



Aquaterra
Scientific



NATIVE VEGETATION REMOVAL SITE ASSESSMENT REPORT

GOFARM MAPLESTONE ORCHARD
- ROSS ROAD PROPERTY

Report prepared to support application for a
Planning Permit: Moira Shire Council

Prepared for goFARM Australia

v.00.181223 Final Report


Project: Native Vegetation Removal Site Assessment Report
 goFARM Ross Road (Maplestone)

To: goFARM Australia
 PO Box 4190, Richmond East VIC 3121

DOCUMENT CONTROL

Report Title	Native Vegetation Removal Site Assessment Report - goFARM Maplestone Orchard - Ross Road					
Document Status	Final_00	Project Number	PRJ-2023-011			
File path	E:\PROJECTS\goFARM\Repprt\Ross Road\Report\Final					
Client	goFARM Australia					
Revision	Date	Revision details	Author	Reviewer	Client – goFARM	
0A	16/11/23	Draft Report	H. Fidock	H. Fidock	David Baker	
00	18/12/23	Final Report	H. Fidock	H. Fidock	David Baker	

DOCUMENT APPROVAL

Author	Heath Fidock
Signature	
Title	Senior Ecologist

Issued by: Aquaterra Scientific Pty Ltd PO Box 298
 ACN: 600300427 Tatura VIC 3616

Aquaterra Scientific Pty Ltd provides this document in either printed format, electronic format or both. The printed version is considered to be binding. If no printed version is supplied the secured electronic pdf is considered binding. The electronic format is provided for your convenience and we request that you ensure the integrity of this electronic information is maintained. Storage of this electronic information should at a minimum comply with the requirements of the Electronic Transactions Act 2000 (Cth).

© **Document Copyright:** Aquaterra Scientific Pty Ltd

The contents of this document are and remain the intellectual property of Aquaterra Scientific Pty Ltd and are not to be provided or disclosed to third parties without our prior written consent. No use of the contents, concepts, designs, drawings, specifications, plans, etc included in this document is permitted unless and until they are the subject of a written contract between goFARM Australia and the addressee of this document. Aquaterra Scientific Pty Ltd accepts no liability of any kind for any unauthorised use of the contents of this document and reserves the right to seek compensation for any such unauthorised use.

TABLE OF CONTENTS

1	Introduction.....	7
1.1	Background and project description	7
1.2	Assessment objectives.....	7
1.3	Assessment scope	7
1.4	Site assessor	7
2	Methods.....	9
2.1	Database review	9
2.2	Threatened species and community assessment.....	9
2.3	Native vegetation field assessment.....	10
2.3.1	Native vegetation mapping	10
2.3.2	Limitations	12
2.4	Legislation and policy.....	12
3	Database Review.....	13
4	Site AssessmentT	15
4.1	Landscape context.....	15
4.2	Site description	15
4.3	Ecological features.....	15
4.4	Native vegetation	15
4.4.1	EVC assessment.....	15
4.5	Mapped vegetation definitions.....	16
4.6	Mapped native vegetation	17
4.7	Native vegetation impacts summary.....	23
5	Cumulative Impacts	24
6	MNES and threatened Species.....	25
6.1	Commonwealth.....	25
6.1.1	Wetlands of international importance.....	25
6.1.2	Listed threatened ecological community	25
6.1.3	Listed threatened species.....	26
6.2	State	27
6.2.1	Summary of recommendations	28

7	Native Vegetation Removal Application Requirements.....	29
8	References.....	34
APPENDIX A	MNES & THREATENED SPECIES ASSESSMENT.....	35
APPENDIX B	PROPOSED VEGETATION IMPACT PHOTOGRAPHS.....	54
APPENDIX C	VEGETATION QUALITY ASSESSMENT RESULTS.....	65
APPENDIX D	NATIVE VEGETATION REMOVAL (NVR) REPORT.....	67
APPENDIX E	OFF-SET BROKER QUOTATION.....	68

TABLES

Table 1	Project Site Land details.....	13
Table 2	Project Site Ecological Details.....	13
Table 3	Occurrence of native vegetation within the Project area.....	17
Table 4	Mapped patch vegetation.....	18
Table 5	Mapped trees/saplings.....	18
Table 6	Summary of scattered trees likely to be impacted and require off-set.....	23
Table 7	Hollow bearing trees.....	23
Table 8	RAMSAR wetlands occurring within the feature area.....	25
Table 9	EPBC listed ecological community likelihood of occurrence.....	26
Table 10	Summary of EPBC Act listed species likely to occur at the Project site.....	26
Table 11	Summary of threatened species likely to occur at the Project site.....	27
Table 12	Proposed native vegetation removal justification.....	31

EXECUTIVE SUMMARY

A native vegetation impact assessment has been undertaken for the proposed orchard development at the goFARM Maplestone Ross Road property. The assessment has determined that up to 0.659 hectares of native vegetation, including 12 large scattered trees. In 2020 Moria Shire provided goFARM with approval to remove 1.507 hectares of native vegetation (including 22 large trees, 4 of which were assumed to be hollow bearing trees) for the Maplestone orchard development. Maplestone adjoins the Ross Road property to the north.

The proposed development area takes in the southern extent of the Maplestone orchard and is located north-east of the Kokoda Road and Ross Road intersection. The property is flat heavily disturbed and modified agricultural land, formally used for irrigated and dryland cropping. Scattered large trees is the dominant vegetation encountered across the properties, with also a few scattered fragments of remnant patch vegetation. In most instances agricultural production has occurred up to the base of trees. Native shrub and ground cover is almost non-existent around the scattered trees or within existing remnant patch. Agricultural crop and weeds are the dominant ground layer feature. Tree species include Grey Box (*Eucalyptus microcarpa*), and some scatterings of White Cyprus (*Callitris glaucophylla*).

The site assessment involved targeted native vegetation mapping, focusing on native vegetation that is proposed to be removed. In addition to this desktop mapping has also been carried out to estimate the remaining native vegetation on the property, to determine the total extent of native vegetation at the property.

This native vegetation impact assessment identified the following:

- Proposed removal of 12 scattered trees (including 2 hollow bearing trees).
- Proposed avoidance of two (2) patches of native vegetation is mapped to be 0.2298 hectares (including 4 large trees, one of which is hollow bearing).
- An additional estimated 0.8 hectares and 14 scattered trees on the property (outside the assessment area) will be retained and protected for conservation.

In total the cumulative extent of proposed removal is 2.166 hectares, including 34 large trees, which includes an estimated 6 hollow bearing trees.

Threatened species analysis

- The assessed identified 52 species of threatened flora and fauna that may exist within 5km of the project site. Of these, one (1) EPBC listed species; Swift Parrot, was assessed as likely to occur within the Project site. Assessment against the Significant Impact Criteria determined that impacts are likely to be low, therefore no further assessment, or EPBC referral is required. Three (3) FFG listed species were assessed as having a medium or higher likelihood of occurring within the Project area. Assessment against the potential for impact to these species determine the overall impact risk to these species as low.
- Five (5) EPBC Act listed ecological communities are predicted to occur within the feature area. Assessment for the presence of each community determined that one ecological community, 'Grey

Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia' is located close to the site and may be present. Assessment against the Listing Advice criteria determined that this threatened community is not present, mainly due to relative patch size being below the 0.5 hectare size threshold, and weed cover being in excess of the 50% cover threshold.

Avoid/minimise

Native vegetation avoidance and minimisation has been a key consideration in the design and construction methodology development for this project. The design of the orchard extension has undergone numerous iterations in order to avoid native vegetation. Through a reduced construction footprint (for the purposes of protecting some heavily treed portions of land in the centre of the property) and applying strategic avoidance and impact minimisation, and keeping in mind the economic feasibility of the Project, the extent of removal has been reduced to 0.659 hectares, a saving of approximately 2.02 hectares.

An off-set quotation has been secured for the required off-set amount as specified in the DEECA NVR Report provided in this assessment report.

1 INTRODUCTION

1.1 Background and project description

goFARM Australia plans to develop land on north-east corner of the Kokoda Road and Ross Road intersection. The property, Maplestone Ross Road property is proposed to be transformed into an orchard. The property adjoins the Maplestone orchard property to the north and will be part of that operation. In 2021 approval was granted by the Moria Shire Council to remove 1.507 hectares of native vegetation, including 22 large trees from the existing Maplestone orchard. As part of the proposed orchard development of the Ross Road property, some native vegetation will need to be removed. The native vegetation proposed for removal on the Ross Road property is the subject of this Site Assessment Report.

The Project site location is provided in **Figure 1**.

1.2 Assessment objectives

The overall objective of this assessment is to gain regulatory approval to remove native vegetation for the Ross Road site development. This will be achieved by meeting the following sub-adjectives:

- Demonstrating a concerted effort to avoid and minimise disturbance to native vegetation, and
- Minimising impacts to threatened species.

1.3 Assessment scope

The native vegetation impact assessment included the following tasks:

- Detailed desktop assessment and database review
- Native vegetation mapping
- Threatened species analysis
- Native vegetation avoidance and impact minimisation analysis

1.4 Site assessor

Aquaterra Scientific lead ecologist, Heath Fidock undertook the Project site native vegetation assessment. Heath is a Department of Energy, Environment and Climate Action (DEECA) Vegetation Quality Assessment (VQA) accredited site assessor who has been working in the Victorian native vegetation assessment sector for more than 15 years. Heath has carried out more than 100 vegetation assessments in Victoria, applying the current vegetation management framework.

Academic Qualifications:

- Bachelor of Science (Ecology and Conservation Biology), Griffith University, 2003
- Master of Environmental Management, Charles Sturt University, 2009

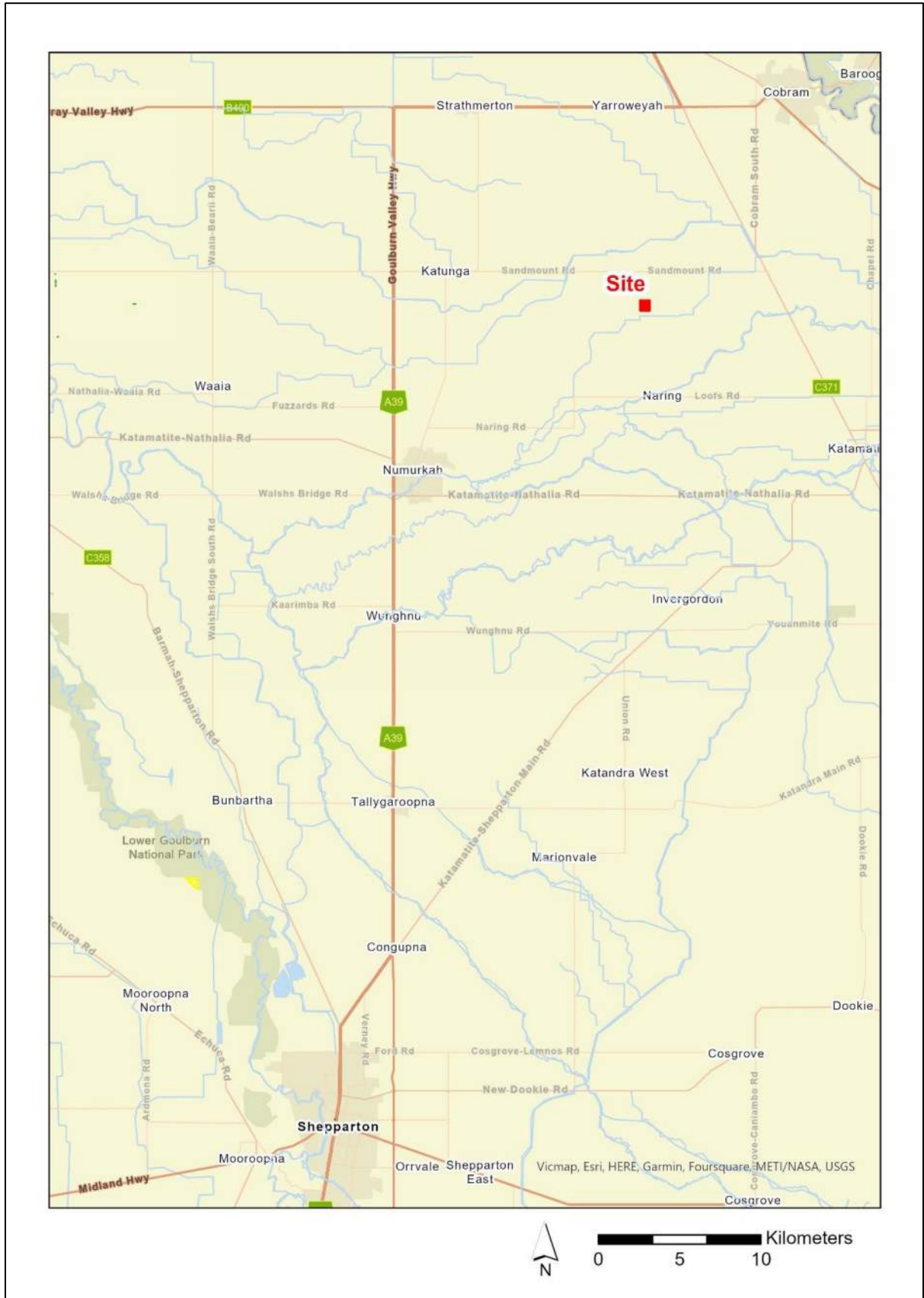


Figure 1 Project Site Location

2 METHODS

2.1 Database review

Relevant literature, online-resources and databases were reviewed to provide an up-to-date assessment of background information, including cadastral information, landscape characteristics and ecological values and significance associated with the study area and surrounds. Information was obtained from the sources outlined below:

- DEECA NatureKit Online Biodiversity Mapping Tool for:
 - Modelled data for remnant vegetation patches and habitat for rare or threatened species;
 - The extent of historic and current Ecological Vegetation Classes (EVC)s;
 - Bioregional status;
 - The location of sites of biological significance within the region; and
 - Threatened species of flora and fauna in Victoria (Victorian Biodiversity Atlas - VBA).
 - The Commonwealth Department of the Environment (DoE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (DEE 2019);
 - Relevant federal and State legislation and policies, including the EPBC Act and Flora and Fauna Guarantee Act 1988 (FFG Act);
- Mapshare Online:
 - Cadastral information
 - Relevant planning information
- Google Earth Pro:
 - Aerial imagery
 - Historical imagery

2.2 Threatened species and community assessment

The significance of a species or ecological community is determined by its listing status in Commonwealth (Environmental Protection and Biodiversity Conservation (EPBC) Act, or state legislation (Flora and Fauna guarantee (FFG) Act). Listing status is set out below:

- Commonwealth (EPBC Act): Listed as critically endangered, endangered, or vulnerable.
- State (FFG Threatened List): Listed as critically endangered, endangered or vulnerable.

