MAWSONS

FEBRUARY 2025

BLUE HILLS QUARRY
OFFSET STRATEGY

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Blue Hills Quarry
Offset Strategy

Mawsons

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REV	DATE	DETAILS
A	25/11/2024	Working Draft

	NAME	DATE	SIGNATURE
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Reviewed by:	Imogen Merlo	03/02/2025	
Approved by:	Nic McCaffrey	04/02/2025	

DECLARATIONS

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, full name and ABN, 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) _____

Organisation (please print) _____

Role (please print) _____

Date _____

PROPONENT CONFLICT OF INTEREST DECLARATION

I declare that to the best of my knowledge I do not have any actual, potential or perceived conflicts of interest that may affect the assessment of this Offset Strategy, except as set out below.
I undertake to make a further declaration detailing any actual, potential or perceived conflict of interest that may arise during the assessment period.
I agree to comply with any mitigation steps required to address any declared conflict.

Signed _____

Full name (please print) _____

Date _____

CONSULTANT CONFLICT OF INTEREST DECLARATION

I declare that to the best of my knowledge I do not have any actual, potential or perceived conflicts of interest that may affect the assessment of this Offset Strategy, except as set out below.
I undertake to make a further declaration detailing any actual, potential or perceived conflict of interest that may arise during the assessment period.
I agree to comply with any mitigation steps required to address any declared conflict.

Signed _____

Full name (please print) _____

Date _____

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GLOSSARY

CEMP	Construction Environment Management Plan
CMA	Catchment Management Authority
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEECA	Department of Energy, Environment and Climate Action
EE Act	Environment Effects Act 1978
EES	Environment Effects Statement
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EVC	Ecological Vegetation Class
FFG Act	Flora and Fauna Guarantee Act 1988
General HUs	General Habitat Units
MNES	Matters of National Environmental Significance
NGZ	No-go Zones
NVR Report	Native Vegetation Removal Report
Species HUs	Species Habitat Units
TPZ	Tree Protection Zone
VQA	Vegetation Quality Assessment

EXECUTIVE SUMMARY

PURPOSE

WSP Australia Pty Limited (WSP) was engaged by Mawsons to prepare an offset strategy (OS) to set out the anticipated State and Federal offset requirements, and the map out a likely pathway for achieving these offsets. A separate Offset Management Plan (OMP) will be prepared should there be requirements to do under the EPBC Act and any state approval process.

The proposed Blue Hills Quarry is likely to trigger offset requirements to compensate for the impacts on native vegetation, significant flora, and fauna habitat. Details of impacts, including options to avoid and minimise losses and legislative implications associated with unavoidable losses, are set out in the project's flora and fauna impact assessment report (Technical Reports).

This OS identifies and quantifies the impacts identified in the Technical Report and sets out a strategy for meeting the obligations under the various policies and legislation. This OS is intended to be a preliminary working draft to be updated as the approvals process progresses. An OS has been drafted at this early stage to provide regulators with understanding of the availability of potential offset liabilities.

PROJECT DESCRIPTION

Mawsons Quarries and Concrete propose to develop a hornfels rock quarry in Bradford within the Mount Alexander Shire LGA. The proposed quarry would involve the development of a:

- 33 ha quarry
- 3 ha area for processing, stockpiling, vehicle workshop and office area
- 4 km haul road from the quarry site to the Bridgewater-Maldon Road via private land.

Key construction activities relate to site establishment and construction of fixed infrastructure associated with the quarry area and associated haul roads. At the end of life, the quarry would be decommissioned and rehabilitated, allowing the site to be re-purposed for environmental conservation purposes.

SUMMARY OF LOSSES, OFFSETS AND CONTRIBUTIONS

Avoidance and minimisation of impacts to native vegetation and threatened species habitat has occurred through the initial planning and siting of the quarry, refinement of project design following ecological assessment advice and mitigation measures to be implemented. If approved, unavoidable residual impacts to significant flora, fauna and vegetation communities can be offset in accordance with the relevant policies and legislation.

Table ES.1 below provides a broad summary of the unavoidable losses associated with the Project and Table ES.2 outlines the likely required offsets triggered under relevant federal and state legislation.

Table ES.1 Summary of unavoidable losses

REMOVAL TYPE	SPECIES/COMMUNITY	EXTENT (HA)
EPBC Act	Brown Treecreeper, Diamond Firetail, Hooded Robin and Southern Whiteface	36.88
	Swift Parrot	24.71

REMOVAL TYPE	SPECIES/COMMUNITY	EXTENT (HA)
	Grey Box Grassy Woodland and Derived Native Grassland of South-eastern Australia	2.60
FFG Act	Victorian Temperate Woodland Bird Community (VTWBC) ***Fauna species*** Brush-tailed Phascogale, Lace Monitor, Diamond Firetail, Hooded Robin, Speckled Warbler, Square-tailed Kite and Swift Parrot recorded as present Bearded Dragon, Barking Owl, Black Falcon, Crested Bellbird, Grey-crowned Babbler, Little Eagle, Painted Honeyeater and Turquoise Parrot moderate/high likelihood of occurrence	36.88
	Flora species Buloke *Allocasuarina luehmannii*, Golden Cowslips *Diuris behrii*, Glaucous Flax-lily *Dianella longifolia* var. *grandis* and Small-flower Wallaby-grass *Rytidosperma monticola*. recorded as present 3 Generally protected flora species recorded as present 10 Restricted use protected flora species recorded as present	36.95
Native vegetation (Guidelines)	Four patches of native vegetation, including 72 large trees One large scattered tree	36.88; 72 Large Trees 0.07 One Large Tree
Total	-	36.95 ha 73 Large Trees

Table ES.2 Offset requirements under the relevant federal and state legislation

LEGISLATION	OFFSETS LIKELY REQUIRED
EPBC Act	Offset requirement is unconfirmed. There is considered one Threatened Ecological Community and six significant fauna species listed under the EPBC Act considered to have a moderate or higher risk of a significant Impact under the EPBC Act. MNES identified at risk of a significant impact are as follows: • Grey Box Grassy Woodland and Derived Native Grassland of South-eastern Australia) - Endangered • Brown Treecreeper Climacteris picumnus (victoriae) – Vulnerable • Diamond Firetail *Stagonopleura guttata* – Vulnerable • Hooded Robin *Melanodryas cucullata* – Endangered • Southern Whiteface *Aphelocephala leucopsis* – Vulnerable • Swift Parrot – *Lathamus discolor* – Critically Endangered.

LEGISLATION	OFFSETS LIKELY REQUIRED
Native Vegetation Regulations (Guidelines)	50.021 species units of habitat for Grey Falcon, *Falco hypoleucos* 52.486 species units of habitat for Eltham Copper Butterfly, *Paralucia pyrodiscus* lucida 49.259 species units of habitat for Ausfeld's Wattle, *Acacia ausfeldii* 49.136 species units of habitat for Cottony Cassinia, *Cassinia ozothamnoides* 49.136 species units of habitat for Flat-leaf Bush-pea, *Pultenaea platyphylla* 49.136 species units of habitat for Western Rat-tail Grass, *Sporobolus* creber 49.259 species units of habitat for Cane Spear-grass, *Austrostipa breviglumis* 49.272 species units of habitat for Cobberas Grevillea, *Grevillea brevifolia* 49.139 species units of habitat for Sutton Grange Greenhood, *Pterostylis agrestis* and; 73 Large trees.

CONCLUSION

Efforts have been made to minimise losses of native vegetation, and where unavoidable, to minimise losses through early assessment and mapping of ecological values within the Project Area, as detailed in (WSP 2024). Consideration of quarry design and haul road alignment has been made to avoid these values where possible, mitigate impacts by staged impacts and reestablishment of habitat, and the development of retention options and conservation measures in a first party offset aimed at protecting these values.

If approved, all unavoidable losses to native vegetation and habitat would be required to be offset *prior* to commencement of works and in accordance with policy and legislative obligations including offsets (if required) under the EPBC Act, and offsets under the *Guidelines 2017* policy.

The figures reported in this OS are based on impacts and offset target calculations associated with the proposed action area. These figures and the associated offset targets should be considered preliminary, and may vary during the approvals process. As such, offset targets should be recalculated and figures revised if required, in the event of approval of the action to ensure that there is no net loss of biodiversity values associated with these projects.

Preliminary calculations under the EPBC Act indicate that all offsets cane be met across land contiguous to the propose action as first party offsets, with the caveat of using the current assumptions and inputs detailed in this report, used in the Offset Assessments Guide – EPBC Act calculator. Similarly, preliminary testing using the Gain Calculator Results indicate approximately 200 % of the likely required species offsets, to satisfy State offset requirements as per the Guidelines (DELWP, 2017b), available across the proposed first party offset area.

1 PROJECT DESCRIPTION

1.1 SUMMARY OF THE PROJECT

Mawsons Quarries and Concrete proposes to develop a hornfels rock quarry in Bradford within the Mount Alexander Shire LGA. The proposed quarry would involve the development of a:

- ~36 ha quarry;
- 3 ha area for processing, stockpiling, vehicle workshop and office area; and
- 4 km haul road from the quarry site to the Bridgewater-Maldon Road via private land.

The proposal is expected to extract approximately 500,000 tonnes per annum of hornfels aggregate, employ 6 full time staff and have a lifespan of 70-100 years. Key construction activities relate to site establishment and construction of fixed infrastructure associated with the quarry area and associated haul roads. At the end of life, the quarry would be decommissioned and rehabilitated, allowing the site to be re-purposed for environmental conservation purposes.

Quarrying of high quality hornfels aggregate at Blue Hills is proposed to support the population growth and development of the Loddon Campaspe region. As populations grow across regional Victoria, the need for development and maintenance of infrastructure is required to support these communities. There are no other Work Authorities for hornfels resources located in the Loddon Campaspe region. The hornfels deposits at Blue Hills' provide a high-quality market resource for regional infrastructure development with excellent access to markets by road transport via the Calder Highway/Freeway as well as the Pyrenees Highway to the west.

1.2 ENVIRONMENTAL IMPACT

The project footprint is known to support high-quality native vegetation and habitat for a number of threatened species including threatened species and communities that are listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as Matters of National Environmental Significance (MNES) and *Flora and Fauna Guarantee Act 1988* (FFG Act). WSP recently undertook a gap analysis and revision of the previous impact assessments being the *Blue Hills Quarry; Flora and fauna Impact Assessment* FFIA (WSP, 2024). Previous reporting informing the FFIA (WSP, 2024) included:

- Ecological assessment of threatened species presence at the proposed Blue Hills quarry. Prepared for Mawsons Concrete & Quarries (Habitat Management Services, 2021)
- Blue Hills Quarry Stage 2 Ecological Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2023a).
- Blue Hills Quarry Haul Road Ecological Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2023b).
- Blue Hills Quarry Impact Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2023e).

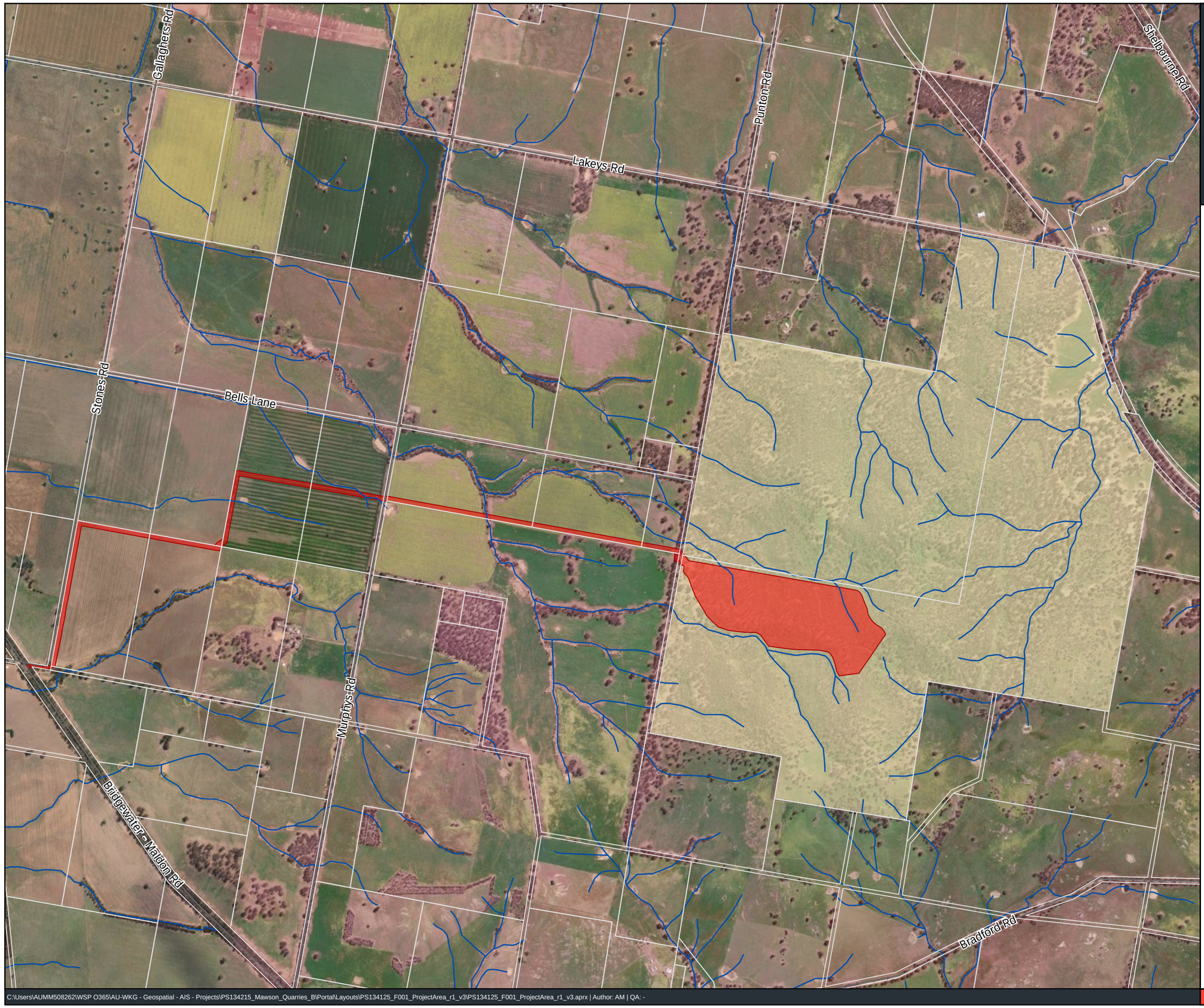
Ecological assessments have determined that the Project has the potential to have a significant impact upon MNES, which requires a referral and consideration by the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Additionally, significant impacts are expected to ecological values that are protected under the FFG Act and will likely trigger a referral under the *Environmental Effects Act 1978* (EE Act). Impacts are expected to be permanent given the nature of the works, however at the end of project life (70-100 years) the project footprint will be rehabilitated.

1.3 POTENTIAL OFFSET(S)

Formal assessment is required to determine whether the Project will have a significant impact on MNES and state ecological values which may occur under a bilateral agreement. Such an assessment will determine if the Project is a 'controlled' action under the EPBC Act. Where residual impacts are significant, then the EPBC Act Environmental Offsets Policy (DSEWPaC, 2012a) will apply.

Given the extent of loss on federal and state-listed flora, fauna and ecological communities, it is expected that impacts to species habitat will trigger offset requirements under the EPBC Act and clause 52.17 of the *Planning and Environment Act 1987* (P&E Act). DEECA may also request compensation under the FFG Act for impacts to protected flora species which will be determined prior to approval.

A third-party broker was contacted to determine the availability of sourcing the necessary Species Habitat Units (SHU) to meet the requirements of the Native Vegetation Removal report (NVR) in early 2023 which concluded that not all of the required SHU could be obtained. As a result, WSP began investigations into the potential for establishing a first-party offsets using the habitat within the broader ~560 ha property which comprises the same or similar vegetation and habitat types to satisfy the offset obligations. Further detail of the proposed offset site is provided in section 4.1. The potential offset area is shown in

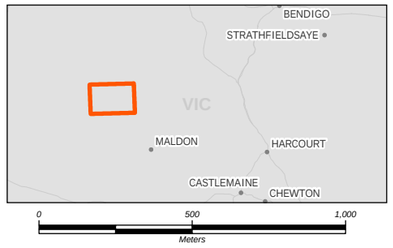


PS134125
Mawson Quarries - Blue Hills

Figure 1
Project Area

Legend

- Roads
- Watercourses
- Cadastre
- Project Area
- Mawson's owned land



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:20,000 Date: 23/10/2024

GDA 2020

Data sources: DELWP, Geoscience Australia
World Imagery: Maxar

2 PROJECT IMPACT

The principle of avoiding impacts, and minimising impacts wherever unavoidable, was adopted at all stages of planning and development of the works program. All unavoidable losses will be offset in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation 2017* (Guidelines 2017) (DELWP, 2017b) policy to ensure that there is no net loss of biodiversity values associated with any of the projects.

The nature of the works (i.e. excavation of a quarry) makes implementation of standard mitigation measures challenging. Quarry construction will be ongoing and therefore it is not possible to enforce work closure around important times of the year (i.e. during specific breeding seasons). Similarly, the entire footprint will be impacted as a result of the proposed works, reducing the ability to minimise impacts to native vegetation within the project area. Whilst detailed avoidance and mitigation measures are provided in the FFIA (WSP, 2024), outlined below is a review of native vegetation and habitat loss assessments and survey methods.

2.1 AVOIDANCE MEASURES

Preliminary visual investigations were undertaken by Mawsons environmental team across the entire property to identify the most appropriate siting for the proposed quarry where native vegetation cover, primarily in the understory was considered lowest, across areas holding hornfels, and in consideration of constraints from other requisites for the quarry construction/operation. Following ecological assessments which identified the presence of the EPBC Act listed Threatened Ecological Community, Grey Box Grassy Woodland within the project footprint, the original 50 ha proposed project footprint was revised down to ~ 34 ha to avoid part of this community and reduce ecological impacts.

The broader project encompasses 560 ha, with the revised project footprint occupying 7% of the total area, retaining approximately 523 ha or 93%. Further avoidance of native vegetation would make the project economically unviable.

A total of 9 haul road options were explored and a revised version of haul road option 8 was chosen as it impacts the least amount of native vegetation and large trees, traversing primarily cleared agricultural land.

To further mitigate impacts, Mawsons is suggesting a staged clearing approach combined with planting vegetation across the broader property. Doing so will aim to minimise the loss of habitat for several impacted species, specifically the Swift Parrot. Clearing for the quarry is proposed to occur in three stages being:

- Stage 1: Span from 0-15 years
- Stage 2: Span from 15-30 years
- Stage 3: Span from 30-75 years.

2.2 MITIGATION MEASURES

All direct and indirect impacts to native vegetation and significant species habitat have been considered in the context of project construction and operation. Detailed mitigation measures are provided in the FFIA (WSP, 2024) which will be implemented to mitigate and manage potential direct and indirect impacts of the project.

2.3 RESIDUAL SIGNIFICANT IMPACT

Outlined below is a review of residual impacts to ecological values, a description of their significance and context within the landscape. All options to avoid or minimise impacts to biodiversity values, such as habitat areas, patches of native vegetation and scattered trees, were considered first and foremost. Only when impacts could not be avoided or further minimised were offsets considered and offset requirements determined. This is in accordance with legislative obligations and the associated policies; including EPBC Act offset for impacts on MNES and offset under the Guidelines 2017

policy (DELWP, 2017b). The impact of this loss on federal and state listed flora, fauna and ecological communities is discussed below. More details including aerial mapping, VQA assessments, habitat significance and significant impact assessments for MNES are provided in the FIFA (WSP, 2024).

2.4 EPBC ACT IMPACTS

Four EPBC Act-listed threatened species and one ecological community were recorded within the quarry project footprint during field assessments. One threatened species, Southern Whiteface *Aphelocephala leucopsis* was recorded outside of the quarry footprint within the broader property and is considered to have a high likelihood of occurrence within the impact area based on its occupation of contiguous habitat. The Project will result in or has the potential to result in the following impacts to significant ecological values:

- Loss of 2.60 ha of Grey Box *Eucalyptus microcarpa* Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, an endangered ecological community listed under the EPBC Act.
- Loss of 36.88 ha of foraging, breeding and dispersal habitat for:
  - Brown treecreeper (Vulnerable), Diamond Firetail (Vulnerable), Hooded Robin (Endangered) and Southern Whiteface (Vulnerable)
- Loss of 24.71 ha of foraging and dispersal habitat for Swift Parrot (Critically Endangered).

2.5 STATE IMPACTS

2.5.1 NATIVE VEGETATION (GUIDELINES)

A total of four patches of native vegetation totalling 36.95 ha are proposed for removal which includes 72 large trees (≥70 cm DBH) in patches and one large, scattered tree. A breakdown based on EVC is provided below:

- Loss of 34.28 hectares of the endangered Hillcrest Herb-rich Woodland (EVC 70), including 61 large canopy trees.
- Loss of 2.60 hectares of the endangered Plains Woodland (EVC 803), including 11 large canopy trees.
- Loss of 1 large, scattered tree (0.07 ha).

2.5.2 FFG ACT LISTED VALUES

Impacts are proposed to the following species recorded as present:

- Loss of 36.95 ha of habitat for growth and reproduction for Buloke, Golden Cowslips, Glaucous Flax-lily and Small-flower Wallaby-grass.
- Loss of 36.88 ha of foraging, breeding and dispersal habitat for Brush-tailed Phascogale, Lace Monitor, Diamond Firetail, Hooded Robin, Speckled Warbler and Square-tailed Kite.
- Loss of 24.71 ha foraging and dispersal habitat for Swift Parrot.
- Loss of 36.68 ha of habitat for the Victorian Temperate Woodland Bird Community, listed under the FFG Act.
- Loss of 36.95 ha of habitat for growth and reproduction for 3 Generally protected flora species.
- Loss of 36.95 ha of habitat for growth and reproduction for 10 Restricted use protected flora species.

In addition, eight FFG Act listed fauna species are considered to have a moderate or higher likelihood of occurrence based on the presence of high-quality suitable habitat, nearby records and/or the results and timing of previous surveys which includes:

- Bearded Dragon, Barking Owl, Black Falcon, Crested Bellbird, Grey-crowned Babbler, Little Eagle, Painted Honeyeater and Turquoise Parrot, which will result in the loss of 36.88 ha of suitable foraging, dispersal and breeding (where applicable) habitat.

2.5.3 HABITAT USE AND CONNECTIVITY

The study area forms part of a larger contiguous block of remnant woodland totalling approximately 560 ha, inclusive of the ~36 ha project footprint. Connectivity for threatened fauna to the property is through vegetated roadsides and scattered remnant patches of woodland within adjacent copped and grazing farmland.

2.5.3.1 BROWN TREECREEPER

There is suitable breeding, foraging and dispersal habitat for Brown Treecreeper across the impact and offset areas. These areas provide habitat critical to the survival of this species as identified in the impact assessment (WSP, 2024) which includes:

- relatively undisturbed grassy woodland with native understorey and an open ground layer structure for foraging
- large living and dead trees which are essential for roosting and nesting sites and for foraging
- fallen timber which provides essential foraging habitat
- hollows in standing dead or live trees and tree stumps are also essential for nesting.

2.5.3.2 HOODED ROBIN

There is suitable breeding, foraging and dispersal habitat for Hooded Robin across the impact and offset areas. These areas provide habitat critical to the survival of this species as identified in the impact assessment (WSP, 2024) which includes:

- dry eucalypt remnant with an open understorey, some grassy areas and a complex ground layer, often in or near clearings or open areas
- structurally diverse habitats featuring: mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses
- standing dead or live trees and tree stumps are also essential for nesting, roosting and foraging
- moderately deep to deep soils, rocks and fallen timber which provides essential foraging habitat.

2.5.3.3 DIAMOND FIRETAIL

There is suitable breeding, foraging and dispersal habitat for Diamond Firetail across the impact and offset areas, particularly where native grass cover is higher and canopy cover is more open. These areas provide habitat critical to the survival of this species as identified in the impact assessment (WSP, 2024) which includes:

- *Eucalypt* woodland
- low tree density, few large logs, and little litter cover but high grass cover for foraging, roosting and breeding.

