

# *Merfield Road Property, Tootanellup*

## **Eco-Restoration Planning as Part of Gondwana Link in the Forests to Stirling sub-region**

### **Vegetation Survey Report**



**Ecologist, Melissa Howe & Green Skills volunteer, Loxley Fedec, assess Merfield Road property, Rocky Gully WA.**

Photo: B;Schur 22<sup>nd</sup> November 2021



*This project was supported by Gondwana Link and the Koorabup Trust*



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## ACKNOWLEDGEMENTS

Green Skills Inc. acknowledges permission and support from Ray White Mt Barker to be able to undertake this survey as part of planning for the conservation and restoration of the Gondwana Link landscape:

<http://www.gondwanalink.org/>

Many thanks also goes to community volunteers, Loxley Fedec and Sarah Pozzi, who accompanied us on this survey. Their time, expertise and knowledgeable contribution to these surveys was much appreciated.

This report was prepared by Melissa Howe B.Sc. (Environmental Management) with input from Green Skills Project Officer, Basil Schur. Maps for the report were designed by Basil Schur and prepared by Maren Heckel. All photos within the report were taken by Basil Schur and Melissa Howe unless otherwise noted.

This work was supported through the Koorabup Trust and associated philanthropic supporters.



**Excellent condition remnant vegetation at Merfield Road property, Rocky Gully, WA.**

Photo: Melissa Howe, 22<sup>nd</sup> November 2021

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## 1. SUMMARY

A snapshot survey of remnant vegetation on the Merfield Road property was undertaken on 22<sup>nd</sup> November 2021 to identify and prioritise future eco-restoration works and recommended management actions for the property as part of Green Skills and Gondwana Link Program.

This survey found that the remnant vegetation remaining on this portion of Merfield Road property is in degraded to excellent ecological condition. This remnant vegetation is worthy of protective conservation management because of its vegetation condition, high biodiversity values and for its connectivity. It forms part of important eco-link pathways in this section of Gondwana Link between the Mt Roe National Park and Poorrarecup Lake. Connected bushland habitat provides for the movement of many species of native fauna across the landscape, thus preventing loss of biodiversity in conservation reserves and remnant vegetation connected to these eco-links.

This report recommends that in the event of the property being acquired for the purposes of conservation, given its strategic position adjacent to the major macro corridor line between the Mt Roe and Stirling Range National Parks, that biodiverse revegetation be undertaken at Merfield to improve the wildlife connectivity and Eco Links in the area. Options for revegetation are provided for in this section. While our preferred recommendation is that all of the degraded and cleared sections of Merfield, be revegetated with direct seeding of appropriate biodiverse mixtures of local flora, revegetation of the areas of land that are currently grazed would provide substantial Eco Link benefit. These options are set out in maps in this report (*see Section 7: Conservation and Restoration Options*).

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## 2. INTRODUCTION

A snapshot survey of remnant vegetation on the Merfield Road property was undertaken on 22<sup>nd</sup> November 2021 to identify and prioritise future eco-restoration works and recommended conservation management actions for the property as part of Green Skills and Gondwana Link Program:

<https://greenskills.org.au/> and <http://www.gondwanalink.org/>

The Merfield Road property is situated in the locality of Rocky Gully, Western Australia within the Shire of Plantagenet and is located on Lot 2250 on Deposited Plan 167541 and Lot 900 on Deposited Plan 224015. Lot 2250 consists of 297.8360 hectares and Lot 900 is 104.484 hectares. Both properties are for sale and comprise a total of 402.32 hectares including approximately 49.5 hectares of established pasture, 266.1 hectares of parkland grazing and 82.9 hectares of remnant vegetation. Not all remnant vegetation areas on the property were surveyed and the observations of flora and fauna are by no means exhaustive and were undertaken opportunistically during the assessment (*see Appendix 1: Flora & Appendix 2: Fauna*).

The Merfield Road property was for sale at the time of the survey and the land uses on the property are currently established pasture and sheep grazing. The property is bounded by Merfield Road to the north, Papes Road on the eastern boundary, a private agricultural property to the south and Reserve 39370 to the west. Remnant vegetation on the Merfield Road property provides direct linkages with Tootanellup Nature Reserve (Lot 2247 R 22442), a 990-hectare conservation area to the north; Reserve 39370, a 133.4380-hectare conservation reserve, to the west; and remnant vegetation on private property to the east. Another large 445-hectare reserve, Randall Road Reserve (Lot 764 R 26586) is located to the northeast of the property approximately 6 kilometres away (*see Section 5: Maps*).

