damp, however will also invade open woodlands and heathlands and can resprout after fire (WoA 2016, AV 2020).

Image 33. A mature plant of Pampas Grass *Cortaderia selloana* subsp. *selloana* in a gully in the centre of the offset site

5.5.4 Pest animals

The primary threats to the LnP is predation by foxes and cats and potential impacts to the quality of their habitat by herbivores. Camera trapping undertaken by GHD during the preliminary offset site assessment in March 2023 identified foxes and cats on site.

Foxes (*Vulpes vulpes*)

The Commonwealth EPBC Act lists *'Predation by European red fox'* as a Key Threatening Process (DCCEEW 2023b).

No foxes or fox dens were observed on the property at the time of the assessment. However, GHD confirmed the presence of foxes during surveys in March 2023, as a fox was sighted nearby along Distillery Creek Road and fox scats were observed within the offset site. Parks Victoria are

currently undertaking an ongoing fox baiting program in the adjoining Great Otway National Park and Anglesea Heath which commenced in 2017. The threat of foxes may increase in future if this ongoing management is not maintained.

Cats (*Felis catus*)

The Commonwealth EPBC Act lists the *'Predation by feral cats'* as a Key Threatening Process (DCCEEW 2023b).

No cats were observed within the offset site during the assessment. However, GHD recorded 2-3 individual cats within the offset site during their targeted fauna surveys (GHD 2023). Parks Victoria has also advised that they are often sighted in the area (Clare Miller pers. Comm.).

Cats are difficult to control and while there are some effective methods used interstate, they are not yet legal in Victoria. In September 2023 a 24-hour curfew will be introduced across the Surf Coast Shire (Clare Miller pers. Comm.). This means cats can be trapped on private property and taken to the local Council pound.

Deer

'Reduction in biodiversity of native vegetation by Sambar (*Rusa unicolor*)' is listed as a threatening process under the FFG Act (DEECA 2023d).

Deer scats were observed along the fenceline near the reclamation plant and occasional game trails and low levels of deer browsing were observed near two open waterbodies during the site assessment. GHD also sighted deer tracks within the offset site during their assessment in March (GHD 2023). These are likely to be from Fallow Deer (*Dama dama*) as they are present in the area although Sambar and Red Deer (*Cervus elaphus*) are also known to be increasing in numbers and expanding in range across the Great Otway National Park and Anglesea Heath (Clare Miller and Michael McKenzie pers. Comm.).

Deer impact native vegetation condition by reducing understorey species diversity and cover as well as soil health through over browsing, over grazing, pugging, creation of game trails, spread of weed seeds on feet, fur and in droppings, tree trunk damage caused by antler rubbing, understorey vegetation thrashing and trampling in scrape areas and around preaching trees during the rut (breeding season), wallowing, and fouling of water ways with urine, faeces when wallowing.

Deer need regular access to water and they shelter in dense vegetation in and around gullies. The deer are likely to be attracted to the water from the artificial water sources (two ponds) near the reclamation plant and dense thickets of *Leptospermum* and other larger shrubby species across the site.

Rabbits (*Oryctolagus cuniculus*)

The Commonwealth EPBC Act lists *'Competition and land degradation by rabbits'* as a Key Threatening Process (DCCEEW 2023b).

There was no evidence of rabbits, rabbit scats or warrens within the offset site recorded during the assessment. However, surveys undertaken by GHD in March 2023 found one European Rabbit along Distillery Creek Road and a possible scat and diggings were recorded near the offset site. Rabbits are a threat as they can graze native vegetation, prevent regeneration of seedlings and cause soil disturbance through diggings.

5.5.5 Inappropriate fire regime

The Commonwealth EPBC Act lists *'Fire regimes that cause declines in biodiversity'* as a key threatening process (DCCEEW 2023b).

Aaron Ledden (pers. Comm.) confirmed that part of the PV asset protection burn program includes undertaking mosaic burns in the Great Otway National Park and Anglesea Heath every six years, some of which may extend into the offset site. The program consists of low intensity burns that exclude gullies.

Unpublished data for the PV Otway Ark monitoring project undertaken in the Great Otway National Park and Anglesea Heath indicates that LnP persist in areas burnt every six years (Aaron Ledden pers. Comm.). This is more frequent than is recommended in published documents including the Heathy Woodland EVC 48 benchmark which recommends a 20 year disturbance interval (DEECA 2023c) and EPBC conservation advice for LnP which recommends a fire interval of >20 years (DAWE 2022). The FFG Action Statement for LnP (DEPI 2013) states that LnP has only been found in long unburnt patches of vegetation of 30 years or more without fox control suggesting long unburnt vegetation is important to assist LnP to avoid predation by foxes.

If fire occurs too frequently, this can reduce vegetation cover and other shelter sites, the survival of some species of soil fungi, and the diversity and amount of food sources for LnP, increasing the risk of detection by predators and resulting in increased predation.

There is a lack of publicly available, empirical published research on the burn regime required to maintain optimal LnP habitat in different vegetation types. It appears that long unburnt vegetation (c. 40 years post fire) across the majority of the site (last burnt in 1983) is providing some suitable habitat to support LnP at this site. At present the accepted published approach is to maintain a >20 year fire interval.

5.5.6 Phytophthora

The Commonwealth EPBC Act lists the *'Dieback caused by the root rot fungus (Phytophthora cinnamomi)'* as a key threatening process (DCCEEW 2023b).

Phytophthora is now widespread in the Great Otway National Park and Anglesea Heath and cannot be eliminated from the landscape (Wilson et al. 2000, CoA 2014, DAWE 2022). There was evidence of *Phytophthora* potentially occurring on the site, which may be impacting the health of the vegetation. Some Grass-trees showed recent evidence of yellowing and dieback in post fire growth in the area burnt in 2019 (Image 34) and to a lesser extent, elsewhere across the site. The eucalypt cover here was also lower than elsewhere in the site which may be due to *Phytophthora* (or recent and increased frequency of fire).

As Grass-trees are particularly sensitive to *Phytophthora* they are often used as early indicators of the disease. *Phytophthora* could reduce species diversity across the site however there are a number of understorey species that are resistant to *Phytophthora* which could still provide suitable structural diversity for LnP.

Image 34. Austral Grass-trees *Xanthorrhoea australis* showing evidence of dieback (yellowing and dead material) likely to have been caused by *Phytophthora cinnamomi* in the north west area of the offset site that was burnt in 2019 (May 2023).

5.5.7 Rubbish

A small amount of rubbish was identified which can pose a risk to vegetation and wildlife. This includes a burnt plastic pipe (described previously in Section 4.7), an old fence post attached to wire mesh fencing (Image 35), and other items of general rubbish discarded along the internal track (Image 36).

Fauna can injure themselves on old fencing material and may ingest or injure themselves on rubbish. Artificial drainage into the site may alter hydrology and impact native vegetation depending on the type of drainage (e.g. may alter nutrient loads or contain chemicals that can impact vegetation health).

Image 35. Old fencing material in the north western area of the site (May 2023).

Image 36. Rubbish along internal tracks within the offset site (May 2023).

5.5.8 Climate change

The impacts of climate change on LnP are not well known. Warmer temperatures and altered rainfall are likely to increase the chances and frequency of drought which in turn may increase the frequency and intensity of bushfires (DAWE 2022). These conditions may lead to altered vegetation structure, drying drainage lines reducing access to water, shelter from fire, vegetation cover for protection from predators and reduction in the biodiversity and abundance of soil fungi food sources (DAWE 2022).

6. Legislation and policy

6.1 Flora and Fauna Guarantee Act 1988

The FFG Act is the primary State legislation for the protection of native plants, animals and ecological communities on public land and water in Victoria. Species, ecological communities and threatening processes can be listed as threatened or protected under the Act based on determination by an independent Scientific Advisory Committee. Listing is intended to protect species or communities from further threats to their survival in Victoria.

The *Flora and Fauna Guarantee Amendment Act 2019* came into effect on 1 June 2020, updating the FFG Act. Updates included a consolidation of flora and fauna listings using the Common Assessment Method (CAM) and new guidelines regarding Critical Habitat determinations. There are no Critical Habitat determinations at present. The amended FFG Act requires Ministers and public authorities to consider the FFG Act when performing functions that might impact biodiversity.

It is an offence to take, trade in, keep, move or process protected flora without a permit, or unless authorised by Order of the Governor in Council published in the Government Gazette (GIC Oder) unless certain conditions apply. The FFG Act defines 'take' as 'kill', 'disturb' or 'collect'.

Protected flora are:

- Plants that are declared to be protected under section 46 of the Act.
- Plants that are listed as threatened under section 10 of the Act.
- Plants that belong to communities that are listed as threatened under section 10 of the FFG Act.

Implications

#Coast Wattle and #Sallow Wattle are included on the FFG Act Protected Flora List. However, as the offset site is on private land and the protected flora removal is being undertaken by the landowner, a protected flora permit is not required to remove these species.

6.2 Catchment and Land Protection Act 1994

Under the *Catchment and Land Protection Act 1994* (the CaLP Act) species of plants and animals are declared as noxious weeds and pest animals in Victoria. The purpose of the Act is to protect primary production, Crown land, the environment and community health from the effects of noxious weeds and pest animals. Under the Act, all Landowners have legal obligations regarding the management of declared noxious weeds and pest animals on their land.

There are four categories of noxious weeds under the CaLP Act: State Prohibited, Regionally Prohibited, Regionally Controlled and Restricted Weeds.

- State Prohibited weeds—these weeds are either not in Victoria or are in such small numbers that eradication is still possible. The Victorian Government is responsible for their eradication and may direct landowners to prevent their growth and spread. It is an offence to buy, sell or transport State Prohibited Weeds in Victoria.
- Regionally Prohibited weeds—Landowners must take all reasonable steps to eradicate Regionally Prohibited weeds on their land.
- Regionally Controlled weeds—these weeds are usually widespread but it is important to prevent further spread. It is the responsibility of the landowner to prevent the growth and spread of Regionally Controlled weeds on their land.
- Restricted weeds—these weeds pose an unacceptable risk of spreading in this State and are a serious threat to other States or Territories. Trade in these weeds, seeds or material with their contaminants is prohibited.

Under the CaLP Act, landowners have a legal duty to prevent the spread of, and as far as possible eradicate, established pest animals. There are four categories of pest animals: Prohibited, Controlled, Regulated (collectively referred to as Restricted pest animals) and Established pest animals.

- Restricted pest animals are not established in the wild in Victoria but have the potential to become a serious threat to primary production, Crown land, the environment or community Health in Victoria and cannot be kept without a permit.
- Established pest animals pose the same threat but are established in the wild in Victoria. Landowners have a responsibility to prevent their spread and where possible eradicate established pest animals.

Implications

One CaLP Act listed weed, African Boneseed **Chrysanthemoides monilifera* subspecies *monilifera* was recorded in the offset site and is classified as 'Regionally Controlled'. Landowners have a legal responsibility under the Act to undertake ongoing control measures to prevent the growth and spread of this weed on their land.

Evidence of rabbits and foxes was recorded on or near the property during the survey undertaken by GHD (2023). Landholders have a responsibility to regularly monitor and control these pest species in perpetuity.

6.3 *Planning and Environment Act 1987*

In Victoria, a permit is required to remove, destroy or lop native vegetation. Regulation of planning proposals with potential impacts to native vegetation is governed by Clause 12.01 (Biodiversity) and Clause 52.17 (Native Vegetation) under all Victorian planning schemes.

Clause 52.17 references the requirements of the Victorian *Guidelines for the removal, destruction, or lopping of native vegetation* (the Guidelines, DEECA 2025a), which is an incorporated document under Clause 72.04 of all planning schemes (DTP 2023b).

The Guidelines seek to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation (DEECA 2025a).

The relevant responsible authorities are required to assess permit applications for the removal, destruction or lopping of native vegetation in accordance with the Guidelines. The responsible authority is the relevant Council. Under Clause 66 (Referral and Notice Provisions) of planning schemes, the application may also need to be referred to DEECA for consideration under certain conditions outlined in the Guidelines.

Implications

A planning permit is required to remove, destroy or lop native vegetation under Clause 52.17 of the Surf Coast planning scheme including non-indigenous native species that are considered high threat weeds, unless an exemption applies.

Two non-indigenous Victorian native plants that are considered highly invasive were identified within the offset site, #Sallow Wattle and #Coast Wattle. A permit is not required for the removal of #Sallow Wattle, as it is listed in the Schedule to Clause 52.17 in 'Weeds of the Surf Coast Shire' (2013) so is exempt. #Coast Wattle, however, is not listed in 'Weeds of the Surf Coast Shire' and requires a Conservation work exemption for removal without a permit.

A Conservation work exemption will also be required prior to the following management actions for any disturbance/loss of native vegetation:

- Construction of any fences/gates (where a fencing exemption does not apply) or placement of boulders across track entrances that will disturb native vegetation; and
- Removal of the burnt pipe extending into the eastern side of the offset site as it will involve disturbance of native vegetation.

A Conservation work exemption enables native vegetation to be removed without a permit to provide an overall improvement for biodiversity and with written agreement of the Secretary to the DEECA (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*).

The Conservation work exemption application can be included if required in the Section 69 Agreement package submitted to NVOR for QA for consideration and sign off by the secretary.

6.4 Surf Coast Planning Scheme

The property is zoned Public Use zone – Service and Utility (PUZ1) and is covered by a Bushfire Management Overlay (BMO).

6.4.1 Zoning

Public Use zone – Service and Utility (PUZ1)

Purpose

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To recognise public land use for public utility and community services and facilities.
- To provide for associated uses that are consistent with the intent of the public land reservation or purpose.

Implications

The offset site management commitments are in addition to what is required under PUZ1 so there are no implications under the PUZ1.

6.4.2 Overlays

Bushfire Management Overly (BMO)

Purpose

- 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.

Under the BMO, bushfire protection measures are required when applying for a permit to construct a building or construct or carry out works. For example, an application must be accompanied by a bushfire hazard site assessment, a bushfire hazard landscape assessment, and a bushfire management statement.

Implications

The establishment of the offset site precludes the construction of any buildings or construction works, therefore there are no implications under the BMO associated with the establishment of the offset site.

7. Management commitments

The OMP management commitments are provided in a similar format and wording to that required for the Section 69 Agreement. This format has been adopted to provide some consistency between the OMP documentation submitted to DCCEEW and NVOR, to improve clarity for the landowner.

7.1 Plan objectives

All high threats to native vegetation condition and LnP habitat improvement including weeds, pest animals, threats to soil structure, natural water flow, vegetation condition and the recruitment cycle must be controlled.

High threats requiring control at this site include:

- Threats to habitat condition from illegal vehicle access.
- High threat weeds;
- Pest animals;
- Tracks and track erosion requiring revegetation and remediation;
- Inappropriate fire regime;
- *Phytophthora*;
- Rubbish left on site; and
- Other threats as identified or that may appear during the 10-year active management period.

7.2 Management priorities

Most of the threats identified on site pose a high risk to LnP and are spread throughout the site so no one threat takes priority over another. All threats need to be managed across the entire site.

7.3 10-year management commitments

The aim of this OMP is to conserve habitat for LnP. To achieve this, the landowner has been consulted, has confirmed they have the capacity, and has agreed to undertake the following management commitments to improve the quality and condition of native vegetation within the offset site for a period of 10 years from the commencement of the agreement, once approved by DCCEEW (Table 1):

Table 1: 10 Year management commitments

10 year management commitments	
Zones	Commitment
All	• register On Title Landowner Security Agreement (Section 69 Agreement) immediately on approval of this OMP by DCCEEW • monitor quarterly (i.e. once per season), and report annually to DEECA, to the Department's standards, on management obligations, commitments actions and results, including high threat weed identification and actions taken for any new threats that may arise.

The landowner must maintain, in perpetuity, the condition of native vegetation and habitat for LnP achieved at the end of the 10-year management period, as outlined above.

7.4 Ongoing management commitments

From the commencement of the agreement, the landowner has agreed to undertake the following management commitments to maintain the quality and condition of native vegetation and habitat for LnP at the site in perpetuity (Table 2):

Table 2: Ongoing management commitments

Ongoing management commitments	
Zone(s)	Commitment
All	From the commencement of the Agreement the landowner must, for all vegetation types: • control ALL high threats (e.g. grazing threats from introduced animals or overgrazing by native herbivores, inappropriate fire or flooding regime, other threats as identified) • eliminate all woody weeds < 1 % cover with no mature plants present • ensure that weed cover does not increase beyond the current level (% cover measured by Site Assessor when establishing the offset site) • monitor for any new and emerging high threat weeds and eliminate to < 1% cover • control foxes, deer, cats, rabbits, spread of *Phytophthora*, inappropriate fire regime and rubbish dumping • undertake track remediation including prevention and repair of erosion and revegetation • protect the site from being readily accessible by persons (i.e. exclude persons, other than those required for management or monitoring) • monitor threats throughout the year (at least once per quarter) • report, as reasonably requested, to DCCEEW and DEECA on management obligations, actions and results • retain all standing trees (dead or alive) • retain all logs, fallen timber and leaf litter • exclude stock

7.5 Fencing and access

Threats, including stock and people (other than management/monitoring personnel), must be excluded from the site at all times. The intention of fencing is to protect the site from threats. The location of fencing is not important as long as the site is protected from all threats in perpetuity.

There are currently no fences around the boundary of the offset site. There is a locked, management vehicle only, access gate across the track entrance from Distillery Creek Road at the northeast end of the site (signposted as Batson Track). The second access track off Distillery Creek Road (located south of the abovementioned northeast track) has been permanently closed with a wooden post and rail fence. Boulders have been placed either side of these entrances to try to prevent unauthorised access around the gate and fence. The track entrance on the north western boundary of the site is open and ungated.

All tracks and track entrances must be permanently blocked off to prevent access from all vehicles and unauthorised personnel. Steel locked gates or other permanent structures and placement of large boulders must be installed immediately adjacent and in contact with each other to prevent illegal vehicle access.

The track entrance via the north-eastern gated track (signposted as Batson Track) will remain temporarily accessible to management vehicles for weed control in the first year and must be permanently closed in the second year so track remediation and regeneration can be undertaken.

Signage must be installed at track entrances and every 100 m along Distillery Creek Road labelled 'CONSERVATION AREA for Protected Fauna. Public Access not permitted' (or similar wording).

Interpretive signage must be installed on Distillery Creek Road at the centre of the offset site boundary to educate the public regarding the risks to threatened fauna caused by illegal access. The aim is to help achieve behavioural change in the form of reduced illegal entry to improve and increase the area and quality of LnP habitat onsite.

Fake security cameras must be installed at track entrances and every 100 m adjacent to the above-mentioned signage and include signage that states the site is monitored to prevent illegal access and trespassers will be prosecuted.

Deer proof fencing may be required to prevent deer accessing artificial water to assist the deer control (i.e. shooting) to reduce deer numbers to a level that prevents vegetation impacts affecting LnP habitat and/or decrease the frequency of shooting required. This would require the construction of a 2 m high conventional deer exclusion fence along the upper edge of the embankment next to the concrete wall and around the entire water holding area to fully enclose the artificial water sources. Any maintenance access gates into these areas would also need to be 2 m high and exclude deer.

All fencing and gates must be maintained in good working condition and any damage/breaches will be repaired within two months of detection.

Threats including stock access and firewood collection must be excluded from the site in perpetuity.

If actions to manage access including installation of fencing or gates will impact native vegetation and if a fencing exemption does not apply, a Conservation work exemption or planning permit will be required under Clause 52.17 of the Surf Coast planning scheme.

Where redundant fencing exists on site it is likely to pose a threat to native animals, especially if it is barbed. Wire from redundant fencing must be removed and disposed of at an appropriate facility

Fencing access management methods are outlined in Table 3.

7.5.1 Performance indicators

No illegal access by vehicles or persons is occurring.