2.5.3.4 SOUTHERN WHITEFACE

There is suitable breeding, foraging and dispersal habitat for Southern Whiteface across the impact and offset areas, particularly where native grass cover is higher and canopy cover is more open. These areas provide habitat critical to the survival of this species as identified in the impact assessment (WSP, 2024) which includes:

- relatively undisturbed open woodlands with an understorey of grasses or shrubs, or both
- habitat with low tree densities and an herbaceous understory litter cover which provides essential foraging habitat

- living and dead trees with hollows and crevices which are essential for roosting and nesting.

2.5.3.5 SWIFT PARROT

Swift Parrots breed in Tasmania therefore, no breeding habitat is present. There is suitable foraging and dispersal habitat only across the impact and offset areas. These areas provide habitat critical to the survival of this species as identified in the impact assessment (WSP, 2024) and include:

- Preferred foraging species of Grey Box (*E. microcarpa*) Yellow Box (*E. melliodora*) and Yellow Gum (*Eucalyptus leucoxylon* subsp. *leucoxylon*)
- Site fidelity to a degree, having been recorded within the impact and offset areas at irregular intervals, mainly on an opportunistic basis despite targeted survey effort.

2.5.3.6 GREY BOX GRASSY WOODLAND AND DERIVED NATIVE GRASSLAND OF SOUTH-EASTERN AUSTRALIA

There is habitat suitable for flora species comprising this community within mapped Grassy Woodland EVC in the south-west of the impact and offset areas as identified in the impact assessment (WSP, 2024).

2.5.4 HABITAT AREA LOSSES AND QUALITY ASSESSMENT FOR MNES

The quality score for an area of habitat or area of community is a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability. There are three components that contribute to the calculation of habitat quality: site condition, site context, and species stocking rates. Each of these quality components have been considered to provide a Habitat Quality Score for each of the habitat categories (breeding and dispersal habitat types) in accordance with the EPBC Offsets Policy.

The habitat loss for all MNES and its respective quality has been provided below. Table 2.1 outlines how these habitat quality attributes have been assessed for all MNES. Each of the three Habitat Quality components are considered in general terms, with a final score out of 10 provided for each of the habitat categories for each species (Table 2.2).

These scores reflect these three attributes, however, we note that this value is subjective and that there may be differences between scores used below and that derived by the DCCEEW.

Table 2.1 Habitat Quality value determination matrices

HABITAT QUALITY COMPONENT	VERY HIGH (4/4)	HIGH (3/4)	MODERATE (2/4)	LOW (1/4)	NEGLIGIBLE (0/4)
BROWN TREECREEPER, HOODED ROBIN, DIAMOND FIRETAIL AND SOUTHERN WHITEFACE					
Site condition: vegetation condition and structure, the diversity of habitat present, and the number of relevant habitat features. (**max 4 points)**	Site contains high-quality habitat with all the habitat elements critical to the survival of the species. such as: undisturbed grassy woodland with native understorey and an open ground layer structure for foraging, large living and dead trees with hollows suitable for nesting, fallen timber which provides essential foraging habitat. Minimal to no threatening processes occurring.	Site contains moderate-high quality habitat, with 1 critical habitat feature missing or threatening process affecting the site.	Site contains moderate quality habitat, with more than 1 critical habitat feature missing or threatening process affecting the site.	Site contains low-moderate quality habitat, with more than 1 critical habitat feature missing or threatening process affecting the site.	Site contains low-quality habitat with critical habitat features no present.
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Site context: importance of habitat location, connectivity, and the role of the site to overall population or extent. (**max 3 points**)	Site is < 300 ha in size with or without connectivity to other remnant patches.	Site is > 20 ha < 300 ha in size, with canopy connectivity (gaps <100 m) to other suitable remnant patches.	Site is between 10-20 ha in size with no / limited connectivity to other remnants or populations.	Small (<10 ha) fragmented site with no connectivity to other remnants or populations.	-
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Species stocking rate: population usage and density, fecundity and viability. (**max 3 points**)	Multiple breeding pairs and family groups present within the site to facilitate genetic diversity and long-term survival, without additional essential migration.	Species recorded on site, breeding pairs may support genetic diversity through migration with nearby remnants.	Species recorded on site in low numbers, which may lead to inbreeding and reduce the long-term survival of this species. Limited connectivity.	Species is not present or within modelled distribution for the species.	-

HABITAT QUALITY COMPONENT	VERY HIGH (4/4)	HIGH (3/4)	MODERATE (2/4)	LOW (1/4)	NEGLIGIBLE (0/4)
SWIFT PARROT					
Site condition: vegetation condition and structure, the diversity of habitat present, and the number of relevant habitat features. (**max 4 points)**	Site contains high-quality habitat with a large contiguous area dominated by preferred feed trees. Canopy trees are in good health with minimal gaps in canopy cover.	Site contains moderate-high quality habitat, with half the site containing preferred feed trees. Canopy trees are in good-fair health with some gaps in canopy cover.	Site contains moderate quality habitat, with part of the site containing preferred feed trees. Canopy trees are in good-poor health with some gaps in canopy cover.	Site contains low-moderate quality habitat with scattered preferred feed trees available and large gaps in canopy cover.	Site contains low-quality habitat with critical habitat features no present.
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Site context: importance of habitat location, connectivity, and the role of the site to overall population or extent. (**max 3 points**)	Site is < 300 ha in size with or without connectivity to other remnant patches.	Site is > 20 ha < 300 ha in size, with canopy connectivity (gaps <100 m) to other suitable remnant patches.	Site is between 10-20 ha in size with no / limited connectivity to other remnants or populations.	Small (<10 ha) fragmented site with no connectivity to other remnants or populations.	-
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Species stocking rate: population usage and density, fecundity and viability. (**max 3 points**)	Sit usage of high, with repeat records across years and across the landscape from various sources.	Site usage possible, with repeat records across years but survey effort has been variable.	Some species records occurring on site and across the broader landscape.	Minimal species records within the broader landscape.	-
GREY BOX GRASSY WOODLAND COMMUNITY					
SCORE	**Very High (4/4)**	**High (3/4)**	**Moderate (2/4)**	**Low (1/4)**	**Negligible (0/4)**
Site condition: vegetation condition and structure, the diversity of habitat present,	Habitat Hectares score of >80. All understory lifeforms present and large trees meet the	Habitat Hectares score of <80 and >60. Most understory lifeforms present and large trees	Habitat Hectares score of <60 and >40. Most understory lifeforms present, though some	Habitat Hectares score of <40 and >30. Meets the threshold for the community but either lacks	Habitat Hectares score <30. Meets the threshold for the community but either lacks

HABITAT QUALITY COMPONENT	VERY HIGH (4/4)	HIGH (3/4)	MODERATE (2/4)	LOW (1/4)	NEGLIGIBLE (0/4)
and the number of relevant habitat features. (**max 4 points)**	benchmark number. Low weed cover.	meet the benchmark number. Low weed cover.	may be in low cover and some large trees present. Low or moderate weed cover.	diversity, plant cover or has higher weed cover.	diversity, plant cover or has higher weed cover.
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Site context: importance of habitat location, connectivity, and the role of the site to overall population or extent. (**max 3 points**)	Ecological community is contiguous with a larger patch >10 ha and provides ecological connectivity for fauna.	Ecological community is contiguous with a patch >2 ha but <10 ha or and provides ecological connectivity for fauna.	Ecological community is small <2 ha and fragmented from other populations and provides some connectivity for fauna.	Ecological community is small <1 ha and fragmented from other populations and provides no connectivity for fauna.	-
SCORE	**HIGH (3/3)**	**MODERATE (2/3)**	**LOW (1/3)**	**NEGLIGIBLE (0/3)**	
Species stocking rate: population usage and density, fecundity and viability. (**max 3 points**)	Site has a high density of associated plant species, particularly in the understory. There is available space for species recruitment and it is occurring.	Site has a moderate density of associated plant species, particularly in the understory. There is some available space for species recruitment and it is occurring.	Site has a low density of associated plant species and just meets the community threshold. There is either limited available space for species recruitment or recruitment is limited for various reasons.	Site has a low density of associated plant species and just meets the community threshold. No recruitment occurring.	-

Table 2.2 Habitat Quality scores

HABITAT CATEGORY	AREA (HA)	SITE CONDITION	SITE CONTEXT	SPECIES STOCKING RATE	HABITAT QUALITY SCORE (1 – 10)
BROWN TREECREEPER, HOODED ROBIN, DIAMOND FIRETAIL AND SOUTHERN WHITEFACE					
Breeding, foraging and dispersal habitat	36.88	**High (3/4)** The impact area and offset sites contain all the critical habitat features for these species; namely open, grassy woodlands suitable for foraging, as well as numerous large trees with suitable hollows for nesting. However, it is actively managed for Wheel Cactus which occurs at low densities across the site which if left unmanaged may affect the quality of the ground layer for foraging. Recent fencing upgrades to limit intrusion from stock has improved ground layer quality directly adjacent to farming land, however due to previous over-grazing from sheep accessing the site, the grassy ground cover is lower in some parts, which may affect foraging opportunities through reduction of insects and/or grass seeds.	**Moderate (2/3)** Site is > than 300 ha in size which can support current and future populations without genetic decline. There is also some connectivity to a remnant patch approximately 2 km away and 26 ha in size via roadside vegetation with likely canopy gaps of <100, however it is unknown as to whether migration is occurring between these patches.	**High (2/3)** Brown Treecreeper was recorded in moderate density across the impact area and offset areas, suggesting multiple breeding pairs. Hooded Robin, Diamond Firetail and Southern Whiteface were recorded in lower numbers but habitat is of high-quality for multiple breeding pairs are likely to be present.	**7**
SWIFT PARROT					
Breeding, foraging and dispersal habitat	24.71	**High (3/4)** The impact area and offset sites contains habitat features for this species utlised for foraging and movement. There are few and sparse, although consistent and repeated records for his species within the proposed	**Moderate (2/3)** Connectivity between smaller fragmented habitat patches occurs along roadsides and to a remnant patch approximately 2 km away and 26 ha in size with known records;	**Low (1/3)** Swift Parrot has been confirmed as present within the impact and offset areas, and occurs within the broader landscape. This species breeds in Tasmania , as such .	**6**

HABITAT CATEGORY	AREA (HA)	SITE CONDITION	SITE CONTEXT	SPECIES STOCKING RATE	HABITAT QUALITY SCORE (1 – 10)
		action, and offset areas, and across the local landscape.	site likely plays an important role in providing foraging opportunities.		
GREY BOX GRASSY WOODLAND COMMUNITY					
Growth and reproduction habitat	2.60	**High (3/4)** The impact area and offset sites contains critical habitat features for this community to occur. However, it is actively managed for Wheel Cactus which occurs at low densities across the site which if left unmanaged would affect the quality of the ground layer for recruitment.	**Moderate (2/3)** The ecological community is contiguous with a larger area of this community within the offset area but is <10 ha in size. The community forms part of a broader contiguous area of woodland which it provides connectivity to for fauna.	**High (3/3)** The ecological community has a high density of associated plant species, particularly in the understory, though there are some patches where density would be greater. Recruitment space is available and occurring, with the community self-sustaining.	**7**

2.5.5 CALCULATOR ASSUMPTIONS

The EPBC offsets calculated above have been based on using the broader property as an offset site which contains suitable habitat for all MNES assessed as significantly impacted. Once the offset site and management plans are determined, subject to confirmation by DCCEEW, then this EPBC OS will be updated and sent to DCCEEW for endorsement.

Table 2.3 below outlines EPBC Offset Calculator inputs ascribed to the proposed offset site, and rationale behind these. The results from the EPBC Offset Calculator are summarised below in section 2.5.6. See also detailed EPBC offset calculations in Appendix B.

Table 2.3 EPBC offset site value assumptions

EPBC CALCULATOR ATTRIBUTE	ATTRIBUTE DESCRIPTION	VALUE USED	VALUE RATIONALE
Time over which loss is averted (max. 20 years)	The foreseeable timeframe (in years) over which changes in the level of risk to a proposed offset site can be considered and quantified.	20	A 20-year covenant will be placed on Title guaranteeing the security of the offset area in perpetuity. 20 years has been used as this is the maximum that the OAG allows for.

EPBC CALCULATOR ATTRIBUTE	ATTRIBUTE DESCRIPTION	VALUE USED	VALUE RATIONALE
Time until ecological benefit	Estimated time (in years) that it will take for the habitat quality improvement of the proposed offset to be realised.	10	Improvement works aimed at increasing the cover and diversity of indigenous grasses within the proposed offset sites will commence immediately; works will include woody weed removal, ecological burning and predator (foxes and feral cats) controls. 10 years has been used as a conservative estimate. Actual ecological benefits are anticipated to be realised in around 1 – 5 years.
Risk of loss (%) without offset	Describes the chance that the habitat on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter) over the foreseeable future (in this case 20 years) in the absence of active conservation management.	1%	There is considered a very low risk of loss of the offset area for purposes of development. Without the offset, impacts to the offset area may be considered higher for similar purposes as the action being extraction of resources. Loss of ecological values is considered likely to be higher than 1 % due to existing threats such as high-threat environmental weed invasion, and absence of active management. As per *Guidance for deriving 'Risk of Loss' estimates when evaluating biodiversity offset proposals under the EPBC Act* (Maseyk et al., 2017), estimated risk of loss over 20 years has been assessed as being 0.09 % over 1 year, and 1.82 % over 20 years.
Risk of loss (%) with offset	Describes the chance that the habitat on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter) over the foreseeable future (in this case 20 years) in the presence of active conservation management.	1%	A 20-year management plan, in conjunction with the offset covenant, will be placed on Title guaranteeing Security and prescriptions for gains via management. Realistically it is considered that the risk of loss will be reduced from 1 % to 0 %, however 1 % has been used in calculator inputs as a conservative measure to account for any unlikely mismanagement and, or, forces of nature including climate change.

EPBC CALCULATOR ATTRIBUTE	ATTRIBUTE DESCRIPTION	VALUE USED	VALUE RATIONALE
Start quality (scale of 0-10)	Current quality of offset site including vegetation condition and structure, the diversity of habitat species present, and relevance of habitat features.	6 7	Habitat quality for Swift Parrot is considered 7. Habitat quality for all other MNES being GBGW, Diamond Firetail, Hooded Robin, Southern Whiteface and Brown Treecreeper is considered 7. A start quality score of 7 is considered adequately representative of habitat quality for listed threatened fauna and GBGW – see matrices above in Table 2.2.
Future quality without offset (scale of 0-10)	Quality of the offset site predicted to occur without active improvement.	5 6	The proposed offset area for Swift Parrot is expected to decline from 6 to 5 without active conservation management. The proposed offset area for GBGW, Diamond Firetail, Hooded Robin, Southern Whiteface and Brown Treecreeper is expected to decline from 7 to 6 without active conservation management. Whilst the offset area is not expected to decline considerably over the 20-year period (even in the absence of active conservation management), there are currently managed high threats to the proposed offset area that are considered likely to reduce habitat quality for all MNES over a 20-year period such as wide-spread Prickly Pear **Opuntia stricta*. infestations. Kangaroo grazing is impacting vegetation – including eucalypt recruitment, which is likely to alter the trajectory of vegetation quality over the long term. Fences are unfit for the exclusion of all high threats Kangaroo. A reduction of the site by a single value, from start quality is considered reasonably representative of a likely 20-year outcome without active intervention in the form of an ecological offset management plan.

EPBC CALCULATOR ATTRIBUTE	ATTRIBUTE DESCRIPTION	VALUE USED	VALUE RATIONALE
Future quality with offset (scale of 0-10)	Quality of the offset site predicted to occur with active improvement.	8	***Swift Parrot*** For Swift Parrot, the future quality with offset is anticipated to be measurably increased with an increase in available habitat of approximately 14 ha by means of revegetation this is anticipated to improve the habitat quality for Swift Parrot within the offset area from a start quality of 7 to a future quality of 8.
		7	***Grey Box Grassy Woodland, Diamond Firetail, Brown Tree-creeper, Southern Whiteface & Hooded Robin.*** Weed control, predator management (foxes and feral cats), (if appropriate), biomass management, improved fencing and supplementary planting are expected to maintain habitat quality for all MNES across the offset site from a start quality of 7 to a future quality of 7.
Confidence in result	Level of certainty that the offset site will not decline.	75%	Landowners with experience with the management of EPBC offset sites and/or relationships with experienced ecological contractor will be prioritised. Actual confidence in result is considered higher than 75 % however this value has been used as a conservative measure.
Confidence in result	Level of certainty about the success of the proposed offset.	75%	Landowners with experience with the management of EPBC offset sites and/or relationships with experienced ecological contractor will be prioritised. Actual confidence in result is considered higher than 75 % however this value has been used as a conservative measure.

2.5.6 OFFSET ASSESSMENT GUIDE RESULTS

The Habitat Quality scores identified in Table 2.2 above, have been used in the Offset Assessment Guide results provided in Appendix B, and summarised below in Table 2.4. These values will require endorsement from DCCEEW during EPBC Act assessment phase prior to development of offset management plan.

Table 2.4 Offset Assessment Guide summary

IMPACT CALCULATOR				OFFSET CALCULATOR				
MNES	**AREA**	**QUALITY**	**STATUS**	**AREA**	**TIME UNTIL BENEFIT**	**START QUALITY**	**FUTURE QUALITY**	**% OF IMPACT OFFSET**
Brown Treecreeper	34.7	7	Vulnerable	499	10	7	7	149
Diamond Firetail	34.7	7	Vulnerable	499	10	7	7	149
Hooded Robin	34.7	7	Endangered	499	10	7	7	135
Southern Whiteface	34.7	7	Vulnerable	499	10	7	7	139
Swift Parrot	24.7	6	Critically Endangered	261	10	6	7	135
Grey Box Grassy Woodland	2.42	7	Endangered	218	10	7	7	849

2.6 SURVEY METHODOLOGY

2.6.1 IMPACT AREA

Due to the impact area being contiguous with the proposed offset area it is considered reasonable to generally infer these results across the proposed offset area in terms of habitat suitability.

A desktop-based gap-analysis was undertaken to review previous assessments including, likelihood of occurrence assessments for threatened flora and fauna species and ecological communities listed under the Commonwealth EPBC Act and/or Victorian FFG Act within the impact area.

Site assessments across the impact area were undertaken by WSP ecologists between September and November 2023 and between 5-7 August 2024 to verify the nature of vegetation communities, threatened species present and associated habitat previously mapped across the project area by Eco Logical Australia between 2021 and May 2023 and Habitat Management Services in 2021. Any other incidental discussions, observations or evidence of flora or fauna were recorded.

A summary of all survey effort, dates personnel and key references are provided in the FIFA (WSP, 2024).

2.6.2 POTENTIAL OFFSET AREA

Surveys were undertaken across the potential offset area in order to provide confidence in the project's capacity to meet EPBC Offset requirements, and in order to generate baseline survey data for monitoring of OMP implementation. Survey methodology of assessment of offset area are detailed in section 4.2.

2.6.3 LIMITATIONS

This Offset Strategy should be considered preliminary, and indicative of an offset strategy that will be developed as the approvals process for the proposed project progresses.

2.6.3.1 SWIFT PARROT

Timing for the Swift Parrot surveys was at the end of the ideal survey period in July, which meant that achieving the full 20 hours of survey effort outlined in the EPBC Act 'Survey guidelines for Australia's threatened birds' (DEWHA, 2011) was not achievable (ELA, 2023). Targeted surveys for Swift Parrot had already been conducted previously by Habitat Management Services (2021) within the quarry area and the haul road option comprised only a small area of suitable habitat along Bridgewater-Maldon Road (ELA, 2023). As a result, an alternative method was used for the surveys (Meney and Timewell, 2021). As Swift Parrot had already been confirmed within the quarry area by HMS and given the presence of suitable foraging habitat within the haul road, assumed presence was applied due to the lack of detection during ELA's targeted haul road surveys.

2.6.3.2 GREY BOX GRASSY WOODLAND

Species recorded and associated coverages, and extent of threatened communities, can change with time, and the results of a survey, including the presence or otherwise of species, are indicative of conditions at the time of assessment.

2.6.3.3 GENERAL

Another common limitation of ecological surveys is the short time period over which they are undertaken and a lack of seasonal sampling, which can lead to lack of detection of some species. Site conditions, including the presence of threatened species and extent of threatened communities, can change with time, and the results of a survey, including the presence or otherwise of species, are indicative of the environmental conditions at the time of assessment. Also, it should be recognised that site conditions, including the presence of threatened species, can change with time.

Verification of works by previous consultants has been undertaken to a reasonable degree, and commensurate with time spent undertaking verification.

This assessment is assumed to satisfy regulatory requirements at this stage of assessment. It is Likely that regulators may require further assessment, for example if referrals under the EPBC Act and EES Act are undertaken.

3 STATEMENT OF EXPECTED OUTCOMES

It is intended that the proposed offset will be achieved in alignment with the *EPBC Act environmental offsets policy* (DSEWPaC, 2012a) in so far as:

1. deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action
2. be built around direct offsets but may include other compensatory measures
3. be in proportion to the level of statutory protection that applies to the protected matter
4. be of a size and scale proportionate to the residual impacts on the protected matter
5. effectively account for and manage the risks of the offset not succeeding
6. be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs
7. be efficient, effective, timely, transparent, scientifically robust and reasonable
8. have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.

Table 3.1 below details how the proposed offset is expected to align with above points.

[Drafting note. This section is only preliminarily drafted, and is to be completed in subsequent revisions]

Table 3.1 Addressing the eight principles of the Offsets Policy relevant to an offset proposal.

PRINCIPLES OF THE OFFSETS POLICY	PROPOSED OFFSET
Deliver an overall conservation outcome that improves or maintains the viability of the protected matter	• Will improve or maintain the viability of the protected matters compared to what would have occurred under the status quo (i.e. no action and no offset), resulting in No Net Loss or a Net Gain for the protected matter. Details of how gains are to be achieved are to be provided in an offset management plan. • Being a contiguous area supporting similar vegetation and habitat types the proposed offset is like-for like, and will achieve a positive conservation outcome for the same protected matter as being impacted. • Being a contiguous area supporting similar vegetation and habitat types the proposed offset supports habitat resources for all EPBC Act and FFG Act listed species and communities as the proposed impact site. See section 4.2. • Be implemented for the duration of the impact. • The offset management plan would not support or recreate non-endemic vegetation or ecosystems. • The offset management would commit to a future quality that is equal to, or greater than, the quality of the impact site to be attained by the nominated time until ecological benefit and then maintained at for the duration of the impact.

PRINCIPLES OF THE OFFSETS POLICY	PROPOSED OFFSET
Be built around direct offsets but can include other compensatory measures	• Be at least 100% direct offset – contiguous 1st party. • The offset management plan would address key threats and priority actions in relevant Recovery Plans, Threat Abatement Plans, Conservation/Listing Advice. • be legally secured for conservation purposes (i.e. protection mechanism that changes land tenure) for at least the duration of the impact if there is a risk of loss or degradation of the site without offset - Offset is to be protected by either a Trust for Nature covenant or an agreement under Section 69 of the *Conservation, Forest and Land Act 1987*.
Be in proportion to the level of statutory protection that applies to the protected matter	• All residual impacts calculations undertaken using the Assessment Guide (Offsets Calculator) were using correct conservation status – see section 2.5.6.
Be of a size and scale proportionate to the residual impacts on the protected matter	• See section 2.4 detailing the attributes of the protected matter being impacted, the quality and importance of those attributes, the nature of the impact. • Level of threat applicable to the offset site, the time it will take to achieve a conservation gain for the protected matter, and risk of the conservation gain not being realised are assessed in sections 2.5.4 & 2.5.5. • All offsets calculations undertaken for threatened species and ecological communities are as accurate as possible and implement the Precautionary Principle where there is scientific uncertainty – see Table 2.3.
Effectively account for and manage the risks of the offset not succeeding	• Offsets are to be 100% direct offset – contiguous 1st party increasing likelihood of successful offset. • The proponent is amenable to the possibility of using Advanced offsets. • Risk analysis provided in section 5. [Drafting note. To be completed in subsequent revisions and, or addressed in offset management plan] • *Assess the potential effectiveness of each management and corrective action financial and business limitations, possible perverse outcomes from the offset, and any other potential limiting factors.* • *Propose compensatory measures for if the offset fails, such as additional offsets to compensate for both the impact and failed offset.* • *Details of how and when the Precautionary Principle has been applied.*

PRINCIPLES OF THE OFFSETS POLICY	PROPOSED OFFSET
Be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs	• Mawsons will be fully responsible for the implementation of offset management plan control certain weeds and feral animals. [Drafting note. To be completed in subsequent revisions and, or addressed in offset management plan] • *Specify environmental planning laws that apply to the offset site (e.g. statutory protection of riparian areas).* • *Conservation gains paid for, or achieved, while participating in other schemes (e.g. carbon offset scheme).* • *Provide conservation gains that are in addition to duty of care, environmental planning laws or other schemes.*
Be efficient, effective, timely, transparent, scientifically robust and reasonable	[Drafting note. To be completed in subsequent revisions and, or addressed in offset management plan] • *Maintain or improve the viability of the protected matter through sound allocation of resources, including for any required management and monitoring of the offset* • *be implemented before, or at the same time as, the impact occurring* • *be based on scientifically robust and verifiable information, including best-practice surveys undertaken by suitably qualified experts* • *all supporting evidence must be provided to the Department, and any assumptions or limitations must be specified* • *the Precautionary Principle must be implemented if there is not scientific certainty* • *use scientifically robust and peer-reviewed methods for collecting and analysing environmental data* • *have realistic offset commitments and completion criteria that are likely to be achieved despite any potential threats or risks*
Have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced	[Drafting note. To be completed in subsequent revisions and, or addressed in offset management plan] • *Detail governance of the offset site, including ensuring that offset actions are fully funded for the required timeframe.* • *Commitments to measure and monitor the performance of the offset, and report on this annually to the Department.* • *As appropriate, be delivered through contractual arrangements with a third party.* • *Ensure that offset commitments are measurable and specific so that they can be audited and enforced.*

4 OFFSET STRATEGY

An offset site has been identified across Mawson's owned land contiguous to the impact area, being a potential first party offset. Potential offset area details are presented in section 4.1, ecological values of the proposed offset are detailed in section 4.2 below.