Likelihood of occurrence and assessment of impact significance

Likelihood of occurrence indicates the potential for a species or ecological community to occur regularly within the study area. Likelihood of occurrence analysis assesses the potential for a species to be present within the study area based on regional geography, site conditions, habitat requirements, and past records. The likelihood is ranked as none, low, medium, high or recorded. Species with a ranking of medium or higher are considered for potential impact significance.

Where an EPBC Act listed threatened species has a moderate or high likelihood of occurrence, or an EPBC Act listed community is confirmed or expected to occur, Self-assessment analysis against the ‘Significant Impact Criteria’ (CoA 2013) is required to determine if the proposed development will “significantly impact’ the species or community. Where the Self-Assessment determines that a significant impact is likely, further targeted assessment work may be required, and/or EPBC Act referral.

2.3 Native vegetation field assessment

A native vegetation assessment for the goFARM Maplestone – Ross Road property was undertaken by the ecologist on 20 October 2023. The assessment included capturing all native vegetation within the designated assessment area (provided by goFARM). Observations were also collected for other vegetation present at the property to aid in site description.

Figure 2 illustrates the assessment area.

Non-native trees and shrubs were not captured as part of this assessment.

Vegetation Quality Assessment (VQA) was undertaken for all patches of native vegetation identified in the study area. This assessment is consistent with DEECA’s habitat hectare method (DSE 2004) and the “Guidelines for the removal, destruction or lopping of native vegetation” (DELWP 2017). All trees were measured and assessed for hollow presence. Detailed photographs of all vegetation were collected.

The desktop assessment also provided a list of potential threatened flora and fauna which was utilized for opportunistic observations while carrying out the native vegetation assessment.

2.3.1 Native vegetation mapping

Field mapping was conducted using a hand-held GPS-enabled tablet. The accuracy of this mapping is therefore subject to the accuracy of the tablets (generally ± 3 metres). Mapping has been produced using a Geographic Information System (GIS).

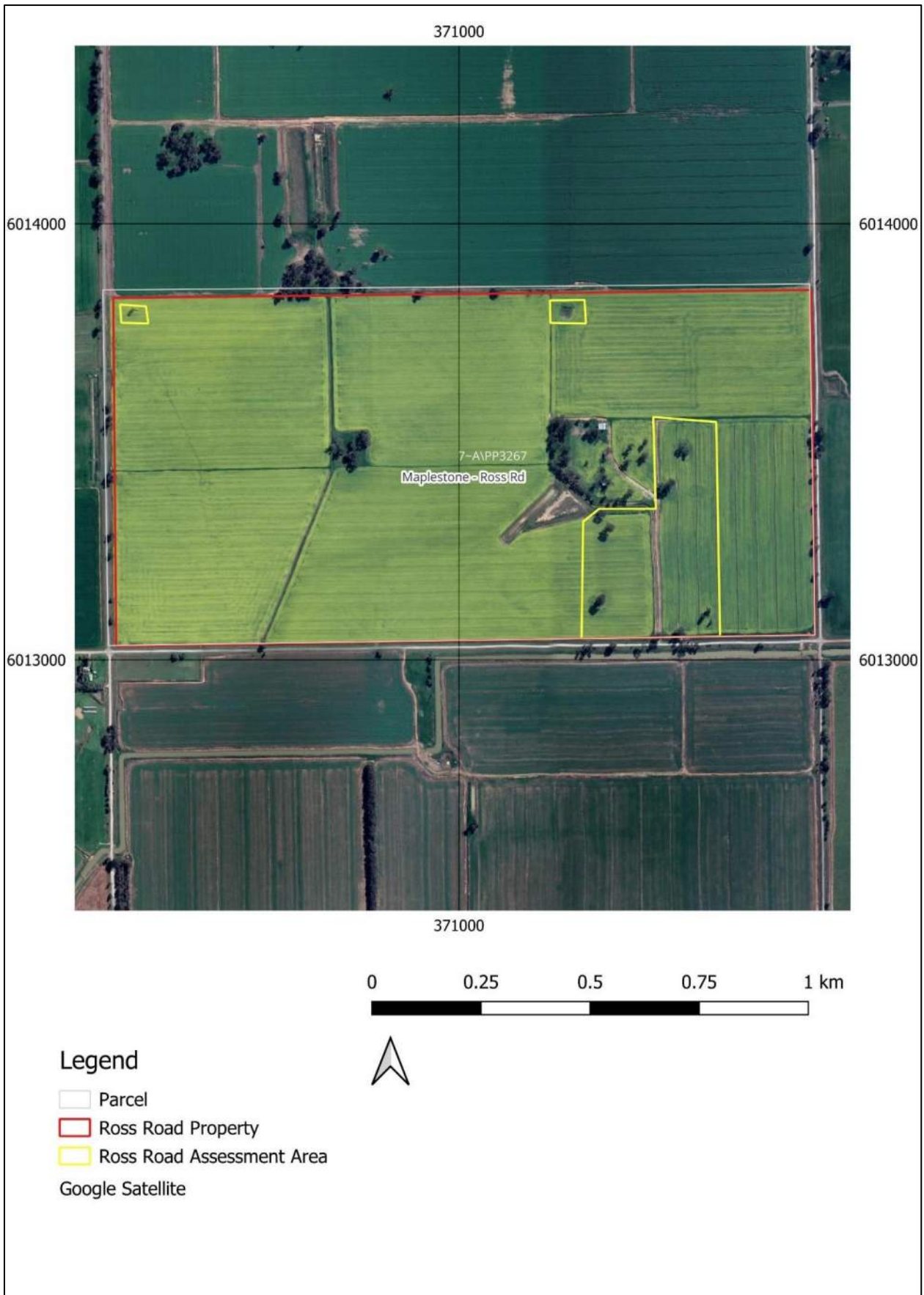


Figure 2 Project assessment area

2.3.2 Limitations

Native vegetation assessment provides sampling of flora at a given time and season. There are a number of reasons why not all species or life forms will be detected at a site during survey, such as low abundance, patchy distribution, species dormancy and seasonal conditions. In many cases these factors do not present a significant limitation to assessing the overall biodiversity values of a site. The native vegetation assessment was undertaken in mid-spring which is considered to be very suitable for some annual flowering species. Given the highly disturbed and modified nature of the site, and recent agricultural workings of almost all ground, conditions were accepted as suitable for site assessment.

2.4 Legislation and policy

The implications for the project were assessed in relation to key biodiversity legislation and policy including:

- Matters listed under the EPBC Act, associated policy statements, significant impacts guidelines, listing advice and key threatening processes;
- Threatened taxa, communities and threatening processes listed under Section 10 of the FFG Act and associated action statements and listing advice;
- Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017a); and
- Planning and Environment Act 1987 – specifically Clauses 12.01-2, 52.17 and 66.02.

3 DATABASE REVIEW

The results of the database review is presented below in **Table 1** and **Table 2**.

Table 1 Project Site Land details

Land ownership	The land is private freehold in the ownership of goFARM Australia
Local Government Area (LGA)	Moira Shire Council
Catchment Management Area (CMA)	Goulburn-Broken
Land tenure	SPI: 7-A\PP3267
Zoning	Farming Zone (FZ)
Topography	The site is relatively flat, with some minor undulation. Most of the property has been land formed and laid out for irrigation. On-site drainage is towards a dam in the centre of the property.
Land use	The former land use is unknown, although expected to be both dryland and irrigated cropping or fodder. The property is currently being operated as dryland cereal crop, prior to be transformed into an orchard.
Surrounding land use	<ul style="list-style-type: none"> – North: orchard – East: dryland/irrigated cropping – South: dryland/irrigated cropping – West: dryland/irrigated cropping

Table 2 Project Site Ecological Details

Nearby ecological features	The Murray River is located approximately 14km to the north-east. The Broken Cree is located approximately 10km to the south.
Bioregion	Murray Fans
Biodiversity Location	The site is generally located within Location 2.
Assessment Pathway	Detailed

<p>Ecological Vegetation Class (EVC)</p>	<p>NatureKit maps the following Ecological Vegetation Classes (EVCs) at the Site:</p> <ul style="list-style-type: none"> • #803 Plains Woodland (conservation status: endangered) • #264 Sandridge Woodland <p>EVC observations provided in Section 3.3.</p>
<p>FFG Listed Threatened Species</p>	<p>Listed threatened species – 16 (3 fauna, 13 flora)</p> <p>Refer to Section 6 and Appendix A for details.</p>
<p>Matters of National Environmental Significance</p>	<ul style="list-style-type: none"> • World Heritage Properties: None • National Heritage Places: None • Wetlands of international importance: 7 • Listed Threatened Ecological Communities: 5 • Listed Threatened Species: 36 (25 fauna, 11 flora) <p>Refer to Section 6 and Appendix A for details.</p>

4 SITE ASSESSMENT

4.1 Landscape context

The study area occurs in a fragmented landscape where introduced vegetation cover is significant and intensive land clearing has taken place over the past 150 years. Land use impacts from clearing, cropping and grazing have reduced vegetation integrity and functionality in northern Victoria (e.g. loss of small native mammals, reduced flora species richness, reduced genetic exchange across communities due to fragmentation). While the agricultural lands have been predominantly cleared for pasture or crop development, they are often interspersed with riparian zones, road reserves and remnant patches and scattered trees in paddocks or reserves. These areas contain significant ecological values and are likely to represent much of the remaining biodiversity in the immediate area. More broadly, the study area is situated between the Murray River riparian area, approximately 20 kilometres north, and the Numurkah Natural Features Reserve which is centred around Broken Creek, and is located approximately 10 Kilometres south of the study area.

4.2 Site description

The Ross Road property is currently being used to grow grain crops. The property is largely cleared except for a some large scattered trees and few fragmented patches. In the centre of the property remnants agricultural infrastructure are located among some remnant trees.

Scattered trees within the assessment area are either Grey Box *Eucalyptus microcarpa*, or White Cyprus *Callitris glaucophylla*. All trees are considered to be large trees indicating that they have existed in the landscape for a long time. Some Grey Box trees are habitat trees consisting of one or more hollows. Understorey around all trees is dominated by exotic weeds including planted cereal crop. Little to no native shrubs, grasses or herbs were observed.

Some patches do exist on the property, including within the assessment area. All patches of native vegetation assessed are highly disturbed and heavily modified. Patch trees consist of Grey Box *E. Microcarpa* and River Redgum *E. camaldulensis*. The patches consist only of the trees within them, with little to no understorey native vegetation. Agricultural weeds dominate the ground layer. Some large trees within patch do contain small hollows.

4.3 Ecological features

There are no ecological features located within the Project Site or within 5km of the site. The Numurkah Natural Features Reserve which is centred around Broken Creek is located to the south of the site and is not expected to be impacted. The Murray River is also located approximately 7 km to the north and will not be impacted by the proposed removal of native vegetation.

4.4 Native vegetation

4.4.1 EVC assessment

The Site is located within the “Murray Fans” bioregion.

The assessment area is characterised by landscape features and life form composition consistent with EVC 803 Plains Woodland, and EVC 264 Sand Ridge Woodland. Differentiating between these EVCs could not be done based on site-specific landscape characteristic due to the tall crops and highly modified nature of the site. The landscape characteristic outside the site, as well as the trees observed specifically characteristic of each EVC) was relied upon.

The Benchmark for EVC 803 Plains Woodland describes this EVC as:

An open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types. Occupies fertile clays and clay loam soils on flat or gently undulating plains at low elevations in areas with <600 mm annual rainfall. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer and chenopods are often present.

Canopy trees characteristic of this EVC include:

- Grey Box *Eucalyptus microcarpa*
- Black Box *Eucalyptus largiflorens*
- Buloke *Allocasuarina luehmannii*
- Black Mallee Box *Eucalyptus porosa*

The Benchmark for EVC 264 Sand Ridge Woodland describes this EVC as:

Open pine-box woodland to 15 m tall with a small or medium shrub layer of variable density and including a range of annual herbs, grasses and geophytes, in the dense ground layer. Occupies distinctive sandy rises (or sand mounts) adjacent to major rivers and wetlands. Very sandy, deep, free draining, moderately fertile soil, developed on sand blown up by wind action from a prior stream bed.

Canopy trees characteristic of this EVC include:



- Yellow Box *Eucalyptus melliodora*
- White Cyprus *Callitris glaucophylla*
- Buloke *Allocasuarina luehmannii*

Although the site is highly modified and disturbed, we are confident that EVCs above are present, and as such has been adopted for the site assessment.

4.5 Mapped vegetation definitions

Native vegetation mapped across the assessment area is generally described by its nature of occurrence, which tends to be consistent across the assessment zone. Its nature of occurrence is defined in Table 3.

Table 3 Occurrence of native vegetation within the Project area

Vegetation definition	Description	Example
Patch vegetation	Where a group of three or more native trees with overlapping canopy, or native shrubs/ground cover where total perennial understory is >25%.	
Scattered Trees	Canopy species >5m in height	

4.6 Mapped native vegetation

The native vegetation mapped within the Project area is detailed in **Table 4** and **Table 5**.

The mapped native vegetation is presented visually in **Figure 2**.

Photographs for all mapped vegetation is provided in **Appendix B**.

Table 4 Mapped patch vegetation

Patch ID	EVC Code	Description / Location*	Impacted by works	No. LTs	Extent (ha)	Hollow bearing trees	VQA undertaken	Photo Reference
1A	Vriv0803	Group of seven (7) small River Redgum trees (possibly planted) with little to no native understory. Surrounded by crop.	No - Avoid	0		No	Yes	Append. B– Photo 1
1B	Vriv0803	Four remnant Grey Box trees (4 x LTs) surrounded by crop. Little to no native understory. Some small hollows present in the trees.	No - Avoid	4		Yes	Yes	Append. B– Photo 2

VQA assessment results are provided in **Appendix D**.