Additional boulders, new fencing/gates, signage and fake security cameras are installed and maintained as required.

If deer exclusion fencing is erected, deer are effectively excluded with no evidence of deer inside the exclusion areas.

No stock access or illegal firewood collection occurring.

All works undertaken are documented.

7.5.2 Adaptive management

Routine checks must be undertaken quarterly to monitor for unauthorised access to the site.

If any method or type of fencing is found to be ineffective and does not protect the site from threats, then undertake repairs, upgrades or employ a different method.

Table 3: Fencing and access – methods and timing

Methods	Location	Timing
Undertake permanent closure of all track entrances with steel locked gates or other permanent structures and placement of boulders immediately adjacent and in contact with each other to prevent illegal vehicle access Temporarily retain management vehicle access for weed control via the northeastern gated track signposted as Batson Track for the first year and permanently close this entrance in the second year and remove street name signage	All track entrances	Complete track closures within 6 months of execution of security agreement Permanently close the northeastern gate on Distillery Creek Road by the end of year 2
Install signage at track entrances and every 100 m along Distillery Creek Road that identifies this as a 'CONSERVATION AREA for Protected Fauna. Public Access is not permitted', (or similar wording)	All track entrances and along the length of Distillery Creek Road that borders the offset site and at the northwestern site entrance	Within 3 months of execution of security agreement
Install fake security cameras at track entrances and every 100 m adjacent to the above-mentioned signage and include signage that states the site is monitored to prevent illegal access and trespassers will be prosecuted	All track entrances and along the length of Distillery Creek Road that borders the offset site and at the northwestern site entrance	Within 3 months of execution of security agreement
Routine checks to monitor for evidence of unauthorised access	Along the length of offset site boundary on Distillery Creek Road (particularly around existing track entrances) and the entrance on the northwest side of the offset site. Incidental observations of site entry should be noted elsewhere along the boundary of the offset site	Each season – spring, summer, winter, autumn. Ongoing
If unauthorised access continues from Distillery Creek Road, install fencing along the full length of the boundary of	Distillery Creek Road along the boundary of the offset site	Within three months of detecting uncontrolled illegal vehicle/pedestrian access

Methods	Location	Timing
the offset site on Distillery Creek Road. Install a galvanised steel ringlock 8/90/30 fence (eight horizontal wires with graduated spacing, 90 cm high and 30 cm vertical picket spacing). The bottom wire must be at least 30 cm high to enable movement of small native mammals.		
If unauthorised entry continues at the northwestern boundary track, use boulders to reinforce the track closure structure and install a locked vehicle only management gate on Batson Track at the intersection with No.2 Road.	All track entrances	Within three months of detecting uncontrolled illegal vehicle/pedestrian access
If deer shooting is not adequately controlling deer in the first 12 months or at any time, thereafter, install a 2 m high deer exclusion fence and gate/s around artificial water sources immediately north of the reclamation plant to reduce suitable habitat for deer and permit management vehicle access	Around the two artificial water sources adjacent to the reclamation plant	From year two onwards, within three months of detecting deer impacts on vegetation and LnP habitat that is not controlled by shooting alone
Monitor quarterly and maintain all fencing, gates and signage in good working condition and repair any breaches	Entire offset site where fencing/gate/signs are installed	Monitor for breaches each season – spring, summer, winter, autumn. Ongoing Repair any breaches/damaged or missing signs within a month of detection

7.6 Weed Control

Weed control is required to prevent weeds impacting LnP habitat on site. All woody weeds on site must be eliminated[9].

7.6.1 Woody weeds

Eliminate all woody weeds listed in Table 4 by the end of the first year of management using the methods outlined in Table 4. Indigenous plants should not be impacted during treatment.

Monitor throughout the year (at least quarterly) for any re-sprouting or seedlings and eradicate (either spot spray or hand pull) for the term of the Agreement. If seeds are present on plants, then remove from site and dispose of responsibly (e.g. double bagged in landfill).

Refer to DEECA *Management standards for native vegetation offset sites, January 2023* – Weed management standard (DEECA 2023e) or its successor.

Monitoring and weed control must be undertaken post fire as there will be mass germination of weed soil stored seed bank of the species listed in Table 4. These species have large seedbanks that can persist for many decades requiring ongoing control.

Any woody weeds listed under the CaLP Act must be eliminated from the offset site by the end of year 10 of the OMP (see Appendix 1).

All machinery and equipment used for any works onsite must be cleaned off site prior to and after work activities to manage the spread of weed seeds and propagules.

Under Victorian legislation, legal use of some chemicals requires the user to possess an Agricultural Chemical User Permit (ACUP). Other chemicals have restrictions on their use in

[9] Eliminate means to reduce weed cover to less than one per cent with no mature individuals present. This means that by the time stated in the management plan the presence of the weed or weeds is negligible. The presence of occasional scattered seedlings (which should be removed ongoing) still constitutes negligible cover.

Chemical Control Areas (CCAs). A suitably qualified contractor with an ACUP permit must undertake the works where such chemicals are required.

Herbicides used to control weeds along and near drainage lines needs be suitable for use near waterways.

New and emerging woody weeds

All new and emerging woody weeds must be eliminated. Monitor throughout the site at least quarterly for the 10 years of active management and then on an ongoing basis and eradicate any identified plants.

Refer to DEECA *Management standards for native vegetation offset sites, January 2023*– Weed management standard (DEECA 2023e) (or its successor).

7.6.2 Performance indicators

Woody weeds eradicated from the site by the end of year 1.

No mature plants within the site by the end of year 1.

No off-target damage to native plants.

No new or high threat woody weeds present on site.

Documentation maintained of all monitoring activities and results, and control activities.

7.6.3 Adaptive management

Review and implement the annual monitoring report recommendations.

If weed cover is not decreasing or is increasing above covers shown in Table 5, then assess which species are not responding and review timing and methods to ensure they are suitable for the target species.

Trial alternative methods and increase the frequency of weed control if necessary.

Table 4: Woody weeds to be controlled – methods and timing (source: Muyt 2001)

Common name	Scientific name	Location	Methods	Timing	Percent cover at inception	Notes
Coast Wattle	#*Acacia longifolia* subsp. *Sophorae*	Entire site	Large plants: cut at ground level (below the lowest active bud) and paint or drill and fill or ringbark Seedlings: hand pull ensuring roots are removed	All year round before seed set which occurs in summer	<1%	Has a large seedbank that can stay dormant for many years. Reaches sexual maturity in 2-3 years. Must remove before this stage. Plants may live for 50 years. Disturbance such as fire and flood stimulate mass germination of the seedbank which will need to be actively controlled for several years afterwards. Young plants can resprout from the base if damaged. Some germination will occur each year in the absence of disturbance. Management will need to be ongoing now that mature plants are present onsite. A Conservation work exemption from DEECA will be required for the removal of #Coast Wattle.
Sallow Wattle	#*Acacia longifolia* subsp. *Longifolia*	Entire site	Large plants: cut at ground level (below the lowest active bud) and paint or drill and fill or ringbark Seedlings: hand pull ensuring roots are removed	All year round before seed set which occurs in summer	<1%	Has a large seedbank that can stay dormant for many years. Reaches sexual maturity as early as 18 months. Must remove before this stage. Disturbance such as fire and flood stimulate mass germination of the seedbank which will need to be actively controlled for several years afterwards. Young plants can resprout from the base if damaged. Some germination will occur each year in the absence of disturbance. Management will need to be ongoing now that mature plants are present onsite
African Boneseed	**Chrysanthemoides monilifera* subsp. *Monilifera*	Entire site	Large plants: cut and paint Seedlings: hand pull ensuring roots are removed Remove any fruiting material from site and dispose of responsibly	All year round before seed set which occurs in April to July	<1%	Large seedbank that can persist for years. Reaches sexual maturity at 18 months. Must remove before this stage. Can and can live for up to 20 years. Disturbance stimulates germination e.g. soil disturbance along the edges of tracks at any time of the year, but more commonly after autumn rains. Can resprout after fire or damage to top growth. Fire triggers seed germination which will need to be actively controlled for several years afterwards
Bluebell Creeper	**Billardiera heterophylla*	Entire site	Large plants: cut and paint/ spray with herbicide or drill and fill. Seedlings: hand pull	Spring or early summer before seed set which occurs summer to autumn	<1%	This species was recorded by GHD during surveys in March 2023. Mass germination occurs post fire
		Entire site	Monitor for and eliminate all new and emerging woody weeds	Ongoing		

Table 5: Total cover of woody weeds on site

Location	Total cover of all woody weeds (%)
Entire site	<1%

7.6.4 Herbaceous broadleaf and grassy weeds

Elimination of all high threat herbaceous and grassy weeds < 1% cover:

All high threat weeds on site should be the focus of herbaceous weed control and must be eliminated[10]. Indigenous plants should not be impacted during treatment.

Aim to eliminate all high threat weeds listed in Table 6 by the end of the fifth year of management using the methods outlined in Table 6.

Treat weeds before the plant has flowered and set seed. If seeds are present on plants then remove from site and dispose of responsibly (e.g. double bagged in landfill).

All machinery and equipment used for any work onsite must be cleaned off site prior to and after work activities to manage the spread of weed seeds and propagules.

Refer to DEECA *Management standards for native vegetation offset sites, January 2023*– Weed management standard (DEECA 2023e) or its successor.

New and emerging high threat herbaceous and grassy weeds

Monitoring for new and emerging high threat herbaceous and grassy weeds is to be conducted at least quarterly for the 10 years of active management and then ongoing, and any new and emerging weeds eliminated.

Refer to DEECA *Management standards for native vegetation offset sites, January 2023*– Weed management standard (DEECA 2023e) (or its successor).

7.6.5 Performance indicators

The cover of herbaceous or grassy weeds does not increase beyond current levels across the site by year 10 (<1% cover).

No off-target damage to native plants.

No new or high threat herbaceous or grassy weeds on site.

Documentation maintained of all monitoring activities and results, and control activities.

7.6.6 Adaptive management

Review the annual monitoring report recommendations.

If weed cover is not decreasing or is increasing beyond covers in Table 7 then review timing and methods to ensure they are suitable for the target species.

Trial alternative methods if necessary and increase the frequency of weed control.

[10] Eliminate means to reduce weed cover to less than one per cent with no mature individuals present. This means that by the time stated in the management plan the presence of the weed or weeds is negligible. The presence of occasional scattered seedlings (which should be removed ongoing) still constitutes negligible cover.

Table 6: Herbaceous weeds to be controlled – methods and timing (source: Muyt 2001)

Common name	Scientific name	Location	Methods	Timing
Pampas Grass	*Cortaderia selloana*	Entire site	Slash inflorescences before seed set to prevent dispersal elsewhere Hand dig to remove plants where possible otherwise slash, burn or spray in winter/spring/summer over several years until plant is destroyed If hand digging, ensure all rhizome fragments are removed from the site	Winter, spring, summer before seed set in March/May
		Entire site	Monitor for and eliminate all new and emerging high-threat herbaceous weeds	Ongoing

Table 7: Total cover of herbaceous weeds on site

Location	**Total cover of all herbaceous and grassy weeds (%)** (including high threat herbaceous and grassy weeds)	**Total cover high threat herbaceous and grassy weeds** (%)
Entire site	<1%	1%

7.7 Pest animals

The aim of pest animal control is to protect the population of LnP from predation by foxes and cats and reduce impacts on habitat quality by deer and rabbits.

Under this management plan, all pest animals listed under the *Catchment and Land Protection Act 1994* must be controlled, with abundance, activity, and disturbance reduced to negligible levels (including no active rabbit warrens and fox dens).

Remove rubbish. Disperse artificial piles of logs and boulders that may be used as harbour by pest animals. Do not remove indigenous plants, fallen logs or boulders from the site.

All machinery and equipment used for any pest control or other work onsite must be cleaned off site prior to and after work activities to manage the spread of weed seeds and propagules.

Continue to monitor for signs of foxes, rabbits and deer at least quarterly, and cats biennially, and control all year round as well as any new and emerging pest animals and ensure appropriate management actions implemented as outlined in Table 8.

7.7.1.1 European rabbit (*Oryctolagus cuniculus*)

Rabbits should be monitored at least quarterly and controlled throughout the year.

If rabbit activity is detected on site, control must be undertaken, using an integrated approach in accordance with DEECA *Management standards for native vegetation offset sites, January 2023*– pest animal management standards (DEECA 2023e), which would involve fumigation, hand collapsing of burrows and baiting.

Warren ripping is not permitted in the offset site. Care must be taken not to create erosion issues when warren destruction takes place.

Ensure artificial forms of harbour are removed (e.g. dumped rubbish).

Any above ground carcasses must be removed to prevent poisoning of native predators.

Baiting must be undertaken by a licensed and suitably qualified contractor with an Agricultural Chemical Users Permit (ACUP).

Engage a professional licensed pest animal controller to undertake shooting if required, generally only effective if rabbits are in low numbers.

Undertake ongoing monitoring of rabbits as part of the biennial LnP camera trapping monitoring program and during quarterly site visits (searching for scats, diggings, warrens and rabbits) (see Section 10 for monitoring details).

7.7.1.2 Fox (*Vulpes vulpes*)

Foxes are a threat to native fauna and should be monitored for at least quarterly and controlled throughout the year if activity is detected in the offset site and surrounding property.

Fox control will be undertaken in line with the PV fox baiting program used in the surrounding Great Otway National Park and Anglesea Heath which includes:

- Placement fox bait stations (using 1080) every 800 m – 1 km along existing tracks (should be located 5 m off the track and buried) and replaced every 4 weeks; and
- Install signs stating, 'Fox baits containing 1080 are currently laid in the area as part of an ongoing fox control program'.

Fox dens where present must be destroyed through fumigation and hand collapse.

Fox control must be undertaken by an experienced pest animal controller, with a commercial operating licence to undertake fox control.

Fox baiting must be undertaken in accordance with the *Agricultural and Veterinary Chemicals (Control of Us*e) *Act 1992* and persons undertaking baiting must have the required permits and follow the document titled 'Directions for the use of 1080 and PAPP pest animal bait products in Victoria' (AV 2023a).

Engage a professional licensed pest animal controller to undertake shooting if required.

Undertake ongoing monitoring of foxes as part of the LnP camera trapping monitoring program and during quarterly site visits (searching for scats, dens and foxes). Amend the control program as required and in collaboration with PV to maintain effective fox control.

7.7.1.3 Cat (*Felis catus*).

Feral cats are declared established pest animals and can be controlled on specified Crown land under the CaLP Act, but this does not extend to private land (AV 2023b). Currently cats can only be managed on private land by shooting (which is labour intensive and requires a lot of skill) if found near livestock (AV 2023c, DCCEEW 2023c). Alternatively, cats can be trapped if there is a council order establishing a cat curfew or no cat zone under the *Domestic Animals* (DA) *Act 1994* and the cat has been found on private land more than once (AV 2023c). Cat trapping must follow the *Prevention of Cruelty to Animals Act* (POCTA) *1986* and POCTA regulations 2019 (AV 2023c)

Parks Victoria (Clare Miller pers. Com.) has advised that Surf Coast Shire Council is introducing a 24-hour cat curfew under the *Domestic Animals Act 1994* in September 2023 after which cat trapping can be undertaken in the shire.

Cats trapped on private land must be handed to local Council so they can be scanned and returned to their owner (AV 2023c). Cats without identification must be managed by a council

pound or shelter in accordance with the Code of Practice for the management of dogs and cats in shelters and pounds (AV 2023c). A Notice of Objection can be issued to owners of cats that trespass on private property, if the cat enters the property again, penalties can be applied to the cat owner (AV 2023c).

Cats trapped as a result of trespassing on private property may be immediately humanely destroyed by council if they are wild, uncontrollable or diseased (AV 2023c).

Trapping carries the risk of trapping native animals and should be undertaken by an experienced, skilled pest controller who must check the traps at least twice a day including dawn and dusk to minimise stress to native animals and to release them safely.

Elsewhere in Australia there are other effective methods of cat control such the Felixer Grooming Trap which is an automated solar operated tool to assist with the control of foxes and cats. The trap uses audio lures to attract cats and foxes and AI, rangefinders and sensors to distinguish cats and foxes from non-target animals. The felixer sprays foxes and cats with a toxic gel and automatically resets, they hold 20 baits. The trap is being commercialised but is not yet legal in Victoria.

Development and trials of several bait products are being undertaken for cats (DCCEEW 2023c) and further information is available at: https://www.dcceew.gov.au/environment/invasive-species/feral-animals-australia/feral-cats/curiosity-bait . Currently only PAPP (para-aminopropiophenone) bait is authorised for use in Victoria by operators with a specific permit issued by Agriculture Victoria, but it can only be used on Crown land where cats are declared established pests (AV 2023b).

If wild cats are identified during the camera trapping for LnP, then a professional pest controller experienced in trapping cats and handling and releasing native animals must be engaged to trap the cats and take them to the pound for immediate destruction. Trapping is recommended each year through late autumn and early winter when food is scarce (trap baits are more attractive at that time).

When effective methods such as the felixer become legal/available, coordinate with DCCEEW, Parks Victoria and DEECA to develop an appropriate cat control program to minimise and avoid off target impacts on LnP.

7.7.1.4 Deer

Currently the most effective method of deer control is shooting.

An ongoing monitoring and shooting program must be undertaken throughout the year.

A professional, skilled, experienced shooter, wildlife controller or deer harvester must be engaged to undertake deer control. This will include camera trapping along game trails and near water sources (e.g. the two unfenced artificial dams and in the gullies) to determine the deer species (to ensure the correct guns and ammunition are used), provide some indication of deer numbers (game harvesters can be used to control high numbers of deer until deer numbers drop to levels that are not viable for harvesting), and the location of deer (to identify areas where shooting will be most effective and control the greatest number of deer in the shortest amount of time).

Game cameras can also be used to collect data for the monitoring program including deer species, deer numbers and locations of greatest activity.

Deer control should be undertaken in consultation and collaboration with DEECA and PV who are undertaking deer control in the surrounding Great Otway National Park and Anglesea Heath (M. Mackenzie pers. Comm.). If deer control is undertaken at the same time in the national park and offset site, then deer flushed into the site can be removed and flushed back into the national park for further control.

Deer control should commence fortnightly, and frequency should be increased if deer numbers are high and continue until deer numbers decrease. Shooting frequency can then be decreased over time to the minimum frequency that controls deer numbers to levels that prevent impacts on vegetation structure and diversity and allows recovery of impacted vegetation and therefore LnP habitat.

If shooting is not adequately reducing deer numbers to a level that prevents vegetation impacts effecting LnP habitat or if the landowner would like to decrease the frequency of shooting required, then deer should be excluded from the two artificial water sources immediately north of the water reclamation plant. This would require the construction of a 2 m high conventional deer exclusion fence along the upper edge of the embankment next to the concrete wall and around the entire water holding area to fully enclose the artificial water sources. Any maintenance access gates into these areas would also need to be 2 m high and exclude deer.

Ongoing monitoring of deer must occur throughout the year and can include the use of game cameras as part of the shooting program, incidental deer photos captured during LnP camera trapping, evidence of deer recorded during LnP habitat monitoring (browse lines, hedging, deer prints, scats, wallows, pugging, rub trees, scrapes and cleared, thrashed areas of vegetation), and through on ground observations recorded during quarterly field visits undertaken each season by the landowner (see Section 10 for monitoring details).

7.7.1.5 New and emerging pest animals

Any new and emerging pest animals must be monitored for, and appropriate management actions implemented in consultation with DCCEEW, DEECA and PV, as outlined in Table 8.

7.7.2 Performance indicators

If identified on site, pest animals, rabbit warrens or fox dens have been controlled immediately.

No increase in the abundance of pest animals.

No impacts on native vegetation from pest animals.

Long-nosed Potoroo continue to be recorded on site with no observed reduction in numbers.

Documentation maintained of all monitoring activities and results, and control activities.