4.1 PROPOSED OFFSET SITE

Mawsons propose to use the retained area within the broader property to generate first party offsets for the project. Details of the offset site are presented in Table 4.1. The offset area is approximately 499 ha which is excluding the following buffers:

- 50 m buffer of the project footprint.
- 6 m buffer along internal parcel boundaries.
- 150 m buffer of surrounding residences.

Table 4.1 Offset site details

ITEM	DETAILS
Landholder	Mawsons Quarries and Concrete Pty Ltd
Address	910 and 912 Lakeys Road Bradford, Victoria 3463
Local Government area	Mount Alexander Shire Council
Locality	Bradford
Parcels	Crown Allotment 9, Section 11 Crown Allotment 10, Section 11
Parcel Further Description	08644 / 410 07391/034 08788/242
Catchment Management Authority	North Central
Bioregion	Goldfields
Size	499 ha
Planning zones & Overlays	Farming Zone (FZ)

4.2 ECOLOGICAL VALUES

Habitat assessments were undertaken across the proposed offset site to confirm the suitability and extent of habitat for threatened species known or with a high likelihood of occurrence WSP REF.

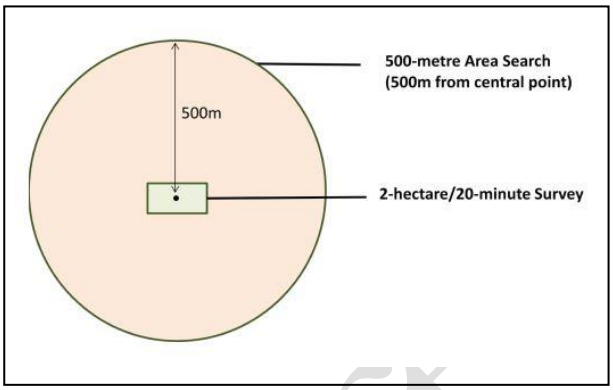
4.2.1 THREATENED BIRD SURVEYS

Targeted survey for threatened Birds – EPBC Act listed, across suitable habitat was undertaken to better inform habitat assessment, and site value score assumptions across the offset area.

Surveys were undertaken in late winter – early spring 2024 for:

a Winter: Swift Parrot.

b Non-seasonal: Brown Treecreeper, Diamond Firetail & Hooded Robin.



Due to the large area to be surveyed, bird surveys followed Embedded Survey monitoring method (Loyn, 1985). The Embedded Survey method involves a 2 hectare / 20-minute survey, followed by a search outside of the 2 ha area, within a 500 m radius of the central point. The potential offset area was divided into 8 similarly areas, within which a 2 ha circular survey area was centrally located. Surveys were done on foot by suitably experienced zoologists. Survey design is shown in mapping at C2.

4.2.1.1 THREATENED BIRD SURVEY RESULTS

Targeted surveys were undertaken on 5, 6 & 7 August, and 26, 27 & 28 September 2024. There were 28 records of threatened birds during the surveys listed under both the EPBC Act and FFG Act. Results are shown in mapping at C2, and in Table 4.2 below.

Table 4.2 Targeted bird survey results across the offset area.

COMMON NAME	SCIENTIFIC NAME	CONSERVATION SIGNIFICANCE	COUNT
Australian Magpie	*Gymnorhina tibicen*		15
Australian Raven	*Corvus coronoides*		1
Australian Shelduck	*Tadorna tadornoides*		1
Australian Wood Duck	*Chenonetta jubata*		1
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*		1
Brown Falcon	*Falco berigora*		1
Brown Treecreeper (south-eastern ssp.)	*Climacteris picumnus victoriae*	VU	17
Brown-headed Honeyeater	*Melithreptus brevirostris*		1
Buff-rumped Thornbill	*Acanthiza reguloides*		2
Crested Shrike-tit	*Falcunculus frontatus*		2
Crimson Rosella	*Platycercus elegans*		3
Diamond Firetail	*Stagonopleura guttata*	VU vu	3
Dusky Woodswallow	*Artamus cyanopterus*		3
Eastern Rosella	*Platycercus eximius*		11
European Goldfinch	*Carduelis carduelis*		1
Galah	*Eolophus roseicapilla*		17
Golden Whistler	*Pachycephala pectoralis*		6
Grey Fantail	*Rhipidura albiscarpa*		4
Grey Shrike-thrush	*Colluricincla harmonica*		5
Hooded Robin	*Melanodryas cucullata cucullata*	EN vu	3
Inland Thornbill	*Acanthiza apicalis*		1
Jacky Winter	*Microeca fascinans*		1
Laughing Kookaburra	*Dacelo novaeguineae*		1
Long-billed Corella	*Cacatua tenuirostris*		1
New Holland Honeyeater	*Phylidonyris novaehollandiae*		1
Noisy Miner	*Manorina melanocephala*		2
Peaceful Dove	*Geopelia striata*		3
Red Wattlebird	*Anthochaera carunculata*		11
Red-browed Finch	*Neochmia temporalis*		5
Red-capped Robin	*Petroica goodenovii*		1
Red-rumped Parrot	*Psephotus haematonotus*		1

COMMON NAME	SCIENTIFIC NAME	CONSERVATION SIGNIFICANCE	COUNT
Restless Flycatcher	*Myiagra inquieta*		4
Speckled Warbler	*Chthonicola sagittatus*	en	1
Spotted Pardalote	*Pardalotus punctatus*		3
Striated Thornbill	*Acanthiza lineata*		1
Sulphur-crested Cockatoo	*Cacatua galerita*		1
Superb Fairy-wren	*Malurus cyaneus*		4
Swift Parrot	*Lathamus discolor*	Cr cr	1
Varied Sittella	*Daphoenositta chrysoptera*		1
Wedge-tailed Eagle	*Aquila audax*		3
Weebill	*Smicrornis brevirostris*		5
Welcome Swallow	*Petrochelidon neoxena*		2
White-browed Babbler	*Pomatostomus superciliosus*		5
White-eared Honeyeater	*Lichenostomus leucotis*		1
White-plumed Honeyeater	*Lichenostomus penicillatus*		18
White-winged Chough	*Corcorax melanorhamphos*		7
Willie Wagtail	*Rhipidura leucophrys*		5
Yellow-faced Honeyeater	*Lichenostomus chrysops*		1
Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*		3
Total			205

Key:
EPBC Act: CR= Critically Endangered, EN = Endangered, VU = Vulnerable, M = Migratory, Mr = Marine
FFG Act: cr = critically endangered, en = endangered, vu = vulnerable

4.2.2 SWIFT PARROT HABITAT

4.2.2.1 RECORDS

In addition to records for Swift Parrot taken by ELA, and that returned in VBA queries (DEECA, 2024) a data extract was requested from Birdlife (Australia, 2024) to return any additional records for Swift Parrot in proximity to the offset area.

There was a total of 2 records taken by ELA in 2023, 1 along the fenceline along the south-western boundary, and one in the south-east of the offset area. There are two Birdlife records of two individuals in the north eastern portion of the site from 2024, and on the northern most boundary. Beyond Mawsons land, Birdlife data has 5 records along Bradford Hills Road South-west of Bradford ~ 1.5 km – 2 km east of the offset area, and one record of two individuals ~ 3.7 km south east of the offset area around Baringhup. VBA records correlate with both ELA records, with one record ~ 150 m north of the ELA record within the offset area, and 3 records around the Birdlife records along Bradford Hills Road.

One records of Swift Parrot were taken by WSP during threatened bird surveys detailed in Section 4.2.1 above. Historic records for Swift Parrot are shown in mapping at C3.

4.2.2.2 CANOPY HABITAT

As detailed in section 2.4.3 of the FFIA (WSP, 2024), Swift Parrot habitat across the impact area was quantified in terms of preferred canopy species, done by point intersects along transects method.

This method was replicated across the proposed offset area with point intersects being taken every 10 m along transects approximately 350 m apart running east west across the potential offsets area. At each point intersect, tree canopy cover of Swift Parrot key tree species was recorded as either present (denoted by a 1) or absent (denoted by a 0). Canopy point intersects were completed using a vertical viewing scope with cross-hair. Canopy transects are also shown in mapping at C3.

A total of 1474 point intersects were surveyed across 8 transects. A total of 773 points intersected Swift Parrot habitat, indicating 52% of the 499 ha offsets area canopy habitat resource for Swift Parrot being 261 ha.

As mentioned in Section 6.2.3.4 of the FFIA (WSP, 2024), within the potential offset area, there has been approximately 14 ha identified as suitable for revegetation with eucalypt canopy species – primarily Grey Box *Eucalyptus microcarpa* and White Box *Eucalyptus aberrans.* Areas identified for canopy revegetation have been ground-truthed to exclude areas currently recruiting eucalyptus, and shallow soils over granite. This revegetation is considered to significantly reduce the residual impacts of the proposed project to Swift Parrot, in terms of the species as a whole, and measurably improve ecological value of the offset area for this species.

4.2.3 GREY BOX GRASSY WOODLAND

The threatened Ecological Community (TEC), *Grey Box Grassy Woodland and Derived Native Grassland of South-eastern Australia*, occurs across much of the potential offset area. Grey Box Grassy Woodland (GBGW) is listed as Endangered under the EPBC Act. This Threatened Ecological Community is described as being *'a woodland to open forest with a canopy dominated by eucalypts and an understorey with a moderately dense to sparse shrub layer and a ground layer of perennial and annual native forbs and graminoids'* (TSSC, 2010).

4.2.3.1 ASSESSMENT METHODOLOGY

To determine whether the threatened ecological community GBGW was present within the project area, WSP ecologists assessed the patch of Plains Woodland within the proposed quarry site against key diagnostic characteristics stipulated in the *Listing Advice for Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia* (TSSC, 2010). The key diagnostic characteristics are designed to allow identification of the ecological community irrespective of the season. Areas of vegetation that do not meet all the key diagnostic characteristics are not the nationally listed ecological community.

Three 10 m x 10 m plots, located within candidate GBGW were assessed by WSP ecologists. Plot locations are shown at C1.

4.2.3.2 RESULTS

Approximately 469.416 ha of vegetation across the offset area are considered to qualify as GBGW. Areas excluded from GBGW across the offset area are those without canopy identified as potential Swift Parrot revegetation areas, and higher areas dominated by White Box *Eucalyptus albens*. GBGW area is shown in mapping at C1 flora coverages are tabulated at Appendix D, a summary of coverage results is presented in Table 4.3 below, and qualification assessment are presented in Table 4.4.

Table 4.3 Summary of results – GBGW flora coverage assessments, plots 1, 2 & 3.

ROW LABELS	PLOT 1	PLOT 2	PLOT 3
Non-indigenous native coverage	0	0	2
Exotic coverage	17	5	5
Indigenous coverage	69	43	75
Understory component	49	18	60
Total	86	48	82

Table 4.4 Assessment of Grey Box Grassy Woodland and derived native grasslands

Key Diagnostic Characteristics	Plot 1	Plot 2	Plot 3
"The ecological community occurs on low slopes and plains from central NSW, through northern and central Victoria into South Australia. Disjunct occurrences are known from near Melbourne and in the	Yes – the proposed project area is located within central Victoria.	Yes – the proposed project area is located within central Victoria.	Yes – the proposed project area is located within central Victoria.

Key Diagnostic Characteristics		Plot 1	Plot 2	Plot 3
Flinders-Lofty Block Bioregion of South Australia."				
"The vegetation structure of the ecological community is typically a woodland to open forest."		Yes – the vegetation structure associated with this ecological community was attributed to Hillcrest Herb-rich Woodland EVC 70.	Yes – the vegetation structure associated with this ecological community was attributed to Box Ironbark Forest EVC 61.	Yes – the vegetation structure associated with this ecological community was attributed to Grassy Woodland EVC 175.
"The tree canopy is dominated (≥ 50% canopy crown cover) by *Eucalyptus microcarpa* (Grey Box). Other tree species may be present in the canopy and, in certain circumstances, may be co-dominant with Grey Box but are never dominant on their own."		Yes – Grey Box is the dominate tree canopy species.	Yes – Grey Box is the dominate tree canopy species.	Yes – Grey Box is the dominate tree canopy species.
"The mid layer comprises shrubs of variable composition and cover, from absent to moderately dense. The mid layer usually has a crown cover of less than 30% with local patches up to 40% crown cover."		Shrub layer is sparse although present with *Acacia pycnantha* and *Pimelea glauca* both at 1 %	Shrub layer is sparse although present with *Acacia pycnantha* and *Pimelea glauca* both at 1 %	Shrub layer is sparse although present with *Acacia pycnantha*, *Eutaxia microphylla* var. *microphylla*, and *Pimelea glauca* all at 1 %
"The ground layer also is highly variable in development and composition, ranging from almost absent to mostly grassy to forb-rich. Ground layer flora commonly present include one or more of the graminoid genera: *Rytidosperma*, *Austrostipa*, *Elymus*, *Enteropogon*, *Dianella* and *Lomandra*; and one or more of the chenopod genera: *Atriplex*, *Chenopodium*, *Einadia*, *Enchylaena*, *Maireana*, *Salsola* and *Sclerolaena*."		Ground layer species recorded, in order of abundance include Tall Raspwort *Gonocarpus elatus*, Rough Spear-grass *Austrostipa scabra* subsp. *falcata*, Common Bog-sedge *Schoenus apogon* Small-flower Wallaby-grass *Rytidosperma monticola*, Green Rock-fern *Cheilanthes austrotenuifolia* and Slender Wallaby-grass *Rytidosperma racemosum* var. *racemosum*.	Ground layer species recorded, in order of abundance include Tall Raspwort *Gonocarpus elatus* Golden Wattle *Acacia pycnantha*, Slender Fireweed *Senecio tenuiflorus* spp. agg., Shiny Everlasting *Xerochrysum viscosum*, Common Raspwort *Gonocarpus tetragynus*, Prickly Guinea-flower, *Hibbertia acicularis* and Copper-awned Wallaby-grass *Rytidosperma fulvum*.	Ground layer species recorded, in order of abundance include Bristly Wallaby-grass *Rytidosperma setaceum*, Rough Spear-grass, *Austrostipa scabra* subsp. *falcata*, Common Bog-sedge *Schoenus apogon*, Shiny Everlasting *Xerochrysum viscosum*, and Plains Everlasting *Chrysocephalum* sp. 1.
"Derived grasslands are a special state of the ecological community, whereby the canopy and mid layers have been mostly removed to <10% crown cover but the native ground layer remains largely intact, with 50% or more of the total vegetation cover being native."		No – Grey Box canopy layer is present.	No – Grey Box canopy layer is present.	No – Grey Box canopy layer is present.
CONDITION THRESHOLDS				
Criteria that are broadly applicable	1a. The minimum patch size is 0.5 hectare;	Yes – GBGW within the potential offset area is a contiguous patch of approximately 469.416 ha.	Yes – GBGW within the potential offset area is a contiguous patch of approximately 469.416 ha.	Yes – GBGW within the potential offset area is a contiguous patch of approximately 469.416 ha.

Key Diagnostic Characteristics		Plot 1	Plot 2	Plot 3
	AND 1b. The canopy layer contains Grey Box (*E. microcarpa*) as the dominant or co-dominant tree species;	Yes – Grey Box is the dominate tree canopy species.	Yes – Grey Box is the dominate tree canopy species.	Yes – Grey Box is the dominate tree canopy species.
	AND 1c. The vegetative cover of non-grass weed species in the ground layer is less than 30% at any time of the year.	1c. Yes – herbaceous weeds less than 30%. Only Horehound *Marubium vulgare* was recorded with 2% cover.	1c. Yes – during the assessment, no herbaceous weeds were recorded within this plot.	1c. Yes – herbaceous weeds less than 30%. Only Slender Centaury *Centaurium tenuiflorum* was recorded with 1% cover.
Additional criteria that apply to smaller woodland patches (0.5 to <2 ha in area) with tree crown cover >10%	2a. At least 50% of the vegetative cover in the ground layer comprises perennial native species at any time of the year." AND 2b. 8 or more perennial native species are present in the mid and ground layers at any time of the year.	N/A	N/A	N/A
Additional criteria that apply to larger woodland patches with a well-developed canopy (2 ha or more in area)	3a. At least 8 trees/ha are hollow bearing or have a diameter at breast height of 60 cm or more; AND 3b. at least 10% of the vegetative ground cover comprises perennial native grasses at any time of the year;	3A. Yes – however, this is an estimation as large tree mapping is yet to be undertaken. 3B. Yes – adequate coverage of perennial native grasses, predominantly Rough Spear-grass – 15% cover.	3A. Yes – however, this is an estimation as large tree mapping is yet to be undertaken. 3B. No – coverage of perennial native grasses within the assessment plot at approximately 2 % coverage. Coverage of perennial native grasses is however variable across EVC 61.	3A. Yes – however, this is an estimation as large tree mapping is yet to be undertaken. 3B. Yes – adequate coverage of perennial native grasses, predominantly Bristly Wallaby-grass *Rytidosperma setaceum* and Rough Spear-grass *Austrostipa scabra* subsp. *falcata* – 40% cover.
	OR 4a. At least 20 trees/ha have a diameter at breast height of 12 cm or more; AND 4b. at least 50% of the vegetative cover in the ground layer comprises perennial native species.	Yes – however, this is an estimation as large tree mapping is yet to be undertaken.	Yes – however, this is an estimation as large tree mapping is yet to be undertaken.	Yes – however, this is an estimation as large tree mapping is yet to be undertaken.
Additional criteria	5a. Woodland density does not meet criteria 3a or 4a, or is a	N/A	N/A	

Key Diagnostic Characteristics		Plot 1	Plot 2	Plot 3
that apply to patches where the canopy is less developed or absent (derived grassland) (≥0.5 ha in area)	derived grassland with clear evidence that the site formerly was a woodland with a tree canopy dominated or co-dominated by *E. microcarpa;* AND 5b. At least 50% of the vegetative cover in the ground layer is made up of perennial native species at any time of the year; AND 5c. 12 or more native species are present in the ground layer at any time of the year.			
Summary	Does the patch meet criteria for listed threatened community?	**Yes** – the patch of native vegetation within the proposed quarry site meets the key diagnostic criteria and condition thresholds for EPBC listed Grey Box Grassy Woodland Threatened Ecological Community.	**Yes** – the patch of native vegetation within the proposed quarry site meets the key diagnostic criteria and condition thresholds for EPBC listed Grey Box Grassy Woodland Threatened Ecological Community.	**Yes** – the patch of native vegetation within the proposed quarry site meets the key diagnostic criteria and condition thresholds for EPBC listed Grey Box Grassy Woodland Threatened Ecological Community.

4.2.4 NATIVE VEGETATION – STATE DEFINITION

4.2.4.1 VEGETATION QUALITY ASSESSMENTS OF OFFSET AREA

The offset area contains native vegetation and habitat of a similar quality and type to that is proposed for removal and has been confirmed to support threatened species habitat to compensate for those lost.

Vegetation Quality Assessments (VQAs) were undertaken on remnant patches of native vegetation to determine the condition of the vegetation in the context of the local area and the relevant bioregion (Goldfields). This methodology is outlined in *Vegetation Quality Assessment Manual-Guidelines for applying the habitat hectares scoring method* (DSE, 2004) (VQA). VQAs were conducted by WSP ecologists during spring 2024 across the proposed offset area. Large trees across the offset area are yet to be mapped, and in lieu of this, estimations of large tree coverages were used. Results are provided below in

Table 4.5. Full VQA results are provided at Appendix E.

Table 4.5 Vegetation Quality Assessment (VQA) results for EVCs identified in the offset area

HABITAT ZONE	1	2	3
BIOREGION	**GOLDFIELDS**	**GOLDFIELDS**	**GOLDFIELDS**
EVC Name	Hillcrest Herb-rich Woodland	Grassy Woodland	Box Ironbark Forest
EVC Number	70	175	61

EVC Conservation Status			Depleted	Vulnerable	Depleted
		Max Score	**Score**	**Score**	
Site Condition	Large Old Trees	10	4	4	3
	Canopy Cover	5	5	5	5
	Understorey	25	15	20	15
	Lack of Weeds	15	9	9	7
	Recruitment	10	10	0	10
	Organic Litter	5	3	5	5
	Logs	5	5	5	4
	EVC Standardiser	-	1	1	1
	Standardised Score	75			
Landscape Context score		25	13	23	13
Total		100	64	60	62
Habitat (Condition) Score		1	0.64	0.6	0.62

4.2.4.2 GAINS AVAILABLE

Indicative gains available within offset area have been calculated using the Gain CalculatorV2.6 (DELWP, 2019). Management actions informing gain scores are as follows:

- Retain all standing trees (dead or alive)
- Exclude stock
- Ensure weed cover does not increase above current level
- Monitor for new high threat weeds & eliminate to < 1% cover
- Retain leaf litter
- Retain logs & fallen timber
- Control rabbits
- Control ALL high threats
- B. Eliminate woody weeds to < 1% cover.

Large trees per zone were not input into the gains calculator at this stage, as large trees across the potential offset area have not been assessed to date. The gain summary table has been provided in Appendix F. Gain scores were used to fulfill Native Vegetation Offset Report – NVOR, data requirements, and generate an NVOR. NVOR provided at Appendix G. A summary of results us provided in Table 4.6. Results indicate approximately 200 % of required species offsets available across the proposed first party offset area.

Table 4.6 Summarised offset availability as per NVOR

Extent

Total Extent (ha)	499.3430
Patches (ha)	499.3430
Scattered Trees (ha)	0
Revegetation (ha)	0
Habitat units of gain for the proposed offset site	
General Habitat Units	121.572 North Central CMA or MOUNT ALEXANDER SHIRE LGA
No. Large Trees	0
Strategic Biodiversity Value Score	0.861
Large trees*	Nil
Species Offset amount	• 117.737 - Bush Stone-curlew, Burhinus grallarius (10174) • 105.385 - Square-tailed Kite, Lophoictinia isura (10230) • 120.569 - Grey Falcon, Falco hypoleucos (10236) • 127.571 - Black Falcon, Falco subniger (10238) • 112.630 - Swift Parrot, Lathamus discolor (10309) • 100.193 - Chestnut-rumped Heathwren, Calamanthus pyrrhopygius (10498) • 119.728 - Painted Honeyeater, Grantiella picta (10598) • 129.208 - Bearded Dragon, Pogona barbata (12177) • 113.394 - Lace Monitor, Varanus varius (12283) • 118.565 - Golden Sun Moth, Synemon plana (15021) • 117.010 - Ausfeld's Wattle, Acacia ausfeldii (500013) • 117.010 - Buloke, Allocasuarina luehmannii (500678) • 117.007 - Cottony Cassinia, Cassinia ozothamnoides (501560) • 82.941 - Small Monkey-flower, Elacholoma prostrata (502196) • 116.799 - Flat-leaf Bush-pea, Pultenaea platyphylla (502865) • 117.028 - Cane Spear-grass, Austrostipa breviglumis (503268) • 117.010 - Half-bearded Spear-grass, Austrostipa hemipogon (503985) • 117.010 - Spear-grass, Austrostipa trichophylla (504512) • 115.881 - Spiny Rice-flower, Pimelea spinescens subsp. spinescens (504823) • 117.010 - Late-flower Flax-lily, Dianella tarda (505085) • 116.724 - Cobberas Grevillea, Grevillea brevifolia (505489) • 117.010 - Arching Flax-lily, Dianella sp. aff. longifolia (Benambra) (505560)

	• 117.029 - Sutton Grange Greenhood, Pterostylis agrestis (507734) • 122.155 - Eltham Copper, Paralucia pyrodiscus lucida (65003)

Source: NVOR ID: 353_20250131_8N1 - Appendix G.