The survey area for this report is relatively level and lies between approximately 212 and 240 metres above sea level in the Kent River catchment area. The catchment has predominantly been cleared for agricultural activities and a large



amount of the remaining remnant vegetation, wetlands and waterways are not protected from grazing and other agricultural impacts.

In 2002, it was estimated that 47.8% (231,912 hectares) pre-European vegetation remained in the Shire of Plantagenet (Shepherd et al., 2002) and the condition of much of this remaining vegetation is not known or formally protected in reserves from the impacts of agricultural activities.

The property is within the Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) region and Southern Jarrah IBRA sub-region (Atlas of Living Australia, 2020).

Three main vegetation complexes are defined by Mattiske and Havel (1998, updated 2016) within the survey area:

1. Camballup (Vegetation complex 54) – Darling Plateau – Depressions and swamps on uplands: Mosaic of woodland of *Eucalyptus marginata subsp. marginata*-*Corymbia calophylla* on slopes, and woodland of *Eucalyptus occidentalis*-*Melaleuca cuticularis*-*Melaleuca raphiophylla*, low woodland of *Melaleuca preissiana*-*Banksia littoralis* and tall shrublands of *Melaleuca viminea* on broad depressions in humid to semiarid zones.
2. Perillup (Vegetation complex 225) – Darling Plateau Uplands – Open forest to woodland of *Corymbia calophylla*-*Eucalyptus marginata subsp. marginata* on low undulating hills and low woodland of *Melaleuca preissiana* on depressions in humid to semiarid zones.
3. Bevan 2 (Vegetation complex 20) – Darling Plateau Uplands – Open forest of *Eucalyptus marginata subsp. marginata*-*Corymbia calophylla*-*Banksia grandis* on undulating uplands in humid and subhumid zones.

This report includes some recommendations for all remnant vegetation areas to be retained and for some cleared areas to be restored with local native species to strengthen and enhance ecological linkages with adjacent remnant vegetation within the Forest to Stirlings section of Gondwana Link (see *Section 7: Conservation and Restoration Options*).

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### 3. SURVEY TEAM

- Basil Schur – Green Skills Inc. Project Manager
- Melissa Howe (BSc Environmental Management) – Ecologist, contracted by Green Skills Inc.
- Loxley Fedec – Green Skills volunteer
- Sarah Pozzi – Green Skills volunteer

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### 4. SURVEY METHODS

A snapshot vegetation survey was undertaken on the Merfield Road property in the locality of Rocky Gully by the Survey team assessing a range of core attributes for numerous remnant vegetation and wetland areas on the property. Options have been proposed for conservation and restoration works on the property (see *Section 7: Conservation and Restoration Options*).

Core attributes selected and assessed included vegetation type, vegetation condition, size and perimeter of the remnant vegetation, presence of Threatened, Specially Protected and/or Priority flora and fauna species (if known),

presence of wetlands or waterways, connectivity to other vegetation and observed or potential disturbances and threats.

The sites containing remnant vegetation were assessed for their vegetation condition. The vegetation condition assessment was adapted from the Keighery Condition Scale (Keighery, 1994) based on a rating of 1 (*Very degraded*) to 5 (*Excellent*) (see *Appendix 3: Vegetation Condition Scale*).

Vegetation types were assigned based on Beard vegetation associations (Beard et al, 2013) and Vegetation complexes were assigned based on Matiske and Havel (2016).

Subsequently, a priority rating was assigned to each site ranging from *High* to *Low* for future eco-restoration works and management actions based on a subjective review of each site's overall core attributes.

Management recommendations and reasons for priority ratings were attributed to each site (see *Section 5: Summary of Survey results and Management recommendations & Section 7: Conservation and Restoration Options*).

Remnant vegetation on the property was mapped (see *Map 1 & 2*) and photos were taken for each site assessed and included in *Section 6: Summary of Survey results and Management recommendations*.

Data collected was recorded on vegetation survey sheets developed by Green Skills and consultants for this assessment (see *Appendix 4: Vegetation Snapshot Survey - 2021 Site Data Form*).