7.7.3 Adaptive management

If the shooting program for deer is not effective/feasible a 2 m high deer exclusion fence must be installed around the artificial water sources and maintained in good condition.

If pest numbers are increasing, then methods will be reviewed and modified. Frequency of control will be increased.

Contact with PV (Clare Miller and Michael Makenzie or a preferred contact advised by PV) will be maintained to coordinate pest animal control in the adjoining Great Otway National Park and Anglesea Heath to reduce the risk of pest animals dispersing into the site from surrounding land.

Table 8: Pest animals to be controlled – species methods and timing

Location	Common name	Methods	Timing
Along vehicle tracks throughout site	Fox	Follow Parks Victoria fox baiting program – place fox bait every 800 m to 1 km along a track (located 5 m off the track and buried). Increase frequency of baiting if monthly is not effective.	Every 4 weeks
Entire site	Rabbits	Undertake baiting,	As required
Entire site	Rabbit and fox	When baiting, collect and dispose of carcasses to prevent poisoning of native predators	As required
Entire site	Rabbit and fox	Remove any (artificial) harbour that may be used by pest animals	Ongoing
Entire site	Rabbit and fox	Fumigate and hand collapse all rabbit burrows and fox dens (unlikely in sandy soil with poor structure)	As required
Entire site	Rabbit and fox	Undertake shooting if required to assist with fox and rabbit control (i.e. if baiting not reducing numbers)	As required
Entire site	Deer	Qualified deer controller engaged to undertake deer shooting program	Fortnightly, decreasing/ increasing in response to deer numbers
Entire site	Cats	Undertake cat trapping from late autumn to early winter	Annually
Entire site	All pest animals	Undertake seasonal (spring, summer, winter, autumn) monitoring and control of all pest animals	Quarterly
Entire site	All pest animals	Monitor pest animal presence as part of deer camera trapping (if professional deer shooter uses camera traps) and the biennial LnP camera trapping, habitat monitoring surveys for LnP	Year 2, 4, 6, 8 and 10 and when deer camera trapping is undertaken
Entire site	New & Emerging pest animals	Monitor seasonally (spring, summer, winter, autumn) and control	Ongoing

7.8 Erosion – track remediation and restoration

Tracks within the offset site will be open to maintenance vehicles only in the first year to assist with weed control and track remediation. Access will be maintained via the north-east gate on Distillery Creek Road (signposted as Batson Track) and permanently closed in the second year of the OMP. The access point just south of this track is already permanently closed but will have additional boulders installed in year one of the OMP to close gaps around the permanent fence currently being illegally accessed by trail bikes. The track access on the northwest side of the offset site will be permanently closed in the first year of the OMP.

Soil saver will be secured in place across areas of erosion and branches of cut #Sallow Wattle and #Coast Wattle will be placed on top (after ensuring they do not contain seeds) to assist with holding soil saver in place, and to provide some protection for supplemental seeding and planting.

Seeds of locally indigenous species occurring on site or from the same EVCs in nearby surrounds should be sourced from a local indigenous nursery (e.g. Geelong Community Nursery). Select species that would best assist with soil stabilisation and are readily available from the local Barwon Water nursery (e.g. *Leptospermum continentale*). These seeds should be direct seeded across the tracks focusing on eroded areas at a rate determined by the nursery.

Ensure any plants or other materials transported into the site are certified free of weeds and pathogens by sourcing plants form nurseries accredited with the Nursery Industry Accreditation Scheme Australia (NIASA) and by ensuring materials (such as potting mixes used in plants planted out on site) conform to Australian Standards for example AS3743 – 2003 Potting mixes.

All machinery and equipment used for any works onsite must be cleaned off site prior to and after work activities to manage the spread of weed seeds and propagules.

Flat areas of track that are very compacted and can be accessed by machinery without impacting native vegetation (e.g. immediately west of northern track entrance of Batson Track) can be shallow ripped or graded, followed by application of soil saver then direct seeded. No ripping or grading must be undertaken on steeply sloping track sections due to the poor soil structure which would increases the risk of erosion.

If vegetation is not establishing in the eroded areas, or elsewhere along tracks, or is too sparse to prevent erosion, undertake supplementary plantings of indigenous species in consultation with the Geelong Community Nursery from year three of the OMP.

Some parts of internal tracks have naturally regenerated with species including Austral Bracken, Thatch Saw-sedge, Prickly Tea-tree and Silver Banksia *Banksia marginata*. This suggests that other track sections should regenerate similarly once vehicle access is removed.

Species that are available to plant/direct seed such as Prickly Tea-tree and Silver Banksia can be used in other sections of the track if stock is available.

Track remediation and restoration methods and timing are provided in Table 9.

7.8.1 Performance indicators

Application of soil saver, branches of #Sallow Wattle and #Coast Wattle (without seed) and direct seeding completed by the end of year one.

All tracks closed to vehicles by year two.

Native plant regeneration evident along tracks from direct seeding, natural regeneration or supplementary planting by year five.

Areas of erosion revegetated and no further erosion occurring by year 10.

Documentation maintained of all monitoring activities and results, and control activities.

No new weeds in areas where contractors have been working.

7.8.2 Adaptive management

If erosion continues, or if direct seeding and natural regeneration is not successful, review methods and modify.

Table 9: Track remediation and restoration management – methods and timing

Location	Methods	Timing
Track	Shallow rip/grade along flat areas of the track that are very compacted and can be accessed by machinery without impacting native vegetation (e.g. immediately west of north-eastern track entrance of Batson Track).	Year 1
Track (areas of erosion)	Lay down soil saver	Year 1 and replace as necessary until revegetation has occurred
Track (areas of erosion)	Place branches of #Sallow Wattle and #Coast Wattle across areas of erosion. Ensure plants are free from seed.	Year 1
Track	Source locally indigenous species on site or from the same EVCs in nearby surrounds from the Geelong Community Nursery. Direct seed the tracks focusing on eroded areas at a rate determined by the nursery.	Year 1 ongoing until revegetated
Track	Close tracks to all vehicles	Year 2
Tracks	If required, undertake supplementary plantings of indigenous species in consultation with the nursery.	From Year 3 (if required) ongoing until revegetated

7.9 Fire regime

Ensure most of the site is maintained in a longer unburnt condition (>20 yrs). Engage with PV to assist with maintaining a larger proportion of the site unburnt for >20 years.

After 20 years of being unburnt, ecological mosaic burning should be undertaken in the Heathy Woodland (avoiding the Sedgy Riparian Woodland in the gullies). The interval between burns of different sections of the offset site should be long enough to allow burnt vegetation to recover and provide shelter and food for LnP before the next burn in the next location. The extent of the area burnt each time should leave enough unburnt habitat at a post fire age sufficient to provide adequate habitat for the species.

A qualified experienced ecologist with a good understanding of LnP management should be consulted to develop an appropriate burn plan for LnP after 20 years based on the conditions at the time (e.g. to accommodate drought, pest animals levels, etc.). The habitat monitoring and LnP camera trapping results collected during the 10 year active management period should be used to inform the development of the burn plan. Experienced burn practitioners must be engaged to conduct these burns.

Monitoring of habitat recovery (vegetation condition and structure) and LnP numbers should be undertaken following all burns and compared with pre burn data to ensure that habitat and the population of LnP is not adversely impacted by the fire timing, frequency, intensity, extent, and location.

Intensive fox, cat and deer control should be undertaken immediately post fire (wildfire or ecological burns) as well as post fire monitoring of predators.

If vegetation is not recovering post fire, then supplementary planting may be required with species indigenous to the site to create suitable habitat.

The fire regime methods and timing are provided in Table 10.

7.9.1 Performance indicators

The site is burnt in a mosaic with no one area burnt more often than every 20 years.

Gullies remaining largely unburnt.

All planned burns are mapped (including extent and location) and burn dates recorded.

LnP are retained on site.

Habitat condition including flora species diversity, vegetation structure and understorey cover is not declining over time.

The date, location and extent of controlled burns or wildfires is recorded.

7.9.2 Adaptive management

If monitoring shows the population of LnP and/or habitat condition is declining due to the existing burn regime, then this will need to be updated in consultation with PV and DCCEEW to agree on a more appropriate burn regime.

Examine other factors (e.g. predation, *Phytophthora*, weeds and impacts of herbivores) that may be impacting LnP and habitat and control these threats.

Table 10: Fire regime management – methods and timing

Location	Methods	Timing
Entire site	Develop a burn plan in consultation with qualified, experienced ecologist to determine the location and size of the area burnt each time with any one area being burnt no more often than every 20 years and leaving enough unburnt vegetation to sustain LnP on site	When approaching 20 years where any part of the site is unburnt
Entire site	Map areas (extent and location) where the native vegetation has been burnt and the date burnt	Following fire
Entire site	Undertake intensive weed, fox, cat and deer control in and around burnt areas until vegetation recovers enough to provide shelter for LnP	Immediately following fire and ongoing during vegetation recovery
Entire site	Undertake biennial monitoring following burns to ensure population and habitat quality of LnP is not impacted over time	Immediately following fire and ongoing during vegetation recovery

7.10 Phytophthora

As *Phytophthora* is likely present onsite, its spread will need to be limited and LnP habitat managed to maintain a dense understorey with some open areas.

Suggested disease management actions include closing tracks (see above for track closure measures), avoiding undertaking works during wet weather and on wet soils (CoA 2014), and implementing strict vehicle washdown protocols (Wilson et al. 2000).

Strict hygiene protocols must be followed before entering and immediately after exiting the site:

- Ensure all clothing, footwear, tools, equipment, machinery, and vehicles are free of mud, soil and organic matter. Clean machinery and vehicles using a hard brush to remove any soil and wash down thoroughly with a hose. Ensure this is undertaken in a suitable location, away from areas of native vegetation. Critical contamination areas that must be cleaned thoroughly including wheel arches, wheel axils, tyre grooves, mud guards, radiators, ledges and frames, and inside driver cabs (Tyers et al. 2004, DPIE 2020).
- Clean all contaminated equipment and footwear using a brush to remove any loose soil and spray with a sterilising solution such as 70% methylated spirits in water or 3-5% solution of sodium hypochlorite (household bleach) in water or commercial fungicidal products e.g. Phytoclean (used as per manufacturer's instructions) or industrial strength detergent (used as per manufacturer's instructions) (DPIE 2020). Used cleaning fluids must be disposed of responsibly away from native vegetation.
- Ensure any plants or other materials transported into the site are certified free of weeds and pathogens by sourcing plants form nurseries accredited with the Nursery Industry

Accreditation Scheme Australia (NIASA) and by ensuring materials (such as potting mixes used in plants planted out on site) conform to Australian Standards, for example AS3743 – 2003 Potting mixes (DoE 2015).

A comprehensive explanation of issues, mitigation measures and best practice in *Phytophthora* hygiene must be included in all contractor inductions and signed and agreed to by all personnel before entering the site.

Undertake spot audits of contractors twice a year to ensure hygiene protocols are being followed.

Biennial LnP habitat monitoring should include assessment of plant death with evidence of dieback of *Phytophthora* sensitive species and an analysis of data to detect increases over time (see Section 10 for monitoring details).

If the understorey vegetation species diversity and cover is declining due to *Phytophthora*, then a plan for supplementary planting of *Phytophthora* resistant species should be developed and implemented in consultation with DCCEEW, NVOR, PV and the Geelong Community Nursery.

The methods and timing for the management of *Phytophthora* are provided in Table 11.

7.10.1 Performance indicators

Copies of signed site inductions from all personnel entering that site that include *Phytophthora* hygiene protocols are kept on file by the landowner.

All vehicles, machinery, equipment and footwear are free of soil and sterilised before entering and immediately after leaving the site.

Phytophthora is not causing extensive degradation of LnP habitat (vegetation structure and health).

7.10.2 Adaptive management

If degradation of LnP habitat by *Phytophthora* is detected, and natural recovery of understorey cover is not occurring due to *Phytophthora*, develop and implement a plan for supplementary planting/direct seeding of *Phytophthora* resistant indigenous understorey species. This must be done in consultation with DCCEEW, NVOR and PV to restore a high cover of understorey plants and LnP habitat.

Review hygiene protocols to ensure they are best practice and undertake site audits of contractors to ensure they understand and are adhering to the protocols.

Table 11: *Phytophthora* management – methods and timing

Location	Methods	Timing
Entire site	Ensure all personnel entering the site receive training on the cleaning protocols for *Phytophthora* and provide the landowner with signed site inductions to confirm this	Ongoing
Entire site	Ensure cleaning protocols are followed for all vehicles, machinery, equipment, and footwear of personnel entering the site by undertaking spot audits twice a year	Ongoing
Entire site	Undertake seasonal (spring, summer, autumn, winter) general site monitoring and biennial habitat monitoring for evidence of *Phytophthora* dieback	Quarterly general site monitoring Year 2, 4, 6, 8 and 10 biennial habitat monitoring
Entire site	Undertake supplementary planting/seeding with locally indigenous understorey species that are not sensitive to *Phytophthora* to restore understorey cover	If required, ongoing

7.11 Rubbish

Remove all rubbish from the site. This includes rubbish present along tracks, old fencing and the burnt plastic pipe extending into the southern side of the offset site with minimal disturbance to native vegetation.

A Conservation work exemption will be required prior to the removal of the pipe for any disturbance/loss of native vegetation under Clause 52.17 of the Surf Coast Planning Scheme (see Section 6 for details).

Avoid new rubbish/material entering the site by informing all permitted persons (Barwon Water staff, contractors, and others) entering the site that they must not leave any rubbish, or materials of any sort on site.

Remove existing and any new rubbish that enters the site (i.e. any illegal dumping).

Rubbish management methods and timing are provided in Table 12.

7.11.1 Performance indicators

All existing rubbish and fencing material removed from the offset site.

No new rubbish is dumped within the site.

The damaged water pipe has been removed with minimal disturbance to native vegetation.

7.11.2 Adaptive management

If there are any further issues managing rubbish within the offset site, such as illegal dumping, review and update methods. For example, install signage warning of fines and prosecution for illegal rubbish dumping.

Ensure all permitted persons entering the site are informed about not leaving any materials on site.

Immediately remove any rubbish found on site.

Table 12: Rubbish management – methods and timing

Location	Methods	Timing
Entire site	Remove all rubbish, fencing material and water pipe within the offset site	Within three months of landowner agreement being executed then ongoing
Entire site	Induct all contractors to prevent rubbish being left on site	Ongoing
Entire site	Monitor the site for rubbish or other materials quarterly and remove	Quarterly ongoing
Offset site boundaries	Install signage warning of fines and prosecution for illegal rubbish dumping if illegal rubbish dumping occurs and prosecute offenders if caught	If required.

7.12 Climate change

The abovementioned management actions will help to protect LnP from the effects of climate change, by maintaining/improving shelter (vegetation cover), food sources and reducing predation pressures. Maintaining LnP access to the two dams north of the reclamation plant would also be important.

8. Management action plan and targets

A copy of the management commitments, action plan and targets should be provided to all Barwon Water staff and subcontractors entering and working on site as part of the site induction which must be signed off when read and understood, with clarification of any requirements provided by Barwon Water if required.

Subcontractors must provide Barwon Water with the following record for each site visit to provide evidence of how they met management commitments:

- Name of each staff member working on site,
- The type and date of training received,
- Who provided the training;
- Summary of training; and
- Details on any management commitment breaches.

Barwon Water will provide all contractors with the contact details of the appointed Barwon Water staff member who must be informed immediately in the event of an environmental emergency associated with this project.

The 10 year management action plan and targets are provided in Table 13.

Table 13: Year 1-10 Management actions plan with targets

Year from commencement: Year 1				
Location	**Management Action Description**	**Reference Table/Information for action**	**Timing**	**Standard to be achieved**
Fencing				
All track entrances to the site (except northeastern track entrance)	Undertake permanent closure of all track entrances Temporarily retain management vehicle access for weed control via the northeastern gated track signposted as Batson Track for the first year.	Table 3 and Section 7.5	Within 6 months of execution of security agreement	Tracks closed
At all track entrances and site boundary along Distillery Creek Road	Install warning and interpretive signage Install fake security cameras	Table 3 and Section 7.5	Within 3 months of execution of security agreement	Signage installed

Year from commencement: Year 1

Location	Management Action Description	Reference Table/Information for action	Timing	Standard to be achieved
The boundary of the offset site, particularly along Distillery Creek Road and all track entrances	Monitor (at least quarterly) and if illegal access continues after closing entrances, fence the border of the offset site for its entire length along Distillery Creek Road	Table 3 and Section 7.5	Within 3 months of detecting illegal access	Fencing installed if required No illegal access occurring
Entire offset site where fencing/gates installed	Monitor and maintain all signage, fake security cameras, fencing and gates in good working condition and repair any breaches	Table 3 and Section 7.5	Ongoing, repair within a month of detection	Fencing/gates/rock blockades, signs, fake cameras in place and in good repair with no fencing/gate breaches
Woody Weeds				
Whole site	Monitor (at least quarterly) and control all woody weeds. Refer to Table 4 for a list of woody weeds, their control method and timing of actions Monitor (at least quarterly) and control/eliminate any re-sprouting weeds or seedlings	Table 4, Table 5 and Section 7.6	Refer to Table 4	No mature plants present by end of Year 1 <1% cover of all listed woody weeds No off-target damage to native plants
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 4 and Section 7.6	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) and eliminate all new & emerging woody weeds	n/a	Ongoing	<1% cover of all woody weeds
Herbaceous Weeds				
Whole site	Monitor (at least quarterly) and control all high threat herbaceous weeds. Refer to Table 6 for list of herbaceous weeds, their control method and timing of actions	Table 6, Table 7 and Section 7.6	Refer to Table 6	<1% cover of high threat herbaceous and grassy weeds No off-target damage to native plants
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 6 and Section 7.6	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) and eliminate all new & emerging herbaceous weeds	n/a	Ongoing	<1% cover of all new and emerging high threat herbaceous and grassy weeds
Pest Animals				
Whole site	Monitor (at least quarterly) for and control all pest animals. Refer to Table 8 for a list of control methods	Table 8, Section 7.7	Ongoing Refer to Table 8	Abundance, activity, and disturbance reduced to negligible levels No soil disturbance within the offset site

Year from commencement: Year 1

Location	Management Action Description	Reference Table/Information for action	Timing	Standard to be achieved
	and timing of actions			No active rabbit warrens to be present No active fox dens to be present No rubbish present to provide harbour Minimal artificial piles of logs and boulders
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 8, Section 7.7	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) and control all new and emerging pest animals	n/a	Ongoing	Control numbers of any new & emerging pest animals
Track remediation and restoration				
Track	Undertake track remediation to control erosion and revegetate	Table 9; Section 7.8	Year 1 and ongoing	No further erosion, indigenous vegetation starting to grow on tracks
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 9; Section 7.8	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Track	Monitor (at least quarterly) and control erosion and threats to revegetation	Section 7.8 and Section 10	Ongoing	Erosion controlled and indigenous vegetation starting to grow on tracks
Fire Regime				
Whole site	Coordinate fire regime to ensure areas burnt are rotated, so that different areas are burnt at different times and any one area is burnt no more frequently than every 20 years	Table 10, Section 7.9	Ongoing	The site is burnt in a mosaic with no one area burnt more often than every 20 years
Whole site	Map areas where the native vegetation has been burnt and record the date burnt	Table 10, Section 7.9	Ongoing	All planned burns are mapped (including extent and location) and burn dates recorded
Whole site	Undertake focused weed and pest animal control in burnt areas until dense cover of indigenous vegetation restored	Table 10, Sections 7.6, 7.7, 7.8 and 7.9	Ongoing	Pests and weeds controlled in burnt areas, and indigenous flora species diversity, vegetation structure and understorey recovered before the next area of the site is burnt
Whole site	Undertake habitat and LnP monitoring following burns to ensure population and habitat quality of LnP is not impacted over time	Table 10, Section 7.9 and Section 10	Ongoing	Habitat condition including flora species diversity, vegetation structure and understorey cover does not decline over time. LnP remain present on site