4.2.5 FFG ACT LISTED THREATENED COMMUNITIES

The project area was found to support one FFG Act listed threatened community; Victorian Temperate Woodland Bird Community (VTWBC). Based on the results of the current, and previous, assessment/s, five VTWBC species have been recorded within the potential offset area, including Jacky Winter which was recorded by WSP ecologists. The other four VTWBC species that have previously been recorded are Brown Treecreeper, Diamond Firetail, Speckled Warbler and Swift Parrot (Eco Logical Australia, 2023e, Habitat Management Services, 2021).

According to the likelihood of occurrence assessments, an additional five VTWBC species are considered to have a moderate or higher likelihood of occurrence based on the presence of suitable habitat and/or previous records within the broader property. This includes Barking Owl, Grey-crowned Babbler, Painted Honeyeater, Southern Whiteface and Turquoise Parrot.

4.2.6 OFFSET SITE PHOTOS

Photo 4.1 Treeless indigenous understory in southern portion suitable for canopy revegetation – Swift Parrot

Photo 4.2 Treeless indigenous understory in norther portion suitable for canopy revegetation – Swift Parrot

Photo 4.3 Treeless indigenous understory across shallow granite - not suitable for canopy revegetation

Photo 4.4 Treeless indigenous understory across shallow granite with high coverage of Plains Everlasting *Chrysocephalum apiculatum* subsp*. congestum*

Photo 4.5 Annual Plains Everlasting *Chrysocephalum apiculatum* subsp*. congestum*

Photo 4.6 Hillcrest herb-rich woodland EVC 70 dominated by White Box *Eucalyptus albens* with high coverage of Rock Fern *Cheilanthes australis*

Photo 4.7 Hillcrest herb-rich woodland EVC 70 interspersed with Wheel Cactus *Opuntia robusta*

Photo 4.8 Diamond Firetail

Photo 4.9 White-browed Babblers

Photo 4.10 Brown Treecreeper

Photo 4.11 Restless Flycatcher

Photo 4.12 Artificial hollow installed in a Grey Box

Photo 4.13 Ecotone, Box Ironbark Forest left, shifting to Hill-crest Herb-rich Woodland right

4.3 SECURING OFFSETS

To meet the requirements under an EPBC Approval the offset site must meet the following conditions of the *EPBC Act Environmental Offsets Policy*:

- be a site that has been confirmed as supporting the target species
- be a site that can be maintained and improved in order to increase the habitat values and long-term sustainability of the target species
- be a site that can be covenanted for the maintenance in perpetuity of habitat for the target species.

4.3.1 SECURITY

Securing of the offset area will either be by a Trust for Nature (TFN) offset covenant (preferred) or on Title via a TFN Offset covenant under the *Victorian Conservation, Trusts Act 1972*; or a Section 69 agreement under the Conservation, *Forest and Lands Act 1987* with the Secretary to the Department of Energy, Environment and Climate Action (DEECA). Both agreements secure the offsets area in perpetuity, and bind future landowners.

This Offset Strategy will inform the Offset Management Plan (OMP) which will be appended to the offset covenant. The OMP will require approval for EPBC Act-listed species by DCCEEW and transposed into the S.69 or TFN OMP template following approval. Quality assurance of the OMP will be undertaken by NVCR.

Advanced offsets have been proposed by the proponent to protect habitat within the proposed offset area prior to the removal of native vegetation. Baseline data has been collected by WSP to inform the establishment of the offset site and to comply with the requirements of the *EPBC Act Environmental Offsets Policy*.

4.3.2 ADVANCED OFFSETS

Mawsons currently undertake a raft of management actions to maintain ecological values across the potential offset area. Advanced offset gains will likely be preferable to ensure ecological values are maintained in the event of an approval under the EPBC Act, prior to the proposed action commencing.

5 RISK ASSESSMENT

A preliminary risk assessment ahs been undertaken outlining possible risks to the offset, potential controls and subsequent mitigated risk. Risk matrix is provided in Table 5.1,and risk assessment in Table 5.2.

Table 5.1 Risk matrix

RISK MATRIX	
Likelihood (L): A qualitative measure of likelihood: how likely is it that this event/circumstances will occur both before and after an offset is secured?	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Consequence (C): Qualitative measure of what will be the consequence/result if the event/circumstances does occur	
Minor	Failure to identify or secure suitable offsets causes minor impact to achieving positive outcome (*e.g. short-term delays to achieving strategy objectives, implementing low-cost, well-characterised corrective actions*)
Moderate	Failure to identify or secure suitable offsets causes moderate substantial impact to achieving positive outcome (*e.g. short-term delays to achieving strategy objectives, implementing well-characterised, high cost/effort corrective actions*)
High	Failure to identify or secure suitable offsets causes substantial impact to achieving positive outcome (*e.g. medium-long term delays to achieving strategy objectives, implementing uncertain, high-cost/effort corrective actions*)
Major	Failure to identify or secure suitable offsets causes major impact to achieving positive outcome (*e.g. strategy objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies*)
Critical	Failure to identify or secure suitable offsets causes severe unrecoverable impact to achieving positive outcome (*e.g. strategy objectives are unable to be achieved, with no evidenced mitigation strategies*)

Final Risk Rating (R): A function of multiplying Likelihood (L) and Consequence (C)

		Consequence				
Likelihood		Minor	Moderate	High	Major	Critical
	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Table 5.2 Risk assessment

RISK EVENT OR CIRCUMSTANCE	RISK DESCRIPTION (E.G. CAUSE AND EFFECT)	INITIAL RISK RATING	RISK MITIGATION STRATEGY(IES)	MITIGATED RISK RATING
Force majeure events				
Drought	• Decrease in growth and reproduction of native flora species. • Increased risk of flora mortality from low soil moisture levels. • Decrease in flora species diversity and increase in bare ground. • Increased risk of erosion and loss of topsoil or crust. • Reduced habitat quality for MNES.	**Medium**	• Increase native flora cover and abundance where affected by high native fauna and pest fauna abundance.	**Medium**
Fire	• Short term impacts to high-quality native vegetation and complex structure. • Loss of threatened species habitat. • Loss of critical habitat features such as tree hollows.	**High**	• Follow CFA fire management guidelines. • Manage fauna post burn to allow vegetation recovery • Install artificial hollows post fire to approximate pre-fire levels.	**Medium**
Flooding	• Flooding unlikely due to relief of landscape.	**Low**	• No action proposed	**Low**
Standard Risks				

Unapproved native vegetation and habitat removal	• Clearing of native vegetation outside of the proposed action area. • Loss of critical habitat features for MNES. • Injury or mortality to MNES and general wildlife.	**Severe**	• Only vegetation identified in the approved Work Plan to be removed by clear signage and confirmed with contractor. • Clear signage identifying offset area erected.	**Low**
Approved native vegetation and habitat removal	• Clearing of native vegetation outside of the proposed action area. • Loss of critical habitat features for MNES. • Injury or mortality to MNES and general wildlife.	**Severe**	• Increased security across proposed offset by on title agreement area to reduce likelihood of future approval of works across the offset area.	**Low**
Overgrazing	• Escaped sheep entering the property from adjacent land via boundary fence. • Loss of plant foliage cover and species diversity. • Reduced opportunity for plant reproduction. • Reduced habitat quality for ground-dependent MNES. • Increased space for weeds to colonise.	**High**	• Implement regular visual fence checks which border adjacent farming properties. • Fix any identified fencing issues as soon as practicable. • If required develop a Kangaroo management plan	**Medium**
Spread of weeds and pathogens	• Potential for reduction in habitat quality for MNES.	**Medium**	• Follow weed and hygiene protocols as per the CEMP. • Undertake weed control. • Establish baseline weed abundance and monitoring plan. • Monitor weed control success and implement adaptive management	**Low**

			procedures where required to increase success.	
Increase in pest animal numbers	• Potential for reduction in habitat quality for MNES (i.e. rabbit warrens, ground disturbance) • Injury or mortality to MNES and general wildlife.	**Medium**	• Undertake pest animal control if baseline numbers increase. • Establish baseline pest animal numbers and monitoring plan. • Monitor pest animal control success and implement adaptive management procedures where required to increase success.	**Low**
Failure to meet offset gain targets within expected timeframe	• Offset management targets not achieved for various reasons (e.g. failure of planted trees to establish, ineffective weed control, impact from major weather event)	**High**	• Review management target success on an annual basis or in accordance with the approved plan. • Apply adaptive management techniques early on to increase success when required.	**Low**

6 RELEVANT DOCUMENTS

6.1 STATUTORY DOCUMENTS

Statutory documents that have informed this offset strategy and will likely inform the offset management plan include:

- Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (DSEWPaC, 2012a)
- Offsets Assessment Guide (DSEWPAC, 2012c)
- Grey Box Grassy Woodlands and Derived Native Grasslands of South Eastern Australia: A guide ot the identification, assessment and management of a nationally threatened ecological community (DSEWPaC, 2012b)
- Commonwealth Listing Advice on Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (TSSC, 2010)
- National recovery plan for the Swift parrot Lathamus discolor (Saunders and Tzaros, 2011)
- Conservation Advice for Aphelocephala leucopsis (southern whiteface) (DCCEEW, 2023a) Threat abatement plan for predation by feral cats 2024 (DCCEEW, 2024)
- Conservation Advice for Climacteris picumnus victoriae (brown treecreeper (south-eastern) (DCCEEW, 2023b)
- Conservation Advice for Melanodryas cucullata cucullata (hooded robin (south-eastern)) (DCCEEW, 2023c)
- Conservation Advice for Stagonopleura guttata (diamond firetail) (DCCEEW, 2023d)
- Guidelines for the removal. destruction or lopping of native vegetation (DELWP, 2017b)
- Assessor's handbook: Applications to remove, destroy or lop native vegetation (DELWP, 2017a)
- Native Vegetation Offset Register; Quality assurance standards for establishing native vegetation offsets (DEECA, 2023).Conservation Advice for Stagonopleura guttata (diamond firetail) (DCCEEW, 2023d).

6.2 OTHER RELEVANT DOCUMENTS

- Ecological assessment of threatened species presence at the proposed Blue Hills quarry. Prepared for Mawsons Concrete & Quarries (Habitat Management Services, 2021)
- Blue Hills Quarry Stage 2 Ecological Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2022).
- Blue Hills Quarry Haul Road Ecological Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2023c).
- Blue Hills Quarry Impact Assessment. Prepared for Mawsons Concrete and Quarries (Eco Logical Australia, 2023d).

7 CONCLUSION

A number of efforts have been made to avoid losses of native vegetation and scattered trees, and where unavoidable, to minimise losses through early assessment and mapping of ecological values within the Project Area, as detailed in WSP 2024. Consideration of quarry design and haul road alignment has been made to avoid these values, and the development of retention options and conservation measures are aimed at protecting these values.

If approved, all unavoidable losses to native vegetation and habitat would be required to be offset *prior* to commencement of works and in accordance with policy and legislative obligations including offsets (if required) under the EPBC Act, and offsets under the *Guidelines 2017* policy.

The figures reported in this OS are based on impacts and offset target calculations associated with the proposed action area. These figures and the associated offset targets may vary during the approvals process. As such, offset targets should be recalculated and figures revised if required in the event of approval of the action to ensure that there is no net loss of biodiversity values associated with these projects.

Preliminary calculations under the EPBC Act indicate that all offsets cane be met across land contiguous to the propose action as first party offsets, with the caveat of using the current assumptions and inputs detailed in this report, used in the Offset Assessments Guide – EPBC Act calculator. Similarly, preliminary testing using the Gain Calculator Results indicate approximately 200 % of the likely required species offsets, to satisfy State offset requirements as per the Guidelines (DELWP, 2017b), available across the proposed first party offset area.

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APPENDIX A

SPECIES LISTS

A1.

FLORA LIST

Table A.1 Flora species observed across the potential offset area

ORIGIN	SCIENTIFIC NAME	COMMON NAME	FFG ACT STATUS	EPBC ACT STATUS
	Acacia implexa	Lightwood		
	Acacia paradoxa	Hedge Wattle		
	Acacia pycnantha	Golden Wattle		
	Acaena echinata	Sheep's Burr		
*	*Acetosella vulgaris*	Sheep Sorrel		
*	*Aira cupaniana*	Quicksilver Grass		
	Allocasuarina littoralis	Black Sheoak		
*	*Arctotheca calendula*	Cape Weed		
	Arthropodium aff. strictum (Goldfields)	Goldfields Chocolate-lily		
	Arthropodium milleflorum s.l.	Pale Vanilla-lily		
	Arthropodium minus	Small Vanilla-lily		
	Arthropodium strictum s.l.	Chocolate Lily		
*	*Asparagus asparagoides*	Bridal Creeper		
	Asteraceae spp.	Composite		
	Atriplex spinibractea	Spiny-fruit Saltbush	Endangered	
	Austrostipa mollis	Supple Spear-grass		
	Austrostipa scabra subsp. falcata	Rough Spear-grass		
	Austrostipa scabra subsp. scabra	Rough Spear-grass		
*	*Avena fatua*	Wild Oat		
*	*Briza minor*	Lesser Quaking-grass		
	Bulbine bulbosa	Bulbine Lily		
	Burchardia umbellata	Milkmaids		
	Carex inversa	Knob Sedge		
	Cassinia sifton	Drooping Cassinia		
*	*Centaurium tenuiflorum*	Slender Centaury		
	Cheilanthes austrotenuifolia	Green Rock-fern		
	Cheilanthes sieberi	Cloak fern		
	Chrysocephalum apiculatum subsp. congestum	Plains Everlasting		
	Chrysocephalum apiculatum subsp. gracile	Mallee Everlasting		
*	*Cicendia filiformis*	Slender Cicendia		

ORIGIN	SCIENTIFIC NAME	COMMON NAME	FFG ACT STATUS	EPBC ACT STATUS
*	*Cirsium vulgare*	Spear Thistle		
	Closterium setaceum	green microalga		
	Daviesia ulicifolia	Gorse Bitter-pea		
	Dillwynia cinerascens s.l.	Grey Parrot-pea		
	Drosera aberrans	Scented Sundew		
*	*Ehrharta calycina*	Perennial Veldt-grass		
	Einadia hastata	Saloop		
	Einadia nutans	Nodding Saltbush		
*	*Erodium botrys*	Big Heron's-bill		
	Eucalyptus albens	White Box		
	Eucalyptus melliodora	Yellow Box		
	Eucalyptus microcarpa	Grey Box		
	Eutaxia microphylla	Common Eutaxia		
	Eutaxia microphylla var. microphylla	Common Eutaxia		
	Geranium sp. 3	Pale-flower Crane's-bill	Endangered	
	Gnaphalium indutum	Tiny Cudweed		
	Gonocarpus elatus	Tall Raspwort		
	Gonocarpus tetragynus	Common Raspwort		
	Hibbertia acicularis	Prickly Guinea-flower		
	Hibbertia riparia	Erect Guinea-flower		
	Hibbertia spp.	Guinea Flower		
*	*Hordeum leporinum*	Barley Grass		
	Hydrocotyle laxiflora	Stinking Pennywort		
*	*Hypochaeris glabra*	Smooth Cat's-ear		
	Hypoxis hygrometrica	Golden Weather-glass		
	Hypoxis hygrometrica var. hygrometrica	Golden Weather-glass		
	Isotoma axillaris	Rock Isotome		
	Juncus pauciflorus x procerus	Loose-flower Rush x Tall Rush hybrid		
	Juncus subsecundus	Finger Rush		
	Lagenophora stipitata s.l.	Common Bottle-daisy		
*	*Lamium spp.*	Dead Nettle		
	Laphangium luteoalbum	Jersey Cudweed		
	Leptorhynchos squamatus	Scaly Buttons		
	Lissanthe strigosa subsp. subulata	Peach Heath		
	Lomandra filiformis subsp. coriacea	Wattle Mat-rush		
	Lomandra filiformis subsp. filiformis	Wattle Mat-rush		
	Lomandra multiflora subsp. multiflora	Many-flowered Mat-rush		
	Lomandra nana	Dwarf Mat-rush		

ORIGIN	SCIENTIFIC NAME	COMMON NAME	FFG ACT STATUS	EPBC ACT STATUS
*	*Lysimachia arvensis*	Pimpernel		
*	*Marrubium vulgare*	Horehound		
	Microlaena stipoides var. stipoides	Weeping Grass		
	Opercularia varia	Variable Stinkweed		
*	*Opuntia robusta*	Wheel Cactus		
*	*Opuntia stricta*	Common Prickly-pear		
	Oxalis exilis	Shade Wood-sorrel		
*	*Oxalis pes-caprae*	Soursob		
	Pauridia glabella var. glabella	Tiny Star		
	Pelargonium rodneyanum	Magenta Stork's-bill		
*	*Phalaris minor*	Lesser Canary-grass		
	Pimelea glauca	Smooth Rice-flower		
	Pimelea humilis	Common Rice-flower		
	Plantago varia	Variable Plantain		
	Rhagodia parabolica	Fragrant Saltbush	Vulnerable	
	Rhagodia spinescens	Hedge Saltbush		
*	*Romulea rosea*	Onion Grass		
	Rytidosperma erianthum	Hill Wallaby-grass		
	Rytidosperma fulvum	Copper-awned Wallaby-grass		
	Rytidosperma monticola	Small-flower Wallaby-grass	Endangered	
	Rytidosperma setaceum	Bristly Wallaby-grass		
	Salvia spp.	Sage		
	Schoenus apogon	Common Bog-sedge		
	Senecio quadridentatus	Cotton Fireweed		
*	*Silybum marianum*	Variegated Thistle		
*	*Solanum nigrum s.s.*	Black Nightshade		
	Solenogyne dominii	Smooth Solenogyne		
	Stackhousia monogyna s.l.	Creamy Stackhousia		
	Styphelia humifusa	Cranberry Heath		
*	*Thlaspi arvense*	Penny Cress		
	Tricoryne elatior	Yellow Rush-lily		
*	*Trifolium dubium*	Suckling Clover		
	Veronica calycina	Hairy Speedwell		
	Vittadinia cervicularis	Annual New Holland Daisy		
	Vittadinia cuneata	Fuzzy New Holland Daisy		
	Vittadinia cuneata var. hirsuta	Fuzzy New Holland Daisy	Endangered	
	Wurmbea dioica	Common Early Nancy		
	Xerochrysum bracteatum	Golden Everlasting		

ORIGIN	SCIENTIFIC NAME	COMMON NAME	FFG ACT STATUS	EPBC ACT STATUS
	Xerochrysum viscosum	Shiny Everlasting		

APPENDIX B

OFFSET ASSESSMENT GUIDE – EPBC ACT CALCULATOR RESULTS

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Hooded Robin
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	**1.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes		**Area**		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat	Yes		**Area**	34.7	Hectares	
			Quality	**7**	Scale 0-10	
			Total quantum of impact	24.29	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	Yes		Adjusted hectares		**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00				
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0					0.00	#DIV/0!	#DIV/0!	
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00				
Threatened species habitat																				
Area of habitat	Yes	24.29	Adjusted hectares	499	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	499	**Risk of loss (%) without offset**	1%	**Risk of loss (%) with offset**	1%	0.00	75%	0.00	0.00				
									Future area without offset (adjusted hectares)	494.0	**Future area with offset (adjusted hectares)**	494.0					32.88	135.38%	Yes	
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**7**	**Future quality without offset (scale of 0-10)**	**6**	**Future quality with offset (scale of 0-10)**	**7**	1.00	75%	0.75	0.67				
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**	**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																			
Condition of habitat Change in habitat condition, but no change in extent	No																			
Threatened species																				
Birth rate e.g. Change in nest success	No																			
Mortality rate e.g Change in number of road kills per year	No																			
Number of individuals e.g. Individual plants/animals	No																			

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	24.29	32.88	135.38%	**Yes**	$0.00	N/A	$0.00
Area of community	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Southern Whiteface
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes		**Area**		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat	Yes		**Area**	34.7	Hectares	
			Quality	**7**	Scale 0-10	
			Total quantum of impact	24.29	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	Yes		Adjusted hectares		**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00				
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0					0.00	#DIV/0!	#DIV/0!	
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00				
Threatened species habitat																				
Area of habitat	Yes	24.29	Adjusted hectares	499	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	499	**Risk of loss (%) without offset**	1%	**Risk of loss (%) with offset**	1%	0.00	70%	0.00	0.00				
									Future area without offset (adjusted hectares)	494.0	**Future area with offset (adjusted hectares)**	494.0					33.90	139.55%	Yes	
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**7**	**Future quality without offset (scale of 0-10)**	**6**	**Future quality with offset (scale of 0-10)**	**7**	1.00	70%	0.70	0.69				
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**	**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																			
Condition of habitat Change in habitat condition, but no change in extent	No																			
Threatened species																				
Birth rate e.g. Change in nest success	No																			
Mortality rate e.g Change in number of road kills per year	No																			
Number of individuals e.g. Individual plants/animals	No																			

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	24.29	33.90	139.55%	**Yes**	$0.00	N/A	$0.00
Area of community	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Swift Parrot
EPBC Act status	Critically Endangered
Annual probability of extinction Based on IUCN category definitions	**6.8%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes		**Area**		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat	Yes		**Area**	24.71	Hectares	
			Quality	**6**	Scale 0-10	
			Total quantum of impact	14.83	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)		% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes		Adjusted hectares		**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00		0.00	#DIV/0!	#DIV/0!	
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0									
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00					
Threatened species habitat																					
Area of habitat	Yes	14.83	Adjusted hectares	261	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	261	**Risk of loss (%) without offset**	1%	**Risk of loss (%) with offset**	1%	0.00	75%	0.00	0.00		135.40%	Yes		
									Future area without offset (adjusted hectares)	258.4	**Future area with offset (adjusted hectares)**	258.4					20.07				
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**6**	**Future quality without offset (scale of 0-10)**	**5**	**Future quality with offset (scale of 0-10)**	**7**	2.00	75%	1.50	0.78					
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**		**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																				
Condition of habitat Change in habitat condition, but no change in extent	No																				
Threatened species																					
Birth rate e.g. Change in nest success	No																				
Mortality rate e.g Change in number of road kills per year	No																				
Number of individuals e.g. Individual plants/animals	No																				

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	14.826	20.07	135.40%	**Yes**	$0.00	N/A	$0.00
Area of community	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Brown Treecreeper
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes		**Area**		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat	Yes		**Area**	34.7	Hectares	
			Quality	**7**	Scale 0-10	
			Total quantum of impact	24.29	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)		% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes		Adjusted hectares		**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00			#DIV/0!	#DIV/0!	
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0									
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00					
Threatened species habitat																					
Area of habitat	Yes	24.29	Adjusted hectares	499	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	499	**Risk of loss (%) without offset**	1%	**Risk of loss (%) with offset**	1%	0.00	75%	0.00	0.00	36.32	149.52%	Yes		
									Future area without offset (adjusted hectares)	494.0	**Future area with offset (adjusted hectares)**	494.0									
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**7**	**Future quality without offset (scale of 0-10)**	**6**	**Future quality with offset (scale of 0-10)**	**7**	1.00	75%	0.75	0.74					
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**		**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																				
Condition of habitat Change in habitat condition, but no change in extent	No																				
Threatened species																					
Birth rate e.g. Change in nest success	No																				
Mortality rate e.g Change in number of road kills per year	No																				
Number of individuals e.g. Individual plants/animals	No																				