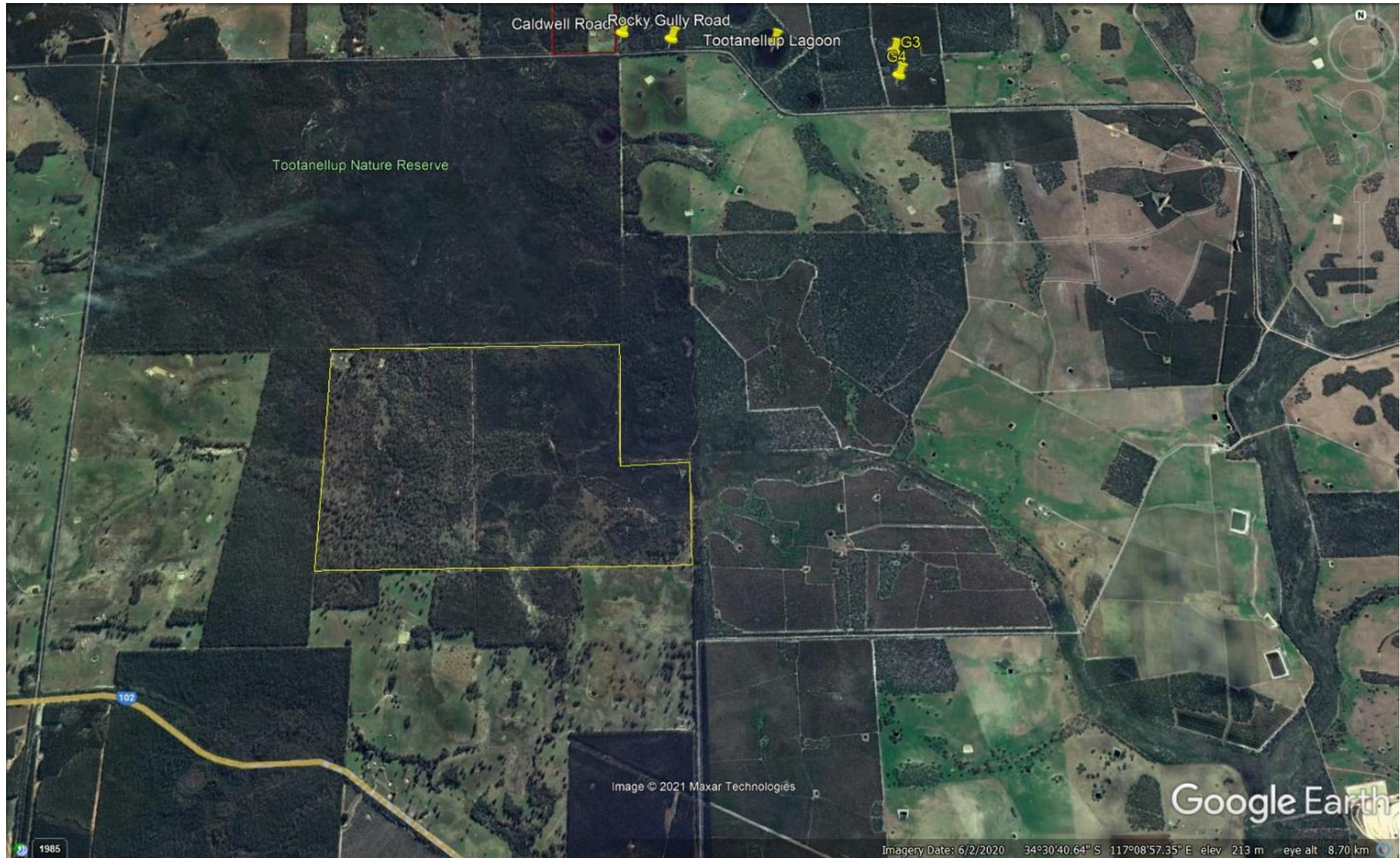
**Red Leschenaultia (*Lechenaultia formosa*) on the Merfield Road property.**