Year from commencement: Year 1

Location	Management Action Description	Reference Table/Information for action	Timing	Standard to be achieved
Phytophthora				
Whole site	Ensure all contractors entering the site receive training on the cleaning/hygiene protocols for *Phytophthora*	Table 11, Section 7.10	Ongoing	All contractors entering the site have completed inductions and training on *Phytophthora* management and cleaning and hygiene protocols
Whole site	Ensure cleaning protocols are followed for all vehicles, machinery, equipment and footwear of personnel entering the site	Table 11, Section 7.10	Ongoing	All vehicles, machinery, equipment and footwear are free of soil and sterilised before entering and immediately after leaving the site
Whole site	Undertake monitoring (at least quarterly) for *Phytophthora*	Table 11, Section 7.10	Ongoing	LnP habitat (vegetation structure, cover, and health) is maintained
Whole site	Undertake supplementary planting/seeding with locally indigenous understorey species that are not sensitive to *Phytophthora* to restore understorey cover if required	Table 11, Section 7.10 and Section 10	Ongoing	LnP habitat (vegetation structure, cover, and health) is maintained
Rubbish				
Whole site	Remove all rubbish within the offset site	Table 12, Section 7.11	Ongoing	No rubbish in offset site
Whole site	Induct all contractors to prevent rubbish being left on site	Table 12, Section 7.12	Ongoing	All contractors inducted regarding not leaving any rubbish on site No rubbish in offset site
Whole site	Install and maintain security cameras and/or signage warning against rubbish dumping	Table 12, Section 7.11 and Section 10	If required	Security cameras/signage installed No rubbish in offset site
Annual reporting and monitoring				
Whole site	Install permanent markers at fixed photopoints along tracks at erosion points and replace markers that have become displaced	Section 10, Attachment 1, Figure 4	Within three months of commencement of the Agreement	Permanent markers established at each photopoint
Whole site	Photographs taken at each photopoint	Section 10, Attachment 1, Figure 4	Same time of year annually	Photographs taken at each photopoint, in same direction, annually
Whole site	Prepare and submit an annual report to DEECA on the template provided and to DCCEEW	Section 10, Attachment 1, Figure 4	Submit reports at least 2 months prior to agreement anniversary date	Annual report is completed, signed, dated and submitted by the landowner at least 2 months prior to the anniversary date of the agreement Report provides enough detail in the form of written comments and supporting evidence that an assessor can easily determine the

Year from commencement: Year 1

Location	Management Action Description	Reference Table/Information for action	Timing	Standard to be achieved
				completion of / progress against the commitments for each zone

Year from commencement: 2-10

Location	Management Action Description	Reference Table for action	Timing	Standard to be achieved
Fencing				
Northeastern track entrance	Permanently close the northeastern gated track signposted as Batson Track	Table 3 and Section 7.5	At the beginning of year 2	All track entrances closed
All track entrances and site boundary along Distillery Creek Road	Monitor (at least quarterly) and if illegal access continues after closing entrances, fence the border of the offset site for its entire length along Distillery Creek Road	Table 3 and Section 7.5	Within 3 months of detecting illegal access	Fencing installed if required No illegal access
Around artificial water sources	Install 2 m high deer exclusion fence/gates around artificial water sources immediately north of the reclamation plant to reduce suitable habitat for deer and assist with deer control if shooting alone is not effectively protecting vegetation and LnP habitat	Table 3 and Section 7.5	Within 3 months of detecting deer impacts on vegetation and LnP habitat that is not adequately controlled by shooting alone	Deer exclusion fencing around artificial water sources installed if required and deer excluded
Entire offset site where fencing/gates are installed	Monitor and maintain all fencing, gates, signs and fake cameras in good working condition and repair any breaches	Table 3 and Section 7.5	Ongoing, repair within a month of detection	Fencing/gates/rock blockades, signs and fake cameras in place and in good repair with no fencing/gate breaches
Woody Weeds				
Whole site	Monitor (at least quarterly) and eliminate all woody weeds. Refer to Table 4 for a list of woody weeds, their control method and timing of actions Monitor (at least quarterly) for any re-sprouting or seedlings and eliminate	Table 4, Table 5 and Section 7.6	Refer to Table 4	<1% cover of all listed woody weeds, with no mature plants present at the end of Year 10 No off-target damage to native plants
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 4 and Section 7.6	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) for any re-sprouting weeds or seedlings and eliminate	n/a	Ongoing	<1% cover of all woody weeds, with no mature plants present at the end of Year 10

Year from commencement: 2-10

Location	Management Action Description	Reference Table for action	Timing	Standard to be achieved
Herbaceous Weeds				
Whole site	Monitor (at least quarterly) and control all high threat herbaceous weeds. Refer to Table 6 for list of herbaceous weeds, their control method and timing of actions	Table 6, Table 7 and Section 7.6	Refer to Table 6	Aim to eliminate all listed high threat herbaceous and grassy weeds by end of Year 5 <1% cover of all high threat herbaceous and weeds at the end of Year 10 No off-target damage to native plants
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 6 and Section 7.6	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) and eliminate all new & emerging herbaceous weeds	n/a	Ongoing	<1% cover of all new and emerging high threat herbaceous and grassy weeds at the end of Year 10
Pest Animals				
Whole site	Monitor (at least quarterly) for and control all pest animals. Refer to Table 8 for a list of control methods and timing of actions	Table 8, Section 7.7	Ongoing Refer to Table 8	Abundance, activity, and disturbance reduced to negligible levels No soil disturbance within the offset site No active rabbit warrens to be present No active fox dens to be present No rubbish present to provide harbour Minimal artificial piles of logs and boulders
Whole site	Induct all contractors to ensure equipment and materials are clean prior to site entry and do not contain and carry weed seeds or propagules onsite	Table 8, Section 7.7	Ongoing	All contractors inducted regarding not spreading weeds into site No new weeds present that are likely to have been spread by contractors (e.g. around areas such as locations of erosion mediation works)
Whole site	Monitor (at least quarterly) and control all new and emerging pest animals	n/a	Ongoing	Control numbers of any new & emerging pest animals
Track remediation and restoration				
Track	Continue track remediation to control erosion and revegetate	Table 9; Section 7.8	Ongoing	No further erosion, indigenous vegetation continuing to grow on tracks
Track	Monitor (at least quarterly) and control erosion and threats to revegetation	Section 7.8 and Section 10	Ongoing	Erosion controlled and dense indigenous vegetation cover restored on tracks by year 10
Fire regime				

Year from commencement: 2-10

Location	Management Action Description	Reference Table for action	Timing	Standard to be achieved
Whole site	Coordinate fire regime to ensure areas burnt are rotated, so that different areas are burnt at different times and any one area is burnt no more frequently than every 20 years	Table 10, Section 7.9	Ongoing	The site is burnt in a mosaic with no one area burnt more often than every 20 years
Whole site	Map areas where the native vegetation has been burnt and record the date burnt	Table 10, Section 7.9	Ongoing	All planned burns are mapped (including extent and location) and burn dates recorded
Whole site	Undertake focused weed and pest animal control in burnt areas until dense cover of indigenous vegetation restored	Table 10, Sections 7.6,7.7, and 7.9	Ongoing	Pests and weeds controlled in burnt areas, indigenous flora species diversity, vegetation structure and understorey recovered before the next area of the site is burnt
Whole site	Undertake biennial habitat monitoring and LnP camera trap monitoring following burns to ensure the population of and habitat quality for LnP is not impacted over time	Table 10, Section 7.9 and Section 10	Ongoing	Habitat condition including flora species diversity, vegetation structure and understorey cover does not decline over time. LnP remain present on site
Phytophthora				
Whole site	Ensure all contractors entering the site receive training on the cleaning/hygiene protocols for *Phytophthora*	Table 11, Section 7.10	Ongoing	All contractors entering the site have completed inductions and training on *Phytophthora* management and cleaning and hygiene protocols
Whole site	Ensure cleaning protocols are followed for all vehicles, machinery, equipment, and footwear of personnel entering the site	Table 11, Section 7.10	Ongoing	All vehicles, machinery, equipment, and footwear are free of soil and sterilised before entering and immediately after leaving the site
Whole site	Undertake monitoring for *Phytophthora* and impact on native vegetation biodiversity, cover and condition across the site biennially	Table 11, Section 7.10 and Section 10	Ongoing	LnP habitat (vegetation structure, cover, and health) is maintained
Whole site	Undertake supplementary planting/seeding with locally indigenous understorey species that are not sensitive to *Phytophthora* to restore understorey cover if required	Table 11, Section 7.10	Ongoing	LnP habitat (vegetation structure, cover, and health) is maintained
Rubbish				
Whole site	Induct all contractors to prevent rubbish being left on site	Table 12, Section 7.10	Ongoing	All contractors inducted regarding not leaving any rubbish on site No rubbish in offset site
Whole site	Install and maintain security cameras and/or signage warning of fines and prosecution for illegal rubbish dumping	Table 12, Section 7.10	If required and then ongoing	Security cameras/signage maintained in good working order No rubbish in offset site
Annual reporting				
Whole site	Replace missing permanent markers at fixed photopoints	Section 10,	Annually ongoing	Permanent markers maintained at each photopoint

Year from commencement: 2-10

Location	Management Action Description	Reference Table for action	Timing	Standard to be achieved
		Attachment 1		
Whole site	Photographs taken at each photopoint	Section 10, Attachment 1	Same time of year annually	Photographs taken at each photopoint, in same direction, annually
Whole site	Prepare and submit an annual report to DEECA on the template provided and to DCCEEW	Section 10, Attachment 1	Submit reports at least 2 months prior to agreement anniversary date	Annual report is signed, dated and submitted by the landowner at least 2 months prior to the anniversary date of the agreement each year for the first 10 years after the Section 69 agreement is signed Report provides enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of / progress against the commitments for each zone

Any activities that are not in accordance with the approved OMP cannot be undertaken without the written approval of DCCEEW and NVOR. Approval is generally not granted unless the activity will produce an equivalent of improved environmental outcome.

9. Risk assessment

The potential risks associated with meeting the minimum management commitments are addressed in this OMP and considered manageable. A risk assessment is provided in Table 14 below.

Table 14: Risk assessment and management

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
Site not legally secured	Low Barwon Water is aware that this is required for the successful establishment of the offset site and has agreed to undertake this measure.	High Failure to establish the offset.	Barwon Water is aware of the requirement to secure the site and has agreed to enter into a Section 69 Agreement signed by Secretary to DEECA once the OMP is approved by DCCEEW.	**Low**
Unauthorised site access and damage to LnP habitat continues and is not prevented	Low Barwon Water understands that preventing unathorised access is important to protecting the LnP habitat in the offset site and has agreed to close the internal tracks and block off all entrances to the site. They have also agreed to put up signs every 100 m along the boundary of Distillery Creek Road that effectively state: "Conservation Area for Protected Fauna. No Public Access. Trespassers will be Prosecuted". Barwon Water will also erect fake security cameras at closed entrances to further deter trespassers.	High Impacts of illegal access within the offset site could include illegal firewood collection; destruction of native vegetation through the formation of illegal access trails; further soil disturbance resulting in increased erosion along existing internal tracks and damage to track remediation works including dislodging and damaging soil saver, revegetation plantings and regenerating vegetation. Illegal access may also spread *Phytophthora* and weed seeds via vehicle tyres and people's footwear and clothing.	Barwon Water has been engaged in discussions with the Site Assessor throughout the offset establishment process regarding requirements to prevent illegal access. Barwon Water will initially use large boulders and/or locked gates to block entrances to the internal tracks, in addition to signage and fake cameras. If these actions do not prevent illegal access, Barwon Water will fence off the offset site along Distillery Creek Road.	**Low**

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
Tracks within offset site are not remediated	Low Barwon Water understands that the extent of the offset site (ha) includes the tracks and tracks must be closed and restored/revegetated to be included in the calculated size of the offset site and LnP habitat. Barwon Water also understands that track remediation is required to make illegal access more difficult and less attractive.	High If the tracks are not restored/revegetated, then the size of the offset site will be reduced and may not meet offset targets. If tracks are not revegetated, it will also make illegal access easier and encourage more bike riders who could do further damage to the vegetation and LnP habitat.	Barwon Water has been engaged in discussions throughout the offset establishment process with the Site Assessor regarding requirements to undertake track remediation and revegetation. Barwon Water understands that from year two the tracks will be closed so they can no longer be used for vehicle access. Barwon Water have also agreed with the management commitment to undertake remediation and restoration of the tracks.	**Low**
Weed control not effective	Low Barwon Water understands that weed control is required to protect and improve habitat quality in the offset site and will engage professional experienced weed contractors who will be inducted and trained to undertake the work effectively. Barwon Water have agreed to undertake weed monitoring and use adaptive management to ensure weed control methods are effective.	High Lack of weed control allows weeds to spread, leading to deterioration of the offset site and a reduction in LnP habitat quality and extent.	Barwon Water have agreed to implement the weed management program included in the OMP. Quarterly monitoring and annual reporting will identify ineffective weed control quickly. Adaptive management will be undertaken immediately if ineffective weed control is identified. Weed control methods will be	**Low**

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
	The site is relatively weed free and accessible and so effective control of weeds on site is considered feasible and achievable.		continually reviewed and the methods, and/or frequency and/or timing of weed control updated accordingly until weed control is achieved.	
Pest animal control not effective	Low Barwon Water understands that pest animal control is a required management commitment and has agreed to engage experienced skilled pest control contractors with the required permits/licences to manage pests on their land.	High Lack of pest animal control within the site would have direct impacts on the LnP including predation by foxes and cats, and potential destruction of habitat by rabbits and deer.	A detailed pest animal program for foxes, cats, deer and rabbits is included in this OMP and Barwon Water have agreed to implement the program. Quarterly monitoring and annual reporting will identify ineffective pest animal control. Adaptive management will be applied immediately if ineffective pest control is identified, and methods will be continually updated until effective pest control is achieved.	**Low**
Fire regime negatively impacting LnP habitat	Low Barwon Water understands that a suitable fire interval of 20 years consisting of mosaic cool burns avoiding the gullies is required to maintain LnP habitat and presence. Barwon Water will engage a qualified	High If the burn regime is too frequent it may decrease the quality and extent of LnP habitat. This may occur if plants do not have time to grow and set seed, resulting in a decrease in understorey cover, species diversity and therefore LnP foraging	The OMP includes quarterly monitoring and annual reporting to identify when and where a burn is required. If monitoring shows the population of LnP and/or habitat condition is declining due to infrequent burning,	**Low**

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
	ecologist experienced in LnP management to develop a suitable burn program and skilled, experienced burn practitioners to undertake an ecological burn after 20 years if parts of the site remain unburnt.	opportunities and increased exposure to predation. This would likely lead to a decline in the population of LnP on site.	then ecological mosaic burning will be undertaken and LnP habitat recovery and numbers will be monitored post-burn to guide the burning program. If monitoring shows the LnP habitat and presence are decreasing due to too frequent burns, then Barwon Water will consult with PV, DCCEEW and NVOR to protect the site from burns for at least 20 years. LnP habitat recovery and presence will be monitored to track recovery. A program for supplementary planting of indigenous understorey vegetation will be developed in consultation with DCCEEW and NVOR to assist habitat recovery if required.	
Dieback of plants from Phytophthora	High Barwon Water understands that *Phytophthora* is present in the landscape and on site and will ensure that personnel entering the site will adhere to strict cleaning protocols to limit the spread. Under the OMP, vegetation monitoring includes the assessment of evidence of	Medium *Phytophthora* dieback can cause the death of canopy and understorey species. This can reduce vegetation cover and in turn reduce the quality of habitat through decreased shelter and foraging opportunities for LnP. However not all flora species are susceptible to	The strict protocols outlined in this OMP will help prevent the spread of *Phytophthora* through the site. However, it may continue to spread on animals feet and fur as they move through the site and along drainage lines and elsewhere when soil moisture is high during wet	**Low**

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
	dieback from *Phytophthora* and the impact on LnP habitat so restoration of LnP habitat can occur if required.	*Phytophthora*, so there will still be some vegetation cover and suitable habitat persisting on site despite the presence of *Phytophthora*.	periods. The vegetation monitoring program includes the assessment of evidence of *Phytophthora* on site. If degradation of LnP habitat by *Phytophthora* is detected, and natural recovery of understorey cover is not occurring, supplementary planting and/or direct seeding of indigenous native understorey plants that are not affected by *Phytophthora* will be undertaken and monitored to restore LnP habitat.	
New threat arises that impacts LnP habitat condition and LnP presence.	Low The site will be regularly monitored as part of the OMP management and monitoring commitments, so any new threats will be readily identified, and a control program developed in consultation with DCCEEW and NVOR.	Low to medium Impact will depend on the threat, however early detection will assist in minimising impacts.	Regular quarterly monitoring of the offset site is part of the OMP requirements to detect new and emerging threats.	**Low**
Environmental emergencies	Low Barwon Water will have a key emergency contact person responsible for managing environmental emergencies associated with the project and this person's details will be provided to all authorised	Low to medium Impact will depend on the emergency, however the engagement and induction of trained, experienced personnel that have safety procedures put in place will assist with minimising impacts.	An appointed Barwon Water staff member will be responsible for ensuring all staff entering the site are trained, experienced and have the correct permits and safety procedures in place for the work	**Low**

Potential risk	Likelihood under the OMP	Impact	Risk management	Risk factor after risk management actions
	personnel entering the site. All Barwon Water staff and subcontractors will be advised of the emergency contact details before going on site. All Barwon Water staff and subcontractors will be inducted and trained for their relevant tasks as per the management plan. Subcontractors engaged will only include experienced, skilled personnel with the relevant training and permits to undertake the work they are engaged to do. The procedures they have in place for environmental emergencies must be detailed in their SWMS or JSA or similar and submitted and reviewed by Barwon Water before entering the site and undertaking works.		they are undertaking. They will have the power to stop and direct works to manage emergencies effectively. The appointed Barwon Water staff member will ensure all authorised personnel entering the site have their details and that they must notify them immediately if an environmental emergency occurs.	

10. Monitoring and reporting requirements

To assess and confirm the effectiveness of the OMP in meeting the minimum management commitments the landowner must implement a monitoring and reporting program. An annual report must be provided to DCCEEW each year of the 10 years of this OMP for the purposes of monitoring, compliance, and auditing to assess performance of the offset. No further reports are required to be provided to DCCEEW after 10 years unless requested.

Under the Section 69 Agreement, landowners are required to monitor the site quarterly for threats and submit a report annually to the NVOR using the bespoke template prepared by the Site Assessor provided in Attachment 1. A report must be provided for each year of the ten years of this management plan and execution of the Section 69 Agreement and thereafter at the reasonable request of the Secretary. Reports must be prepared using the Annual Report template provided by the Department and prepared by the site assessor (Attachment 1).

The Annual Report addresses progress against the commitments set out in this Agreement. Annual Reports must provide enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of, or progress towards meeting the commitments for each zone. A minimum of one piece of evidence is to be provided per management commitment, such as a work log, photographs of works, before/after photos, receipts/invoices for equipment, materials, labour or professional fees.

The monitoring report must include the progress of management actions in achieving annual targets outlined in the OMP. At the end of 10 years of active management, the site is required to be maintained in perpetuity so that it meets or is in better condition than the minimum required offset commitments.

Reports must be submitted to DCCEEW and NVOR at least two months prior to the anniversary date of the execution of the Section 69 Landowner Agreement to allow time for review and assessment of compliance.

The monitoring observations and annual reporting must be submitted in the Monitoring and Annual Reporting template designed for this agreement during offset establishment.