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	24.29	36.32	149.52%	**Yes**	$0.00	N/A	$0.00
Area of community	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Diamond Firetail
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes		**Area**		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat	Yes		**Area**	34.7	Hectares	
			Quality	**7**	Scale 0-10	
			Total quantum of impact	24.29	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)		% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes		Adjusted hectares		**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00		0.00	#DIV/0!	#DIV/0!	
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0									
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00					
Threatened species habitat																					
Area of habitat	Yes	24.29	Adjusted hectares	499	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	499	**Risk of loss (%) without offset**	1%	**Risk of loss (%) with offset**	1%	0.00	75%	0.00	0.00		36.32	149.52%	Yes	
									Future area without offset (adjusted hectares)	494.0	**Future area with offset (adjusted hectares)**	494.0									
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**7**	**Future quality without offset (scale of 0-10)**	**6**	**Future quality with offset (scale of 0-10)**	**7**	1.00	75%	0.75	0.74					
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**		**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																				
Condition of habitat Change in habitat condition, but no change in extent	No																				
Threatened species																					
Birth rate e.g. Change in nest success	No																				
Mortality rate e.g Change in number of road kills per year	No																				
Number of individuals e.g. Individual plants/animals	No																				

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	24.29	36.32	149.52%	**Yes**	$0.00	N/A	$0.00
Area of community	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

APPENDIX C

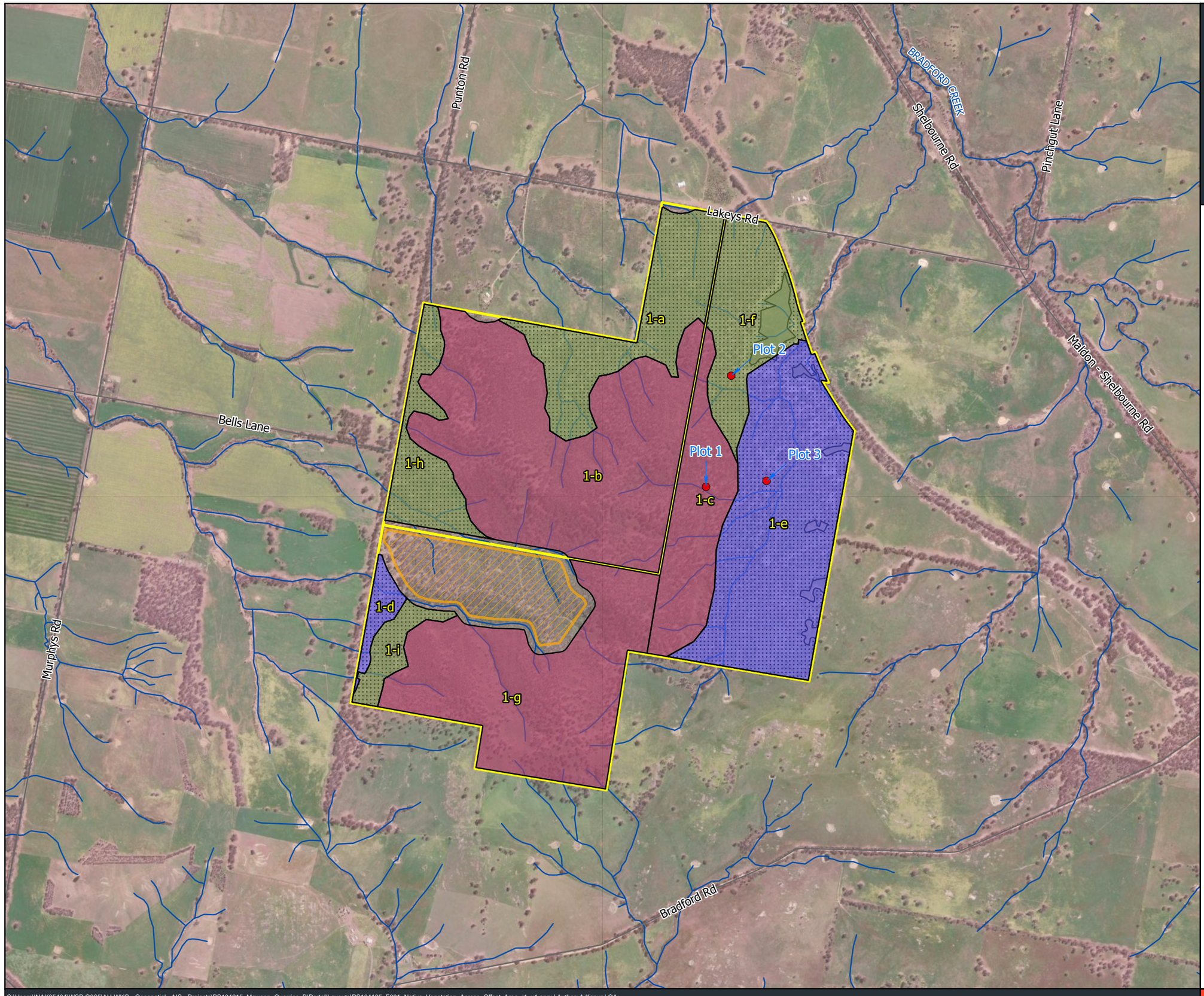
MAPPING

C1.

NATIVE VEGETATION ACROSS THE OFFSET AREA

PS134125
Mawson Quarries - Blue Hills

Figure 1
Native Vegetation across Offset Area



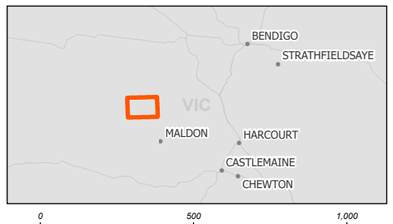
Legend

- GBGW flora plots
- Roads
- Watercourses

NVOR offset area

EVC NAME

- Box Ironbark Forest
- Grassy Woodland
- Hillcrest Herb-rich Woodland
- BHQ Extraction Area v4
- Grey Box Grassy Woodlands-EPBC Act
- Mawsons Owned Land



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

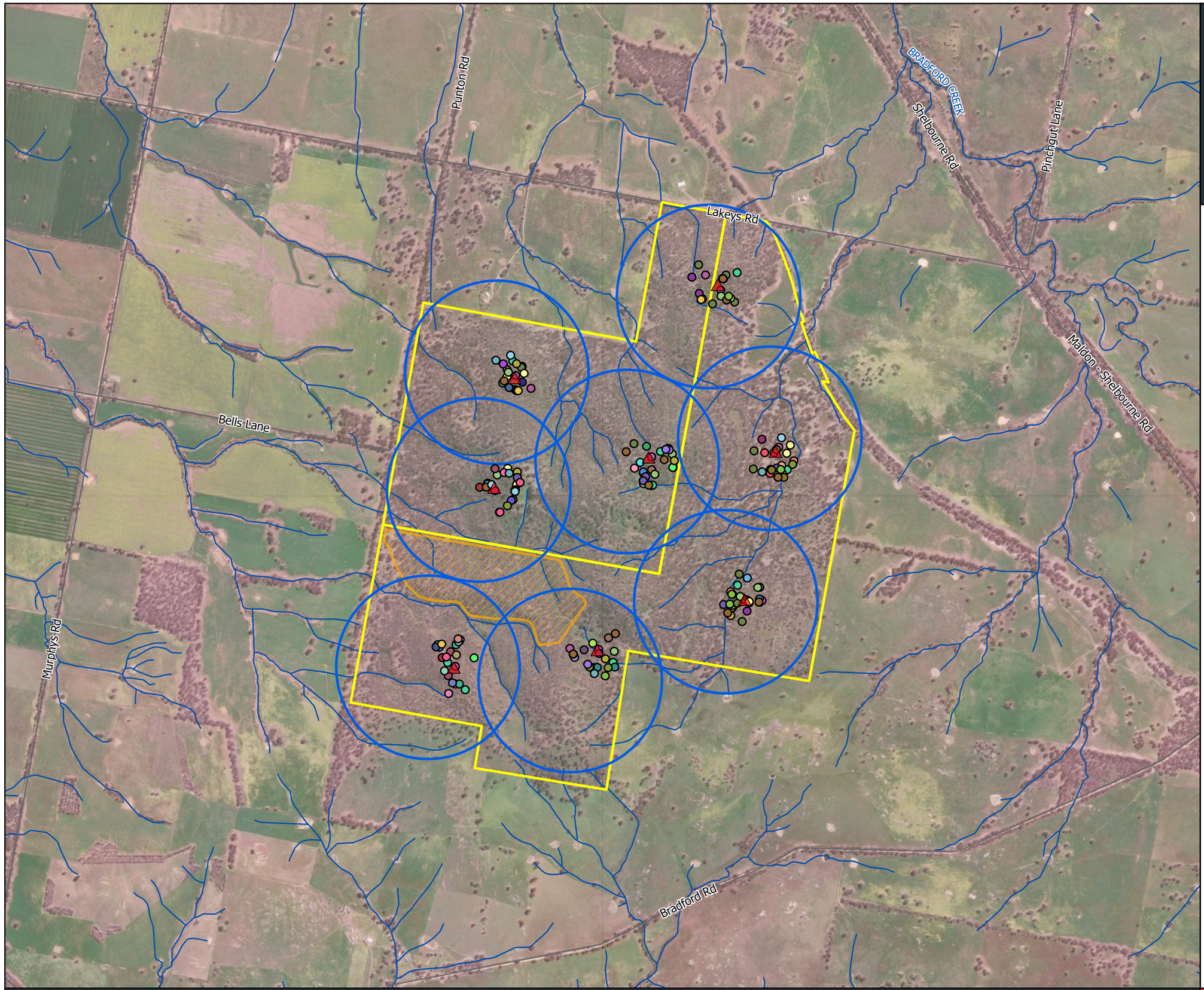
1:20,000 Date: 4/02/2025

GDA 2020

Data sources: DELWP, Geoscience Australia
World Imagery: Maxar

C2.

THREATENED BIRD SURVEY DESIGN AND RESULTS



PS134125
Mawson Quarries - Blue Hills

Figure 2
Threatened Bird Surveys

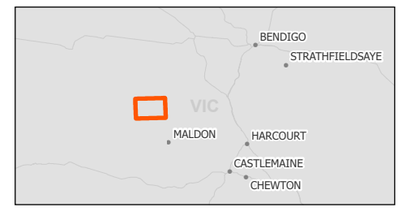
Legend

- Bird survey centre
- Roads
- Watercourses
- BHQ Extraction Area v4

Threatened bird survey results

Species

- Australian Magpie _ Gymnorhina tibicen
- Australian Raven _ Corvus coronoides
- Australian Shelduck _ Tadorna tadornoides
- Australian Wood Duck _ Chenonetta jubata
- Black Wallaby _ Wallabia bicolor
- Black-faced Cuckoo-shrike _ Coracina novaehollandiae
- Brown Falcon _ Falco berigora
- Brown Treecreeper (south-eastern ssp.) _ Climacteris picumnus victoriae
- Brown-headed Honeyeater _ Melithreptus brevirostris
- Buff-rumped Thornbill _ Acanthiza reguloides
- Crested Shrike-tit _ Falcunculus frontatus
- Crimson Rosella _ Platycercus elegans
- Diamond Firetail _ Stagonopleura guttata
- Dusky Woodswallow _ Artamus cyanopterus
- Eastern Grey Kangaroo _ Macropus giganteus
- Eastern Rosella _ Platycercus eximius
- European Goldfinch _ Carduelis carduelis
- European Hare _ Lepus europeaus
- European Rabbit _ Oryctolagus cuniculus
- Galah _ Eolophus roseicapilla
- Golden Whistler _ Pachycephala pectoralis
- Grey Fantail _ Rhipidura albiscarpa
- Grey Shrike-thrush _ Colluricincla harmonica
- Hooded Robin _ Melanodryas cucullata cucullata
- Inland Thornbill _ Acanthiza apicalis
- Jacky Winter _ Microeca fascinans
- Laughing Kookaburra _ Dacelo novaeguineae
- Long-billed Corella _ Cacatua tenuirostris
- New Holland Honeyeater _ Phylidonyris novaehollandiae
- Noisy Miner _ Manorina melanocephala
- Peaceful Dove _ Geopelia striata
- Red Fox _ Vulpes vulpes
- Red Wattlebird _ Anthochaera carunculata
- Red-browed Finch _ Neochmia temporalis
- Red-capped Robin _ Petroica goodenovii
- Red-rumped Parrot _ Psephotus haematonotus
- Restless Flycatcher _ Myiagra inquieta
- Speckled Warbler _ Chthonicola sagittatus
- Spotted Pardalote _ Pardalotus punctatus
- Striated Thornbill _ Acanthiza lineata
- Sulphur-crested Cockatoo _ Cacatua galerita
- Superb Fairy-wren _ Malurus cyaneus
- Swift Parrot _ Lathamus discolor
- Varied Sittella _ Daphoenositta chrysoptera
- Wedge-tailed Eagle _ Aquila audax
- Weebill _ Smicrornis brevirostris
- Welcome Swallow _ Petrochelidon neoxena
- White-browed Babbler _ Pomatostomus superciliosus
- White-eared Honeyeater _ Lichenostomus leucotis
- White-plumed Honeyeater _ Lichenostomus penicillatus
- White-winged Chough _ Corcorax melanorhamphos
- Willie Wagtail _ Rhipidura leucophrys
- Yellow-faced Honeyeater _ Lichenostomus chrysops
- Yellow-footed Antechinus _ Antechinus flavipes
- Yellow-rumped Thornbill _ Acanthiza chrysorrhoa
- <all other values>
- Mawsons Owned Land



0 500 1,000
Meters

Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

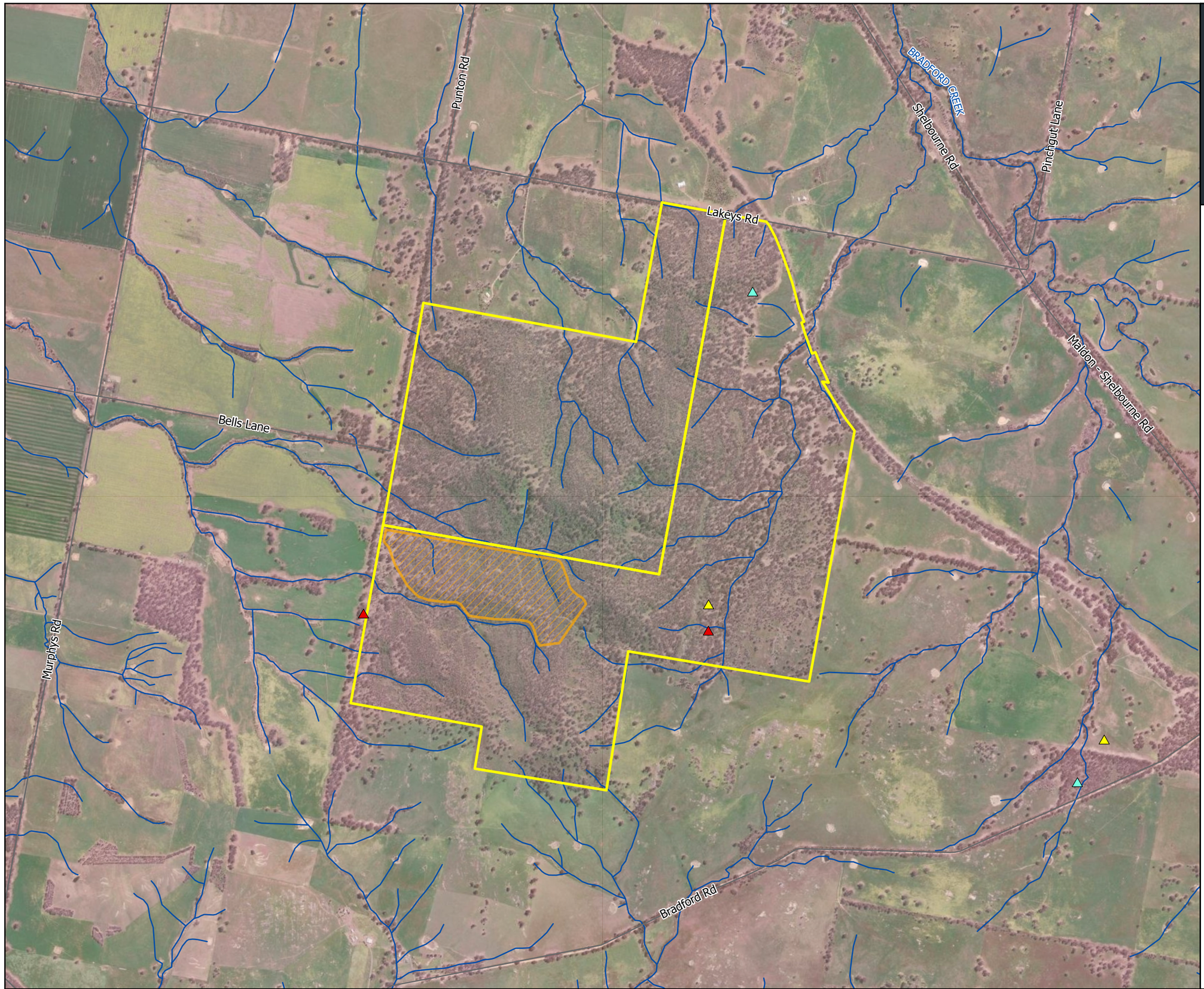
1:20,000 Date: 3/02/2025

GDA 2020

Data sources: DELWP, Geoscience Australia
World Imagery: Maxar

C3.

SWIFT PARROT RECORDS AND HABITAT ASSESSMENT

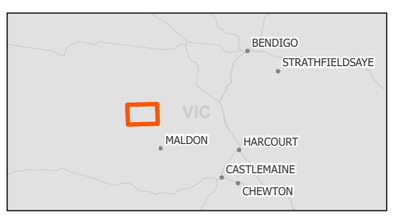


PS134125
Mawson Quarries - Blue Hills

Figure 3
Swift Parrot Habitat Assessment

Legend

- Swift Parrot - ELA records
- Swift Parrot - VBA records
- Swift Parrot - Birdlife records
- Roads
- Watercourses
- BHQ Extraction Area v4
- Mawsons Owned Land



0 500 1,000
Meters

Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:20,000 Date: 3/02/2025

Data sources: DELWP, Geoscience Australia
World Imagery: Maxar

APPENDIX D

THREATENED ECOLOGICAL COMMUNITY ASSESSMENT RESULTS

D1.1 GREY BOX GRASSY WOODLAND COVERAGE ASSESSMENT PLOT RESULTS

D1.1.1 PLOT 1

Table D.1 Flora species and coverages – GBGW qualification plot 1

ORIGIN	SCIENTIFIC NAME	COMMON NAME	COVERAGE
*	*Vulpia myuros f. myuros*	Rat's-tail Fescue	10
*	*Marrubium vulgare*	Horehound	2
*	*Bromus diandrus*	Great Brome	2
*	*Carduus tenuiflorus*	Winged Slender-thistle	1
*	*Briza minor*	Lesser Quaking-grass	1
*	*Aira spp.*	Hair Grass	1
	Eucalyptus microcarpa	Grey Box	20
	Gonocarpus elatus	Tall Raspwort	15
	Austrostipa scabra subsp. falcata	Rough Spear-grass	15
	Schoenus apogon	Common Bog-sedge	5
	Rytidosperma monticola	Small-flower Wallaby-grass	3
	Cheilanthes austrotenuifolia	Green Rock-fern	2
	Rytidosperma racemosum var. racemosum	Slender Wallaby-grass	2
	Rytidosperma fulvum	Copper-awned Wallaby-grass	1
	Arthropodium strictum s.l.	Chocolate Lily	1
	Acacia pycnantha	Golden Wattle	1
	Senecio quadridentatus	Cotton Fireweed	1
	Sonchus oleraceus	Common Sow-thistle	1
	Hydrocotyle verticillata	Shield Pennywort	1
	Pimelea glauca	Smooth Rice-flower	1

D1.1.2 PLOT 2

Table D.2 Flora species and coverages – GBGW qualification plot 2

ORIGIN	SCIENTIFIC NAME	COMMON NAME	COVERAGE
*	*Vulpia bromoides*	Squirrel-tail Fescue	5
	Eucalyptus microcarpa	Grey Box	25
	Gonocarpus elatus	Tall Raspwort	5

ORIGIN	SCIENTIFIC NAME	COMMON NAME	COVERAGE
	Acacia pycnantha	Golden Wattle	3
	Senecio tenuiflorus spp. agg.	Slender Fireweed	1
	Xerochrysum viscosum	Shiny Everlasting	1
	Gonocarpus tetragynus	Common Raspwort	1
	Hibbertia acicularis	Prickly Guinea-flower	1
	Rytidosperma fulvum	Copper-awned Wallaby-grass	1
	Pimelea glauca	Smooth Rice-flower	1
	Veronica plebeia	Trailing Speedwell	1
	Austrostipa scabra subsp. scabra	Rough Spear-grass	1
	Helichrysum luteoalbum	Jersey Cudweed	1
	Lomandra filiformis subsp. filiformis	Wattle Mat-rush	1

D1.1.3 PLOT 3

Table D.3 Flora species and coverages – GBGW qualification plot 3

ORIGIN	SCIENTIFIC NAME	COMMON NAME	COVERAGE
#	*Cassinia arcuata*	Drooping Cassinia	2
*	*Vulpia bromoides*	Squirrel-tail Fescue	3
*	*Centaurium tenuiflorum*	Slender Centaury	1
*	*Hypochoeris radicata*	Flatweed	1
	Rytidosperma setaceum	Bristly Wallaby-grass	20
	Austrostipa scabra subsp. falcata	Rough Spear-grass	20
	Eucalyptus microcarpa	Grey Box	15
	Schoenus apogon	Common Bog-sedge	5
	Xerochrysum viscosum	Shiny Everlasting	3
	Chrysocephalum sp. 1	Plains Everlasting	2
	Eutaxia microphylla var. microphylla	Common Eutaxia	1
	Wahlenbergia luteola	Bronze Bluebell	1
	Rytidosperma geniculatum	Kneed Wallaby-grass	1
	Acacia pycnantha	Golden Wattle	1
	Senecio quadridentatus	Cotton Fireweed	1
	Solenogyne dominii	Smooth Solenogyne	1
	Pimelea glauca	Smooth Rice-flower	1

ORIGIN	SCIENTIFIC NAME	COMMON NAME	COVERAGE
	Vittadinia cuneata	Fuzzy New Holland Daisy	1
	Rytidosperma fulvum	Copper-awned Wallaby-grass	1
	Pelargonium rodneyanum	Magenta Stork's-bill	1
	Veronica plebeia	Trailing Speedwell	0

APPENDIX E

VEGETATION QUALITY ASSESSMENT RESULTS - VQA

VQA Assessment Data

PS134215: Blue Hills

Project name	Blue Hills	Zone ID	1
Assessor	Justin Pegg	Date	05/08/2024
EVC	Gold0070: Hillcrest Herb-rich Woodland	DBH	70cm
Bioregion	Goldfields	Location	-36.9172° N, 144.0222° E

MULTIPLIER	1	HABITAT SCORE
SITE CONDITION SCORE	51	64.00
LANDSCAPE SCORE	13	

LARGE TREES	BM	Obs
Health	N/A	>70%
Number/ha	15	5
Score	**4**	
CANOPY TREES	**BM**	**Obs**
Health	N/A	>70%
Cover %	15	20
Score	**5**	
ORGANIC LITTER	**BM**	**Obs**
Cover of litter %	20	70
Origin of litter	N/A	Native
Score	**3**	

RECRUITMENT	BM	Obs
Evidence of a cohort		Yes
Evidence of episodic event	Continuous	No
% of woody species with adeq. recruit		70
Diversity of woody species	7	10
Score	**10**	
RECRUITMENT (NON-WOODY)	**BM**	**Obs**
Cover of recruitment area (%)		0
Herb Diversity	20	14
Score	**0**	
LOGS	**BM**	**Obs**
Logs within 1ha (m)	150	150
Large logs within 1ha (m)	50	30
Score	**5**	

PATCH SIZE	Obs
Area of patch (ha)	272.6
Significantly disturbed	Yes
Score	**8**
DISTANCE TO CORE (50ha area)	**Obs**
Distance to core (km)	0
Significantly disturbed	Yes
Score	**4**
NEIGHBOURHOOD	**%**
Significantly disturbed	Yes
100m	50
1km	20
5km	20
Score	**1**

WEEDS	%	HT
Hypochaeris glabra	1	No
Silybum marianum	3	Yes
Cirsium vulgare	1	No
Lysimachia arvensis	0.5	No
Arctotheca calendula	2	No
Ehrharta calycina	1	No
Cicendia filiformis	0.2	No
Romulea rosea	2	No
Briza minor	2	No
Opuntia stricta	2	Yes
Marrubium vulgare	2	Yes
Asparagus asparagoides	0.5	Yes
Total Cover	17.20%	
Cover of high threat species	7.50%	
Score	**9**	