Photo: Melissa Howe, 22<sup>nd</sup> November 2021



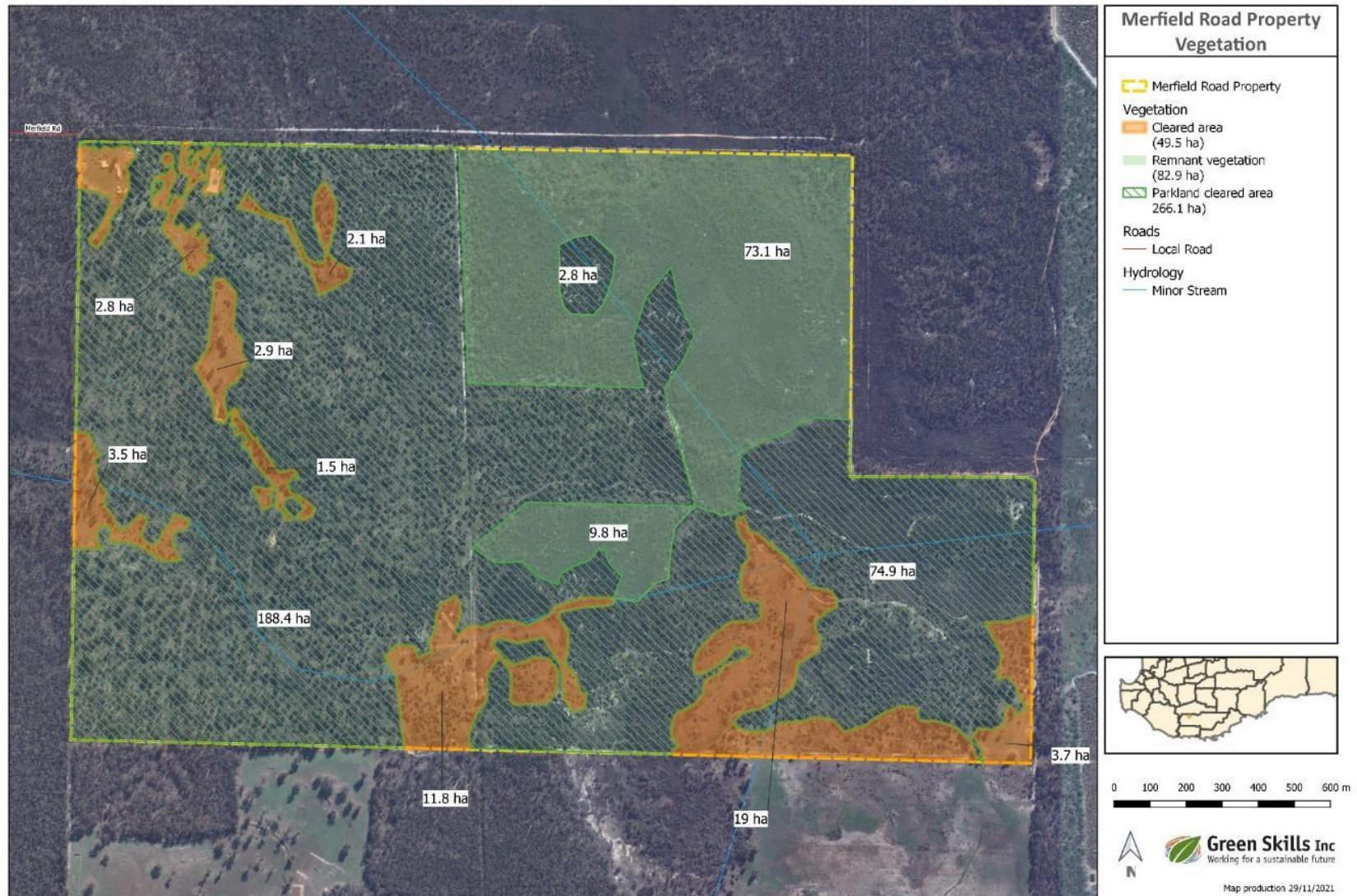
## 4. MAPS

**MAP 1: MERFIELD ROAD PROPERTY LOCALITY – LOT 2250 ON DP 167541 & Lot 900 ON DP 224015**



**MAP 2: MERFIELD ROAD PROPERTY Google Earth Map**





**MAP 3: MERFIELD ROAD PROPERTY VEGETATION**



## 5. SUMMARY OF RESULTS & MANAGEMENT RECOMMENDATIONS

### SITE M1

Date: Monday 22 Nov 2021		Recorder/s: Melissa Howe, Basil Schur	
Photo numbers	587-601	Connectivity to other bushland (Y/N)	Y