10.1 Monitoring

10.1.1 Quarterly site inspections for threats

Under a Section 69 Agreement an assessment site must be visually inspected four times a year (spring, summer, autumn and winter) to identify and record threats. The following information must be collected and provided to NVOR using the annual report template (Attachment 1) and this information can also be used to complete the annual report to DCCEEW:

- The cover of high threat weeds and any mature plants present;
- The trend in weed cover across the site compared to previous years (increasing/decreasing);
- Any new and emerging weed species in the site including along the site boundaries;
- Evidence of dieback in canopy Trees, Grass-trees or shrubs;
- Evidence of existing pest animals;
- Evidence of new pest animals;

- The condition of any fencing/gates/signage;
- Evidence of illegal site access and remediation works;
- Evidence of firewood collection;
- The condition of the tracks including regeneration;
- Evidence of rubbish dumping;
- Regeneration of vegetation in the wetland area after drainage pipe removal;
- Evidence of any fire (extent, location, date); and
- Evidence of any new threats.

10.1.2 Annual photo point monitoring of threat remediation

Annual photo point monitoring of threat management is a requirement under a Section 69 Agreement. Photopoint monitoring is where repeat photographs are taken from a fixed point. They can show work done, results and improvement or deterioration in site condition over time. Photos that demonstrate the progress and effectiveness of threat management must be taken from the same fixed photo monitoring point on the same cardinal bearing (i.e. N, S, E, or W) ideally at a similar time to those taken for the original site assessment: 2-4 May 2023 and included in the Annual Report to NVOR and can also be included in the report to DCCEEW.

These photo point locations must be clearly marked on a map and all photos must be clearly labelled with date, location and bearing, as well as notes about the condition of the vegetation and the threat being managed e.g. erosion, high threat weed invasions, illegal access etc. and how management is progressing. This will enable the progress of threat remediation to be visually recorded and compared each year.

During the initial site assessment in May 2023, the coordinates and baseline photos for 10 permanent photo monitoring points were recorded (Figure 4 and Attachment 1). They included three permanent photos points marked by the installation of 1.3 m high black star pickets capped with yellow plastic caps. These stakes mark an illegal access point at the intersection of Distillery Creek Road and the southern most access track (permanently closed), a stand of weeds in the centre of the offset site, and a black burnt plastic drainage pipe extending from Distillery Creek Road into the southern side of the offset site (see Figure 4 and Attachment 1 and Section 4.7). A fourth photo point was established at the northern gated site entrance on Distillery Creek Road but was not marked as it is visible to the public and a star picket would likely go missing (Figure 4 and Attachment 1). The gate provides a permanent reference point for photo monitoring.

Five additional permanent photo monitoring points were established at erosion points along internal tracks and baseline photos taken (Figure 4 and Attachment 1). Star pickets were not installed in these areas as they may be dislodged during remediation works. The landowner must permanently mark the photopoint with a post within 3 months of the agreement taking effect. See Table 15 for photopoint establishment and monitoring requirements.

One monitoring point in the northwest burnt area was not marked as it is temporary and will be used to record vegetation recovery post fire (Attachment 1 and Figure 4). It will also be used to observe the impacts of *Phytophthora* as it is presently dominated by Grass-trees. Over time when the vegetation has recovered, ongoing monitoring is not likely to be required here. If other parts of the site are burnt within the first 10 years of the management plan, then post fire recovery and *Phytophthora* monitoring points should be established in those locations.

Table 15: Marking permanent monitoring photo points

Method	Timing
Permanently mark photo points at erosion locations to monitor track remediation	Within 12 months of commencement of execution of the landowner agreement
Replace photo point markers if they are removed or displaced	Ongoing

10.1.3 Biennial Long-nosed Potoroo and habitat monitoring (years 2, 4, 6, 8 and 10)

Monitoring must be undertaken by a qualified experienced ecologist in years 2, 4, 6, 8 and 10 to assess the progress of the OMP against the agreed management commitments to improve and maintain LnP habitat. This will assist with risk management by providing feedback to guide adaptive management (if required). The results must be included in the annual report to DCCEEW.

Long-nosed Potoroo camera trapping

Monitoring to confirm the presence of LnP will be completed every two years in spring at the eight camera locations used in the preliminary offset site assessment undertaken by GHD in March 2023 (Figure 4). Details are provided in the '*Proposed Offset Site 245 Distillery Creek Road, Aireys Inlet: Targeted fauna and vegetation survey report*' (GHD 2023). The methodology below largely follows the method outlined in GHD (2023):

- Survey effort: 8[11] cameras, one each at eight camera trap locations across the site deployed for 25 trap days;
- Camera type: Infrared flash camera with minimum 12 megapixel resolution, minimum 64 gigabyte memory card, battery power to last at least 25 days and a weatherproof case;
- Camera position: secured to a tree or branch 100 cm – 150 cm above the ground with camera angled towards the ground, or at c. 50 cm above the ground with the camera angled horizontally;
- Lure: a suitable lure (e.g. universal mammal bait balls of combined peanut butter, rolled oats and golden syrup, with the option of including truffle infused olive oil, linseed oil or vanilla essence) placed within a small ventilated container secured to the ground or on a stake at a point c. 30 to 40 cm above the ground within the cameras field of view and without obstructions between the camera and the bait to reduce camera triggering by vegetation movement; and
- Camera settings: moderate sensitivity, 3 images per video per trigger (with a 30 second delay between each trigger).

Personal undertaking the monitoring for LnP must have the relevant animal ethics and research approvals.

Images will be downloaded and reviewed to identify and document the animal species recorded.

[11] GHD initially set up nine camera trap locations during initial targeted surveys, however one camera failed so eight camera trap locations were used to detect LnP effectively.

The following information needs to be recorded for each monitoring year and included in the annual report for that year:

- Number of effective camera trapping days, dates deployed, number of cameras set – any issues (e.g. equipment failure);
- Weather conditions during each survey period;
- Number of LnP camera trap records each monitoring year; and
- Number of individuals of other fauna species recorded (including pest animals) in each monitoring year.

Vegetation condition and habitat monitoring

There are no formal habitat assessment guidelines for LnP and the methods used in the Otway Ark program are not publicly available. The HHa assessment method, is a recognised method of assessing vegetation condition and quality used here used to confirm the proposed offset site meets the minimum HHa assessment condition score of at least 0.3 to meet Victorian offset site eligibility requirements, however it is not designed to be a monitoring tool. A literature review of monitoring methods for LnP found a recent study titled: *A preliminary survey of small native mammals and their habitat at Stromlo East and West*, *Act* (EHW 2022) that included methods for monitoring small mammal habitat. The Guide to monitoring habitat structure: a rationale report, Version 1, Fire and adaptive management (DSE 2012) and the Commonwealth *Vegetation Assessment Guide* (DoE 2013) were also reviewed. The methods outlined in these documents have been adapted and simplified for this OMP.

Habitat condition monitoring will be undertaken biennially in spring along 8 x 50 m long permanent line transects (one at each camera location) using the pole intercept method.

A qualified experience ecologist will establish the permanent transects in suitable LnP habitat at around 20 m from each camera trapping location. Some distance from camera trap locations is required to avoid disturbed vegetation around the camera trap location impacting the vegetation monitoring results.

Photos will be taken each monitoring period at each end of the transect looking back towards the opposite end and in the centre of the transect (25 m mark) in the four cardinal directions (N, S, E, W) to provide a visual record of vegetation structure and cover that can be compared over subsequent years.

Projected canopy cover

- crown cover will be assessed by measuring the start and end point along the tape that eucalypt canopy cover starts and stops to provide a total length in cm.

Understorey

Using a 2 m high pole, the number of pole touches at 0-0.2 m, >0.2-0.5 m, >0.5-1 m, >1 m -2 m of any part of native or exotic plants at one metre intervals along the transect (starting at the 1 m mark) will be recorded for each of the following structural form categories:

- Tussock grass;
- Non tussock grass;
- Herb (non woody flowering plants including lilies);
- Creeper (any plant that creeps or climbs for support);

- Sedge/rush;
- Ground fern (other than bracken);
- Bracken;
- Mature shrubs (noting if dead or alive as may indicate presence of *Phytophthora*);
- Shrub recruit;
- Canopy saplings;
- Grass-trees (noting if dead, alive, poor health as may indicate presence of *Phytophthora*); and
- Canopy trees (noting if dead, alive, poor health) (will need to estimate these due to height).

Ground cover

Features will be recorded in the following categories for each pole touch:

- Bare ground;
- Moss/fungi;
- Litter (detached material < 10 cm diameter);
- Detached logs (≥10 cm diameter); and
- Other (note what this is).

The number of touches recorded for each habitat feature will be summed for each category to provide frequency score for each feature which will be compared with previous years data (from year 4 onwards, year 2 will form the baseline data).

Additional information will be collected opportunistically along and around the transect to inform management including but not limited to:

- Any weed species, number of individuals and, maturity (juveniles or mature);
- Evidence of other threats such e.g. excessive herbivory caused by deer, macropods; rabbits, deer scrapes, rub trees, game trails etc.;
- Evidence of dieback in Grass-trees;
- Evidence of dieback in canopy trees and/or shrubs;
- Evidence of fire since the last monitoring; and
- Evidence of new and emerging threats.

This monitoring program was provided to PV for review, and they have advised that the monitoring results would be very useful to complement the information being collected by the ongoing Otway Ark small mammal research and monitoring program.

The Otway Ark program is run by PV in the adjoining Great Otway National Park and Anglesea Heath (Michael MacKenzie and Clare Miller pers. Comm.), with the long-term objective being to assess the effectiveness of fox control and the response of selected small mammals (including LnP). The aim of the program is to enhance or maintain the distribution, abundance, and richness of ground dwelling mammals across the Otway Ranges (Robley et al. 2019).

Barwon Water has agreed to provide the biennial LnP camera trapping and habitat monitoring results to PV at the end of each round of monitoring. This will provide environmental co-benefits by contributing data on LnP habitat management methods and their effectiveness to assist with LnP conservation.

10.2 Reporting

The annual report must compare each year's management outcomes and compliance with the minimum management commitments agreed to by DCCEEW and set out in this OMP.

10.2.1 DCCEEW requirements

The reports must include the following information to satisfy DCCEEW:

10.2.1.1 Site information

Landowner of the offset site:	
Location and address of the offset site:	
Offset site number (if applicable):	
Offset plan reference number (if applicable):	
Responsible authority:	
Report #:	
Signature:	
Date:	

10.2.1.2 Habitat management progress

The annual DCCEEW report must include:

- Results of LnP camera trapping (years 2, 4, 6, 8 and 10);
- Results and photos from habitat monitoring (years 2, 4, 6, 8 and 10);
- Comparisons of the habitat monitoring data between years (years 4, 6, 8 and 10);
- An assessment of the effectiveness of management actions including unsuccessful and successful management methods and any adaptive management used to achieve the management goals;
- An evaluation of the likelihood of the site meeting the agreed management commitments by the end of year 10 of the OMP; and
- Records of inductions signed and completed by each of Barwon Water's and subcontractor staff members entering and/or undertaking work on site, the training they received, who delivered the training, content of the training and actions completed to prevent weed seeds/propagules and *Phytophthora* entering the site.

Annual Reports should provide enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of/progress against the OMP management commitments.

If any management actions included in the OMP, or any reporting requirements outlined above are not completed, then the landowner must provide documented justification and evidence in the relevant reporting year.

The landowner must outline any adaptive management including remedial actions and updated management methods they will be undertaking to meet the agreed management commitments.

Details of any non-compliance with approval conditions, environmental incidents and emergencies must be included in the annual report with details of how these have been addressed. Failure to comply can incur a range of criminal and civil penalties which are set out in DCCEEW enforcement policy available at: Compliance and enforcement policy_ EPBC Act .

10.2.2 NVOR requirements

The annual report for NVOR must include completion of the annual reporting template prepared for the site by Abzeco (Attachment 1).

10.2.2.1 Threat management progress

The annual report template must include the information collected during quarterly landowner inspections:

- A detailed list of all quarterly monitoring observations;
- Details (description and photos) of management actions and timing of each action undertaken during the reporting year;
- Evidence of management actions (e.g. photos, receipts for materials and works completed, and work logs); and
- Clear, labelled photos from threat photo monitoring points including photo bearing, GPS waypoints of photo locations and description.

The completed NVOR annual report can be included in the DCCEEW annual report submission to inform the progress of site management.

11. Maintaining Long-nosed Potoroo habitat quality and native vegetation quality and condition in perpetuity

This OMP outlines management commitments and targets required to be achieved at the site to improve the quality and condition of native vegetation and LnP habitat. At the completion of the 10-year active management period, the landowner is required to continue to undertake management to maintain native vegetation quality and condition and LnP habitat at the site. This includes maintaining native vegetation condition and targets required to be achieved at the end of the 10-year management period and all ongoing management commitments and targets in perpetuity.

Figure 1: Location of proposed project impact site and offset site for Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) (EPBC Referral No. 2022/09343) – Barwon Water Colac Otway (water supply) Pipeline project.

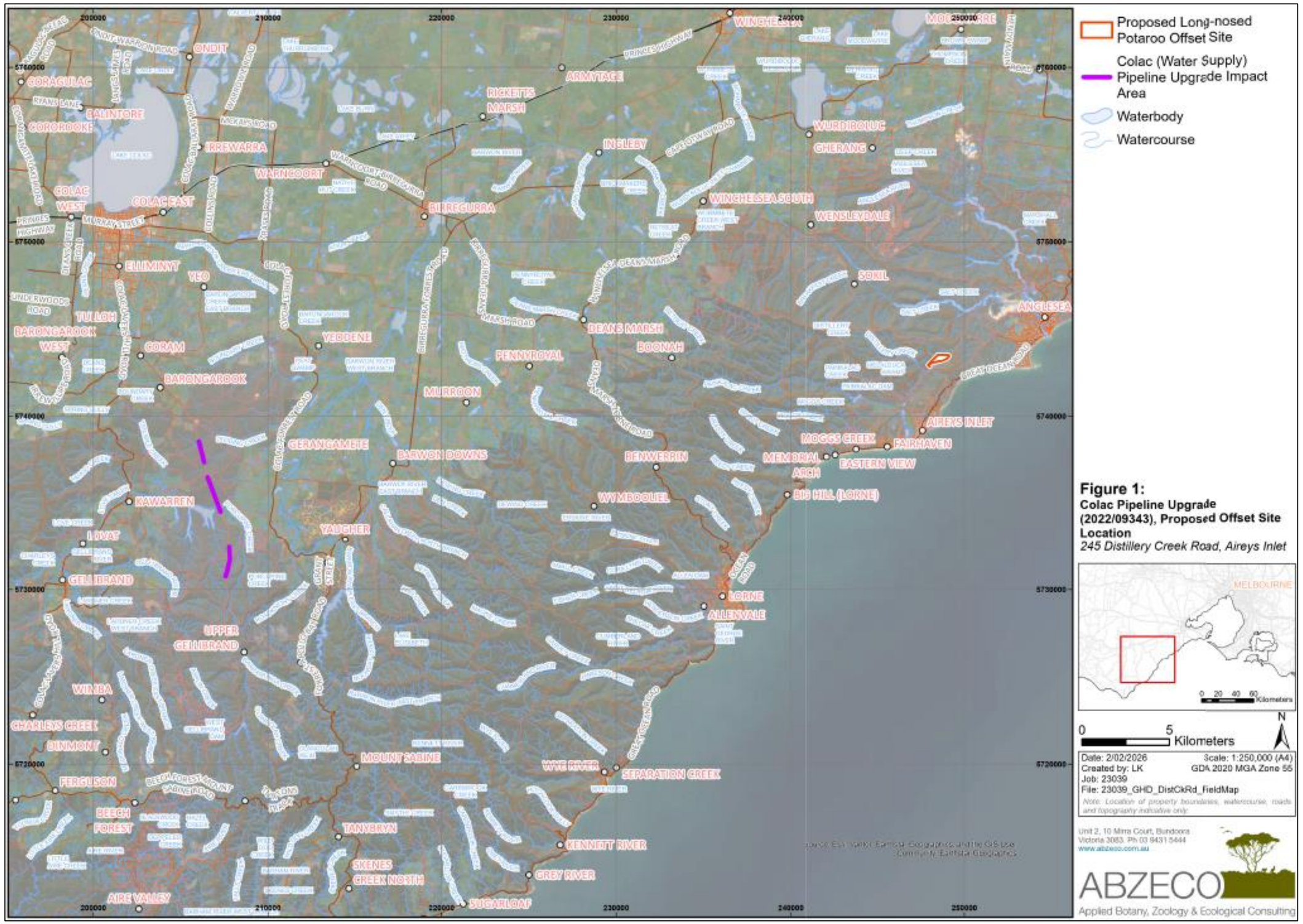

Figure 2: Landscape context and natural features – proposed offset site for Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) (EPBC Referral No. 2022/09343), 245 Distillery Creek Road, Aireys Inlet

N.B. The buffers between the offset site boundary and property boundary are a DEECA requirement for offset sites registered under a Section 69 Agreement.