Table 5 Mapped trees/saplings

Tree ID	Species	EVC Code	EVC Benchmark DBH (cm)	DBH (cm)	Size Class	Hollow bearing	Impact	Exempt (yes/no)	Photo Reference
3H	<i>E. microcarpa</i>	MuF_0803	70	111	Large	Yes	Yes, remove	No	Append. B– Photo 3
3I	<i>E. microcarpa</i>	MuF_0803	70	121	Large	Yes	Yes, remove	No	Append. B– Photo 4
3J	<i>Callitris Glaucophylla</i>	MuF_0264	40	45	Large	No	Yes, remove	No	Append. B– Photo 5
3K	<i>Callitris Glaucophylla</i>	MuF_0264	40	48	Large	No	Yes, remove	No	Append. B– Photo 5
3L	<i>Callitris Glaucophylla</i>	MuF_0264	40	48	Large	No	Yes, remove	No	Append. B– Photo 6
3M	<i>Callitris Glaucophylla</i>	MuF_0264	40	63	Large	No	Yes, remove	No	Append. B– Photo 6
3N	<i>Callitris Glaucophylla</i>	MuF_0264	40	68	Large	No	Yes, remove	No	Append. B– Photo 7

Tree ID	Species	EVC Code	EVC Benchmark DBH (cm)	DBH (cm)	Size Class	Hollow bearing	Impact	Exempt (yes/no)	Photo Reference
3O	<i>E. microcarpa</i>	MuF_0803	70	119	Large	No	Yes, remove	No	Append. B– Photo 8
3P	<i>E. microcarpa</i>	MuF_0803	70	106	Large	No	Yes, remove	No	Append. B– Photo 9
3Q	<i>E. microcarpa</i>	MuF_0803	70	127	Large	No	Yes, remove	No	Append. B– Photo 10
3R	<i>E. microcarpa</i>	MuF_0803	70	82	Large	No	Yes, remove	No	Append. B– Photo 10
3S	<i>Callitris Glaucophylla</i>	MuF_0264	40	76	Large	No	Yes, remove	No	Append. B– Photo 11

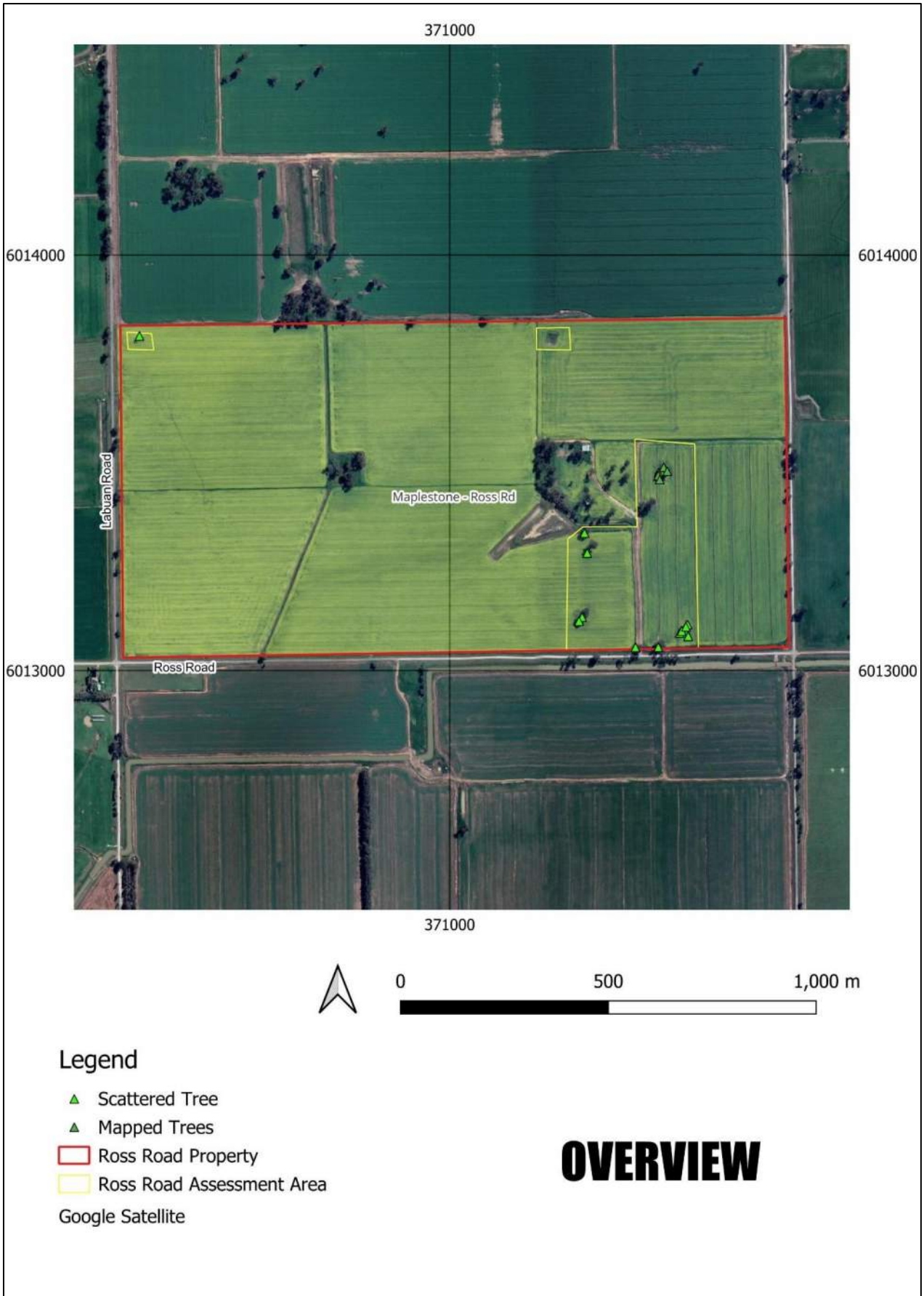
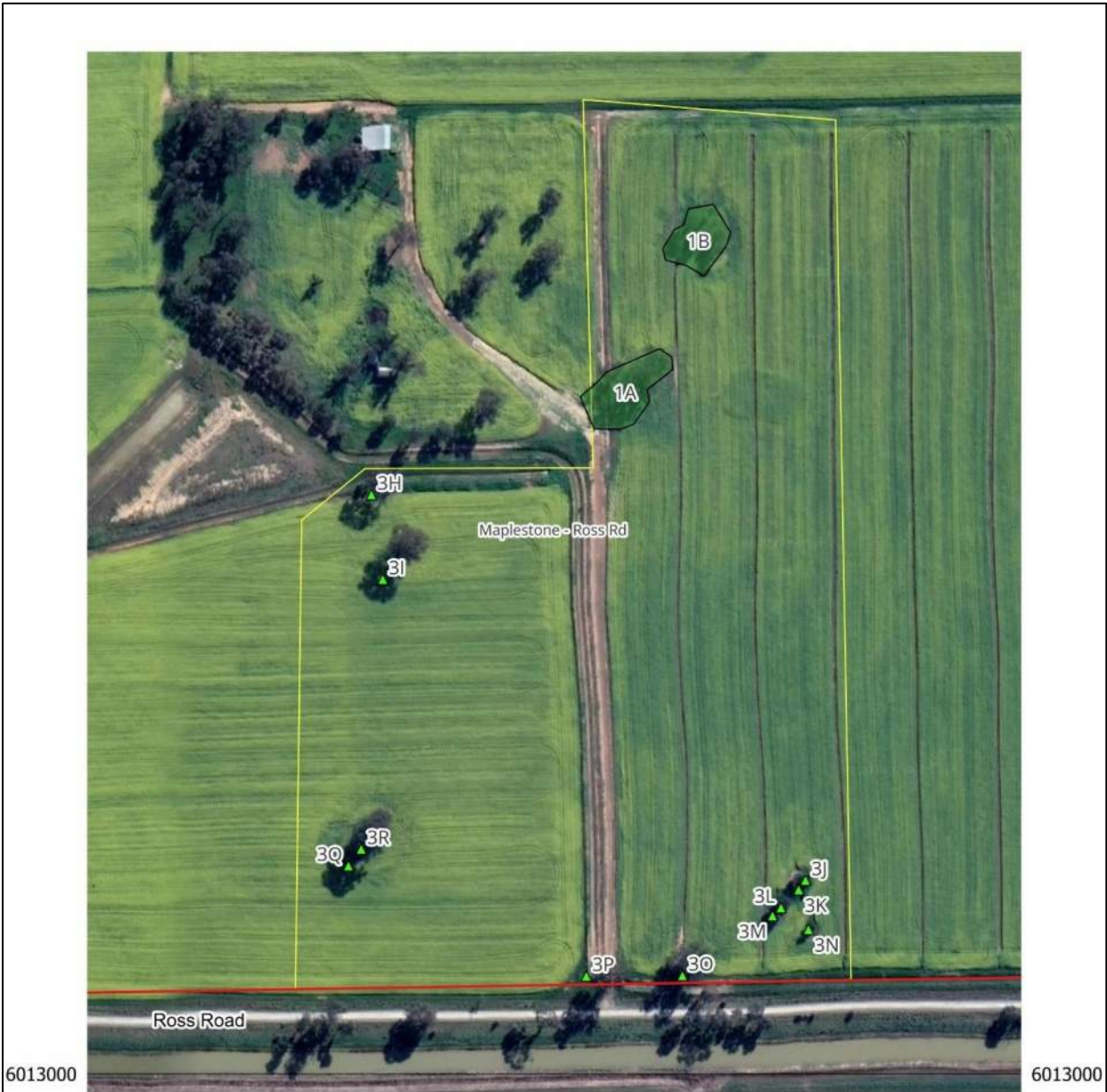


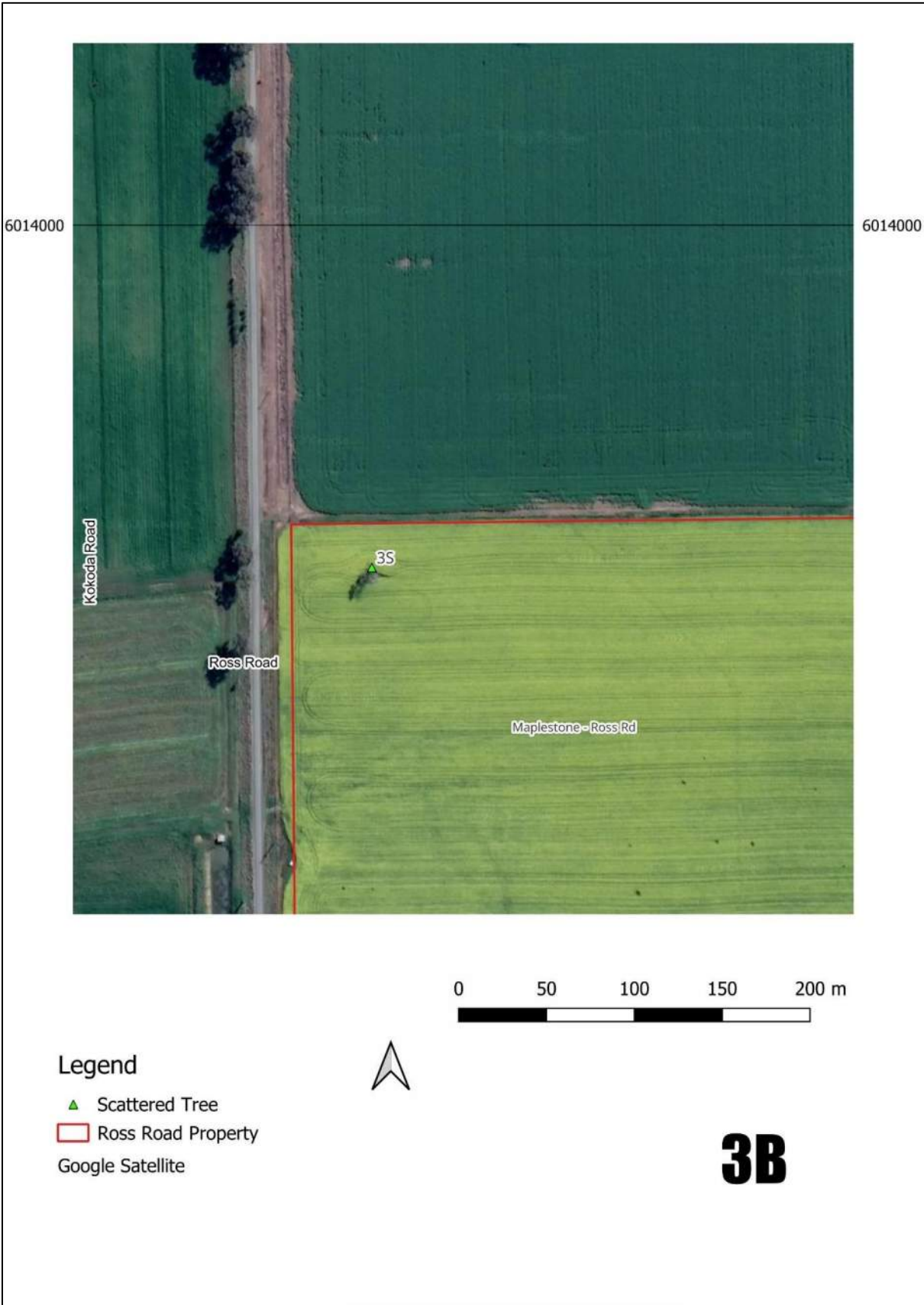
Figure 3 Project site Mapped Native Vegetation (incl. 3A-3B)



Legend

- ▲ Scattered Tree
- Native vegetation Patch
- ▭ Ross Road Property
- ▭ Ross Road Assessment Area
- Google Satellite

3A



4.7 Native vegetation impacts summary

Table 6 Summary of scattered trees likely to be impacted and require off-set

Tree ID	Size	Species	Count
3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S	Large	<i>E. Microcarpa</i> , <i>E. camaldulensis</i> , <i>C. Glaucophylla</i>	12
-	Small	-	-

Table 7 Hollow bearing trees

Vegetation type	Count	Count – hollow bearing	To be removed
Patch (canopy trees (LTs))	4	2	4
Scattered trees (LTs)	12	2	12

5 CUMULATIVE IMPACTS

In 2021 goFARM received planning approval from the Moria Shire Council to remove 1.507 hectares of native vegetation (including 22 large trees) for the Maplestone Orchard development. The proposed development at the Maplestone – Ross Road property seeks approval for the removal of 0.889 hectares, including 16 large trees, 12 of which are scattered trees and four (4) are patch canopy trees. In total the cumulative extent of proposed removal is 2.396 hectares, including 38 large trees.