UNDERSTOREY — **Score: 15**

	Req.	IT	T	MT	MS	SS	PS	LH	MH	SH	LTG	LNG	MTG	MNG	TTG	HG	GF	TF	SC	EP	BL	S/C	No	Cov
Benchmark no. species		1	2		2	2		4	14	2	1		12	3			1						11	
Obs. no. species		3			7	7		2	10	9	3		13	5	3		2						11	
Benchmark % cover		5	10		5	1		10	20	5	1		30	5			1				10	10		113
Obs. % cover		21%			7	5.10		1.50	20.50	6.60	2.50		25.60	4.50	4.50		10.50							109.30
Present & Modified		P			P	P		P&M	P	P	P		P	P			P							

Species list

	Req.	IT	T	MT	MS	SS	PS	LH	MH	SH	LTG	LNG	MTG	MNG	TTG	HG	GF	TF	SC	EP	BL	S/C	No	Cov
Acacia pycnantha	Yes				1	1																		2
Allocasuarina littoralis	Yes	1			0.5																			1.50
Arthropodium milleflorum s.l.	No												0.5											0.50
Arthropodium minus	No												0.5											0.50
Arthropodium strictum s.l.	No												1		0.5									1.50
Austrostipa mollis	No										1		1											2
Austrostipa scabra subsp. scabra	No												3		1									4
Bulbine bulbosa	No												0.1											0.10
Burchardia umbellata	No												0.5											0.50
Cassinia sifton	Yes				1																			1
Cheilanthes austrotenuifolia	No	10			1	1											10							22
Cheilanthes sieberi	No																0.5							0.50
Chrysocephalum apiculatum su…	No								1	0.5														1.50
Dillwynia cinerascens s.l.	No					0.1																		0.10
Eucalyptus albens	Yes				2	0.5																		2.50
Eucalyptus melliodora	Yes				0.5																			0.50
Eucalyptus microcarpa	Yes	10			1	1																		12
Gonocarpus elatus	No								12	1														13
Hibbertia riparia	Yes								0.5															0.50
Hibbertia spp.	No					0.5																		0.50
Hydrocotyle laxiflora	No									2														2
Juncus subsecundus	No												0.5	0.5										1
Lagenophora stipitata s.l.	No									0.1														0.10
Lomandra filiformis subsp. filifor…	No													0.5										0.50
Lomandra multiflora subsp. multi…	No												0.5	0.5										1
Lomandra multiflora subsp. multi…	No													1										1
Microlaena stipoides var. stipoides	No													2										2
Opercularia varia	No								0.5	0.5														1
Pelargonium rodneyanum	No								2	0.5														2.50
Pelargonium rodneyanum	No								1															1
Pimelea humilis	Yes					1																		1
Rytidosperma erianthum	No												5											5

Rytidosperma fulvum	No										1		3											4
Rytidosperma fulvum	No												5											5
Rytidosperma monticola	No												5		3									8
Senecio quadridentatus	No							0.5	0.5															1
Senecio quadridentatus	No								0.5															0.50
Solenogyne dominii	No									1	0.5													1.50
Veronica calycina	No								0.5	0.5														1
Wurmbea dioica	No									0.5														0.50
Xerochrysum viscosum	No							1	2															3

VQA Assessment Data

PS134215: Blue Hills

Project name	Blue Hills	Zone ID	2
Assessor	Justin Pegg	Date	06/08/2024
EVC	Gold0175_61: Low Rises Grassy Woodland	DBH	70cm
Bioregion	Goldfields	Location	-36.9060° N, 144.0338° E

MULTIPLIER	1	HABITAT SCORE
SITE CONDITION SCORE	48	60.00
LANDSCAPE SCORE	12	

LARGE TREES	BM	Obs
Health	N/A	>70%
Number/ha	15	4
Score	**4**	
CANOPY TREES	**BM**	**Obs**
Health	N/A	>70%
Cover %	15	15
Score	**5**	
ORGANIC LITTER	**BM**	**Obs**
Cover of litter %	20	30
Origin of litter	N/A	Native
Score	**5**	

RECRUITMENT	BM	Obs
Evidence of a cohort		No
Evidence of episodic event	Continuous	No
% of woody species with adeq. recruit		91
Diversity of woody species	10	11
Score	**0**	
RECRUITMENT (NON-WOODY)	**BM**	**Obs**
Cover of recruitment area (%)		0
Herb Diversity	16	19
Score	**0**	
LOGS	**BM**	**Obs**
Logs within 1ha (m)	150	90
Large logs within 1ha (m)	50	25
Score	**5**	

PATCH SIZE	Obs
Area of patch (ha)	105.9
Significantly disturbed	Yes
Score	**8**
DISTANCE TO CORE (50ha area)	**Obs**
Distance to core (km)	0
Significantly disturbed	Yes
Score	**4**
NEIGHBOURHOOD	**%**
Significantly disturbed	Yes
100m	50
1km	20
5km	0
Score	**0**

WEEDS	%	HT
Opuntia stricta	1	Yes
Arctotheca calendula	1	No
Erodium botrys	1	No
Marrubium vulgare	2	Yes
Hypochaeris glabra	1	No
Romulea rosea	1	No
Cirsium vulgare	1	Yes
Centaurium tenuiflorum	1	No
Cicendia filiformis	1	No
Lamium spp.	2	No
Acetosella vulgaris	2	No
Asteraceae spp.	2	No
Total Cover	16.00%	
Cover of high threat species	4.00%	
Score	**9**	

	UNDERSTOREY																						**Score:**	**20**
	Req.	IT	T	MT	MS	SS	PS	LH	MH	SH	LTG	LNG	MTG	MNG	TTG	HG	GF	TF	SC	EP	BL	S/C	No	Cov
Benchmark no. species		1			6	3	1	4	10	2	2		11	3									10	
Obs. no. species		1	1		9	9	1	2	10	14	3		8	1	8		1		1				14	
Benchmark % cover		5			15	5	1	10	15	5	5		25	5							10	10		111
Obs. % cover		1%	1		13.50	6.10	0.50	6	15.10	13.20	1.60		12.10	1	11.50		3		0.50		7	10		103.10
Present & Modified		P			P	P	P	P	P	P	P		P&M	P&M							P	P		

Species list

Acacia implexa	Yes				1																		1
Acacia pycnantha	Yes				1	1																	2
Acaena echinata	No								0.5														0.50
Arthropodium milleflorum s.l.	No												2		1								3
Arthropodium strictum s.l.	No												2		1								3
Atriplex spinibractea	Yes				2	1																	3
Austrostipa mollis	No												1		1								2
Austrostipa scabra subsp. falcata	No												2		1								3
Burchardia umbellata	No										0.1												0.10
Cassinia sifton	Yes				2	1																	3
Cheilanthes austrotenuifolia	No																3						3
Chrysocephalum apiculatum su…	No								2	2													4
Daviesia ulicifolia	Yes					0.5																	0.50
Drosera aberrans	No									0.5													0.50
Einadia nutans	No																		0.5				0.50
Eucalyptus melliodora	Yes				0.5	0.5																	1
Eucalyptus microcarpa	Yes	1	1		1	1																	4
Eutaxia microphylla var. microph…	Yes				0.5																		0.50
Geranium sp. 3	No								0.5														0.50
Gnaphalium indutum	No									2													2
Gonocarpus elatus	No								5	1													6
Gonocarpus tetragynus	No									1													1
Hibbertia riparia	Yes				5	0.5																	5.50
Hydrocotyle laxiflora	No									2													2
Hypoxis hygrometrica var. hygro…	No												1										1
Isotoma axillaris	No								0.1	0.1													0.20
Juncus pauciflorus x procerus	No										0.5												0.50
Juncus subsecundus	No												1										1
Leptorhynchos squamatus	No									0.1													0.10
Lissanthe strigosa subsp. subulata	No					0.1																	0.10
Lomandra filiformis subsp. filifor…	No																						
Lomandra multiflora subsp. multi…	No																						

Lomandra nana	No												1										1
Opercularia varia	No									0.5													0.50
Oxalis exilis	No									1													1
Pimelea glauca	Yes				0.5	0.5																	1
Plantago varia	No								0.5														0.50
Rytidosperma fulvum	No										1		3		3								7
Rytidosperma setaceum	No														1								1
Schoenus apogon	No														3								3
Senecio quadridentatus	No							1	1														2
Solenogyne dominii	No									1													1
Stackhousia monogyna s.l.	No								0.5														0.50
Styphelia humifusa	No						0.5																0.50
Tricoryne elatior	No												0.1										0.10
Veronica calycina	No									0.5													0.50
Vittadinia cuneata var. hirsuta	No								2	1													3
Wurmbea dioica	No														0.5								0.50
Xerochrysum viscosum	No							5	3	0.5													8.50

VQA Assessment Data

PS134215: Blue Hills

Project name	Blue Hills	Zone ID	3
Assessor	Nic McCaffrey	Date	06/08/2024
EVC	Gold0061: Box Ironbark Forest	DBH	70cm
Bioregion	Goldfields	Location	-36.9045° N, 144.0298° E

MULTIPLIER	1	HABITAT SCORE
SITE CONDITION SCORE	49	62.00
LANDSCAPE SCORE	13	

LARGE TREES	BM	Obs
Health	N/A	>70%
Number/ha	15	2
Score	**3**	
CANOPY TREES	**BM**	**Obs**
Health	N/A	>70%
Cover %	30	20
Score	**5**	
ORGANIC LITTER	**BM**	**Obs**
Cover of litter %	20	30
Origin of litter	N/A	Native
Score	**5**	

RECRUITMENT	BM	Obs
Evidence of a cohort		Yes
Evidence of episodic event	Continuous	No
% of woody species with adeq. recruit		70
Diversity of woody species	12	10
Score	**10**	
RECRUITMENT (NON-WOODY)	**BM**	**Obs**
Cover of recruitment area (%)		0
Herb Diversity	9	14
Score	**0**	
LOGS	**BM**	**Obs**
Logs within 1ha (m)	200	160
Large logs within 1ha (m)	50	6
Score	**4**	

PATCH SIZE	Obs
Area of patch (ha)	120.6
Significantly disturbed	Yes
Score	**8**
DISTANCE TO CORE (50ha area)	**Obs**
Distance to core (km)	0
Significantly disturbed	Yes
Score	**4**
NEIGHBOURHOOD	**%**
Significantly disturbed	Yes
100m	50
1km	20
5km	20
Score	**1**

WEEDS	%	HT
Romulea rosea	2	No
Marrubium vulgare	5	Yes
Hypochaeris glabra	1	No
Opuntia stricta	2	No
Arctotheca calendula	1	No
Thlaspi arvense	1	No
Aira cupaniana	2	No
Acetosella vulgaris	5	Yes
Cicendia filiformis	0.1	No
Ehrharta calycina	0.2	No
Solanum nigrum s.s.	0.1	No
Hordeum leporinum	0	No
Total Cover	19.40%	
Cover of high threat species	10.00%	
Score	**7**	

UNDERSTOREY — **Score:** 15

	Req.	IT	T	MT	MS	SS	PS	LH	MH	SH	LTG	LNG	MTG	MNG	TTG	HG	GF	TF	SC	EP	BL	S/C	No	Cov
Benchmark no. species		1			7	4	2		9		1		8										7	
Obs. no. species		1			5	5		1	12	5	1		7	3									9	
Benchmark % cover		5			25	5	1		20		1		15								10	20		102
Obs. % cover		5%			9	8		0.10	16.10	6	0.50		17	7							10	20		98.70
Present & Modified		P			P&M	P			P		P		P								P	P		

Species list

Acacia paradoxa	Yes				1																			1
Acacia pycnantha	Yes				5																			5
Acaena echinata	No								1															1
Arthropodium milleflorum s.l.	No													5										5
Arthropodium minus	No								0.5															0.50
Arthropodium strictum s.l.	No								2	2														4
Austrostipa mollis	No										0.5		1											1.50
Cassinia sifton	Yes				1																			1
Cheilanthes sieberi	No								1															1
Daviesia ulicifolia	Yes				1																			1
Drosera aberrans	No									1														1
Einadia hastata	No								0.5															0.50
Einadia nutans	No								2															2
Eucalyptus microcarpa	Yes	5																						5
Eutaxia microphylla	Yes					0.5																		0.50
Gonocarpus elatus	No								5	1														6
Gonocarpus tetragynus	No					5																		5
Hibbertia acicularis	No					1																		1
Hydrocotyle laxiflora	No								2	1														3
Lagenophora stipitata s.l.	No									1														1
Laphangium luteoalbum	No								0.5															0.50
Lomandra filiformis subsp. coriac...	No												5	1										6
Lomandra nana	No													1										1
Pauridia glabella var. glabella	No												1											1
Pimelea humilis	Yes					1																		1
Rhagodia parabolica	No				1	0.5																		1.50
Rytidosperma fulvum	No												1											1
Rytidosperma monticola	No												5											5
Rytidosperma setaceum	No												2											2
Schoenus apogon	No												2											2
Senecio quadridentatus	No							0.1	0.1															0.20
Veronica calycina	No								0.5															0.50

Xerochrysum bracteatum	No								1															1

APPENDIX F

GAIN SUMMARY TABLE – STATE OFFSETS

F1.1 GAIN SUMMARY TABLE – STATE OFFSETS

Summary of gain scoring

Version 2.6	**Property address / location**	Bradford Road	**User name**	Justin Pegg
	Unique project ID	Blue Hills	**Organisation**	WSP
Last saved: 16 January 2025	**Proposal type**	Offset	**Contact phone**	0403659945
	Current land tenure	Freehold land	**Contact email**	0

Site number / Zone ID	**1 / 1**	**1 / 2**	**1 / 3**	**1 / 4**	**1 / 5**	**1 / 6**	**1 / 7**	**1 / 8**	**1 / 9**
Zone type	Patch	Patch	Patch	Patch	Patch	Patch	Patch	Patch	Patch
Size of zone (ha)	47.196	136.2645	39.735	6.166	99.795	39.224	10.047	96.647	96.647
Bioregion	Goldfields	Goldfields	Goldfields	Goldfields	Goldfields	Goldfields	Goldfields	Goldfields	Goldfields
EVC name	Box Ironbark Forest	Hillcrest Herb-rich Woodland	Hillcrest Herb-rich Woodland	Granitic Grassy Woodland	Granitic Grassy Woodland	Granitic Grassy Woodland	Box Ironbark Forest	Hillcrest Herb-rich Woodland	Box Ironbark Forest
EVC standardiser	1	1	1	1	1	1	1	1	1
BioEVC code / conservation status	Gold0061 / D	Gold0070 / D	Gold0070 / D	Gold0175_62 / V	Gold0175_62 / V	Gold0175_62 / V	Gold0061 / D	Gold0070 / D	Gold0061 / D
Vegetation type	Woody	Woody	Woody	Woody	Woody	Woody	Woody	Woody	Woody
Property size (ha)	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha	≥ 10 ha
Total native veg. on property (ha)	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha	≥ 20 ha
Current security	None	None	None	None	None	None	None	None	None
Proposed security	On-title agreement	On-title agreement	On-title agreement	On-title agreement	On-title agreement	On-title agreement	On-title agreement	On-title agreement	On-title agreement
Current land management restrictions	None	None	None	None	None	None	None	None	None
Type of overlay	0	0	0	0	0	0	0	0	0

Habitat scoring	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*	*Habitat score*	*Maint. gain*	*Impr. gain*
Large trees	3	0.75	N/A	4	0.63	N/A	4	0.63	N/A	4	0.63	N/A	4	0.63	N/A	3	0.75	N/A	3	0.75	N/A	4	0.63	N/A	3	0.75	N/A
Tree canopy cover	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0	5	0.25	0
Understorey	15	1.5	2.5	15	1.5	2.5	15	1.5	2.5	20	2	2.5	20	2	2.5	15	1.5	2.5	15	1.5	2.5	15	1.5	2.5	15	1.5	2.5
Lack of weeds	7	N/A	2	9	N/A	2	9	N/A	2	9	N/A	2	9	N/A	2	7	N/A	2	7	N/A	2	9	N/A	2	7	N/A	2
Recruitment	10	1	0	10	1	0	10	1	0	0	0	2	0	0	2	10	1	0	10	1	0	10	1	0	10	1	0
Organic litter	5	0.5	0	3	0.3	2	3	0.3	2	5	0.5	0	5	0.5	0	5	0.5	0	5	0.5	0	3	0.3	2	5	0.5	0
Logs	4	4.4	0	5	5	0	5	5	0	5	5	0	5	5	0	4	4.4	0	4	4.4	0	5	5	0	4	4.4	0
Site condition (/75)	***49***			***51***			***51***			***48***			***48***			***49***			***49***			***51***			***49***		
Landscape context (/25)	13			13			13			12			12			12			13			13			13		
Habitat score (/100)	**62**			**64**			**64**			**60**			**60**			**61**			**62**			**64**			**62**		
Maintenance gain (standardised)		8.4000			8.6800			8.6800			8.3800			8.3800			8.4000			8.4000			8.6800			8.4000	
Improvement gain (standardised)		4.5000			6.5000			6.5000			6.5000			6.5000			4.5000			4.5000			6.5000			4.5000	
Prior management gain		6.2000			6.4000			6.4000			6.0000			6.0000			6.1000			6.2000			6.4000			6.2000	
Security gain		6.2000			6.4000			6.4000			6.0000			6.0000			6.1000			6.2000			6.4000			6.2000	
Gain score (out of 100)		**25.30**			**27.98**			**27.98**			**26.88**			**26.88**			**25.10**			**25.30**			**27.98**			**25.30**	
Gain score divided by 100		0.2530			0.2798			0.2798			0.2688			0.2688			0.2510			0.2530			0.2798			0.2530	

Habitat hectares of gain	11.9406	38.1268	11.1179	1.6574	26.8249	9.8452	2.5419	27.0418	24.4517
Number of large trees in zone	0	0	0	0	0	0	0	0	0

Management actions									
Retain all standing trees (dead or alive)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exclude stock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ensure weed cover does not increase above current level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Monitor for new high threat weeds & eliminate to < 1% cover	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retain leaf litter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retain logs & fallen timber	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control rabbits	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control ALL high threats	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. Eliminate woody weeds to < 1% cover	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

APPENDIX G

NATIVE VEGETATION OFFSET REPORT – NVOR

Native Vegetation Offset Report

NVOR ID: 353_20250131_8N1

This report provides information about a potential native vegetation offset site in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines).The information in this report is based on spatial information and gain scores provided by the landholder or their representative. Any changes to this input information will change the habitat units of gain reflected in this report. This report **is not** an assessment by the Department of Energy, Environment and Climate Action (DEECA). The responsible authority must confirm the offset is acceptable and meets eligibility criteria defined in the Guidelines.

Report details

Date created: 31/01/2025

Local Government Area: MOUNT ALEXANDER SHIRE

Shapefile name: NVOR_offset area test_20250129.shp

Site assessor name: Justin Pegg

Catchment Management Authority: North Central

Registered Aboriginal Party: Dja Dja Wurrung

Coordinates: 144.01940, -36.91237

Address:
BRADFORD ROAD SHELBOURNE 3515
BRADFORD ROAD BRADFORD 3463
LAKEYS ROAD BRADFORD 3463

Regulator Notes

Offset polygons are located:

- Across multiple properties and/or within six metres of a property boundary

Summary of offset site

Extent	
Total Extent (ha)	**499.3430**
Patches (ha)	499.3430
Scattered Trees (ha)	0.0000
Revegetation (ha)	0.0000
Habitat units of gain for the proposed offset site	
General Habitat Units	**125.8600** North Central CMA, MOUNT ALEXANDER SHIRE LGA 0.861 Strategic Biodiversity Value
No. Large Trees	**235**
Species Habitat Units	**117.737** - Bush Stone-curlew, Burhinus grallarius (10174)

105.385 - Square-tailed Kite, Lophoictinia isura (10230)

120.569 - Grey Falcon, Falco hypoleucos (10236)

127.571 - Black Falcon, Falco subniger (10238)

112.630 - Swift Parrot, Lathamus discolor (10309)

100.193 - Chestnut-rumped Heathwren, Calamanthus pyrrhopygius (10498)

119.728 - Painted Honeyeater, Grantiella picta (10598)

129.208 - Bearded Dragon, Pogona barbata (12177)

113.394 - Lace Monitor, Varanus varius (12283)

118.565 - Golden Sun Moth, Synemon plana (15021)

117.010 - Ausfeld's Wattle, Acacia ausfeldii (500013)

117.010 - Buloke, Allocasuarina luehmannii (500678)

117.007 - Cottony Cassinia, Cassinia ozothamnoides (501560)

82.941 - Small Monkey-flower, Elacholoma prostrata (502196)

116.799 - Flat-leaf Bush-pea, Pultenaea platyphylla (502865)

117.028 - Cane Spear-grass, Austrostipa breviglumis (503268)

117.010 - Half-bearded Spear-grass, Austrostipa hemipogon (503985)

117.010 - Spear-grass, Austrostipa trichophylla (504512)

115.881 - Spiny Rice-flower, Pimelea spinescens subsp. spinescens (504823)

117.010 - Late-flower Flax-lily, Dianella tarda (505085)

116.724 - Cobberas Grevillea, Grevillea brevifolia (505489)

117.010 - Arching Flax-lily, Dianella sp. aff. longifolia (Benambra) (505560)

117.029 - Sutton Grange Greenhood, Pterostylis agrestis (507734)

122.155 - Eltham Copper, Paralucia pyrodiscus lucida (65003)

Next Steps

Offset sites must meet eligibility criteria as outlined in the Guidelines and the Native Vegetation Gain Scoring Manual, Version 2 available on the DEECA website, and any other relevant requirements. Eligible offset sites that are intended to be banked (allocated over time) must be registered on the Native Vegetation Credit Register (NVCR). Where offset credits are to be sold, the site must also be assessed by a NVCR registered Site Assessor. A gain scoring assessment must be completed before any offset can be registered on the NVCR. All proposed offset sites must be secured by a relevant security agreement that includes an Offset Management Plan.

Appendix 1: Habitat units of gain per zone

This table provides the habitat units of gain per zone of the offset site. The trading and allocation of units within the Native Vegetation Credit Register (NVCR) takes place at the zone level.

The Species-General Offset Test is applied to determine which species the proposed offset site provides habitat for. The threshold is set at 0.0025 per cent of the mapped habitat value for a species. When the threshold is met or exceeded, Species Habitat Units are generated. If required, the 0.0025% threshold can be turned off, provided this is requested from DEECA prior to the offset site being established. Multiple species units will be generated if the threshold is exceeded for multiple species.

The Species Habitat Units for each species in a zone are calculated by the following equation in accordance with the Guidelines:
Species Habitat Units = extent x gain score x species landscape factor, where the species landscape factor = 0.5 + (habitat importance score/2)

The General Habitat Units in a zone are calculated by the following equation in accordance with the Guidelines:
General Habitat Units = extent x gain score x general landscape factor, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

Species and General Habitat Units are alternates and the use or sale of one type of unit will affect the number of other types of units remaining.