Figure 3: Identified threats – proposed offset site for Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) (EPBC Referral No. 2022/09343), 245 Distillery Creek Road, Aireys Inlet

Figure 4: Monitoring Points – proposed offset site for Long-nosed Potoroo *Potorous tridactylus trisulcatus* (South-East Mainland) (EPBC Referral No. 2022/09343), 245 Distillery Creek Road, Aireys Inlet

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Appendix 1: Vascular plant species recorded on site (combined species lists from surveys undertaken by Abzeco (2-4 May 2023) and GHD (March 2023)

Key:

EPBC = Listed under the *Environment Protection and Biodiversity Conservation Act 1999*
- CR – Critically Endangered
- EN – Endangered
- VU – Vulnerable

FFG = Listed under the *Flora and Fauna Guarantee Act 1988*
- cr – Critically Endangered
- en – Endangered
- vu – Vulnerable

Weed = plant taxa introduced into Victoria or Australia
- * - introduced species
- # - invasive native species outside natural range (non-indigenous)

CaLP = Noxious weeds listed under the *Conservation and Land Protection Act 1994*
- RC – Regionally Controlled
- R – Restricted

Status	Scientific name	Common name	EPBC	FFG	CaLP
	Acacia genistifolia subsp. *platyphylla*	Spreading Wattle			
#	*Acacia longifolia* subsp. *longifolia*	Sallow Wattle			
#	*Acacia longifolia* subsp. *sophorae*	Coast Wattle			
	Acacia mucronata subsp. *longifolia*	Narrow-leaf Wattle			
	Acacia myrtifolia	Myrtle Wattle			
	Acacia paradoxa	Hedge Wattle			
	Acacia pycnantha	Golden Wattle			
	Acacia suaveolens	Sweet Wattle			
	Acacia verniciflua s.l.	Varnish Wattle			
	Acacia verticillata subsp. *verticillata*	Prickly Moses			
	Acrotriche serrulata	Honey-pots			
	Allocasuarina littoralis	Black Sheoak			
	Allocasuarina misera	Slender Sheoak			
	Allocasuarina paludosa	Scrub Sheoak			
	Amperea xiphoclada var. *xiphoclada*	Broom Spurge			
	Amyema pendula	Drooping Mistletoe			
	Aotus ericoides	Common Aotus			
	Apium prostratum subsp. *prostratum* var. *filiforme*	Sea Celery			
	Argentipallium obtusifolium	Blunt Everlasting			
	Austrostipa spp.	Spear Grass			
	Banksia marginata	Silver Banksia			
*	*Billardiera heterophylla*	Bluebell Creeper			
	Billardiera macrantha	Purple Apple-berry			
	Billardiera mutabilis	Common Apple-berry			
	Bossiaea spp.	Bossiaea			
	Burchardia umbellata	Milkmaids			
	Calytrix tetragona	Common Fringe-myrtle			
	Carex appressa	Tall Sedge			
	Cassytha glabella	Slender Dodder-laurel			
	Cassytha melantha	Coarse Dodder-laurel			
	Cassytha pubescens s.s.	Downy Dodder-laurel			
*	*Centaurium* spp.	Centaury			
	Centella cordifolia	Centella			
*	*Chrysanthemoides monilifera* subsp. *Monilifera*	African Boneseed			RC
	Coprosma quadrifida	Prickly Currant-bush			
*	*Cortaderia selloana* subsp. *selloana*	Pampas Grass			
	Corybas spp.	Helmet Orchid			
	Cryptandra tomentosa s.s.	Prickly Cryptandra			

Status	Scientific name	Common name	EPBC	FFG	CaLP
	Deyeuxia spp.	Bent Grass			
	Dianella revoluta s.l.	Black-anther Flax-lily			
	Dillwynia glaberrima	Smooth Parrot-pea			
	Dillwynia sericea	Showy Parrot-pea			
	Diplarrena moraea	White Iris			
	Drosera aberrans	Scented Sundew			
	Drosera pelatata s.s.	Bog Sundew			
	Empodisma minus	Spreading Rope-rush			
	Epacris impressa	Common Heath			
	Eucalyptus baxteri s.s.	Brown Stringybark			
	Eucalyptus obliqua	Messmate Stringybark			
	Eucalyptus ovata	Swamp Gum			
	Euchiton japonicus s.s.	Creeping Cudweed			
	Exocarpos cupressiformis	Cherry Ballart			
	Gahnia radula	Thatch Saw-sedge			
	Gonocarpus tetragynus	Common Raspwort			
	Goodenia geniculata	Bent Goodenia			
	Goodenia lanata	Trailing Goodenia			
	Goodenia ovata	Hop Goodenia			
	Goodenia radicans	Shiny Swamp-mat			
	Gratiola peruviana	Austral Brooklime			
	Hakea ulicina	Furze Hakea			
	Hibbertia empetrifolia subsp. *empetrifolia* s.s.	Tangled Guinea-flower			
	Hibbertia fasciculata var. *prostrata*	Bundled Guinea-flower			
	Hibbertia riparia	Erect Guinea-flower			
	Hibbertia sericea s.s.	Silky Guinea-flower			
	Hydrocotyle sibthorpioides	Shining Pennywort			
*	*Hypochaeris radicata*	Flatweed			
	Hypolaena fastigiata	Tassel Rope-rush			
	Isolepis fluitans	Floating Club-sedge			
	Isopogon ceratophyllus	Horny Cone-bush			
*	*Juncus bulbosus*	Bulbous Rush			
	Juncus holoschoenus	Joint-leaf Rush			
	Juncus spp.	Rush			
	Lepidosperma longitudinale	Pithy Sword-sedge			
	Leptospermum continentale	Prickly Tea-tree			
	Leptospermum myrsinoides	Heath Tea-tree			
	Leptospermum scoparium	Manuka			
	Leucopogon glacialis	Twisted Beard-heath			
	Lindsaea linearis	Screw Fern			
	Lobelia anceps	Angled Lobelia			
	Lomandra micrantha s.l.	Small-flower Mat-rush			
	Lomatia ilicifolia	Holly Lomatia			
	Olearia lirata	Snowy Daisy-bush			
	Ornduffia reniformis	Running Marsh-flower			
	Ozothamnus ferrugineus	Tree Everlasting			
	Persoonia juniperina	Prickly Geebung			
	Pimelea humilis	Common Rice-flower			
	Pimelea linifolia subsp. *linifolia*	Slender Rice-flower			
*	*Plantago coronopus*	Buck's-horn Plantain			
	Platylobium obtusangulum	Common Flat-pea			
	Platylobium spp.	Flat Pea			
	Platysace heterophylla var. *heterophylla*	Slender Platysace			

Status	Scientific name	Common name	EPBC	FFG	CaLP
	Poa sieberiana var. *sieberiana*	Grey Tussock-grass			
	Polyscias sambucifolia subsp. 1	Broad-leaf Panax			
	Pomaderris ferruginea	Rusty Pomaderris			
	Pomaderris racemosa	Cluster Pomaderris			
	Poranthera microphylla s.s.	Small Poranthera			
	Pteridium esculentum subsp. *esculentum*	Austral Bracken			
	Pultenaea daphnoides	Large-leaf Bush-pea			
	Rytidosperma spp.	Wallaby Grass			
	Selaginella uliginosa	Swamp Selaginella			
	Senecio quadridentatus	Cotton Fireweed			
	Senecio spp.	Groundsel			
	Spyridium parvifolium	Dusty Miller			
	Styphelia humifusa	Cranberry Heath			
	Tetrarrhena distichophylla	Hairy Rice-grass			
	Tetratheca ciliata	Pink-bells			
	Tetratheca pilosa	Hairy Pink-bells			
	Thysanotus patersonii	Twining Fringe-lily			
	Viola cleistogamoides	Hidden Violet			
	Wahlenbergia gracilis	Sprawling Bluebell			
	Xanthorrhoea australis	Austral Grass-tree			
	Xanthorrhoea minor subsp. *lutea*	Small Grass-tree			
	Xanthosia dissecta s.s.	Native Parsley			
	Xanthosia huegelii	Heath Xanthosia			

Appendix 2: Habitat Hectare vegetation quality and condition scores – 245 Distillery Creek Road, Aireys Inlet, May 2023

See the *Vegetation Quality Assessment Manual – Guidelines for applying the Habitat Hectare scoring method version 1.3* (DSE 2004) and the *Assessors Handbook, Applications to remove, lop or destroy native vegetation, version 1.2* (DEECA 2025b for method details).

Legend:

HZ = Habitat Zone | EVC = Ecological Vegetation Class | LC = Least Concern

OP = Otway Plain bioregion | HW = Heathy Woodland | D = Depleted

SRW = Sedgy Riparian Woodland | ha = hectare

[12]Site and Habitat Zone			1A	1A	1A	1A	1A	1A	1B, 1C, 1D
Habitat Hectare Assessment Point			**1a**	**1b**	**1c**	**1d**	**1e**	**1a-e (combined)**	**2a-d (combined)**
Bioregion			OP	OP	OP	OP	OP	OP	OP
EVC Name			HW	HW	HW	HW	HW	HW	SRW
EVC Number			48	48	48	48	48	48	198
EVC Conservation Status			LC	LC	LC	LC	LC	LC	D
		Maximum Score							
Site Condition	Large Old Trees	10	0	0	0	0	9	0	7
	Canopy Cover	5	4	4	2	2	4	4	4
	Lack of Weeds	15	11	11	15	13	15	11	11
	Understorey	25	15	15	15	5	15	15	15
	Recruitment	10	6	5	3	6	6	6	6
	Organic Matter	5	5	5	3	3	5	5	5
	Logs	5	0	0	0	0	0	0	0
	Total site score	75	41	40	38	29	54	41	48
Landscape Value		25	18	18	18	18	18	18	18
Habitat Points		100	59	58	56	47	72	59	66
Individual point habitat scores (vegetation quality assessments)+		**/100**	**0.59**	**0.58**	**0.56**	**0.47**	**0.72**	**-**	**-**
Combined Average Habitat Score			**-**	**-**	**-**	**-**	**-**	**0.59**	**0.66**
Total Area (ha)								25.4800	3.9466 (1B = 3.0239) (1C = 0.4913) (1D = 0.4314)

+Individual point habitat scores are provided illustrate the variability in LnP habitat in the Heathy Woodland. A single, overall average score for habitat zone 1A is provided as per the requirements outlined in the *Assessors Handbook, Applications to remove, lop or destroy native vegetation, version 1.2* (DEECA 2025b). The LnP habitat in the SRW was not as variable so only a combined score is provided as per DEEECA (2025b). See Section 5.3.2 for further details and explanation.

[12] DEECAs native vegetation offset site Landowner Agreement standards require vegetation types (in this case a native vegetation patch) situated in a discrete polygon (area of native vegetation undivided by natural or human made boundary contained within a single land parcel) to be labeled with a unique site identifier (in this case '1') and each habitat zone to be labeled with a letter i.e. 1A, 1B, 1C and 1D for this site (DEECA 2025c).

Attachment 1: Department of Energy, Environment and Climate Action, Native Vegetation Offset Register, annual report template

Annual Reporting Template for CW_CFL-3804_01

Landowner name: Barwon Region Water Corporation **Management year:** #

Completed by: ####### **Date:** ######

<**Instructions / guidance:**
This document is a template for the landowner preparing an annual report and has been designed specifically for your landowner agreement.

This report includes sections for recording Site Visits (Work Log), for outlining observations during site monitoring, and for outlining actions undertaken.

Most sections of the annual report are split into two sections

1) **Monitoring** (observations) undertaken by the landowner (or appointed personnel); and,
2) **Actions** undertaken by the landowner (or appointed personnel); Actions undertaken by the landowner should be informed by the monitoring/observations (e.g. If rabbits were observed in X zone, control should be undertaken in X zone).

Green text provides an example of the type and detail of information that you should provide in your annual report and may assist in understanding reporting structure. Green text must be deleted and replaced with information relating to the past year of management.

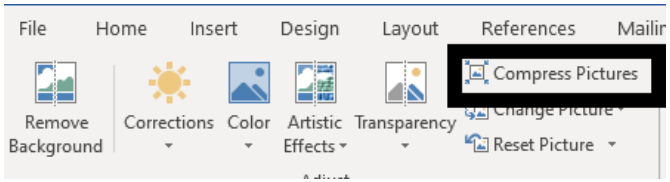
For more detail on Department of Energy, Environment and Climate Action (DEECA) native vegetation offset standards for management refer to the publication – *Management standards for native vegetation offset sites (September 2019), Department of Environment, Land, Water and Planning*. Available on the DEECA website:
https://www.environment.vic.gov.au/__data/assets/pdf_file/0028/435187/Management-standards-for-native-vegetation-offset-sites-V1.0-23092019.pdf

Refer to your management plan for details about your required management actions. Provide at least one piece of evidence per management action/commitment in the management plan.

As part of your annual reporting requirements, complete this template and email to Nativevegetation.offsetmanagement@delwp.vic.gov.au by the anniversary of your agreement commencement date.

You will probably need to compress your pictures to allow your email server to send the documents (see figure below). Individual photos are to be representative of management for other similar infestations across the site and show reference background to identify comparison photos at different times

Also save this word document as a PDF prior to emailing to further reduce the file size.



Work Log

Outline all visits to the sites conducted by the landowner/manager/contractor, including monitoring and works

Monitoring commitment: Monitor the whole of the site at least once per season during the management year, or more often if threats are observed or if your site experiences significant changes in conditions (e.g. flooding or high rainfall). General monitoring of the sites involves walking over a large percentage of the sites so that the landholder/staff know where threats are and the general level/cover of the threat

Have the sites have been monitored at least once per season?				Yes/No	
Visit	**Date**	**Season**	**Reason (Monitoring or Management)**	**Area of site covered/time taken**	**Focus/Comment**
1	7/10/23	Spring	Monitoring	Traversed whole site – 3hrs	General monitoring for all threats
2	12/10/23	Spring	Management	Whole site – 3hrs	Deer control – camera traps and shooting
3	15/10/23	Spring	Monitoring	Traversed eastern site boundary and closed track entrances - 1hr	Fencing/gates – illegal access
4	21/10/23	Spring	Management	North west and east boundary – 8hrs	Gate repair at track entrance, addition of rocks to rock blockade (east boundary), replacement of missing signage (north west boundary), rubbish removal
5	22/10/23	Spring	Both	Entire site – 4hrs	Monitor for weeds, weed control
6	23/10/23	Spring	Management	All internal tracks – 1hr	Fox control
7	26/10/23	Spring	Management	Entire site – 3hrs	Deer control
8	5/11/23	Spring	Both	Whole site – 3hrs	Check spraying results and follow up control
9	15/11/23	Spring	Management	Whole site – 3hrs	Deer control
10	25/11/23	Spring	Management	Whole site – 4hrs	Deer and fox control
11	30/11/23	Spring	Management	All tracks – 1hr	Check for erosion area after heavy rains
12	21/12/23	Summer	Monitoring	Traversed whole site – 3hrs	General monitoring for all threats and illegal access
13	28/12/23	Summer	Management	Whole Site – 7hrs	Weed control on summer germination, deer control, fox control
14	14/1/23	Summer	Monitoring	Whole Site – 4hrs	Fox control, deer control

Work Log

Outline all visits to the sites conducted by the landowner/manager/contractor, including monitoring and works

Monitoring commitment: Monitor the whole of the site at least once per season during the management year, or more often if threats are observed or if your site experiences significant changes in conditions (e.g. flooding or high rainfall). General monitoring of the sites involves walking over a large percentage of the sites so that the landholder/staff know where threats are and the general level/cover of the threat

15	15/1/23	Summer	Management	Entire site – 3hrs	Weed control, check for early summer germinants
16	15/2/23	Summer	Management	Whole Site – 4hrs	Check spraying results, weed control, fox control, deer control – camera traps and shooting
17	12/3/23	Autumn	Monitoring	Traversed whole Site – 3hrs	General monitoring for all threats and illegal access, fox control, deer control
18	28-30/4/23	Autumn	Management	Central areas of site and tracks – 3 days	Installation of fencing along Distillery Creek Road offset site boundary
19	29/4/23	Autumn	Management	Erosion points along tracks – 1 hr	Soil saver and direct seeding undertaken at erosion points along internal tracks, permanent photo monitoring point marked
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					

Work Log

Outline all visits to the sites conducted by the landowner/manager/contractor, including monitoring and works

Monitoring commitment: Monitor the whole of the site at least once per season during the management year, or more often if threats are observed or if your site experiences significant changes in conditions (e.g. flooding or high rainfall). General monitoring of the sites involves walking over a large percentage of the sites so that the landholder/staff know where threats are and the general level/cover of the threat

30					
31					

Fencing – monitoring (observations) *Outline observations from site visits conducted by the landowner/manager*				
Management actions/commitments: Monitor for damage to fences, gates, access or potential access to the site(s) by public, at least quarterly (i.e. four times per year).				
	Season[13]			
	Spring	Summer	Autumn	Winter
Are all gates, fencing, and signs intact and are all gates secure?	Yes. A branch fell on the wooden fence that is installed to permanently close the most southern track entrance off Distillery Creek Road on the eastern boundary of site in October. It was removed the following week and the fence was repaired. One conservation area 'keep out' sign at the north west boundary track closure point was noted to be missing in October and was replaced the following week.	Yes	Yes	Yes
Were unauthorised people and vehicles excluded from the site this quarter?	Yes	Yes	Evidence of illegal access by trail bikes noted at closed track entrances on Distillery Creek Road in March, entire length of site boundary along Distillery Creek Road fenced the following month in April and there has been no further illegal access noted since then.	Yes
If applicable is all deer exclusion fencing and all deer exclusion gates intact and secure?	n/a	n/a	n/a	n/a
If applicable, were deer excluded from the artificial water sources this quarter (ie season)?	n/a	n/a	n/a	n/a

[13] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Fencing – monitoring (observations) *Outline observations from site visits conducted by the landowner/manager*				
Management actions/commitments: Monitor for damage to fences, gates, access or potential access to the site(s) by public, at least quarterly (i.e. four times per year).				
Season[13]				
	Spring	Summer	Autumn	Winter
Were any new threats identified?	No	No	No	No

Fencing – actions

Outline actions conducted by the landowner/manager during the management year

Management actions/commitments: Threats including stock must always be excluded from the site/s unless part of biomass management included in the management plan. Follow DEECA management standards[14] if fencing is installed, replaced or repaired.

Management actions/commitments	**Location & length**	**Timing**	**Action complete (yes/no)**	**Date/s completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
Maintain fencing/gates to close tracks and signage around boundary of all sites in good condition and to DEECA standards at a minimum (including no barb wire).	All track entrances along Distillery Creek Road and north west entrance	Ongoing	Yes	21 October 2023 21 October 2023	Branch removed from fence and fence repaired. Signage replaced.	A large branch from a Messmate Stringybark fell on the more southerly track closure fence on Distillery Creek Road after a strong gale. The top two rails of the fence were broken. Sign removed by unknown persons.	Invoice for fence repair materials and labour, and before and after photos. Invoice for sign and labour, and before and after photos.
If gated track entrances and signage alone are not preventing illegal access, construct install fencing	Along the Distillery Creek Road the full length of the offset site boundary – approximately 700 m	When required	Yes	28-30 April 2024	Fence erected along Distillery Creek Road offset site boundary with a galvanised steel ring lock 8/90/30 fence.	Fencing installed to prevent illegal access by vehicles/pedestrians.	Invoice for fencing materials and labour, and before and after photos.
If a required to support deer shooting efforts (and reduce	Completely enclose artificial	Immediately on identification of	Not required at	n/a	n/a	n/a	n/a

[14] *Management standards for native vegetation offset sites* (September 2019), Department of Environment, Land, Water and Planning

Fencing – actions

Outline actions conducted by the landowner/manager during the management year

Management actions/commitments: Threats including stock must always be excluded from the site/s unless part of biomass management included in the management plan. Follow DEECA management standards[14] if fencing is installed, replaced or repaired.

Management actions/commitments	**Location & length**	**Timing**	**Action complete (yes/no)**	**Date/s completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
required frequency) erect a deer exclusion fence around the artificial water sources in the southwest part of the property (outside the offset site) to exclude deer accessing water	water sources at the south western end of the site - approximately 320 m of fencing	threat	present				

Were stock and unauthorised human access excluded from the site this year? If not, provide comments. Yes. Since additional fencing was constructed along Distillery Creek Road, there has been no evidence of illegal site entry and vegetation is recovering along informal trial bike tracks around these entrances.

Woody weeds – monitoring (observations) *Outline observations from site visits conducted by the landowner/manager*				
Management actions/commitments: Monitor abundance and for new and emerging weeds at least quarterly				
	Season[15]			
	Spring	Summer	Autumn	Winter
Which woody weed species were observed?	Coast Wattle Sallow Wattle African Boneseed	Coast Wattle Sallow Wattle African Boneseed	Coast Wattle Sallow Wattle African Boneseed	Coast Wattle Sallow Wattle
Are there any mature woody weeds present? If so, which species?	None	None	None	None
Are any seedlings or re-sprouting woody weeds present? If so, which species?	Yes, there are a few scattered seedlings of Coast Wattle and African Boneseed continually emerging and being removed. Stumps of large plants of Coast Wattle and Sallow Wattle that had been cut and painted treated last January were checked in October and appear to be dead.	Yes, there are a few scattered seedlings of Coast Wattle, Sallow Wattle and African Boneseed continually emerging and being removed.	Yes, there are a few scattered seedlings of Coast Wattle, Sallow Wattle and African Boneseed continually emerging and being removed.	Yes, there are a few scattered seedlings of Coast Wattle and Sallow Wattle continually emerging and being removed.
Are any new and emerging woody weeds detected, and if so of what species?	Yes: several seedlings of Mirror Bush **Coprosma repens* were observed in the centre of the site which were hand pulled ensuring roots were removed. Biennial Long-nosed Potoroo habitat monitoring is not due until next year so	None	None	None

[15] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Woody weeds – monitoring (observations)				
Outline observations from site visits conducted by the landowner/manager				
Management actions/commitments: Monitor abundance and for new and emerging weeds at least quarterly				
Season[15]				
	Spring	Summer	Autumn	Winter
	there are no new weed findings to report from those results.			

Total % cover of woody weeds		
(initial site assessment date – 2-4 May 2023) Date this cover estimate was done: 15 November 2023		
Site/Zone	**Original cover of woody weeds (at original site assessment)** [16]	**Observed cover this management year**
Heathy Woodland	<1%	<1%
Sedgy Riparian Woodland	<1%	<1%
Sedge Wetland	0%	0

[16] Cover is the percentage of the site or zone area that would be under a shadow cast by the foliage of woody weeds if the sun was directly above. If estimating percent cover (preferred method) is not possible, then state if cover is increasing, decreasing or stable relative to the cover at the time of the original assessment. Where possible estimate cover at approximately the same time of the year as the original site assessment.