Relative vegetation quality for patch vegetation is similar across the Maplestone orchard property, including the Ross Road portion of the property. With regards to available native vegetation, large trees are the dominant feature with very limited understory cover. It is not known how many trees were previously cleared that may have contained hollows. The large tree hollow bearing ratio observed in this study (excluding 6 x *C. Glaucophylla* which do not bear hollows) is one in five trees. Of the 22 large trees removed under the previous approval, approximately 20 trees were the type of tree that could bear hollows. Therefore, it is estimated that four trees were likely to contain hollows. Therefore, of the 38 large trees removed it is estimated that six (8) large trees are/were hollow bearing.

The cumulative loss of 8 hollow bearing trees as well as the total loss of 2.396 hectares is considered when performing the threaten species impact assessment.

6 MNES AND THREATENED SPECIES

6.1 Commonwealth

6.1.1 Wetlands of international importance

A search of the PMST included a buffer zone of 5km around the Project site. The PMST identifies six (6) wetlands of international importance (RAMSAR) occurring within the feature area. These are present below in Table 8.

No wetlands will be impacted by the proposed development.

Table 8 RAMSAR wetlands occurring within the feature area.

Wetland name	Distance from Site (upstream)	Potential impacts from development proposal
Banrock Station Wetland Complex	500 - 600km	The proposed development at the Maplestone Ross Road property, including the removal of 0.889 ha of native vegetation is not expected to have any impact on these wetlands or forests.
Barmah forest	10-20km	
Gunbower Forest	50 - 100km	
Hattah-Kulkyne Lakes	300 - 400km	
NSW Central Murray State Forests	10 - 20km	
Riverland	400 - 500km	
The Coorong, and Lakes Alexandrina and Albert Wetland	500 - 600km	

6.1.2 Listed threatened ecological community

The PMST identifies four (4) threatened ecological vegetation communities occurring within the feature area. These are present below in Table 9.

No threatened ecological communities are present at the site.

Table 9 EPBC listed ecological community likelihood of occurrence.

Community name	Listing	PMST Predicted occurrence	Assessed occurrence
Natural Grasslands of the Murray Valley Plains	Critically Endangered	May	Not present. Not recorded in the assessment area. This community does not occur in this regional landscape.
Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Likely	Not present. Although this community is present close by, the listing criteria for number of understory species and weed cover is not met.
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Known	Not Present. Buloke trees are not found within the assessment area.
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Likely	Not present. Species consistent with this community are not found within the woodlands of the Project area.

6.1.3 Listed threatened species

A review of the PMST identified 36 species of threatened flora and fauna known or predicted to occur within 5km of the Project site. Of these, there were 25 species of fauna, and 11 species of flora.

An assessment of likelihood of occurrence within the Project site is provided in **Appendix A (A1)**.

Two (2) species are assessed as having a moderate or higher likelihood of occurring within the Project site.

Table 10 provides a list of the EPBC Act listed specie likely to occur within the Project site.

Table 10 Summary of EPBC Act listed species likely to occur at the Project site

Species	Common name	EPBC	FFG	Likelihood of Occurrence
<i>Lathamus discolor</i>	Swift Parrot	Cr	cr	Medium

Assessment against the Significant Impact Criteria (CoA 2013) has been undertaken for each species listed under the EPBC Act as having a moderate likelihood of occurring at the site. The assessment determined that none of these species will be significantly impacted by the proposed development. No further surveys are required. A referral to the Commonwealth Department of Environment is **NOT** required.

Significance Assessment – Self Assessment for each species is provided in **Appendix A (A2)**.

Swift Parrot *Lathamus discolor*

SIC Self-assessment result – No significant impact

Suitable habitat for foraging is present within the assessment area. Swift Parrot has been observed close by and may well utilise these trees. An abundance of suitable trees are located very close to the Project site, on-site, in the protected Lower Goulburn National Park, road reserves, and surrounding private land. Removal of the 16 large trees and two (2) patches at the Maplestone Ross Road Project site is not expected to have a significant impact on this species. An EPBC Act referral is not required. Removal of trees should be carried out, outside the winter migration period, March to September.

Site specific recommendations for the protection and potential impact reduction is provided in Section 6.2.1.

6.2 State

A review of the VBA identified 16 species of threatened flora and fauna known to occur within 5km of the Project site. Of these, there were 3 species of fauna, and 13 species of flora. A likelihood of occurrence assessment was carried out. The results are provided in **Appendix A (A1)**. Three (3) fauna species are assessed as having a medium or higher likelihood of occurring within the Project site. No threaten flora are expected to occur at the site. Table 11 provides a list of the threatened species with a medium or higher likelihood of occurrence within the Project site and assessed significance of impact.

Table 11 Summary of threatened species likely to occur at the Project site

Species	Common name	EPBC	FFG	Likelihood of Occurrence	Significance of Impacts
<i>Varanus varius</i>	Lace Monitor	-	vu	Medium	Low The Project area mostly contains scattered large trees and very depleted Grey Box patches with very little connectivity. Two small satellite patches exist that will require removal. Although not recorded at the site previously, this species may be encountered here, however, habitat quality is very low. Trees and ground cover within the patch zones to be

Species	Common name	EPBC	FFG	Likelihood of Occurrence	Significance of Impacts
					impacted should be inspected prior to disturbance.
<i>Aythya australis</i>	Hardhead	-	vu	Medium	<p><u>Very Low</u></p> <p>These species may occasionally utilise the constructed dams on the site. Proposed development, including the removal of native vegetation is unlikely to impact these species given that the farm dams do not provide sufficient resources to support this species on a permanent basis. If these species are present, they will quickly vacate upon disturbance without and impact.</p>
<i>Biziura lobata</i>	Musk Duck	-	vu	Medium	

6.2.1 Summary of recommendations

In order to reduce potential impacts to threatened species the following actions are recommended during proposed native vegetation removal:

- Native vegetation removal should be undertaken outside the winter migration season for the Swift Parrot, March to September.
- All trees are to be inspected for resident wildlife including hollows. Any native wildlife found should be relocated un appropriate permit as required.
- Where patch vegetation is to be removed, this must be thoroughly inspected for Lace Monitor.

7 NATIVE VEGETATION REMOVAL APPLICATION REQUIREMENTS

The following information is provided as a response to the application requirements for the removal of native vegetation under the detailed assessment pathway, in accordance with Victorian Planning Provision 52.17 of the Greater Shepparton Council planning scheme and the *Planning and Environment Act 1987*. The eleven (11) application requirements as detailed in the Assessors Handbook (DELWP 2018) are addressed below.

1. Native Vegetation to be removed

A description of vegetation within the site and a figure showing the extent of impacts is provided in **Section 4**.

goFARM propose to remove 0.659 hectares of native vegetation (including 12 large trees) as part of the proposed development at the site.

The NVR report for the proposed native vegetation removal is attached in **Appendix D**

2. Topographic and land information

Site specific information is provided in **Section 3**.

3. Photographs of vegetation

Photographs of all native vegetation to be removed is provided in **Appendix B**.

4. Past removal of vegetation

No past removal

5. Avoid and minimise statement

This statement describes the options considered by Moira Shire Council to avoid the removal of and minimise the impacts on native vegetation and biodiversity values.

Strategic level planning:

The site has not been subject to any other regional or landscape scale strategic planning process to our knowledge.

Site level planning:

Technical scope – The Maplestone Ross Road property, now being used as an interim cereal crop is planned for orchard development in the near future. In order to facilitate the design, 0.659 hectares of native vegetation will need to be removed, including 12 large scattered trees.

The Maplestone Ross Road property also contains native vegetation that will be protected. Two Patches (1A and 1B with a total mapped area of 0.2298 hectares) are located within the assessment area. An additional two patches (located outside the assessment area) with an extent of almost 0.8 hectares

and fourteen (14) scattered trees are situated close to the centre of the property will be set aside for protection. The total extent of native vegetation to be retained and protected is approximately 1.8 hectares. Ordinarily this vegetation would require removal, however goFARM has set this aside for conservation purposes.

The full extent of native vegetation at the Maplestone Ross Road property is approximately 2.7 hectares (including the 0.659 hectares proposed to be removed and 2.02 hectares of patch and scattered tree to be protected). Strategic design of the Ross Road orchard development has gone through numerous iterations with dedicated native vegetation avoidance planning to compliment the orchard design. Through these design and planning considerations and best practice orchard design feasibility, the number of trees identified for removal has reduced to the current extent of 0.659 (from the 2.7 hectares of native vegetation on the property). Figure 4 below illustrates the protected native vegetation at the property.

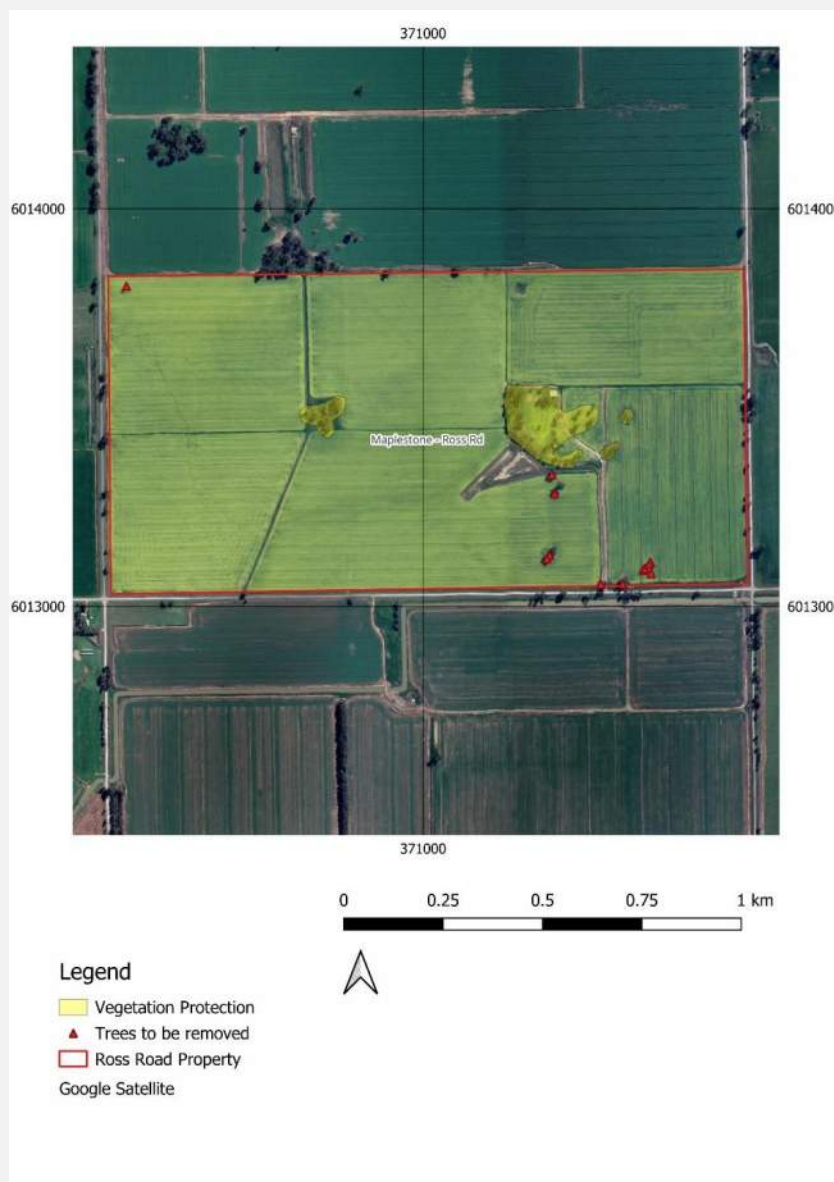


Figure 4 Native vegetation protection

No feasible opportunities exist to further avoid and minimise impacts.

All options to avoid and minimise impacts to vegetation across the site have been canvassed and deliberated. Rational justification for the removal of each tree is provided below in Table 12. The justifications outlined in the table demonstrate for reasons of economic feasibility it is considered that there are no other feasible options to further avoid impacts without jeopardising the future orchard development plans.

Table 12 Proposed native vegetation removal justification

Tree ID	Justification for removal
3L, 3O	Tree is located on a proposed drain alignment. Realignment of the drain to a distance of at least 20m from the tree (to avoid tree roots) would be cost prohibitive, and potentially jeopardise the drainage of the orchard.
3P	The tree location is on the alignment of an all-weather farm track. The all-weather farm track must be in this location as this is the most efficient, cost-effective location in terms of minimising earth moving to construct the track. The track is also incorporated with the drainage design of the property. By moving this track, drainage design would likely be compromised. Therefore, drains may require realignment. To facilitate this, a large amount of additional earth would need to be shifted adding significant extra cost. A realignment of the track and potentially some of the drainage lines may have impact implications on other trees at the site.
3H, 3I, 3J, 3K, 3M, 3N, 3Q, 3R, 3S	Significant long-term impacts to planted orchard trees would be incurred by the presence of large remnant trees. If the large tree was retained the impacts to the orchard would be as such: 25 orchard trees could not be planted. This would cover the immediate zone in the location of the trees. For the next lot of trees around the remnant tree the next circle off trees beyond this would have a yield reduction of 60% and the next circle after this would be 40% yield reduction. This is due to shading and nutrition competition. Financial impact of this is ~\$7,560/ha P/A in lost revenue and an 18% increase in capex cost (i.e. cost per ha will remain the same regardless of the tree remaining or going). An illustration of this is provided in Diagram 1.