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	-	10.999	-
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.741	-	10.399 - Bush Stone-curlew Burhinus grallarius (10174)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.555	-	9.289 - Square-tailed Kite Lophoictinia isura (10230)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.785	-	10.662 - Grey Falcon Falco hypoleucos (10236)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.887	-	11.272 - Black Falcon Falco subniger (10238)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.661	-	9.919 - Swift Parrot Lathamus discolor (10309)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.474	-	8.804 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.770	-	10.570 - Painted Honeyeater Grantiella picta (10598)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.907	-	11.390 - Bearded Dragon Pogona barbata (12177)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.684	-	10.057 - Lace Monitor Varanus varius (12283)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.900	-	11.347 - Golden Sun Moth Synemon plana (15021)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Buloke Allocasuarina luehmannii (500678)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.689	-	10.085 - Small Monkey-flower Elacholoma prostrata (502196)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.740	-	10.394 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Cane Spear-grass Austrostipa breviglumis (503268)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Spear-grass Austrostipa trichophylla (504512)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.740	-	10.389 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Late-flower Flax-lily Dianella tarda (505085)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.742	-	10.406 - Cobberas Grevillea Grevillea brevifolia (505489)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.739	-	10.386 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-a	Patch	-	Gold0061	Depleted	0.253	0.740	22	47.2102	47.2102	0.842	0.812	-	10.821 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	-	37.328	-
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.755	-	33.374 - Bush Stone-curlew Burhinus grallarius (10174)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.567	-	29.790 - Square-tailed Kite Lophoictinia isura (10230)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.795	-	34.135 - Grey Falcon Falco hypoleucos (10236)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.899	-	36.118 - Black Falcon Falco subniger (10238)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.681	-	31.962 - Swift Parrot Lathamus discolor (10309)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.487	-	28.278 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.784	-	33.917 - Painted Honeyeater Grantiella picta (10598)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.917	-	36.445 - Bearded Dragon Pogona barbata (12177)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.692	-	32.178 - Lace Monitor Varanus varius (12283)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.909	-	36.294 - Golden Sun Moth Synemon plana (15021)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Buloke Allocasuarina luehmannii (500678)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.555 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.767	-	33.607 - Small Monkey-flower Elacholoma prostrata (502196)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.764	-	33.549 - Cane Spear-grass Austrostipa breviglumis (503268)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Spear-grass Austrostipa trichophylla (504512)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.755	-	33.375 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Late-flower Flax-lily Dianella tarda (505085)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.762	-	33.508 - Cobberas Grevillea Grevillea brevifolia (505489)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.765	-	33.552 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-b	Patch	-	Gold0070	Depleted	0.279	0.730	65	136.3064	136.3064	0.963	0.872	-	35.601 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	-	10.203	-
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.722	-	9.547 - Bush Stone-curlew Burhinus grallarius (10174)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.565	-	8.678 - Square-tailed Kite Lophoictinia isura (10230)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.788	-	9.914 - Grey Falcon Falco hypoleucos (10236)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.897	-	10.521 - Black Falcon Falco subniger (10238)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.683	-	9.330 - Swift Parrot Lathamus discolor (10309)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.495	-	8.290 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.783	-	9.885 - Painted Honeyeater Grantiella picta (10598)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.923	-	10.665 - Bearded Dragon Pogona barbata (12177)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.692	-	9.380 - Lace Monitor Varanus varius (12283)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.912	-	10.603 - Golden Sun Moth Synemon plana (15021)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Buloke Allocasuarina luehmannii (500678)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.719 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.752	-	9.712 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Cane Spear-grass Austrostipa breviglumis (503268)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Half-bearded Spear-grass Austrostipa hemipogon (503985)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Spear-grass Austrostipa trichophylla (504512)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.737	-	9.630 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Late-flower Flax-lily Dianella tarda (505085)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.760	-	9.758 - Cobberas Grevillea Grevillea brevifolia (505489)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.753	-	9.720 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.756	-	9.735 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-c	Patch	-	Gold0070	Depleted	0.279	0.730	19	39.7480	39.7480	0.840	0.853	-	10.275 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	-	1.546	-
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.745	-	1.446 - Bush Stone-curlew Burhinus grallarius (10174)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.540	-	1.277 - Square-tailed Kite Lophoictinia isura (10230)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.770	-	1.468 - Grey Falcon Falco hypoleucos (10236)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.875	-	1.554 - Black Falcon Falco subniger (10238)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.640	-	1.360 - Swift Parrot Lathamus discolor (10309)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.454	-	1.205 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.745	-	1.447 - Painted Honeyeater Grantiella picta (10598)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.893	-	1.570 - Bearded Dragon Pogona barbata (12177)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.653	-	1.371 - Lace Monitor Varanus varius (12283)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Buloke Allocasuarina luehmannii (500678)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.684	-	1.396 - Small Monkey-flower Elacholoma prostrata (502196)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Cane Spear-grass Austrostipa breviglumis (503268)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Spear-grass Austrostipa trichophylla (504512)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.688	-	1.400 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Late-flower Flax-lily Dianella tarda (505085)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.702	-	1.411 - Cobberas Grevillea Grevillea brevifolia (505489)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.703	-	1.412 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-d	Patch	-	Gold0175	Vulnerable	0.269	0.700	2	6.1688	6.1688	0.865	0.731	-	1.435 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	-	22.984	-
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.741	-	23.352 - Bush Stone-curlew Burhinus grallarius (10174)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.550	-	20.797 - Square-tailed Kite Lophoictinia isura (10230)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.763	-	23.652 - Grey Falcon Falco hypoleucos (10236)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.878	-	25.192 - Black Falcon Falco subniger (10238)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.658	-	22.239 - Swift Parrot Lathamus discolor (10309)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.485	-	19.922 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.762	-	23.635 - Painted Honeyeater Grantiella picta (10598)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.909	-	25.615 - Bearded Dragon Pogona barbata (12177)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.659	-	22.262 - Lace Monitor Varanus varius (12283)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.893	-	25.398 - Golden Sun Moth Synemon plana (15021)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Buloke Allocasuarina luehmannii (500678)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.683	-	22.582 - Small Monkey-flower Elacholoma prostrata (502196)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.689	-	22.663 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Cane Spear-grass Austrostipa breviglumis (503268)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Spear-grass Austrostipa trichophylla (504512)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.637	-	21.965 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Late-flower Flax-lily Dianella tarda (505085)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.687	-	22.633 - Cobberas Grevillea Grevillea brevifolia (505489)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.702	-	22.832 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.687	-	22.637 - Sutton Grange Greenhood Pterostylis agrestis (507734)

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Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-e	Patch	-	Gold0175	Vulnerable	0.269	0.700	47	99.8144	99.8144	0.713	0.713	-	22.980 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	-	8.317	-
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.765	-	8.692 - Bush Stone-curlew Burhinus grallarius (10174)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.552	-	7.641 - Square-tailed Kite Lophoictinia isura (10230)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.780	-	8.766 - Grey Falcon Falco hypoleucos (10236)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.884	-	9.276 - Black Falcon Falco subniger (10238)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.659	-	8.169 - Swift Parrot Lathamus discolor (10309)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.469	-	7.234 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.763	-	8.680 - Painted Honeyeater Grantiella picta (10598)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.905	-	9.381 - Bearded Dragon Pogona barbata (12177)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.679	-	8.269 - Lace Monitor Varanus varius (12283)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.906	-	9.383 - Golden Sun Moth Synemon plana (15021)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Buloke Allocasuarina luehmannii (500678)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.577	-	7.767 - Small Monkey-flower Elacholoma prostrata (502196)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.678	-	8.262 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Cane Spear-grass Austrostipa breviglumis (503268)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Half-bearded Spear-grass Austrostipa hemipogon (503985)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Spear-grass Austrostipa trichophylla (504512)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.746	-	8.599 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Late-flower Flax-lily Dianella tarda (505085)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.690	-	8.321 - Cobberas Grevillea Grevillea brevifolia (505489)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.689	-	8.319 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.730	-	8.518 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-f	Patch	-	Gold0061	Depleted	0.251	0.720	18	39.2361	39.2361	0.689	0.726	-	8.497 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	-	26.334	-
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.727	-	23.360 - Bush Stone-curlew Burhinus grallarius (10174)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.567	-	21.189 - Square-tailed Kite Lophoictinia isura (10230)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.792	-	24.234 - Grey Falcon Falco hypoleucos (10236)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.882	-	25.453 - Black Falcon Falco subniger (10238)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.661	-	22.459 - Swift Parrot Lathamus discolor (10309)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.485	-	20.082 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.771	-	23.949 - Painted Honeyeater Grantiella picta (10598)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.914	-	25.890 - Bearded Dragon Pogona barbata (12177)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.674	-	22.641 - Lace Monitor Varanus varius (12283)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.888	-	25.540 - Golden Sun Moth Synemon plana (15021)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Ausfeld's Wattle Acacia ausfeldii (500013)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Buloke Allocasuarina luehmannii (500678)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.194 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.716	-	23.215 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.717	-	23.221 - Cane Spear-grass Austrostipa breviglumis (503268)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Spear-grass Austrostipa trichophylla (504512)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.695	-	22.928 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Late-flower Flax-lily Dianella tarda (505085)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.708	-	23.104 - Cobberas Grevillea Grevillea brevifolia (505489)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.715	-	23.199 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-g	Patch	-	Gold0070	Depleted	0.280	0.730	46	96.6757	96.6757	0.947	0.832	-	24.772 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	-	5.758	-
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.758	-	5.365 - Bush Stone-curlew Burhinus grallarius (10174)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.557	-	4.753 - Square-tailed Kite Lophoictinia isura (10230)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.794	-	5.477 - Grey Falcon Falco hypoleucos (10236)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.897	-	5.791 - Black Falcon Falco subniger (10238)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.671	-	5.100 - Swift Parrot Lathamus discolor (10309)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.479	-	4.514 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.774	-	5.415 - Painted Honeyeater Grantiella picta (10598)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.912	-	5.837 - Bearded Dragon Pogona barbata (12177)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.677	-	5.120 - Lace Monitor Varanus varius (12283)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Buloke Allocasuarina luehmannii (500678)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.755	-	5.357 - Small Monkey-flower Elacholoma prostrata (502196)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Cane Spear-grass Austrostipa breviglumis (503268)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Spear-grass Austrostipa trichophylla (504512)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.765	-	5.387 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Late-flower Flax-lily Dianella tarda (505085)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.383 - Cobberas Grevillea Grevillea brevifolia (505489)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.763	-	5.382 - Sutton Grange Greenhood Pterostylis agrestis (507734)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-h	Patch	-	Gold0061	Depleted	0.253	0.760	11	24.1331	24.1331	0.886	0.813	-	5.534 - Eltham Copper Paralucia pyrodiscus lucida (65003)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	-	2.391	-
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.732	-	2.202 - Bush Stone-curlew Burhinus grallarius (10174)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.550	-	1.971 - Square-tailed Kite Lophoictinia isura (10230)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.779	-	2.261 - Grey Falcon Falco hypoleucos (10236)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.883	-	2.394 - Black Falcon Falco subniger (10238)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.646	-	2.092 - Swift Parrot Lathamus discolor (10309)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.467	-	1.866 - Chestnut-rumped Heathwren Calamanthus pyrrhopygius (10498)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.755	-	2.231 - Painted Honeyeater Grantiella picta (10598)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.900	-	2.416 - Bearded Dragon Pogona barbata (12177)

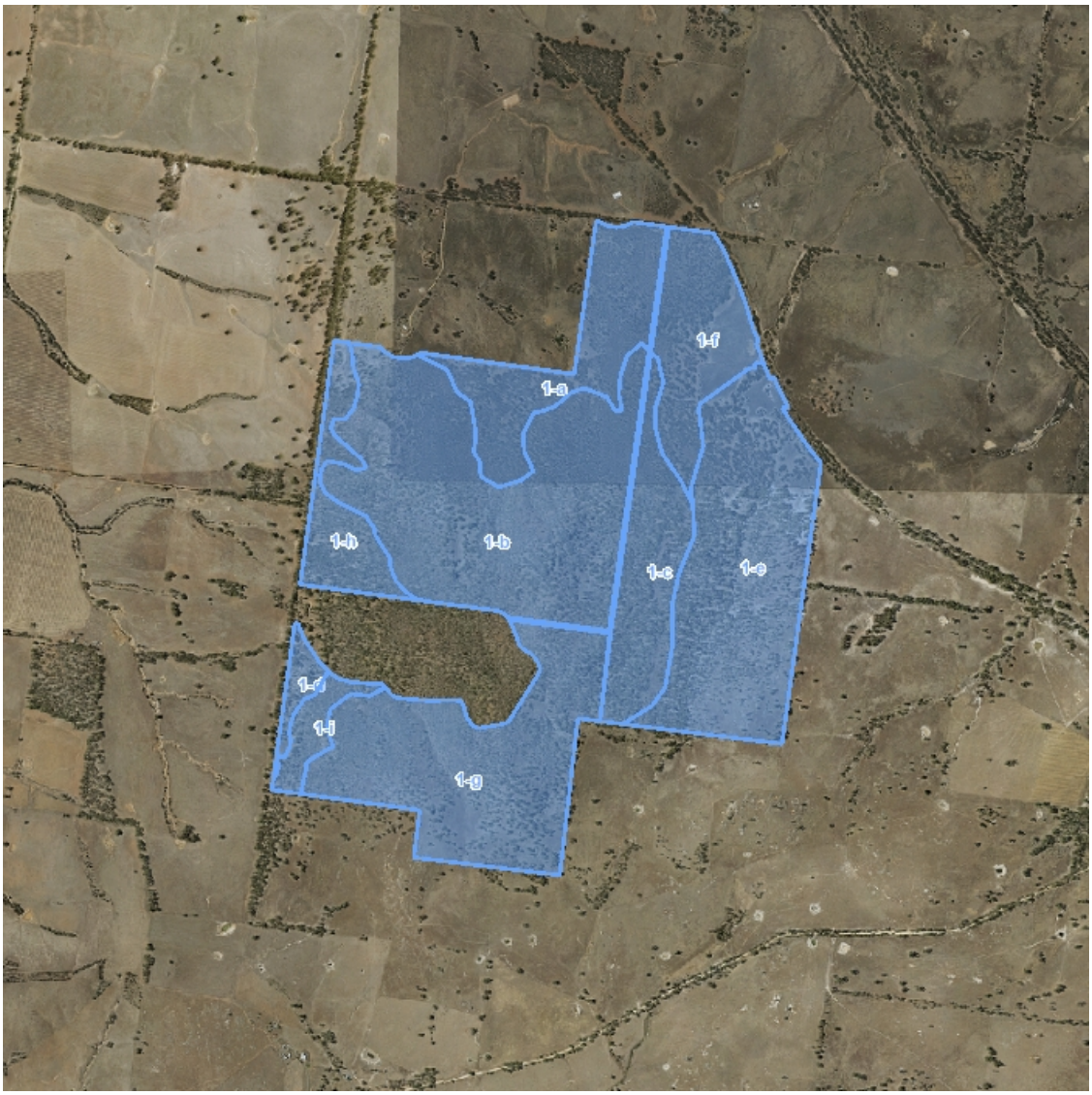
Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.664	-	2.116 - Lace Monitor Varanus varius (12283)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Ausfeld's Wattle Acacia ausfeldii (500013)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Buloke Allocasuarina luehmannii (500678)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Cottony Cassinia Cassinia ozothamnoides (501560)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.688	-	2.146 - Small Monkey-flower Elacholoma prostrata (502196)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Flat-leaf Bush-pea Pultenaea platyphylla (502865)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Cane Spear-grass Austrostipa breviglumis (503268)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Half-bearded Spear-grass Austrostipa hemipogon (503985)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Spear-grass Austrostipa trichophylla (504512)

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Gain score**	**Condition Score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap**	**SBV score**	**HI Score**	**General Habitat Units**	**Species Habitat Units**
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.208 - Spiny Rice-flower Pimelea spinescens subsp. spinescens (504823)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Late-flower Flax-lily Dianella tarda (505085)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.730	-	2.199 - Cobberas Grevillea Grevillea brevifolia (505489)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Arching Flax-lily Dianella sp. aff. longifolia (Benambra) (505560)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.736	-	2.207 - Sutton Grange Greenhood Pterostylis agrestis (507734)
1-i	Patch	-	Gold0061	Depleted	0.253	0.730	5	10.0503	10.0503	0.881	0.762	-	2.240 - Eltham Copper Paralucia pyrodiscus lucida (65003)