Remnant Vegetation	Y	Y/N	Coordinates	E
Restoration/Revegetation			Zone: 50	N

Site Vegetation							
Cross boxes	Woodland/Forest	Shrubland	Mallee Heath	Heath	Open	Mid dense	Closed
Upper	X				X		
Mid	X				X		
Lower	X				X		
Ground	X					X	

Land Formation Cross boxes	Level	X	Gentle		Moderate	
	Steep		Very steep		Precipitous	
Wetlands/creek present (describe)		Yes, ephemeral (seasonally inundated) Paperbark wetland				

Disturbance/Threats Yes (Y)/No (N)	Animal paths	Y	Stock grazing	Not evident	Flooding	Possible
	Erosion	N	Recent fire (<5 yrs)	No	Weeds	N Minimal
	Salinity	N	Dieback disease	Not evident		
Other notes						

FLORA - DOMINANT SPECIES
<i>Eucalyptus marginata</i> (Jarrah), <i>Corymbia calophylla</i> (Marri), <i>Eucalyptus decipiens</i> (Moit/Redheart), <i>Banksia littoralis</i> (Swamp Banksia) and <i>Melaleuca preissiana</i> (Stout Paperbark) with a diverse understorey of shrub, sedge and herb species (see Appendix 1: Flora).

FAUNA SPECIES
False Western Froglet (see Appendix 2: Fauna).

SITE NO.	AREA (hectares)/ PERIMETER (metres)	VEGETATION TYPE	VEGETATION CONDITION 1-VERY DEGRADED TO 5-EXCELLENT	PRIORITY FOR MANAGEMENT LOW, MEDIUM, HIGH, VERY HIGH
M1		Jarrah-Marri open forest, Eucalypt woodland ( <i>Eucalyptus decipiens</i> ) & ephemeral Paperbark/Swamp Banksia wetland	5 – Excellent	High

PHOTOS & DESCRIPTOR
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*Banksia littoralis* (Swamp Banksia), *Melaleuca preissiana* (Stout Paperbark) and *Xanthorrhoea platyphylla* (Grass tree) in Excellent condition.



Loxley Fedec (left) and Melissa Howe (right) observe some minute water-loving flora species such as *Utricularia* (Bladderworts) and *Stylidium* (Triggerplants).



Green Skills volunteer, Sarah Pozzi (left) assists Melissa Howe (right) to assess the site.



*Callitris pyramidalis* (Swamp Cypress, Swan River Cypress or King George's Cypress Pine) is a species of coniferous tree in the Cupressaceae. It is endemic to southwestern Western Australia.



A very impressive sized Grass tree (3.5 metres to the base of the green leaves) was encountered within the remnant vegetation that could be over 200 years old.



Excellent condition *Eucalyptus decipiens* (Moit/Redheart) woodland remnant vegetation.





Green Skills survey team assess the remnant vegetation.



Dead shrub species covered in lichen with *Patersonia occidentalis* (Purple Flag) growing through it.



Very tall mature *Melaleuca preissiana* (Stout Paperbark) specimens.



*Callitris pyramidalis* (Swamp Cypress).



Green Skills Survey team identifying the grass tree (*Xanthorrhoea platyphylla*).



Loxley Fedec next to Wiry Wattle (*Acacia extensa*).





Healthy ground cover species, *Desmocladius asper*.



Loxley Fedec observes the adjacent remnant vegetation.



Loxley Fedec carefully captured, held and released a False Western Froglet for identification.



This track is outside the perimeter of the Merfield property.



Adjacent remnant vegetation provides excellent ecological connectivity to the Merfield property.



Making a decision whether to attempt to drive through the waterlogged track...we didn't! Went the long way around.

#### MANAGEMENT RECOMMENDATIONS AND/OR REASON FOR PRIORITY

**Vegetation condition:** Site M1 remnant vegetation was classified as Excellent condition (see Appendix 3: Vegetation Scale).

**Invasive weed species:** Weed species are minimal within the remnant vegetation and predominantly confined to edges and kangaroo trails.

**Pest animals:** None observed. Foxes, rabbits and cats likely to occur on the property. The presence of Kangaroos was evident.

**Plant disease:** There are some *Eucalyptus marginata* (Jarrah) crowns that have died off, which can be an indication of dieback presence, although other dieback susceptible species occurring did not exhibit any signs of dieback. It is more likely that the Jarrah tree crowns were killed off in a fire or other climatic events such as heatwaves and/or drought conditions.