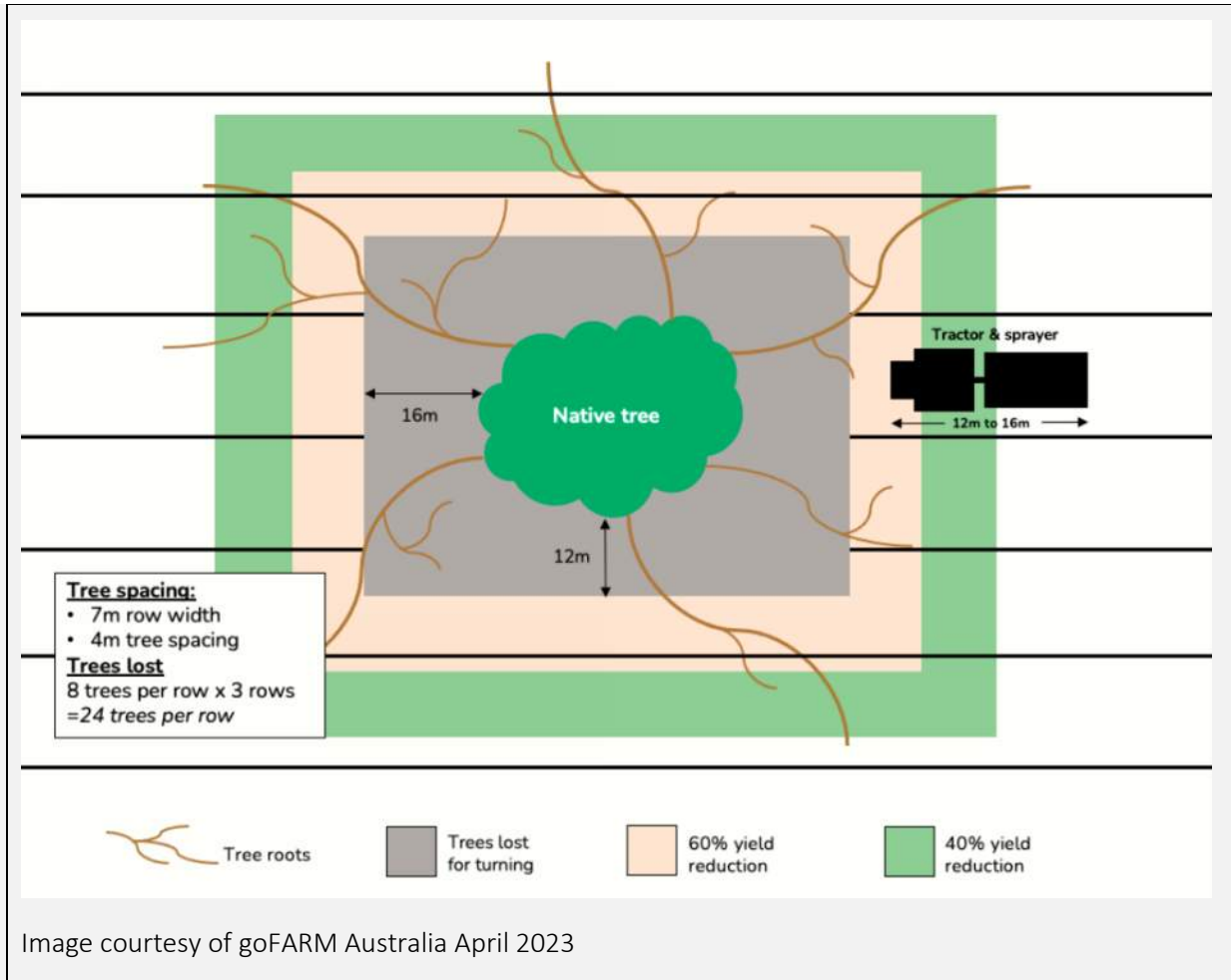


Figure 5 Orchard tree impacts from large remnant tree

Ecological Risk Management

As part of the environmental management process for the orchard development, all trees planned for removal shall undergo mandatory checks for resident wildlife, including the pre-clearing check of all hollows and nests that may be present. Details hollows are provided in Table 5. All wildlife residing in the trees will be relocated by a qualified wildlife handler in accordance with approved procedures and permits where required.

Timing of tree removal shall be carried out in accordance with the recommendations detailed in Section 6.2.1.

Following removal, the trees and stumps may be made available to certain organisations that can utilise these for habitat enhancement, such as re-snagging in rivers / lakes, and ground dwelling animal refuge.

6. Property management plans

Not applicable

7. Defendable space statement

Not applicable

8. Native vegetation precinct plans considerations

Not applicable

9. Off-set statement

The Native Vegetation Removal (NVR) Report has been prepared by DELWP EnSym support. The NVR Report is provided in **Appendix D**. A summary of the NVR Report is provided below:

NVR Report Element	Results	Comment
Location Category	2	Moderate location risk
Extent of proposed removal	0.659 hectares	Cumulative extent: 2.166 hectares
Extent of past removal	1.507 hectares	
NV Assessment Pathway	Detailed	≥ 0.5 hectares of native vegetation incl. 16 large trees from within location category 2
Strategic Biodiversity Value Score	0.392	-
Modelled habitat for rare or threatened species	Yes	Modelled habitat for 52 species (refer to Appendix 2, page 6-8 of the NVR Report). Clearing is below the cumulative threshold required to trigger species offsets.
Offset type	General	General offset units required
Offset amount: general habitat units	0.147 general habitat units	General habitat units required
Catchment Management Authority	Goulburn-Broken CMA or Moira Shire	The offset site must be located within the same Catchment Management Authority boundary or municipal district as the native vegetation to be removed.

goFARM intends to purchase the offset credits from the Victorian native vegetation credit register. A quotation has been obtained (**Appendix E**) to purchase general habitat units that satisfy the offset requirements as specified in the NVR Report.

10. Site assessment report

This report represents the site assessment.

11. Impacts to rare or threatened species habitat

Refer to Section 6.

8 REFERENCES

1. Biosis 2020. Maplestone Farm, Flora and Fauna Assessment. Unpublished internal report prepared for planning permit application to Moria Shire.
2. Department of Environment, Land, Water and Planning 2022. *NatureKit*. Access online 12 January 2023. Available at: <http://maps.biodiversity.vic.gov.au/viewer/?viewer=NatureKit>
3. Department of Environment, Land Water and Planning, 2023. *Mapshare*. Accessed online 12 January 2023, at: <https://mapshare.vic.gov.au/vicplan/>
4. Department of Environment, Land, Water and Planning 2018. *Assessor's handbook - Applications to remove, destroy or lop native vegetation v.1.1. DELWP Victoria*
5. Department of Environment, Land, Water and Planning 2017. *Guidelines for the removal, destruction or lopping of native vegetation*. DELWP Victoria
6. Department of Sustainability and Environment 2004. *The Vegetation Quality Assessment Manual v.1.3*. DSE Victoria
7. Franklin DC, Menkhorst PW & Robinson JL (1989). *Ecology of the Regent Honeyeater Xanthomyza phrygia*. Emu 89: 140-54.
8. Higgins PJ, Peter JM & Steele WK (Eds) (2001). *Handbook of Australian, New Zealand and Antarctic Birds. Volume Five - Tyrant-flycatchers to Chats*. Melbourne: Oxford University Press.
9. Higgins P 1999. *Handbook of Australian, New Zealand and Antarctic Birds. Volume 4, Parrots to Dollarbird*, Oxford University Press.

APPENDIX A MNES & THREATENED SPECIES ASSESSMENT

A1 Listed Flora and Fauna Species

The following abbreviations and symbols are relevant to this Appendix:

Table A1-1 Listing terminology

Code	meaning	Reference
National listing (EPBC Act)		
<i>CR</i>	Critically endangered	Environmental Protection and Biodiversity Conservation (EPBC) Act 1999
<i>EN</i>	Endangered	
<i>VU</i>	Vulnerable	
State listing (FFG Act)		
<i>cr</i>	Critically endangered	Victorian Flora and Fauna Guarantee Act 1988 (FFG Act)
<i>en</i>	Endangered	
<i>vu</i>	Vulnerable	

The following tables includes the listed flora and fauna species that have the potential to occur within the Project site. The list of species is sourced from the VBA and PMST (accessed 02/11/23).

Table A1-2 Threatened species likelihood of occurrence assessment

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
National Significance (EPBC Act)						
<i>Austrostipa wakoolica</i>	A spear-grass	EN		No records of this species in Victoria	Very low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	cr	Narrow habitat preferences, preferring shallow, vegetated freshwater or brackish swamps.	Very low	No suitable habitat within the assessment area
<i>Rostratula australis</i>	Australian Painted-snipe	EN	cr	Well-vegetated shallows and margins of wetlands, dams, sewage ponds; wet pastures, marshy areas, irrigation systems, lignum, tea-tree scrub, open timber.	Very low	No suitable habitat within the assessment area
<i>Neophema chrysostoma</i>	Blue-winged Parrot	VU		Prefer grasslands and grassy woodlands with a particular preference for areas near wetlands. The species over-summers in Tasmania.	Low	Not previously recorded within 5km of the assessment area. This species is not expected to occur as there is no suitable habitat within the work area

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper	VU	-	Prefers Eucalyptus woodlands and open forests, particularly those containing box species and stringybarks for their foraging habitat, with fallen timber, and not too thick shrub cover.	Low	Previously recorded within the assessment area. Site is heavily disturbed and modified for farming practice. There is no understory vegetation present. May be present opportunistically.
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	cr	Tidal mudflats; saltmarsh, saltfields; fresh, brackish or saline wetlands; sewage ponds.	Very low	No suitable habitat within the assessment area
<i>Stagonopleura guttata</i>	Diamond Firetail	0	vu	Open Eucalypt forests/woodlands; River Red Gum, Mallee, Buloke, Cypress Pine.	Low	Not previously recorded within 5km of the assessment area. This species is not expected to occur as there is no suitable habitat within the work area
<i>Galaxias rostratus</i>	Flat-headed Galaxias	CR	vu	Shoals in mid-water. Usually below 150 m altitude in Murray system in still or gently flowing waters, lakes, billabongs and backwaters. Depth 1 m, substrate of coarse sand and mud, and debris.	None	No works to occur In waterways, aquatic species will not be impacted.
<i>Synemon plana</i>	Golden Sun Moth	VU	vu	Native temperate grassland and open grassy woodlands, may also be found in degraded grasslands dominated by exotic Chilean Needlegrass.		

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
<i>Falco hypoleucos</i>	Grey Falcon	VU	vu	Lightly treed inland plains, gibber deserts, sandridges, pastoral lands, timber watercourses; seldom in driest deserts.	Low	Habitat utilised by this species does occur within the assessment area. May occur, however, this species does not breed in the region, and is only like to be present if there is prolonged drought in the more arid areas.
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	VU	vu	Camps of this species are found in gullies, typically not far from water and usually in vegetation with a dense canopy.	Very Low	No suitable habitat within the assessment area
<i>Litoria raniformis</i>	Growling Grass Frog	VU	vu	A largely aquatic species found among vegetation within or at the edges of permanent water – streams, swamps, lagoons, farm dams and ornamental ponds. Often found under debris on low, often flooded river flats. Frequently active by day.	None	No suitable habitat within the assessment area. No works to occur In waterways, aquatic species will not be impacted.
<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern)	EN		Prefers lightly wooded landscapes, usually Eucalypt woodlands, Acacia scrub and mallee formations, often found in or near clearings in these landscapes.	Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
<i>Senecio macrocarpus</i>	Large-headed Fireweed	VU	cr	In Victoria largely confined to remnant Themeda grasslands on loamy clay soils derived from basalt from near Melbourne west to Skipton area. Also known from	Very Low	No suitable habitat within the assessment area

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
				auriferous ground near Stawell. Formerly recorded from near Horsham and Casterton, but apparently long extinct from these areas.		
<i>Macquaria australasica</i>	Macquarie Perch	EN	en	The Macquarie Perch was once widespread through the cooler upper reaches of the southern tributaries of the Murray-Darling river system in Victoria and New South Wales. Although it was considered rare downstream in the Murray River, in Victoria the Macquarie Perch occurred in the Barmah Lakes area and tributaries such as Broken Creek. In New South Wales, the species occurred in the upper reaches of the Macquarie River system. However, currently in Victoria only small discrete populations remain in the upper reaches of the Mitta Mitta, Ovens, Broken, Campaspe and Goulburn Rivers in northern Victoria. A larger, apparently self-sustaining translocated population exists in the Yarra River, around Warrandyte and is potentially the most secure in the country. It is also known to persist in Lake Eildon in the Goulburn River catchment.	None	No suitable habitat within the assessment area. No works to occur In waterways, aquatic species will not be impacted.
<i>Lophochroa leadbeateri leadbeateri</i>	Major Mitchell's Cockatoo (eastern)	EN		Found in a wide range of habitats but nearly always within proximity to water sources.	Low	Not previously recorded within 5km of the assessment area. Although suitable habitat (hollows) does exist, the work site is well outside the normal

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
						distribution ranges for this species.
<i>Brachyscome muelleroides</i>	Mueller Daisy	VU	en	Extremely rare, in Victoria confined to floodplains of the Murray River and its tributaries, from Tocumwal east to the Ovens River. Flowers Sep-Nov. 3.	Very low	Not previously recorded within 5km of the assessment area. Site is heavily disturbed and modified for farming practice. There is no understory vegetation present.
<i>Maccullochella peelii</i>	Murray Cod	VU	en	Slow flowing turbid water of rivers and streams at low elevations. Also fast-moving clear, rocky upland streams. Favours deeper water around boulders, longs, undercut banks and overhanging vegetation.	None	No works to occur In waterways, aquatic species will not be impacted.
<i>Grantiella picta</i>	Painted Honeyeater	VU	vu	Mistletoes in eucalypt forests/woodlands; black box on watercourses; box-ironbark-yellow gum woodlands; paperbarks, Casuarinas; mulga, other acacias; trees on farmland; gardens.	Very Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
<i>Aprasia parapulchella</i>	Pink-tailed Worm-Lizard	VU	en	The Pink-tailed Worm-lizard occurs in New South Wales (NSW), Victoria and the Australian Capital Territory (ACT) where it is widely but patchily distributed along the foothills of the western slopes of the Great Dividing Range between Bendigo in Victoria	Very Low	No suitable habitat within the assessment area

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
				and Gunnedah in NSW. In Victoria its distribution is not fully known, but it is centered around Bendigo and thought to encompass Big Hill Range to the south, Marong to the west and Sugarloaf Range to the east. The Pink-tailed Worm-lizard's habitat includes primary and secondary grassland, grassy woodland and woodland communities, and the species usually inhabits sloping sites that contain rocky outcrops or scattered, partially buried rocks. These rocky habitats tend to be well-drained mid-slope or ridge-top sites with loosely embedded rocks on soil substrate with ant galleries present. Individuals are most commonly found sheltering under these rocks and spend considerable time in ant burrows below these rocks, which are considered important foraging and shelter sites.		
<i>Pedionomus torquatus</i>	Plains-wanderer	CR	cr	Sparse, treeless, lightly grazed native grasslands/herbfields with bare ground, old cereal crops, short Lucerne, sparse saltbush, low shrubland.	Very low	Site is heavily disturbed and modified for farming practice. No native ground layer species exist.
<i>Swainsona plagiotropis</i>	Red Swainson-pea	VU	en	Restricted to a few sites in north-central Vic. between Bendigo and the Murray River. Grows in grassland on heavy red soils and is now almost confined to roadside remnants. Flowers Aug-Nov.	Very low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present,