Woody weeds – actions

Outline actions conducted by the landowner/manager during the management year

Management actions/commitments: Eliminate all woody weeds listed in Table 2 of the management plan to <1% cover with no mature plants by the end of the fifth year of management. Use methods described in Table 2. New and emerging woody weeds eliminated to <1% cover with no mature plants.

Standards: Follow DEECA management standards. Indigenous plants should not be impacted during treatment. Monitor for any re-sprouting or seedlings and eradicate either by spot spraying or hand pulling.

Species/management actions	**Timing**	**Sites / Zones**	**Action completed (yes/no)**	**Date/s completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
Coast Wattle **Acacia longifolia* subsp. *sophorae* - cut large plants, hand pulled seedlings	All year	Entire site	Yes	22 October, 5 November, 28 December, 15 January, 15 February	Cut and painted large plants and hand pulled seedlings – checked no seeds present before laying cut branches down on erosion areas along tracks.	Six mature plants were treated. Over 50 plants have now been controlled. This species is scattered in the offset site and surrounds, and I will need to be vigilant to ensure that it does not re-establish. The year 1 target should be met.	See worklogs, herbicide invoice and photographs
Sallow Wattle **Acacia longifolia* subsp. *longifolia* - cut large plants, hand pulled seedlings	All year	Entire site	Yes	22 October, 5 November, 28 December, 15 January, 15 February	Cut and painted large plants and hand pulled seedlings – checked no seeds present before laying cut branches down on erosion areas along tracks.	Six mature plants were treated. Over 10 plants have now been controlled. This species is scattered in the offset site and surrounds, and I will need to be vigilant to ensure that it does not re-establish. The year 1 target should be met.	See worklogs, herbicide invoice and photographs
African Boneseed *Chrysanthemoides monilifera* subsp. *monilifera* – hand pull seedlings	All year	Entire site	Yes	22 October, 5 November, 28 December, 15 January, 15 February	Hand pulled a few small seedlings along tracks and throughout site.	No mature plants recorded.	See worklogs and photographs
Bluebell Creeper **Billardiera heterophylla* handpull/spray	Spring-early summer	Entire site	Yes	22 October, 5 November, 28 December, 15 January, 15 February	Checked for seedlings.	All mature plants have been eliminated in year 1. The site of the original infestation was checked and there were no seedlings.	Worklog

Add any new and emerging woody weeds found since the management plan was completed

Mirror Bush	All year	All	Yes	15 December	Hand pulled seedling.	One small Mirror Bush seedling was found in the north of the site and removed. No more plants were found.	See worklogs, photographs and map of GPS tracks showing areas of site monitored.

Herbaceous and grassy weeds – monitoring (observations) *Outline observations from site visits conducted by the landowner/manager (e.g. weed distribution and abundance, effectiveness of past control)*				
Management action/commitments: Monitor weeds at least quarterly, and especially after periods of high rainfall.				
	Season[17]			
	Spring	Summer	Autumn	Winter
High threat weeds: *Pampas Grass* **Cortaderia selloana*	Control of Pampas Grass is ongoing – slashing and spraying will need to be undertaken over several years to kill the plants, there are approximately 30 mature plants on site and they have been treated, several seedlings were found and hand pulled. Work concentrates in gullies where most mature plants occur. I am confident cover will be <1% in all zones by the end of year 10.	No new Pampas Grass Plants noted, some existing plants resprouting so they were treated	No new Pampas Grass plants and no resprouting observed this season	No new Pampas Grass plants and no resprouting observed this season
Other: n/a				
New/emerging weeds detected previous years:	None.	None.	None.	None.
New/emerging weeds detected this year:	No new herbaceous weeds were detected. Biennial Long-nosed Potoroo habitat monitoring is not due until next year so there are no new weed findings to report from those results.	No new herbaceous weeds were detected.	No new herbaceous weeds were detected.	No new herbaceous weeds were detected.

[17] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Total (%) cover of herbaceous and grassy weeds (initial site assessment date 2-4 May 2023) Date this weed cover estimate was done: 15 November 2023				
Zone	***All* herbaceous and grassy weeds (including high threat species)**		***High threat* herbaceous and grassy weeds**	
	Original cover (%)	**Observed cover this management year (%)**[18]	**Original cover (%)**	**Observed cover this management year (%)**
Heathy Woodland	<1%	<1%	<1%	<1%
Sedgy Riparian Woodland	<1%	<1%	<1%	<1%
Sedge Wetland	<1%	<1%	<1%	<1%

[18] Cover is the percentage of the zone area that would be under a shadow cast by the foliage of herbaceous and grassy weeds if the sun was directly above. If estimating percent cover (preferred method) is not possible, then state if cover is increasing, decreasing or stable relative to the cover at the time of the original assessment. Where possible estimate cover at approximately the same time of the year as the original site assessment.

Herbaceous and grassy weeds - actions

Outline actions conducted by the landowner/manager during the management year

Management action/commitments: All high threat herbaceous (including grassy) weeds listed in Table 4 of the management plan must be eliminated to <1% cover by the end of the 10th year of management using the methods outlined in Table 4. Ensure that weed cover does not increase beyond current levels.

Undertake control of weeds annually to ensure their cover does not increase. Prioritise control of high threat weeds, new/emerging weeds and species increasing in cover.

Standards: Follow DEECA management standards. Treat weeds before plants flower and set seed. Indigenous plants should not be impacted during treatment. It is better to work on less dense infestations first and where infestations may impact important biodiversity or landscape features.

Weed type	Species/management actions	Timing	Sites / Zones	Action completed - yes/no	Date/s treated	Description of action	Results/comments/observations	Description of evidence supplied (e.g. photographs, invoices, worklogs)
High threat	Pampas Grass - slash and spray adult plants, hand pull seedlings	Winter, spring, summer	Entire site	Yes	22 October, 5 November, 28 December, 15 January, 15 February	Slashed and sprayed in spring/summer, hand pulled seedlings.	Burning plants (a recommended treatment) is not possible due to high cover of indigenous plants, so focused on slash and spray before seed set and removal of young flower heads before seed set. Plants resprouting, will need several years of treatment to kill them. Several seedlings were hand pulled (including roots) and removed from the site.	Photos, worklog
Other	Species: n/a Actions: n/a							
Add any new and emerging woody weeds found since the management plan was completed								
New and emerging	None							Map of GPS tracks to show areas of site monitored.

Pest animals and other high threat animals – monitoring (observations)					
Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of disturbance, abundance)					
Management action/commitments: Monitor pest animals and other high threat animals at least quarterly					
Season[19]					
	Spring	Summer	Autumn	Winter	**Are abundance and impacts of the pest animal at negligible levels**
Rabbits	No warrens, diggings or latrines found in the site. Deer controller did not report seeing any rabbits while undertaking deer control and camera trapping.	No warrens, diggings or latrines found in the site.	No warrens, diggings or latrines found in the site.	No warrens, diggings or latrines found in the site.	Yes
Foxes	No fox dens were found, one scat was found in the site. Deer controller did not report seeing any foxes while undertaking deer control and camera trapping.	No fox dens were found, one scat was found in the site.	No fox dens were found, one scat was found in the site.	No fox dens were found, one scat was found in the site.	Yes
Cats	Two cats were recorded during deer camera trapping, both with collars and tags on, no untagged cats. Cat trapping program is being developed with DEECA NVOR, DCCEEW and Surf Coast Shire Council. Long-nosed Potoroo camera trapping due to be undertaken in the next monitoring year which will also provide further data on the presence of cats.	Cat observed running through site by weed control contractors	Cat observed on road side with collar on by weed contractors	Cat trapping commencing shortly	No
Deer	Six old deer scats found near the reclamation plant; no other evidence seen. Deer controller reported finding two deer on camera traps and shooting two deer earlier in the season, and none have been seen since then.	5 more deer shot by deer controller	3 deer shot by deer shooter	Deer control cull planned in following year in adjoining national park so will also undertake deer control in offset site at same time to prevent the site providing refuge and increase success of deer control	Yes
New/emerging	n/a - no new pests detected.	n/a - no new pests detected	n/a - no new pests detected	n/a - no new pests detected	n/a - no new pests detected

[19] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Pest animals and other high threat animals – monitoring (observations) *Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of disturbance, abundance)*					
Management action/commitments: Monitor pest animals and other high threat animals at least quarterly					
	Season[19]				
	Spring	Summer	Autumn	Winter	**Are abundance and impacts of the pest animal at negligible levels**
pests detected previous years: None					
New/emerging pests detected this year: None	n/a - no new pests detected. Biennial Long-nosed Potoroo habitat monitoring is not due until next year so there are no new weed findings to report from those results.	n/a - no new pests detected	n/a - no new pests detected	n/a - no new pests detected	n/a - no new pests detected

Pest animals and other high threat animals – actions

Standards: Reduce abundance and impacts to negligible levels. Follow DEECA management standards. Monitoring and control should be done throughout the year. Increase monitoring frequency if pest animal activity is high. For rabbits use an integrated approach including fumigation, hand collapsing of burrows and baiting or shooting. For foxes fumigate and hand collapse dens. Remove carcasses to prevent poisoning of native predators. Ensure that native animals are not using burrows before fumigating and collapsing burrows.

Sites/Zones	**Common name**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
All	Rabbits	Control if evidence of rabbits detected. Baiting, shooting (and fumigation, and hand collapse warrens if present).	Ongoing	n/a – no rabbits or evidence of rabbits on site				
All	Foxes	Monthly baiting program continuing. If evidence of foxes detected increase frequency of baiting, undertake shooting, and fumigation, and hand collapse dens found on site.	Ongoing	Yes	23 October 25 November 25 December 14 January 15 February 12 March	Replacement of fox baits located every 800 m along internal tracks and adjacent to Distillery Creek Road.	No fox activity found.	Worklog
All	Cats	Undertake monthly trapping once 24 hr cat curfew is introduced in the Surf Coast Shire from 30 September 2023. Use new methods e.g. 'Felixer' cat grooming traps when/if legalised in Victoria.	Ongoing from 30 September 2023	n/a			Developing plan for supply, setting out, checking cat traps and where cats will be taken in line with legislative and policy requirements with Surf Coast Shire Council, DEECA and DCCEEW. Plan to be completed and implemented by May 2024.	Copy of plan. When plan implemented will provide worklogs, coordinates of trap locations, number of trap days, number of feral and domestic cats trapped, photos of cats trapped.
All	Deer	Camera trapping and shooting	Camera trapping every three	yes	12 October	Camera traps set up around artificial water	Camera traps found two deer in October and one deer in January.	Worklog of camera trapping

Pest animals and other high threat animals – actions

Standards: Reduce abundance and impacts to negligible levels. Follow DEECA management standards. Monitoring and control should be done throughout the year. Increase monitoring frequency if pest animal activity is high. For rabbits use an integrated approach including fumigation, hand collapsing of burrows and baiting or shooting. For foxes fumigate and hand collapse dens. Remove carcasses to prevent poisoning of native predators. Ensure that native animals are not using burrows before fumigating and collapsing burrows.

Sites/Zones	Common name	Method	Timing	Action completed - yes/no	Dates completed	Description of action	Results/comments/observations	Description of evidence supplied (e.g. photographs, invoices, worklogs)
			months Shooting fortnightly until December Shooting monthly from December		14 January 12 October 26 October 15 November 30 November 28 December 14 January 15 February	bodies and in gullies Fortnightly shooting on one night for three hours from dusk using night vision equipment and drones to detect deer locations. Monthly shooting as above	Shooting undertaken fortnightly and changed to monthly when no deer were found during the shooting visits in November. Will increase shooting frequency if more deer found on site and decrease frequency to every six weeks if no deer found over the next two months.	(locations and dates deployed), photos (date, time, locations), GPS track log of shooters dates, times and areas covered on site.
All	New and emerging pest animals	Control if found	As required	n/a	n/a	-	No new pests observed, no control action required	

Erosion – track remediation and restoration– Monitoring (observations) *Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of erosion)*					
Management action/commitments: Monitor threats at least quarterly; Reduce erosion to negligible levels					
	Season[20]				
	Spring	Summer	Autumn	Winter	**Are abundance and impacts of the pest animal at negligible levels**
Illegal site access	Signage still in place, one sign replaced in October 2023. Gates/fencing/across track openings and boulders adjacent to track openings in place. Illegal site access noted in October around closed track entrances. This ceased after additional rocks installed in October. Photos of fencing, signage and additional rocks attached.	Signage still in place. Gates/fencing/across track openings and boulders adjacent to track openings in place. No illegal site access noted	Signage still in place, Gates/fencing/across track openings and boulders adjacent to track openings in place. Illegal site access was noted again in March, so fencing installed along Distillery Creek Road offset site boundary in April. No further illegal access observed since then.	Signage still in place, No further illegal access observed.	Yes
Erosion	No new erosion points or extension of existing erosion noted. Some very young direct seed germinants observed. Photos from fixed photo points attached.	No new erosion points or extension of existing erosion noted. Vegetation starting to recover	No new erosion points or extension of existing erosion noted. Vegetation spreading across tracks	No new erosion points or extension of existing erosion noted. Soil and leaf litter starting to infill erosion areas	Yes
Other, or new and emerging erosion threats	No new or emerging threats identified.	n/a			

[20] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Control Erosion – track remediation and restoration – actions

Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.

Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
All	Illegal access	Maintain permanent locked gates/fencing to permanently close internal tracks into the site. Install boulders beside track entrances to block access around the side closed tracks. Install signage warning that the site is private property, no trespassing, trespassers will be prosecuted, fake security cameras and interpretive signs explain it is fauna conservation site. Install fencing along Distillery Creek Road along the site boundary.	Ongoing as required	Yes Yes	21 October 2023 28-30 April 2024	Two top rails of track closure fence replaced (more southerly entrance off Distillery Creek Road). Missing sign replaced at western closed track entrance. Extra rocks installed to block informal trail bike tracks created beside closed track entrances on Distillery Creek Road. Entire length of site boundary along Distillery Creek Road fenced.	In September and October, fresh trail bike tracks were observed beside locked gate/fenced old tracks on Distillery Creek Road that led into the site indicating that unauthorised trail bikes had entered the offset site via old internal tracks. No further evidence of illegal access since fencing erected.	Worklogs, invoices for boulders, fencing materials, replacement sign and labour. Before and after photos

Control Erosion – track remediation and restoration – actions

Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.

Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
All	Erosion	Remediated erosion points with soil saver. Lay down cut Coast Wattle and Sallow Wattle (with no seeds) across soil saver. Source local indigenous seed and direct seed with indigenous species in Autumn. Mark permanent photo monitoring points for erosion areas with a steel star picket and yellow cap. Take before and after baseline photos from photo point.	Within 12 months of execution of landowner agreement then ongoing as required.	Yes	29 April 2023 29 April 2023 29 April 2023	Soil saver applied across all erosion points along closed vehicle tracks. Photo monitoring points were permanently marked with a steel star picket and yellow cap, location coordinates recorded at each erosion point if not in the same location as the photopoints below. Before and after baseline photos taken from each photo monitoring point stake (showing stake in photo for future reference). Direct seeding with indigenous species undertaken across all erosion points.	None of the cut Coast Wattle or Sallow Wattle laid down on the tracks had any seeds.	Worklogs, receipts for materials and labour, photos

Control Erosion – track remediation and restoration – actions

Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.

Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)

Rubbish removal – Monitoring (observations) *Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of rubbish)*					
Management action/commitments: Monitor threats at least quarterly; remove and preventrubbish dumping					
	Season[21]				
	Spring	Summer	Autumn	Winter	**Are threats at negligible levels?**
Rubbish	All rubbish, old fencing and old water pipe removed from the site, no new rubbish observed.	No new rubbish observed	No new rubbish observed	No new rubbish observed	Yes
Other, or new and emerging threats of rubbish	No new or emerging threats identified.	n/a	n/a	n/a	n/a

[21] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Rubbish removal – actions

Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.

Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
All	Rubbish	Remove all rubbish, disused fencing material and water pipe from the site	Within three months of signing the Section 69 agreement then ongoing	Yes	21 October 2023	Contractors traversed the site on foot and removed the rubbish and old fencing material from the site. The old, damaged water pipe (entering the site from Distillery Creek Road) was removed by hand by lifting it and cutting and capping outside the offset boundary.	There was minimal damage to vegetation during pipe removal as it was on the surface and was able to be lifted without digging or use of machinery within the offset site.	Worklog, invoices for labour, photos of rubbish removed, before and after photos of pipe removal

Control all other high threats – Monitoring (observations) *Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of disturbance, abundance)* **Management action/commitments:** Monitor threats at least quarterly; Reduce abundance/impacts to negligible levels					
	Season[22]				
	Spring	Summer	Autumn	Winter	**Are abundance/threats at negligible levels?**
Phytophthora	Some dieback noted in Grass-trees (yellowing off), but most Grass-trees and other plants appear healthy (showing no signs of dieback). Dieback does not appear to be increasing across the site. Biennial Long-nosed Potoroo habitat monitoring (which includes observations of potential *Phytophthora* dieback) is not due until next year so there are no findings to report this year from that survey program. See photos from northwest area of the site burnt in 2019 showing high numbers of living Grass-trees	No further die back noted in Grass-trees (yellowing off), and most Grass-trees and other plants appear healthy (showing no signs of dieback). Dieback does not appear to be increasing across the site.	No further die back noted in Grass-trees (yellowing off), and most Grass-trees and other plants appear healthy (showing no signs of dieback). Dieback does not appear to be increasing across the site.	Some dieback noted in Grass-trees (yellowing off), but most Grass-trees and other plants appear healthy (showing no signs of dieback). Dieback does not appear to be increasing across the site.	No, but not expected to be as the methods and technology does not exist to eliminate *Phytophthora*, can only control its spread by humans. No increase in potential *Phytophthora* dieback observed across the site compared to assessment report and understorey cover remains high.
Inappropriate fire regime	No parts of the site have been unburnt for more than 20 years, most of the site was last burnt in 2010 (13 years ago) and a small section in the north west section of the site was burnt in 2019. See photos from northwest area of the site burnt in 2019 showing good vegetation recovery.	No unplanned burns occurred	No unplanned burns occurred	No unplanned burns occurred	Yes
Other, or new and	No new or emerging high threats identified.	n/a	n/a	n/a	n/a

[22] Order of seasons should be based on the date the landowner agreement commenced (i.e. If the landowner agreement was signed in spring, then the first quarter is spring)

Control all other high threats – Monitoring (observations)

Outline observations from site visits conducted by the landowner/manager (e.g. Evidence of disturbance, abundance)

Management action/commitments: Monitor threats at least quarterly; Reduce abundance/impacts to negligible levels

Season[22]

	Spring	Summer	Autumn	Winter	**Are abundance/threats at negligible levels?**
emerging high threats					

Control all high threats – actions								
Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.								
Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
All	*Phytophthora*	Ensure all Barwon Water staff and contractors entering the site are trained and undertake cleaning and hygiene protocols for the management of *Phytophthora*. Ensure all materials bought on site are from clean sources. Undertake spot audits twice a year to check these protocols are being adhered to. Undertake supplementary planting/direct seeding at densities advised by local indigenous native plant nursery using locally indigenous understorey species that are not sensitive to *Phytophthora* if habitat monitoring shows a decline in understorey cover over time.	Ongoing Ongoing If required	Yes Yes Not required	21 October 2023 15 January 2024	All management vehicles, footwear and equipment used by contractors were brushed down and cleaned with a mixture of 70% methylated spirits and 30% water outside the offset site immediately before and after undertaking any work on site.	Two unannounced spot audits were carried out by Barwon Water and all contractors were found to be following the hygiene policy. Seed, potting mix and soil saver used for potted plants used in plantings was confirmed by the supplier to conform to the Nursery Industry Accreditation Scheme Australia (NIASA)	Worklogs, dates, personnel, and results of spot audits. Photos of cleaning equipment.
All	Inappropriate	No burns required at this	n/a					

Control all high threats – actions								
Standards: Control all high threats to maintenance and improvement of native vegetation condition, including, but not limited to the following. Reduce presence, activity and disturbance of introduced animals to negligible levels. Control native herbivores to the extent necessary to ensure improvements in vegetation condition including tree canopy and understorey cover, diversity and recruitment results. Control erosion.								
Sites/Zones	**Threat**	**Method**	**Timing**	**Action completed - yes/no**	**Dates completed**	**Description of action**	**Results/comments/observations**	**Description of evidence supplied** (e.g. photographs, invoices, worklogs)
	fire regime	stage.						