Appendix 2 - Images of mapped native vegetation

1. Property in context

2. Aerial photograph showing mapped native vegetation

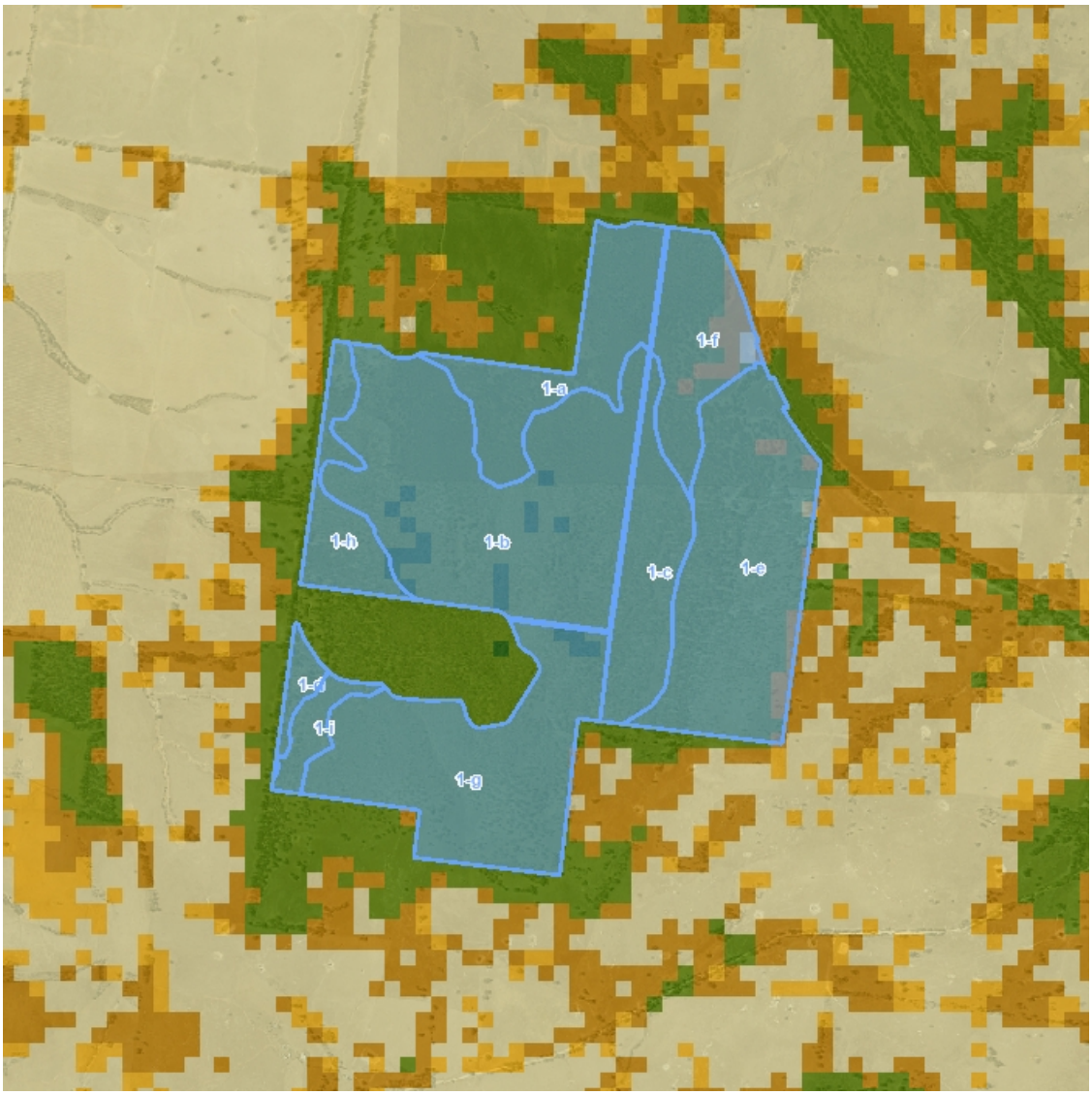


Patches
Scattered Trees
Revegetation Areas

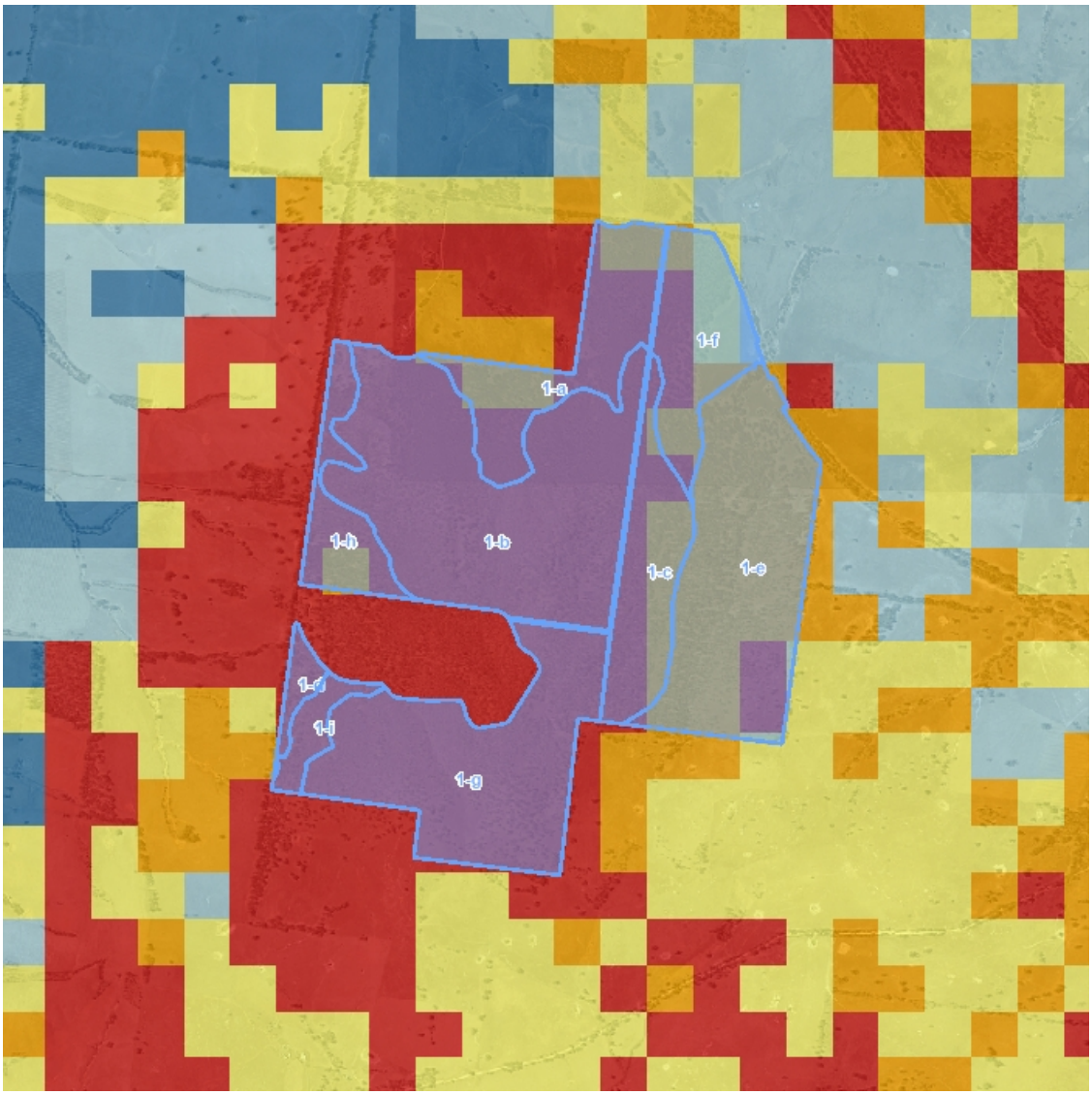
N

700 m

3. Modelled Condition Score Map



4. Strategic Biodiversity Value Score Map



7. Habitat Importance maps

Bush Stone-curlew

Burhinus grallarius

10174

Square-tailed Kite

Lophoictinia isura

10230

Grey Falcon

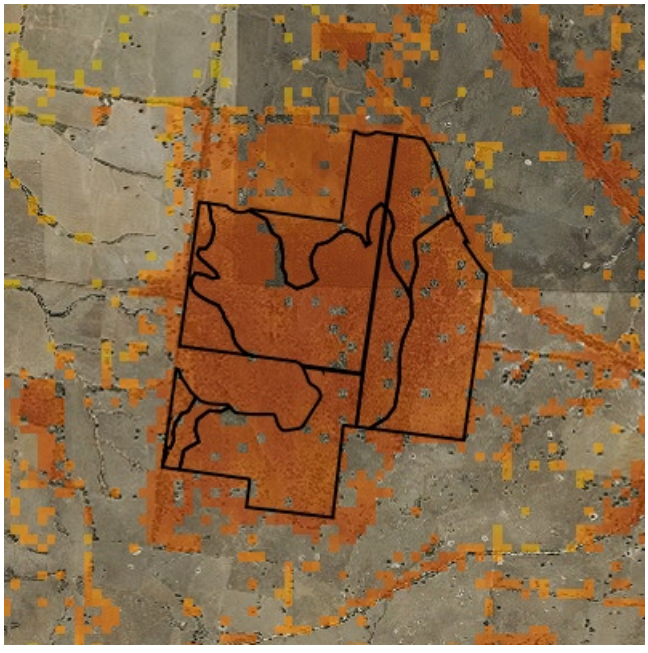
Falco hypoleucos

10236

Black Falcon

Falco subniger

10238



Offset Features

Habitat Importance

0 100

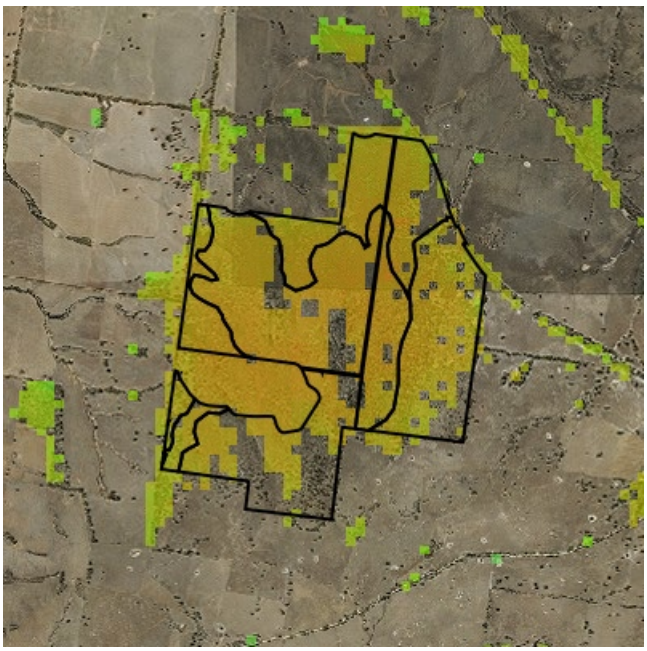
N

700 m

Swift Parrot

Lathamus discolor

10309



Chestnut-rumped Heathwren

Calamanthus pyrrhopygius

10498

Painted Honeyeater

Grantiella picta

10598

Bearded Dragon

Pogona barbata

12177

Offset Features

Habitat Importance

0 100

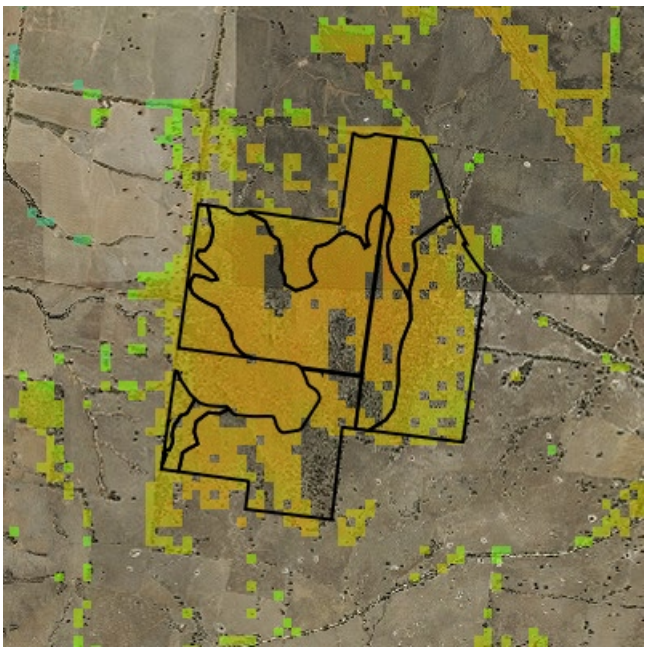
N

700 m

Lace Monitor

Varanus varius

12283



Golden Sun Moth

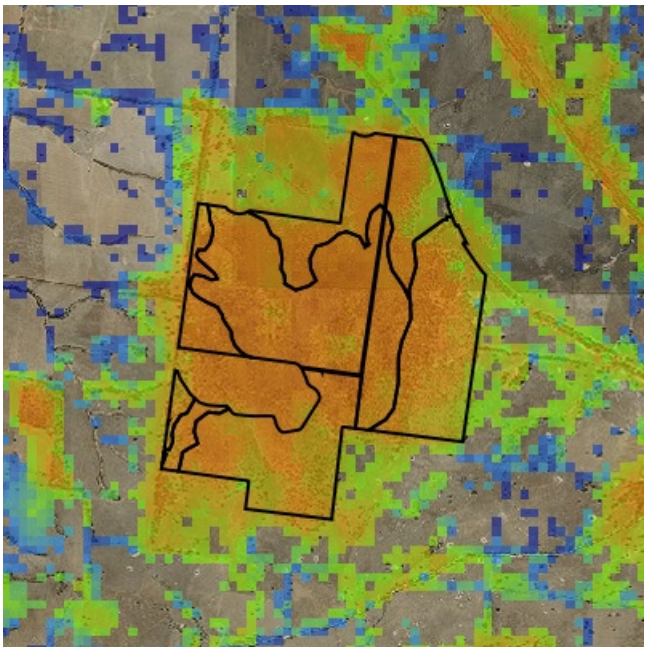
Synemon plana

15021

Ausfeld's Wattle

Acacia ausfeldii

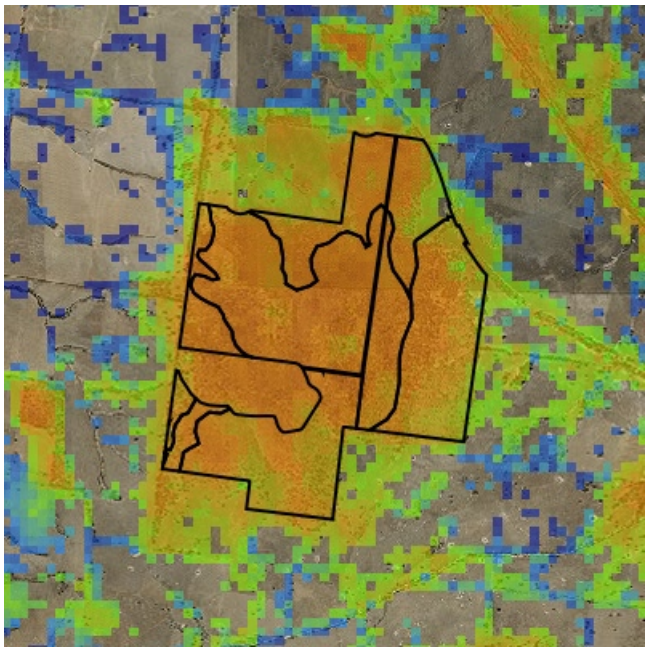
500013



Buloke

Allocasuarina luehmannii

500678



Offset Features

Habitat Importance

0 100

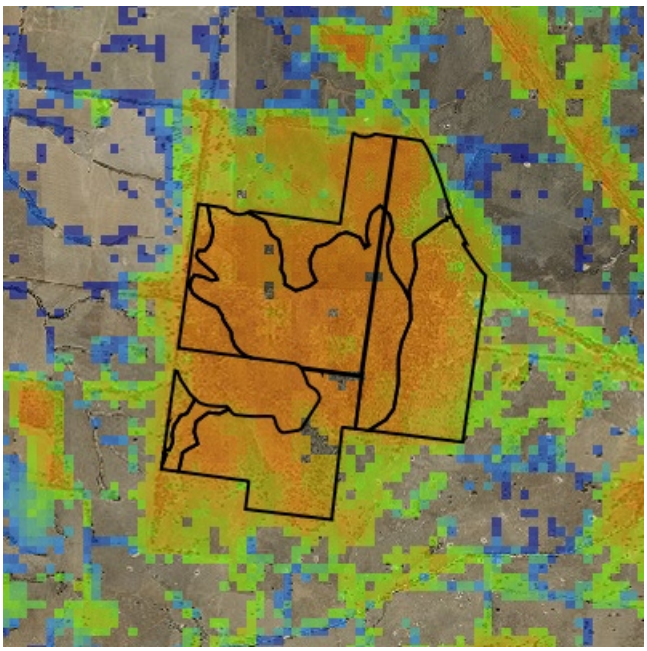
N

700 m

Cottony Cassinia

Cassinia ozothamnoides

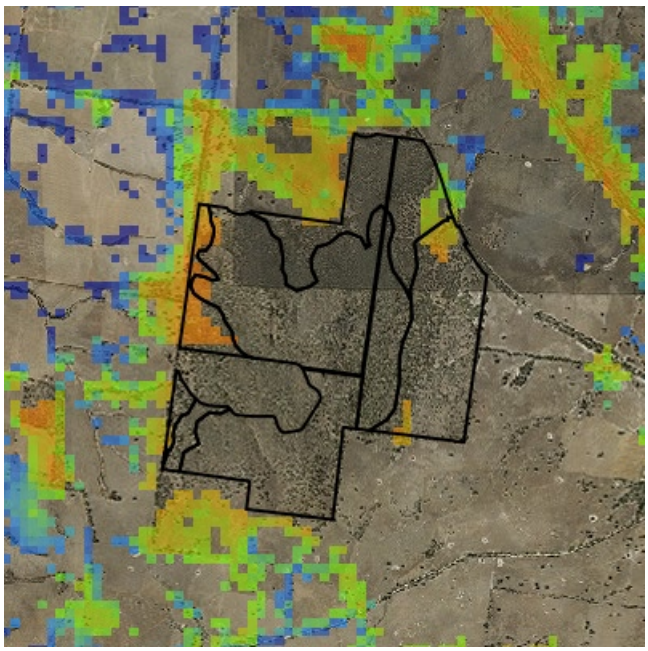
501560



Small Monkey-flower

Elacholoma prostrata

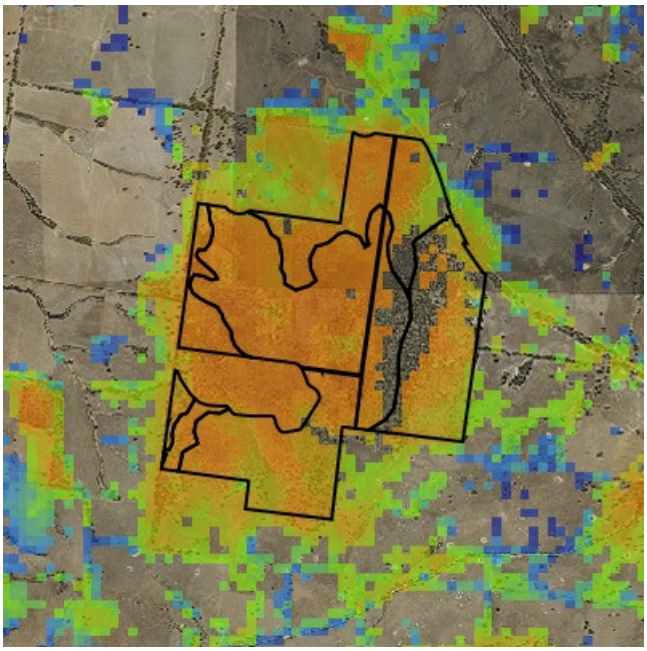
502196



Flat-leaf Bush-pea

Pultenaea platyphylla

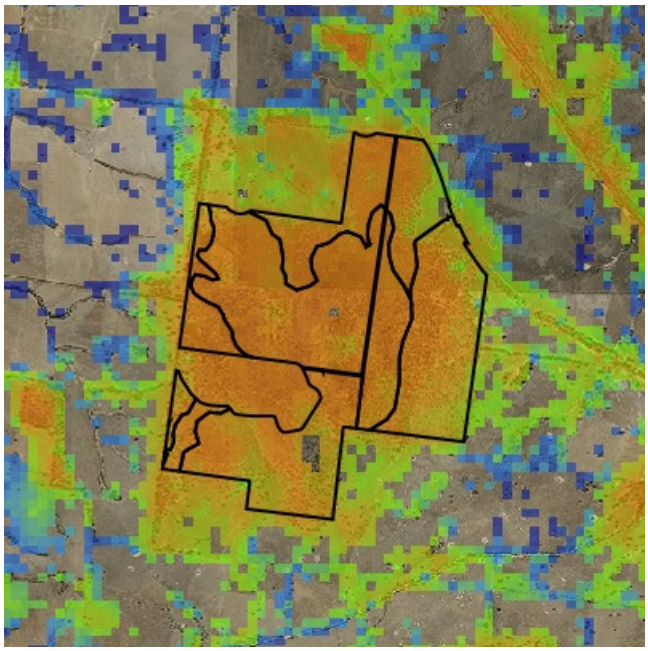
502865



Cane Spear-grass

Austrostipa breviglumis

503268



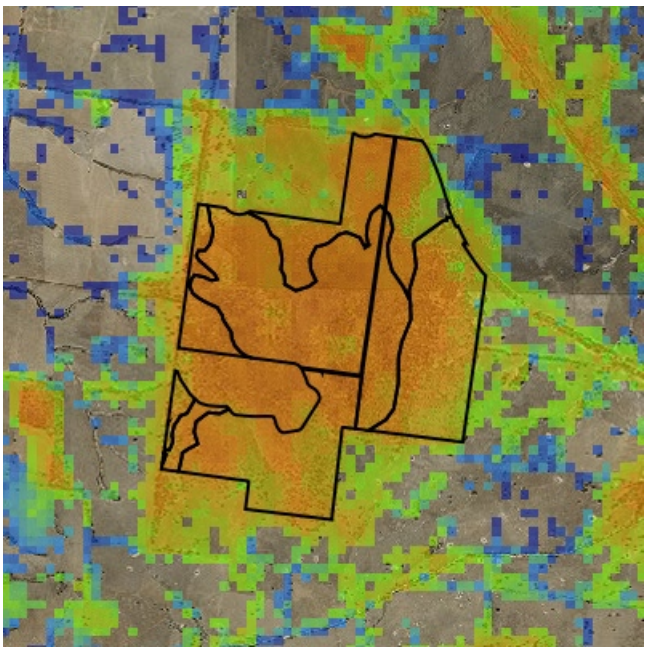
Offset Features

Habitat Importance

Half-bearded Spear-grass

Austrostipa hemipogon

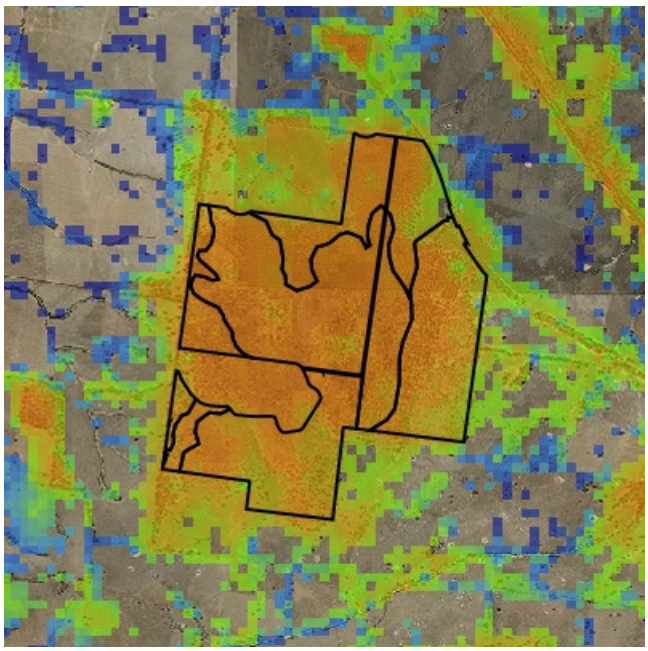
503985



Spear-grass

Austrostipa trichophylla

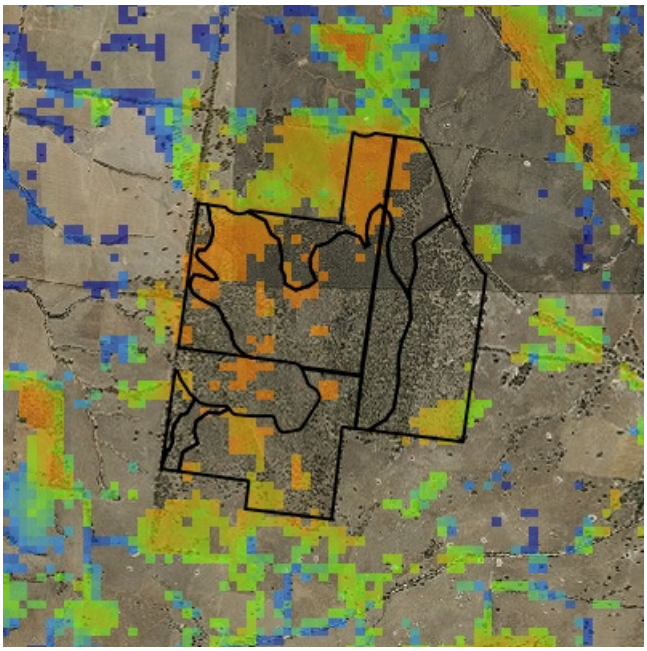
504512



Spiny Rice-flower

Pimelea spinescens subsp. spinescens

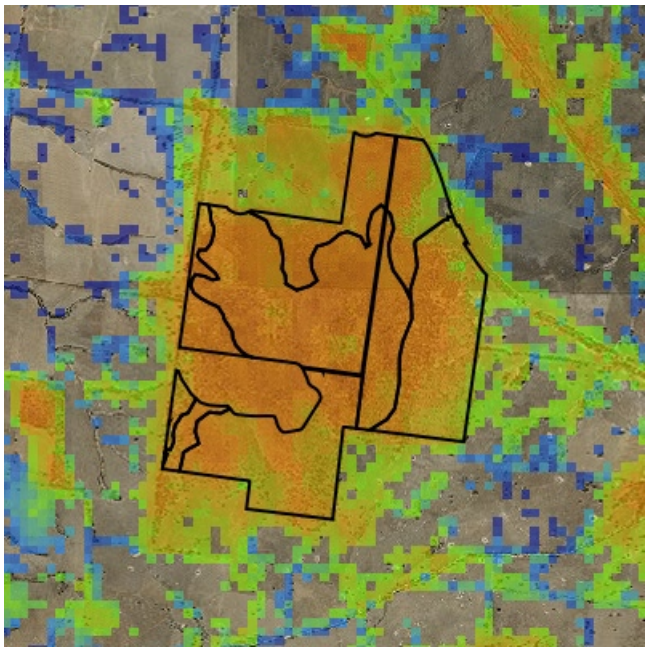
504823



Late-flower Flax-lily

Dianella tarda

505085



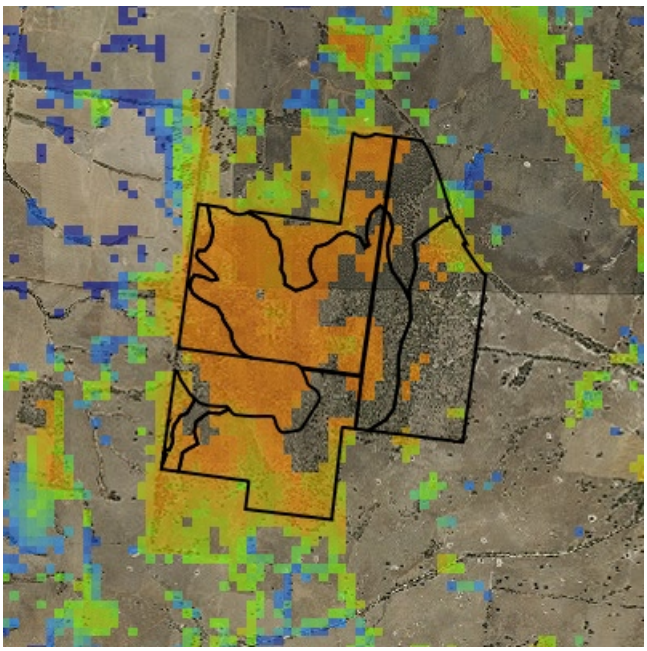
Offset Features

Habitat Importance

Cobberas Grevillea

Grevillea brevifolia

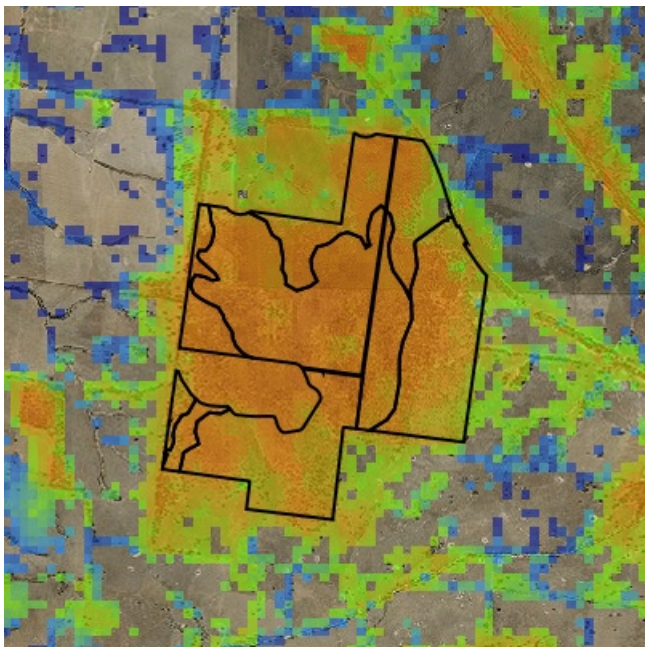
505489



Arching Flax-lily

Dianella sp. aff. longifolia (Benambra)

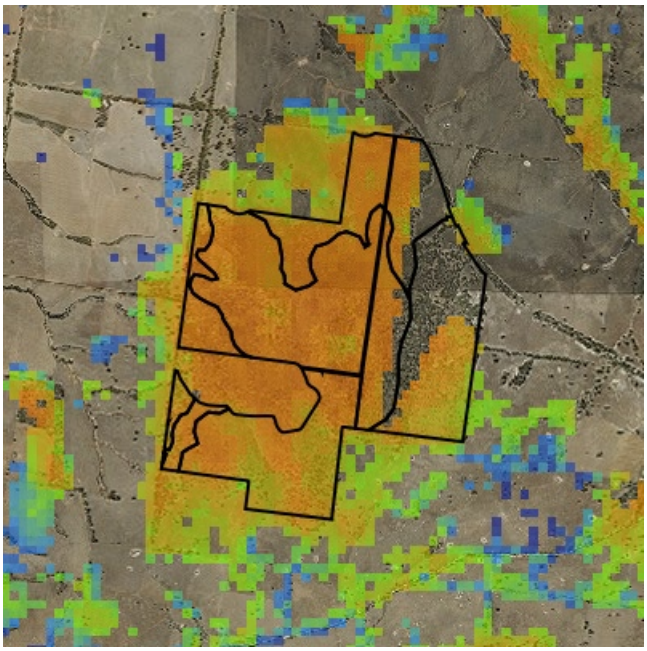
505560



Sutton Grange Greenhood

Pterostylis agrestis

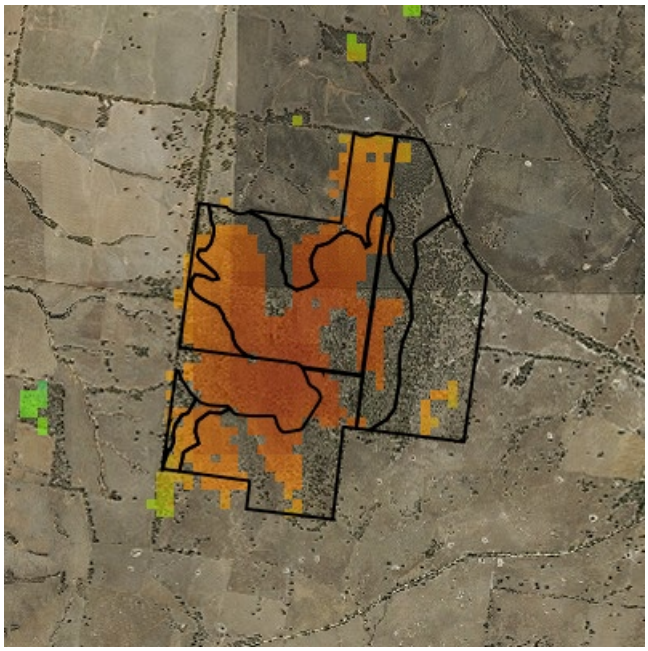
507734



Eltham Copper

Paralucia pyrodiscus lucida

65003



Offset Features

Habitat Importance

APPENDIX H

LIMITATIONS STATEMENT

H1.1 LIMITATIONS STATEMENT

This Report is provided by WSP Australia Pty Limited (*WSP*) for E.B. Mawson & Sons Pty. Ltd. (*Client*) in response to specific instructions from the Client and in accordance with WSP's proposal dated 21/09/2022 and agreement with the Client dated 07/10/2022 (*Agreement*).

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