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
						no suitable habitat within the assessment area
<i>Anthochaera phrygia</i>	Regent Honeyeater	CR	cr	Dry open forest, woodlands, or red ironbark, yellow box, white and yellow gum, mistletoe on river she-oaks, trees in farmlands, streets, gardens.	Very Low	Site is heavily disturbed and modified for farming practice. There is no understory vegetation present.
<i>Myriophyllum porcatum</i>	Ridged Water-milfoil	VU	cr	Rare and restricted to northern and north-western Victoria where it has been recorded growing in temporary waterholes, lagoons, farm dams and rock holes, and on clay pans.	None	Site is heavily disturbed and modified for farming practice. No works to occur In waterways, aquatic species will not be impacted.
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	VU	0	Largely confined to permanent swamps, principally along the Murray River between Wodonga and Echuca, uncommon to rare in the south (e.g. Casterton, Moe, Yarram), probably due to historic drainage of wetlands (RBGV 2016). Largely restricted in greater Melbourne to seasonal wetlands and mudflats of River Red Gum swamps of the Lower Yarra and Plenty/Merri volcanic plains north of Melbourne (Cam Beardsell pers. comm.).	Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Study area does not have any land prone to inundation, or wetlands, no suitable habitat within the assessment area
<i>Swainsona murrayana</i>	Slender Darling-pea	VU	en	Extremely rare in northern and western Victoria where usually found in seasonally inundated flats and around lakes. Flowers Aug.-Nov.	Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present,

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
						no suitable habitat within the assessment area
<i>Crinia sloanei</i>	Sloane's Froglet	EN	en	Sloane's Froglet is endemic to the Murray-Darling Basin from where it has been recorded at widely scattered locations in north central Victoria and central western New South Wales from the Victorian to the Queensland border. It has disappeared from much of its former range and now appears to be restricted to a very small area of New South Wales near Albury and Corowa, and a series disjunct populations at Wangaratta, Chiltern, Little Lake Charm and Moodies Swamp near Cobram. Sloane's Froglet lives and breeds in temporary and permanent waterbodies including oxbows off creeks and rivers, farm dams, large and small natural wetlands, constructed frog ponds and temporary puddles. It prefers wetlands that contain riparian and aquatic vegetation. Most often it has been found in waterbodies that contain grasses and reeds that are of medium height and have small stem diameters as it lays its eggs attached to vegetation. Sloane's Froglet uses roadside drains, table drains, irrigation channels and inundated grasslands to move from one area to another.	Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Study area does not have any land prone to inundation, or wetlands, no suitable habitat within the assessment area
<i>Aphelocephala leucopsis</i>	Southern Whiteface	VU	-	Prefers relatively undisturbed open woodland and shrubland with grassy and shrubby understorey,	Low	Not previously recorded within 5km of the work site. This species is not expected to occur

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
				including herbaceous species with low tree densities and numerous tree hollows.		as there is no suitable habitat within the work area
<i>Pimelea spinescens subsp. spinescens</i>	Spiny Rice-flower	CR	cr	Grows in grassland, open shrubland and occasionally woodland, often on basalt-derived soils. Mostly west of Melbourne (to near Horsham), but extending as far north as Echuca.	Very low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
<i>Polytelis swainsonii</i>	Superb Parrot	VU	en	River red gums, black box, yellow box, river oak, mostly near rivers; mallee, stubbles, pastures, gardens.	Low	Not previously recorded within 5km of the assessment area. Has been recorded north of the site near Strathmerton. Although suitable habitat (hollows) does exist, the work site is outside the normal distribution ranges for this species.
<i>Senecio psilocarpus</i>	Swamp Fireweed	VU		Rare, restricted in Victoria to a few herb-rich winter-wet swamps throughout the south of the state, west from Sale, growing on volcanic clays or peaty soils.	Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Study area does not have any land prone to inundation, or wetlands, no suitable habitat within the assessment area
<i>Lathamus discolor</i>	Swift Parrot	CR	cr	Open grassy woodland, with dead trees, near permanent water and forested hills, coastal heaths, pastures with exotic grasses, weeds, roadsides, orchards.	Medium.	Large tree do exist within the assessment area. This species may be present.

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
<i>Sclerolaena napiformis</i>	Turnip Copperburr	EN	cr	Known only from a few populations in remnant grassland on clay-loam soils in north-central Victoria in the Echuca-Nathalia area, and between Donald and Stawell in the west. Fruits Nov.-May.	None	Not previously recorded within 5km of the work site. This species is not expected to occur as there is no suitable habitat within the work area
<i>Hirundapus caudacutus</i>	White-throated Needletail	VU	vu	Airspace over forests, woodlands, farmlands, plains, lakes, coasts, towns, feeding companies frequency patrol back and forward along favoured hilltops and timbered ranges.	Low	Not previously recorded within 5km of the work site. Site is heavily disturbed and modified for farming practice. There is no understory vegetation present.
<i>Lepidium monoplcooides</i>	Winged Peppergrass	EN	en	Uncommon in north-western quarter of State, mostly on heavy soils near lakes and watercourses. Flowers mostly spring-summer.	Very Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
<i>Lepidium aschersonii</i>	Spiney Peppergrass	EN	en	Tends to grow on heavy clay soils in grasslands but also recorded for grassy woodlands, open forests and around swamps.	Very Low	Not observed within 5km radius of site. Site is heavily disturbed and modified for farming practice. Little to no native understory present, no suitable habitat within the assessment area
State listing (FFG Act)						
<i>Aythya australis</i>	Hardhead		vu	Deep, permanent wetlands, large open waters, brackish coastal swamps, farm dams, ornamental lakes , sewage pond.	Medium.	This species may occasionally use farm dams and irrigation channels within the Project area. Water bodies present at the site are not sufficient to

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
						support this species on a permanent basis.
<i>Biziura lobata</i>	Musk Duck		vu	Well-vegetated swamps, wetlands, both brackish and fresh, lakes, reservoirs, shallow bays, inlets; occasionally at sea.	Medium.	This species may occasionally use farm dams and irrigation channels within the Project area. Water bodies present at the site are not sufficient to support this species on a permanent basis.
<i>Varanus varius</i>	Lace Monitor		en	Coast, ranges, slopes and adjacent plains of eastern and south-eastern Australia, where it occurs in occur in well-timbered areas from dry woodlands to cool temperate forests. It feeds on insects, reptiles and small mammals, but is a major predator of nestling birds. Often forages on the ground, and in trees (Cogger 2014).	Medium.	Large trees and some small patch vegetation does exist close to the assessment area. Very poor connectivity between patches, however onsite drains and tracks may provide access to work areas. This species may be present.
<i>Brachyscome muelleroides</i>	Mueller Daisy	VU	en	Extremely rare, in Victoria confined to floodplains of the Murray River and its tributaries, from Tocumwal east to the Ovens River. Flowers Sep-Nov. 3 (Walsh and Entwisle 1999).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Callitriche umbonata</i>	Winged Water-starwort		en	Scattered and uncommon. Mainly in inland parts of Victoria in damp and swampy places. Flowers Aug-Dec (Walsh and Entwisle 1999).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present,

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
						no suitable habitat within the assessment area.
<i>Calotis anthemoides</i>	Cut-leaf Burr-daisy		cr	Scattered north and west of Melbourne (e.g. Sunshine, Camperdown, Moyston, Dunkeld, Numurkah regions) on heavy soils prone to waterlogging, but now rather rare due to habitat depletion (RBGV 2018).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Allocasuarina luehmannii</i>	Buloke		vu	Usually growing in woodland with Eucalyptus microcarpa, on non-calcareous soils. Mainly distributed north of Great Dividing Range throughout north-central and north-western Victoria, with a few sites on the western outskirts of Melbourne (Walsh and Entwisle 1996).	None	Not observed within the project area.
<i>Myriophyllum porcatum</i>	Ridged Water-milfoil	VU	cr	Rare and restricted to northern and north-western Victoria where it has been recorded growing in temporary waterholes, lagoons, farm dams and rock holes, and on clay pans (RBGV 2019).	Very low	Site is heavily disturbed and modified for farming practice. No aquatic habitat present for this species.
<i>Swainsona murrayana</i>	Slender Darling-pea	VU	en	Extremely rare in northern and western Victoria where usually found in seasonally inundated flats and around lakes. Flowers Aug.-Nov (Walsh and Entwisle 1996).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Tripogonella loliiformis</i>	Rye Beetle-grass		en	An uncommon grass of scattered occurrence through drier areas of the state (e.g. Mt Arapiles, basalt plains just west of Melbourne, Strathbogie Ranges, Killawarra Forest near Wangaratta,	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
				Beechworth, Suggan Buggan). Usually occurring on shallow soils overlying rock. One of few 'resurrection plants' native to Victoria. The dry, apparently lifeless foliage has the capacity to rehydrate and become green following substantial rains (RBGV 2017).		no native understory present, no suitable habitat within the assessment area.
<i>Brachyscome chrysoglossa</i>	Yellow-tongue Daisy		en	Growing as far south as Geelong, east as far as Barnawartha, extending west to the Wimmera and north-west into the Sunset Country and beyond. Occurs in a diversity of habitats, e.g. In the south, in mallee woodlands on sandy loam in the north-west, and i (Walsh and Entwisle 1999).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Hypoxis exilis</i>	Swamp Star		en	Rare in Victoria where known only from very few sites on the Murray River floodplain near Barmah Forest to south of Yarrawonga (Tungamah area), and apparently confined to similar situations in NSW along the Murrumbidgee and Edwards Rivers. (RBGV 2021)	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Myriophyllum striatum</i>	Striped Water-milfoil		en	In Victoria, currently only known from the northern areas, including Wedderburn and Nathalia. Grows mainly fully emergent in damp situations on creek banks and around waterholes, but occasionally found in deep water. Flowers spring-summer (Walsh and Entwisle 1996).	Very low	Site is heavily disturbed and modified for farming practice. No aquatic habitat present for this species.
<i>Myriophyllum gracile var. lineare</i>	Slender Water-milfoil		en	In Victoria, only known from near Numurkah, where it grows in damp areas which become pools in winter. Flowers mainly in spring (Walsh and Entwisle 1996).	Very low	Site is heavily disturbed and modified for farming practice. No aquatic habitat present for this species.

Species name	Common name	Conservation status		Habitat description	Likely occurrence in Project area	Rationale for likelihood ranking
		EPBC	FFG			
<i>Panicum laevinode</i>	Pepper Grass		vu	Uncommon, recorded from native grassland, grassy Red Gum forests, and sometimes, pasture in north-central Victoria, mostly occurring on land prone to inundation and very responsive to summer rain (RBGV 2019).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.
<i>Swainsona sericea</i>	Silky Swainson-pea		en	Disjunct occurrence in north of Victoria, usually found in grassland and grassy woodland. Flowers Aug-Oct (Walsh and Entwisle 1996).	Very low	Site is heavily disturbed and modified for farming practice. Crops are sown out throughout most of the property. Little to no native understory present, no suitable habitat within the assessment area.

A2 Listed EPBC Species Significance Assessment

Swift Parrot *Lathamus discolor*

Swift Parrot is listed as Critically Endangered under the EPBC Act and FFG Act. Their Victorian distribution is centred on box-ironbark forests in the north-central region, although they are often recorded in other areas of the state particularly within the Grey Box woodland landscape. Swift Parrot is a slim, medium-sized parrot that breeds in Tasmania from September to April and then migrates to the mainland during April (Higgins 1999). On mainland Australia, Swift Parrots prefer to inhabit dry open eucalypt forests and woodlands, especially box-ironbark forests. However, it is also often recorded in urban areas, including parks, gardens, street trees, golf courses and agricultural settings (Higgins 1999).

Occurrence in study area: Swift Parrot has been recorded sporadically around the Project area specifically within the local region. Grey Box is common throughout the Project site which does support this species. The occurrences of these tree species within the Project area are mainly large trees Swift Parrot has the potential to be a regular visitor to the study area during autumn and winter.

Significance Impact - Self Assessment

Significant impact criteria	Likelihood of significant impact	Justification
Lead to a long-term decrease in the size of a population	Unlikely	Swift Parrots are known to occur occasionally in the local area and utilise lerp infested Grey Box as a foraging resource (Saunders & Tzaros 2011). The proposed action is likely to remove up to 44 large trees that would be utilised by this species. However, there is an abundance of trees within the regional landscape capable of supporting this species in the absence of these trees. The proposed action is therefore unlikely to lead to a long-term decrease in the size of a population of the species.
Reduce the area of occupancy of the species	Unlikely	This species is not a coloniser or regular occupier of these trees. These trees are only used for opportunistic feeding, where there is an absence of the more highly desired Box Ironbark trees
Fragment an existing population into two or more populations	Highly unlikely	Due to its complex movement patterns typified by migration and local nomadism, the Swift Parrot has what is effectively a single national population. Individuals move interchangeably between key wintering sites on the Australian mainland and can move freely through areas of unsuitable and

Significant impact criteria	Likelihood of significant impact	Justification
		marginal habitat to seek out and exploit favourable habitat patches. The removal of mostly scattered trees is proposed and will not fragment an existing population
Adversely affect habitat critical to the survival of a species	Highly unlikely	Critical habitat for Swift Parrot has not been defined, and is difficult to define given its reliance on a diversity of habitat types across its range and the dependence on these sites varies both spatially and temporally. Priority habitats for the species are defined in the National Recovery Plan (Saunders and Tzaros 2011) as habitats which are used: <ul style="list-style-type: none"> - for nesting - by large proportions of the Swift Parrot population - repeatedly between seasons (site fidelity), or - for prolonged periods of time (site persistence). Vegetation in the study area is not used for nesting (they breed only in Tasmania). It is therefore highly unlikely the proposal would adversely affect habitat critical to this species survival.
Disrupt the breeding cycle of a population	Highly unlikely	This species only breeds in Tasmania.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Unlikely	The proposed development is unlikely to cause the Swift Parrot to decline due to the abundance of foraging habitat spread across the region.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	Highly unlikely	The proposed action is highly unlikely to exacerbate the current level of invasive species threat operating within the study area to the point that they become harmful to the Swift Parrot.
Introduce disease that may cause the species to decline, or	Highly unlikely	The proposed action is highly unlikely to introduce a disease that causes the Swift Parrot to decline.
Interfere with the recovery of the species.	Unlikely	A national recovery plan for the Swift Parrot has been produced (Saunders & Tzaros 2011) to

Significant impact criteria	Likelihood of significant impact	Justification
		<p>minimise the probability of extinction of the Swift Parrot in the wild, and to increase the probability of important populations becoming self-sustaining in the long term. The proposal is unlikely to directly interfere with priority habitats that have been identified in the 2011 recovery plan or any Swift Parrot recovery actions in northern Victoria.</p>

Significant Impact Assessment

Swift Parrot has the potential to occur within the study area during its winter migration to mainland Australia. Significant impact to this species by the proposed orchard development is not expected as suitable foraging habitat for this species is abundant throughout the local landscape. It is recommended however that removal be undertaken outside the winter migration period from March to September.