Any additional actions required from DEECA monitoring or annual report reviews

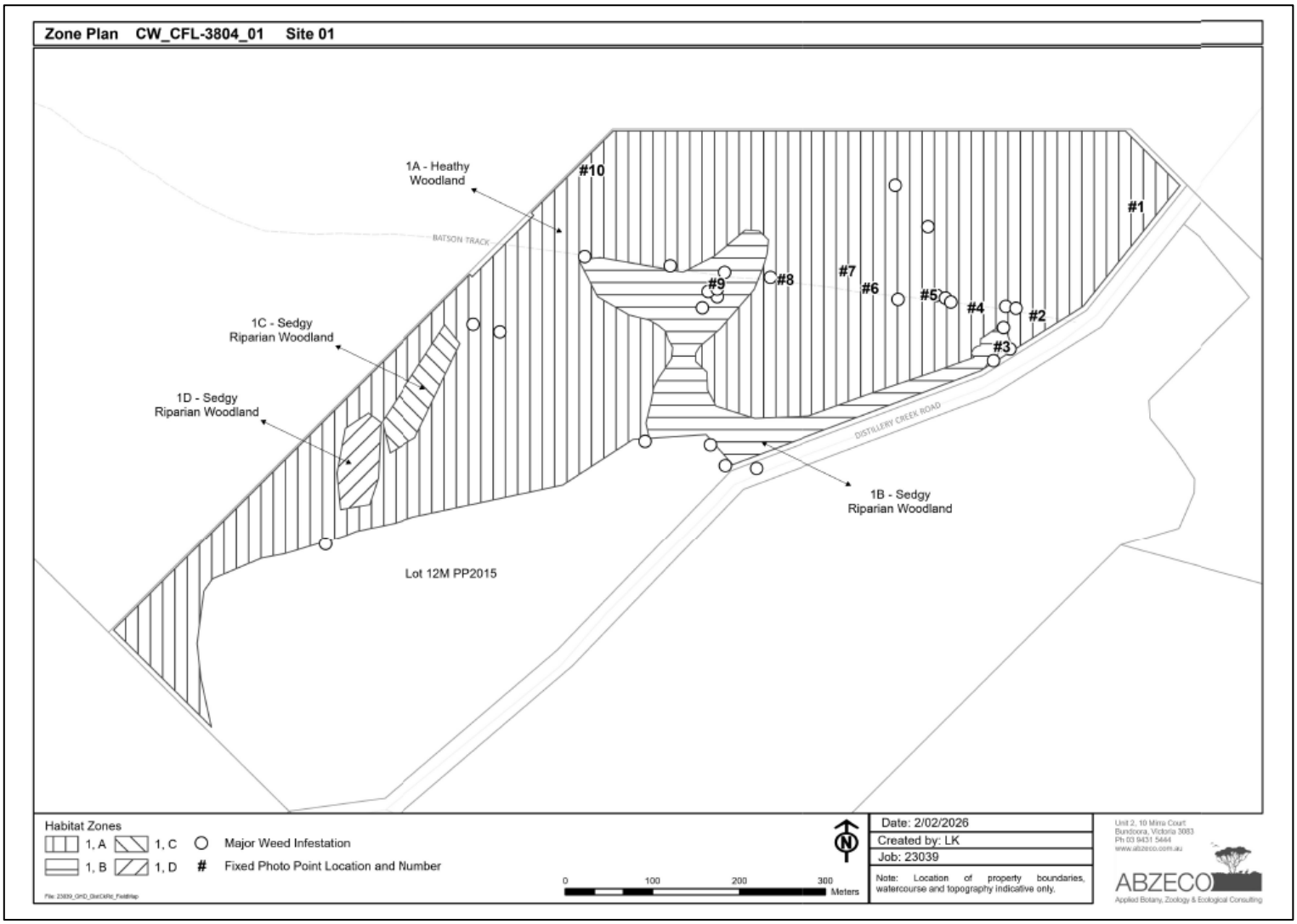
(refer to latest letters from DEECA)

Have additional actions been completed? What was the result?

DEECA requested that track erosion in centre of the site have additional soil saver applied, and supplementary planting undertaken. Additional soil saver, plantings and direct seeding with indigenous plants undertaken in May 2024. See worklog and photos for evidence.

Is there anything else you'd like to report? Sightings, rainfall? Feedback? Positive sightings (eg. new species observed)?
We had a wet spring, so the growth of some weed species was greater than normal. I feel we remain on track to meet the targets in the management plan. PV undertook a fuel reduction burn in the neighbouring national park, resulting in the north-eastern corner of the site being burnt (extended about 20m into the site). It was a cool burn and did not go into the gullies. Increased weed control visits have been undertaken in this area to monitor and control any weeds. Very few have been found. Quite a few Acacia germinants but will have to wait until 12 months post burn to identify Coast Wattle and Sallow Wattle to avoid off target damage to indigenous wattle species.

Photopoint map – aerial overview



Photopoints

Permanent markers/stakes for photo points established and remain on-site/intact? Yes / No (if not, brief explanation)

The below photo placeholders are for you to insert your photo points. Click the icon and you will be prompted to replace the picture.

Include a caption for each photo describing the change observed since last year.

Photographs taken during initial assessment (ie. 'year 0') are located below. These photograghs have been provided by your site assessor and serve as a baseline for comparison of the sites condition over time.	**Paste this years photo point photographs below. Remember to include descriptive captions under each photo**
	
Photopoint 1, Habitat Zone 1A, site boundary, Heathy Woodland Location: -38.422120, 144.125913 Description of location: Northern most gated entrance to internal tracks off Distillery Creek Road. Is sign posted as Baston Track Direction: Northwest Date photo taken: 04 May 2023 Description: Unauthorised site access from Distillery Creek Road by tail bike tracks from around boulders either side of gate (left side shown here). No permanent marker placed here as likely to be removed as it would be visible from Distillery Creek Road. Gate provides permanent landmark for photo point.	Photopoint 1, Habitat Zone 1A, site boundary, Heathy Woodland: Year 1, showing additional boulders in place and vegetation regenerating along illegal access tracks around this track entrance.

	
Photopoint 2, Habitat Zone 1A, Heathy Woodland Location: -38.423218, 144.124566 Description of location: southern Baston Track entrance from Distillery Creek Road Direction: South Date photo taken: 04 May 2023 Description: Illegal trailbike access track through bush around wooden fence track closure from Distillery Creek Road. Also erosion on track west of monitoring stake (out of shot) see photo in 'Photographs of additional works section below'.	Photopoint 2, Habitat Zone 1A, Heathy Woodland: Year 1, showing bush regenerating and no evidence of illegal access since extra boulders put in place next to this closed track entrance.

	
Photopoint 3, Habitat Zone 1B, Sedge Wetland within Sedgy Riparian Woodland Location: -38.423528, 144.124088 Description of location: small wetland depression adjacent to Distillery Creek Road, near the centre of the south eastern offset site boundary along Distillery Creek Road. Direction: West Date photo taken: 04 May 2023 Description: Black burnt plastic water pipe (tip of yellow cap in photo) to be removed.	Photopoint 3, Habitat Zone 1B, Sedge Wetland within Sedgy Riparian Woodland: Year 1, area where black plastic water pipe was removed with little disturbance and now regenerating.

	
Photopoint 4, Habitat Zone 1A, internal track Location: -38.423115, 144.123759 Description of location: along southern most alignment of Batson Track near entrance from Distillery Creek Road. Direction: West Date photo taken: 02 May 2023 Description: Eroded and compacted wheel ruts requiring remediation with soil saver and direct seeding. Will need to be permanently marked with a star picket or similar after track remediation works undertaken in year 1.	Photopoint 4, Habitat Zone 1A, internal track: Year 1, showing soil saver in place, some recruitment with small seedlings emerging. No evidence of further erosion or other disturbance.

	
Photopoint 5, Habitat Zone 1A, internal track Location: -38.422966, 144.123148 Description of location: southern most alignment of Batson Track entrance from Distillery Creek Road. Direction: West Date photo taken: 02 May 2023 Description: Track erosion requiring remediation with soil saver and direct seeding. Will need to be permanently marked with a star picket or similar after track remediation works undertaken in year 1.	Photopoint 5, Habitat Zone 1A, internal track: Year 1, showing soil saver in place, some recruitment with small seedlings emerging. No evidence of further erosion or other disturbance.

	
Photopoint 6, Habitat Zone 1A, internal track Location: -38.422878, 144.122381 Description of location: southern most alignment of Batson Track entrance from Distillery Creek Road. Direction: West Date photo taken: 02 May 2023 Description: Track erosion requiring remediation with soil saver and direct seeding. Will need to be permanently marked with a star picket or similar after track remediation works undertaken in year 1.	Photopoint 6, Habitat Zone 1A, internal track: Year 1, showing soil saver in place, some recruitment with small seedlings emerging. No evidence of further erosion or other disturbance.

	
Photopoint 7, Habitat Zone 1A, internal track Location: -38.422694, 144.122090 Description of location: centre of the offset site along northern most alignment of Batson Track entrance from Distillery Creek Road. Direction: East Date photo taken: 03 May 2023 Description: Track erosion requiring remediation with soil saver and direct seeding. Will need to be permanently marked with a star picket or similar after track remediation works undertaken in year 1.	Photopoint 7, Habitat Zone 1A, internal track: Year 1, showing soil saver in place, some recruitment with small seedlings emerging. No evidence of further erosion or other disturbance.

	
Photopoint 8, Habitat Zone 1A, internal track Location: -38.422761, 144.121256 Description of location: centre of the offset site along southern most alignment of Batson Track entrance from Distillery Creek Road. Direction: East Date photo taken: 02 May 2023 Description: Track erosion requiring remediation with soil saver and direct seeding. Will need to be permanently marked with a star picket or similar after track remediation works undertaken in year 1.	Photopoint 8, Habitat Zone 1A, internal track: Year 1, showing soil saver in place, some recruitment with small seedlings emerging. No evidence of further erosion or other disturbance.

	
Photopoint 9, Habitat Zone 1B, Sedgy Riparian Woodland Location: -38.422837, 144.120190 Description of location: Drainage Gully in centre of site just south off Batson Track Direction: South west Date photo taken: 04 May 2023 Description: Pampas grass (centre of photo) and several large Coast Wattles and Sallow Wattles (not in shot) to the left, right and behind monitoring point stake and a few metres past Pampas Grass	Photopoint 9, Habitat Zone 1B, Sedgy Riparian Woodland: Year 1, showing removal of *Pampas Grass. No resprouting or seedlings recorded.

	
Photopoint 10, Habitat Zone 1A, Heathy Woodland Location: -38.421548, 144.118784 Description of location: north west section of site burnt in 2019 Direction: East Date photo taken: 03 May 2023 Description: Vegetation recovery in a section of the offset site 4 years after a control burn that extended into the offset site from the adjoining national park. Grass-trees showed minimal evidence of *Phytophthora* (occasional yellowing plant), the rest of the understorey vegetation was still in the early stages of post fire recovery, the canopy was alive and growing, with no canopy recruits as yet. (Temporary photopoint while vegetation recovers from fire, so not permanently marked with a star picket).	Photopoint 10, Habitat Zone 1A, Heathy Woodland: Year 1, showing ongoing vegetation recovery, increased understorey shrub cover, Grass Tees remain healthy with only a few plants showing signs of dieback. No canopy tree recruits as yet.

Photographs of additional works – any photographs of works or points of interest that are not a photopoint. Any photographed invoices, work logs or receipts of consumables can also be inserted here. You are not limited to four photographs.

Caption: Example of rubbish found on side of Baston Track in centre of offset site during site assessment (May 2023) and needs to be removed. Coordinates: 38.422806, 144.121592

Caption: Old fencing material found in northern section of the offset site during site assessment (May 2023) and needs to be removed. Coordinates: 38.422101, 144.119718

	
Caption: Erosion at track entrance that needs to be remediated (next to photo monitoring point 2 – left hand side of photo).	**Caption:**

Compliance with the Obligations of the Landowner

(as contained in the Landowner Agreement)

Management of the Site

In relation to the Site, the Landowner covenants and agrees:

5.4 to complete the Management Actions for the purpose of achieving the Management Commitments, to the standards required by the Site Management Plan and to the satisfaction of the Secretary, regardless of whether all Native Vegetation Credits have been sold to other people. Where the Landowner has completed the Management Actions specified in the Site Management Plan to the satisfaction of the Secretary, but a Management Commitment is not achieved for reasons out of the control of the Landowner, the Secretary will not withhold any payment to the Landowner;

5.5 to allow the Secretary and the Secretary's officers, employees, agents, contractors, invitees and licensees access to, and entry onto the Site in accordance with this Agreement or the Conservation Forests and Land Act 1987; and

5.6 to undertake the works required to implement the Site Management Plan in compliance with all relevant laws, regulations and statutes, including subordinate instruments and authorisation.

Protection of Native Vegetation

5.7 The Landowner must:

5.7.1 not cause or consent to the removal, destruction, lopping or any other interference with any Native Vegetation on the Site;

5.7.2 take all reasonable steps to ensure that no Native Vegetation on the Site is removed, destroyed, lopped or otherwise interfered with; and

5.7.3 subject to clause 6.4, not apply for, or consent to an application for, a permit under the Planning and Environment Act 1987 (Vic) to remove, destroy or lop Native Vegetation on the Site.

Protection of other habitat

5.8 Subject to clauses 2.13 and 6.4, the Landowner must:

5.8.1 not cause or consent to the removal or interference with any rocks or fallen vegetation on the Site; and

5.8.2 take all reasonable steps to ensure that no rock or fallen vegetation on the Site is removed or interfered with.

Exclusion of livestock

5.9 Subject to clauses 2.13 and 6.4, and except as provided for in any Management Notice under clause 7, the Landowner must:

5.9.1 not cause or consent to the introduction of any livestock on the Site; and

5.9.2 take all reasonable steps to ensure that no livestock enter or remain on the Site.

Introduction of animals other than livestock

5.10 Subject to clauses 2.13, 5.11 and 6.4, the Landowner must:

5.10.1 not bring, or consent to the bringing of, any Domestic Animal onto the Site; and

5.10.2 take all reasonable steps to exclude any Domestic Animal that enters onto the Site.

5.11 The Landowner may bring domestic dogs on to the Site provided that any dogs so brought are under the immediate control of the Landowner or another person authorised by the Landowner at all times.

Installation or upgrade of fencing

5.12 This clause applies if the Site is adjacent to any land from which any stock or person (whether or not the person is in a vehicle):

5.12.1 has ready access to the Site;

5.12.2 is reasonably likely to have ready access to the Site; or

5.12.3 becomes reasonably likely to have ready access to the Site.

5.13 If clause 5.12 applies, the Landowner must, subject to clause 6.4, ensure that there is adequate fencing and gates between the land and the Site so as to protect the Site from being readily accessible by stock or persons.

5.14 Subject to clause 6.4, any works required under clause 5.13 must be carried out:

5.14.1 in the case of a site to which clauses 5.12.1 or 5.12.2 apply at the Commencement of this Agreement, within three months of the Commencement Date of this Agreement or at any earlier time specified in the Site Management Plan; or

5.14.2 in any other case, within three months of any change in circumstance that creates a reasonable likelihood of any stock or person having ready access to the Site for the purposes of clause 5.12.3, or at any earlier time specified by the Secretary by written notice to the Landowner.

Maintenance of fencing

5.15 Subject to clause 6.4, the Landowner must maintain any fencing required by clause 5.10.2 or clause 5.13 in good repair and condition at all times.

Statutory pest management obligations

5.16 From the Commencement Date of this Agreement and on an ongoing basis, the Landowner must, in relation to the Site, ensure compliance with:

5.16.1 the requirement to prevent the growth and spread of Regionally Controlled Weeds under section 20(1)(e) of the Catchment and Land Protection Act 1994 (Vic);

5.16.2 the requirement to prevent the spread of, and as far as possible, eliminate established pest animals under section 20(1)(f) of the Catchment and Land Protection Act 1994 (Vic); and

5.16.3 the requirement to eradicate Regionally Prohibited Weeds under section 20(1)(d) of the Catchment and Land Protection Act 1994 (Vic).

Weeds identified in Site Management Plan

5.17 The Landowner must, to the extent specified in the Site Management Plan, eradicate or prevent the growth and spread of any Weed or other plant as specified in the Site Management Plan.

Application of fertiliser

5.18 The Landowner must:

5.18.1 not apply any fertiliser to any part of the Site;

5.18.2 not consent to the application of any fertiliser to any part of the Site; and

5.18.3 take all reasonable steps to ensure that fertiliser is not applied to any part of the Site.

Buildings and structures

5.19 Subject to clauses 2.13, 6.4 and 5.20, the Landowner must:

5.19.1 not erect or place any building or structure on the Site; and

5.19.2 take all reasonable steps to ensure that no building or structure is placed on the Site by any other person.

5.20 The Landowner may erect temporary structures on the Site as part of any grazing of livestock authorised under the Site Management Plan, consent under clause 6.4 or Management Notice under clause 7.

Alterations to the natural state of water bodies

5.21 Subject to clauses 2.13 and 6.4, the Landowner must not cause or consent to, and must take all reasonable steps to avoid any occurrence of, any act which alters the natural state of, or the flow, supply, quantity or quality of, any body of water on to or from the Site.

Rubbish and other materials

5.22 The Landowner must not cause or consent to, and must take all reasonable steps to avoid, the dumping of any rubbish or the storage of any materials on the Site.

Further restrictions on using the land

5.23 Subject to clause 6.4, the Landowner must not cause or consent to any of the following, and must take all reasonable steps to ensure that the following do not occur on the Site:

5.23.1 the removal, introduction or disturbance of any soil, rocks or other minerals or the construction of dams or modification of existing dams;

5.23.2 subdivision;

5.23.3 the operation of any trade, industry or business;

5.23.4 the recreational use of trail bikes or four wheel drive vehicles;

5.23.5 the carrying out of any works on the Site other than those required by this Agreement or by law; and

5.23.6 the carrying out of any other activities not consistent with the purposes of this Agreement.

Extractive industry and utility installations

5.24 The Landowner must not permit, unless required by law:

5.24.1 the issue of any licence or approval for exploration, mining, extraction or production of gas, petroleum, minerals or other substances on the Site; or

5.24.2 the installation of any transmission lines or other services or works on the Site.

5.25 The Landowner must bring this Agreement to the attention of any person who notifies the Landowner that they have applied for or will be applying for a licence, approval or proposal to take an action of the kind described in clauses 5.24.1 and 5.24.2, and to any other person or body whose approval is required to take that action.

5.26 The landowner must notify the Secretary of any notification of an application for a licence, approval or proposal to take an action of the kind described in clauses 5.24.1 and 5.24.2.

Have you complied with all the above conditions?

Yes / No (please circle) If no, provide details below

_____

_____

_____

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I hereby declare:

- The supplied information is accurate and complies with reporting requirements under Section 5 (Obligations of the Landowner) of the landowner agreement for VC_CFL-3804_01; and,

- I am the owner (or authorised person) of the property on which VC_CFL-3804_01 situated and should the property be sold, I will immediately inform DEECA in accordance with Section 13 of the landowner agreement

Signed: _____ Date