APPENDIX B PROPOSED VEGETATION IMPACT PHOTOGRAPHS

Mapped patch vegetation proposed to be avoided



Photo 1 1A – Proposed removal



Photo 2 1B – Proposed removal

Mapped scattered large trees proposed to be removed



Photo 3 3H – Proposed for removal

Oct 19, 2023 11:16:46
55H 371337 6013325
188° S
31



Photo 4 31 – Proposed for removal

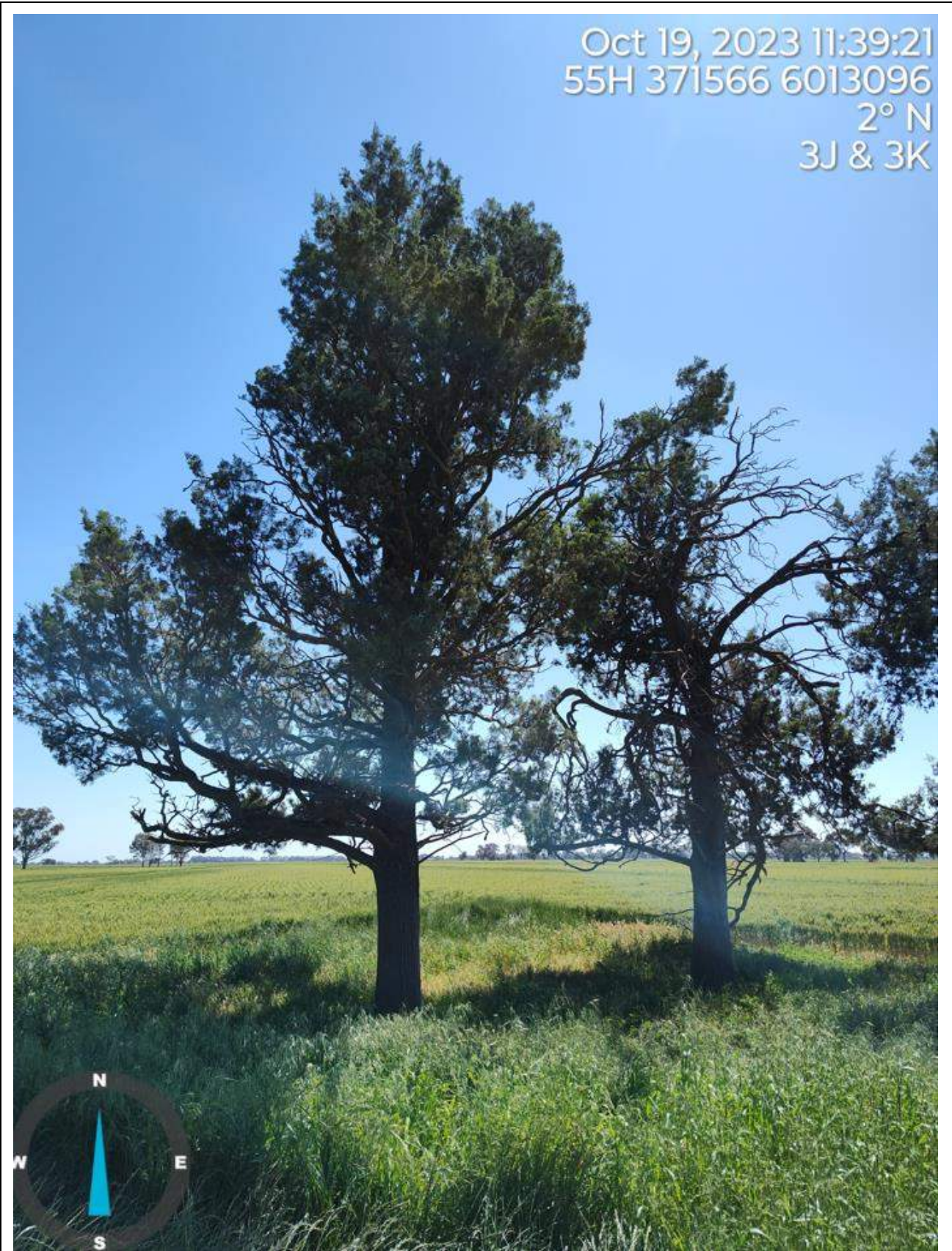


Photo 5 3J & 3K – Proposed for removal

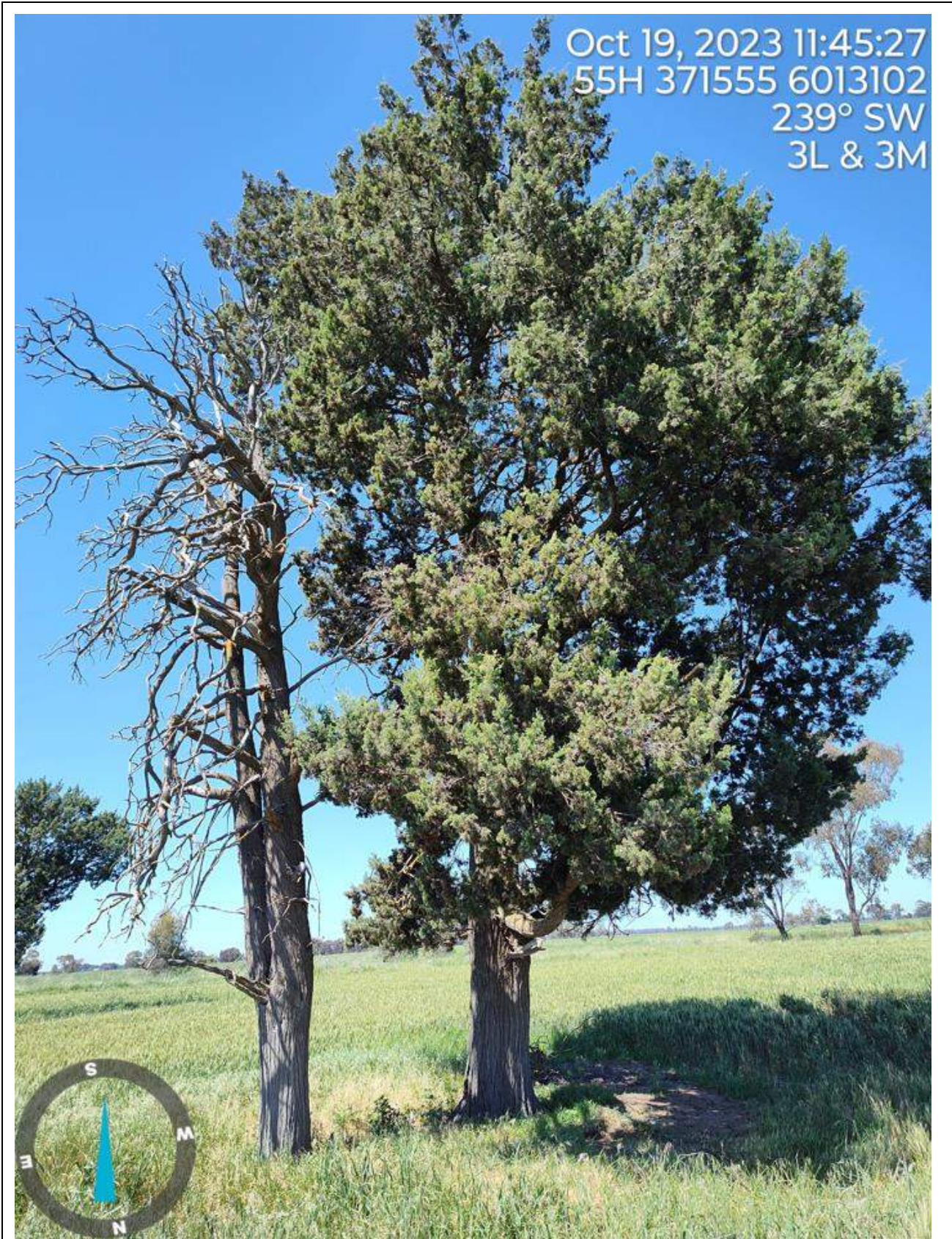


Photo 6 3L & 3M – Proposed for removal

Oct 19, 2023 11:51:06
55H 371569 6013092
182° S
3N



Photo 7 3N – Proposed for removal

Oct 19, 2023 11:54:49
55H 371515 6013087
217° SW
30

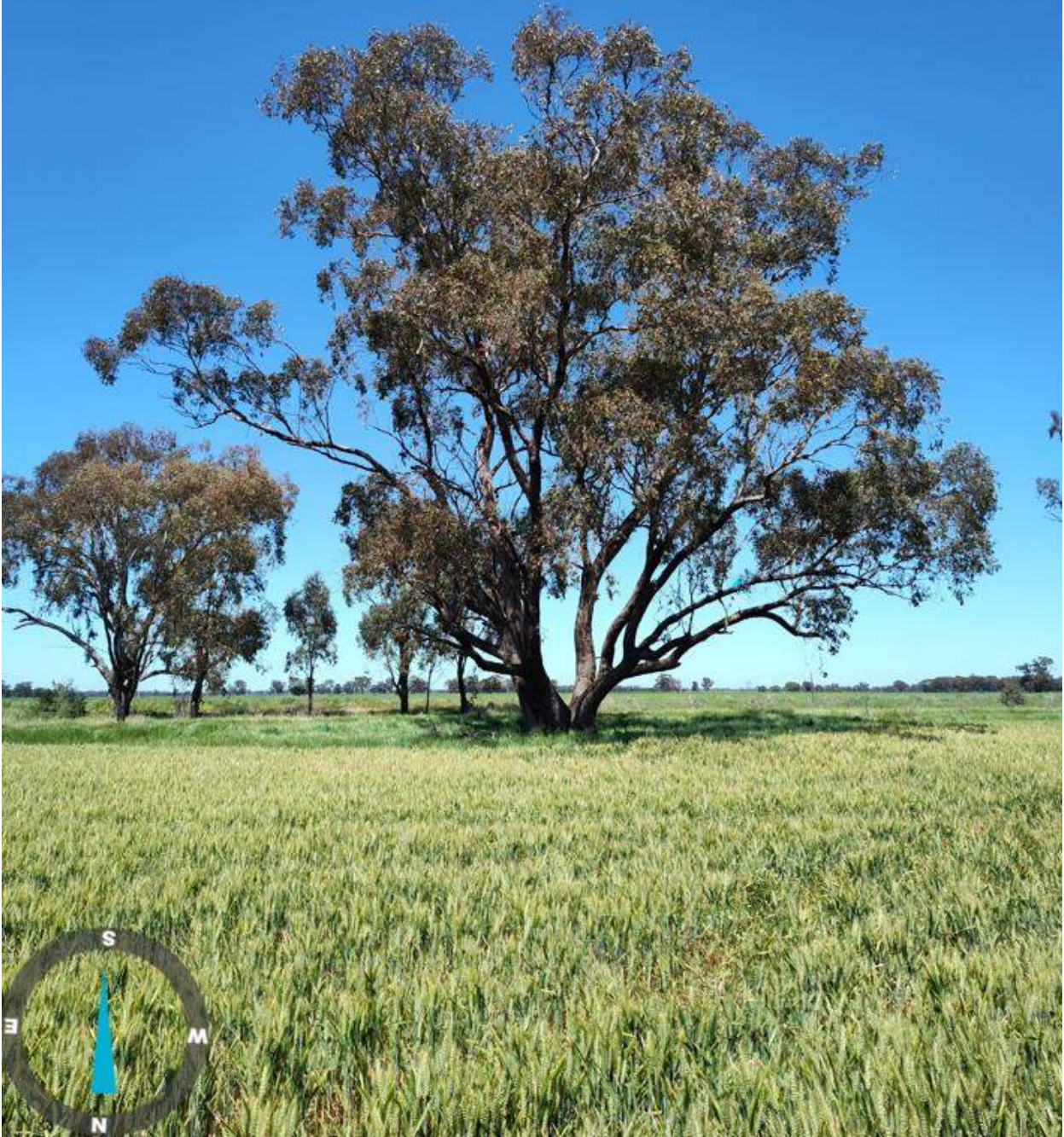


Photo 8 30 – Proposed for removal



Photo 9 3P – Proposed for removal



Photo 10 3Q & 3R – Proposed for removal



Photo 11 3S – Proposed for removal

APPENDIX C VEGETATION QUALITY ASSESSMENT RESULTS

Table C1 Detailed VQA assessment results (patch vegetation proposed to be removed)

Habitat Zone ID		1A	1B	
Bioregion		Murray Fans	Murray Fans	
EVC #		MuF_0803	MuF_0803	
		Max Score		
Site Condition	Large Trees	10	10	0
	Canopy Cover	5	4	2
	Lack of Weeds	15	2	2
	Understory	25	0	5
	Recruitment	10	0	0
	Organic Litter	5	2	2
	Logs	5	0	0
	Zone Condition Score		18	11
Landscape Value	Patch Size	10	1	1
	Neighbourhood	10	0	0
	Distance to Core	5	0	0
	Total Landscape Score		1	1
CONDITION SCORE		100	19	12
Habitat points = #/100			0.19	0.12

APPENDIX D NATIVE VEGETATION REMOVAL (NVR) REPORT

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report **is not an assessment by DELWP** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: 16/12/2023
Time of issue: 6:32 am

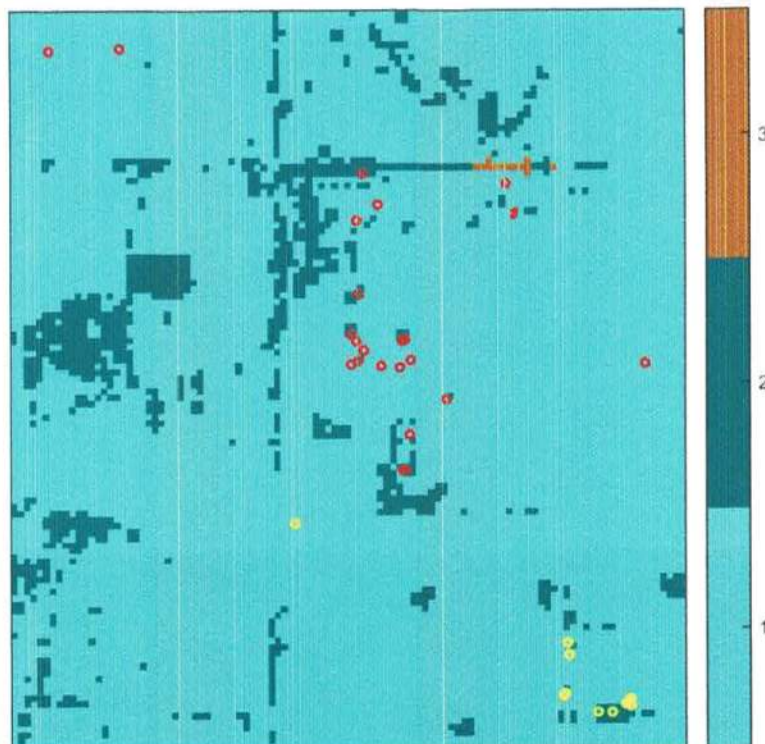
Report ID: AQU_2023_007

Project ID: Ross Road NV Removal_amended 141223

Assessment pathway

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	2.166 ha
Extent of past removal	1.507 ha
Extent of proposed removal	0.659 ha
No. Large trees proposed to be removed	12
Location category of proposed removal	Location 2 The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

1. Location map



Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount¹	0.147 general habitat units
Vicinity	Goulburn Broken Catchment Management Authority (CMA) or Moira Shire Council
Minimum strategic biodiversity value score ²	0.392
Large trees	12 large trees

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

¹ The general offset amount required is the sum of all general habitat units in Appendix 1.

² Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

Any proposal to remove native vegetation must meet the application requirements of the Detailed Assessment Pathway and it will be assessed under the Detailed Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

This *Native vegetation removal report* must be submitted with your application for a permit to remove, destroy or lop native vegetation.

Refer to the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) for a full list of application requirements. This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (partly met)
- Maps showing the native vegetation and property (partly met)
- Information about the impacts on rare or threatened species.
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs
- Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defensible space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- A site assessment report including a habitat hectare assessment of any patches of native vegetation and details of trees
- An offset statement that explains that an offset has been identified and how it will be secured.

© The State of Victoria Department of Environment, Land, Water and Planning
Melbourne 2023

This work is licensed under a Creative Commons Attribution 4.0 International licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria as author. The licence does not apply to any images, photographs or branding, including the Victorian Coat of Arms, the Victorian Government logo and the Department of Environment, Land, Water and Planning logo. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/34.0/au/deed.en>

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne.

For more information contact the DELWP Customer Service Centre 136 186

www.delwp.vic.gov.au

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Obtaining this publication does not guarantee that an application will meet the requirements of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes or that a permit to remove native vegetation will be granted.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes.

Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{Species habitat units} = \text{extent} \times \text{condition} \times \text{species landscape factor} \times 2, \text{ where the species landscape factor} = 0.5 + (\text{habitat importance score}/2)$$

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
3-I	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.070	0.392		0.015	General
3-M	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.043	0.590		0.010	General
3-H	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.070	0.281		0.014	General
3-J	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.045	0.697		0.011	General
3-L	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.026	0.618		0.006	General
3-K	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.028	0.672		0.007	General
3-N	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.060	0.697		0.015	General
3-O	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.070	0.590		0.017	General

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BIOEVC	BIOEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
3-P	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.070	0.590		0.017	General
3-R	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.053	0.220		0.010	General
3-Q	Scattered Tree	muf_0803	Endangered	1	no	0.200	0.070	0.053	0.220		0.010	General
3-S	Scattered Tree	muf_0264	Vulnerable	1	no	0.200	0.070	0.070	0.510		0.016	General

Jericho Wire-grass	<i>Aristida jerichoensis</i> var. <i>subspnulfera</i>	504631	Endangered	Dispersed	Habitat importance map	0.0000
Rye Beetle-grass	<i>Triopogon loliformis</i>	503455	Rare	Dispersed	Habitat importance map	0.0000
Dwarf Bitter-cress	<i>Rorippa eustylis</i>	502944	Rare	Dispersed	Habitat importance map	0.0000
Kamarooka Mallee	<i>Eucalyptus froggattii</i>	501279	Rare	Dispersed	Habitat importance map	0.0000
Smooth Minuria	<i>Minuria integerrima</i>	502201	Rare	Dispersed	Habitat importance map	0.0000
Long Eryngium	<i>Eryngium paludosum</i>	501238	Vulnerable	Dispersed	Habitat importance map	0.0000
Broom Bitter-pea	<i>Daviesia genistifolia</i> s.s.	503813	Rare	Dispersed	Habitat importance map	0.0000
Dark Wire-grass	<i>Aristida calycina</i> var. <i>calycina</i>	503630	Rare	Dispersed	Habitat importance map	0.0000
Southern Swainson-pea	<i>Swainsona behriana</i>	504944	Rare	Dispersed	Habitat importance map	0.0000
Bush Stone-curlflew	<i>Burhinus grallarius</i>	10174	Endangered	Dispersed	Habitat importance map	0.0000
Rosemary Grevillea	<i>Grevillea rosmarinifolia</i> subsp. <i>rosmarinifolia</i>	504066	Rare	Dispersed	Habitat importance map	0.0000
Ausfeld's Wattle	<i>Acacia ausfeldii</i>	500013	Vulnerable	Dispersed	Habitat importance map	0.0000
Late-flower Flax-lily	<i>Dianella tarda</i>	505085	Vulnerable	Dispersed	Habitat importance map	0.0000
Grey-crowned Babbler	<i>Pomatostomus temporalis temporalis</i>	10443	Endangered	Dispersed	Habitat importance map	0.0000
Branching Groundsel	<i>Senecio cunninghamii</i> var. <i>cunninghamii</i>	503104	Rare	Dispersed	Habitat importance map	0.0000
Slender Club-sedge	<i>Isolepis congrua</i>	501773	Vulnerable	Dispersed	Habitat importance map	0.0000
Fuzzy New Holland Daisy	<i>Vitadinia cuneata</i> var. <i>morisii</i>	505060	Rare	Dispersed	Habitat importance map	0.0000
Small Burr-grass	<i>Tragus australianus</i>	503418	Rare	Dispersed	Habitat importance map	0.0000
Brolga	<i>Grus rubicunda</i>	10177	Vulnerable	Dispersed	Habitat importance map	0.0000
Cottony Cassinia	<i>Cassinia ozothamnoides</i>	501560	Vulnerable	Dispersed	Habitat importance map	0.0000
Dwarf Brooklime	<i>Gratiola pumilo</i>	503753	Rare	Dispersed	Habitat importance map	0.0000
Waterbush	<i>Myoporum montanum</i>	502240	Rare	Dispersed	Habitat importance map	0.0000
Hairy Tails	<i>Ptilotus erubescens</i>	502825	Vulnerable	Dispersed	Habitat importance map	0.0000

Purple Diuris	<i>Diuris punctata</i>	501084	Vulnerable	Dispersed	Habitat importance map	0.0000
Lanky Buttons	<i>Leptorhynchus elongatus</i>	501941	Endangered	Dispersed	Habitat importance map	0.0000
Dookie Daisy	<i>Brachyscome gracilis</i>	505494	Vulnerable	Dispersed	Habitat importance map	0.0000
Buloke	<i>Allocasuarina luehmannii</i>	500678	Endangered	Dispersed	Habitat importance map	0.0000
Buloke Mistletoe	<i>Amyema linophylla subsp. orientalis</i>	500217	Vulnerable	Dispersed	Habitat importance map	0.0000
Twiggy Sida	<i>Sida intricata</i>	503143	Vulnerable	Dispersed	Habitat importance map	0.0000
Black Falcon	<i>Falco subniger</i>	10238	Vulnerable	Dispersed	Habitat importance map	0.0000
Ridged Water-nitfoil	<i>Myriophyllum porcatum</i>	502257	Vulnerable	Dispersed	Habitat importance map	0.0000
Slender Darling-pea	<i>Swainsona murrayana</i>	503321	Endangered	Dispersed	Habitat importance map	0.0000
Lace Monitor	<i>Varanus varius</i>	12283	Endangered	Dispersed	Habitat importance map	0.0000
Spotted Emu-bush	<i>Eremophila maculata subsp. maculata</i>	501204	Rare	Dispersed	Habitat importance map	0.0000
Spiny Lignum	<i>Duma horrida subsp. horrida</i>	502230	Rare	Dispersed	Habitat importance map	0.0000

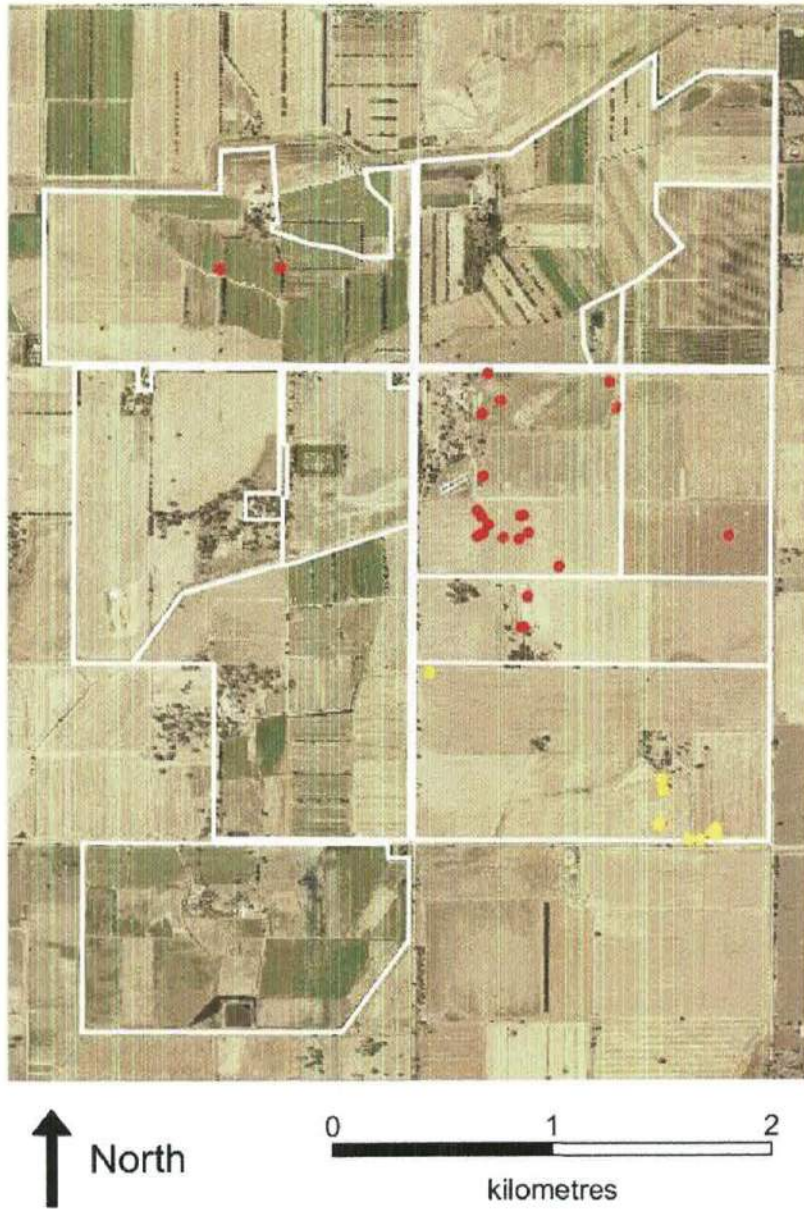
Habitat group

- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

Habitat impacted

- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA record is an area in Victoria that represents a large population, roosting or breeding site etc.

4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

Red boundaries denote areas of past removal.

APPENDIX E OFF-SET BROKER QUOTATION

Our reference: VLQ-9924-B

Your reference: goFARM
Maplestone Orchard - Ross Road

18 December 2023

goFARM Australia
c/- Aquaterra Scientific
Heath.Fidock@aquaterrasoci.com.au

To whom it may concern

RE: Quotation for the supply of native vegetation credits

Vegetation Link is an accredited offset provider with the Department of Energy, Environment and Climate Action (DEECA). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based on the information you have provided; I understand you require the following native vegetation offset:

Offset type	Vicinity	General habitat units (GHU)	Min. strategic biodiversity value (SBV)	Large trees
General	Goulburn Broken CMA	0.147	0.329	12

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the options quoted below¹. This quotation is valid for 14 days, subject to credit availability.

Credit Trade Option 1: 2 x 3-Party CTA pathway - offset sites located in the Greater Shepparton City area (approx. 3-6 week turnaround from acceptance of quote)

Native Vegetation Credit Fees – Invoiced by DEECA	
Cost of native vegetation credits (0.006 GHU + 12 Large Trees) (ex. GST)	\$4,140.00
Cost of native vegetation credits (0.141 GHU) (ex. GST)	\$12,690.00
Broker Fee – Invoiced by Vegetation Link	
Cost of broker fee for 2 CTAs (ex. GST)	\$2,500.00
Total Credit Trade Fees	
Subtotal Cost (ex. GST)	\$19,330.00
Total GST applicable	\$1,933.00
Total Cost (inc. GST)	\$21,263.00

¹ Note that the broker fee includes the NVOR transfer and allocation fees when an allocation is done at the time of purchase.

Vegetation Link Pty Ltd

ABN: 92 169 702 032

www.vegetationlink.com.au

Credit Trade Option 2: 3-Party CTA pathway - offset site located in the Campaspe Shire area (approx. 3-6 week turnaround from acceptance of quote)

Native Vegetation Credit Fees – Invoiced by DEECA		
	Cost of native vegetation credits (ex. GST)	\$19,083.00
Broker Fee – Invoiced by Vegetation Link		
	Cost of broker fee (ex. GST)	\$1,250.00
Total Credit Trade Fees		
	Subtotal Cost (ex. GST)	\$20,333.00
	Total GST applicable	\$2,033.30
	Total Cost (inc. GST)	\$22,366.30

If you would like to purchase credits, let us know that you accept the quote and return the attached **purchaser details form** by email. If more than one quotation option is provided above, specify which option you choose. Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation are in the FAQ below.

Should you have any queries, please do not hesitate to contact us on 1300 VEG LINK (1300 834 546) or email offsets@vegetationlink.com.au.

Sincerely,



Shannen Hunter
Biodiversity Offset Broker