**Connectivity:** Connectivity to other remnant vegetation is very good. There is a large area of remnant vegetation directly adjacent to Site M1 to the north (Tootanelup Nature Reserve), west (Reserve 39370) and east (private property).

**Management recommendations:** Retain remnant vegetation and consider Conservation and Restoration options provided (See Section 7).

## SITE M2

**Date:** Monday 22 Nov 2021

**Recorder/s:** Melissa Howe, Basil Schur

**Photo numbers**

587-601

**Connectivity to other bushland (Y/N)**

Y

**Remnant Vegetation**

Y

Y/N

**Coordinates**

E

**Restoration/Revegetation**

**Zone: 50**

N

## Site Vegetation

Cross boxes	Woodland	Shrubland	Mallee Heath	Heath	Open	Mid dense	Closed
<b>Upper</b>	X				X		
<b>Mid</b>	X				X		
<b>Lower</b>	X				X		
<b>Ground</b>	X					X	

**Land Formation**

Level

X

Gentle

Moderate

Cross boxes

Steep

Very steep

Precipitous

**Wetlands/creek present (describe)**

Yes, ephemeral (seasonally inundated) Paperbark wetland

**Disturbance/Threats Yes (Y)/No (N)**

Animal paths

Y

Stock grazing

N

Flooding

Possible

Erosion

N

Recent fire (<5 yrs)

N

Weeds

Y

Salinity

Possible

Dieback disease

Not evident

**Other notes**

## FLORA - DOMINANT SPECIES



*Eucalyptus rudis* (Flooded Gum), *Eucalyptus occidentalis* (Flat-topped Yate) and *Melaleuca cuticularis* (Saltwater Paperbark) with a diverse understorey of sedge, rush, shrub and herb species. Priority 3 species, *Stylidium lepidum* (Redcaps Triggerplant).

#### FAUNA SPECIES

See Appendix 2

SITE NO.	AREA (hectares)/ PERIMETER (metres)	VEGETATION TYPE	VEGETATION CONDITION 1-VERY DEGRADED TO 5-EXCELLENT	PRIORITY FOR MANAGEMENT LOW, MEDIUM, HIGH, VERY HIGH
M2		Paperbark wetland & Eucalypt woodland	3 – Good	High

#### PHOTOS & DESCRIPTOR



Loxley Fedec looks out into Flooded Gum (*Eucalyptus rudis*) woodland on Merfield property which has been parkland cleared and grazed.



Melissa Howe assesses the remnant vegetation on Merfield property and documents dominant flora species.



Boundary between adjacent remnant bushland and Merfield property.



Internal boundary of Merfield property.





Merfield property offers valuable habitat for native fauna.



The presence of Saltwater Paperbark (*Melaleuca cuticularis*) may indicate salinity issues within this area.



*Eucalyptus occidentalis* (Flat-topped Yate) with a diversity of understorey species also occurs on the Merfield property.



Remnant vegetation on Merfield property was assessed to be in Good condition.



*Stylidium lepidum* (Redcaps Triggerplant) was identified on the property and is a Priority 3 species.



*Stylidium lepidum* (Redcaps Triggerplant) was identified on the property and is a Priority 3 species.





Glauert's Froglet (*Crinia glauerti*) found near ephemeral wetland area



Native rushes form part of the understorey flora species.



Mature trees and good recruitment of Eucalypt species was observed.



Native rushes prevail as good understorey flora species.



Native herb species, Red Leschenaultia (*Lechenaultia formosa*) growing on the property.





Mature Flooded Gum (*Eucalyptus rudis*) and good recruitment of younger Eucalypt species was noted, despite evidence of some tree deaths.



Some areas were dominated by a weed understorey (*Ehrharta species*).



*Ehrharta species* has taken over some cleared areas on the property.



*Ehrharta species* seed head.

#### MANAGEMENT RECOMMENDATIONS AND/OR REASON FOR PRIORITY

**Vegetation condition:** Site M2 remnant vegetation was classified as Good condition (see Appendix 3: Vegetation Scale).

**Invasive weed species:** Weed species were prevalent within the remnant vegetation.

**Pest animals:** None observed. The presence of Kangaroos was evident.

**Plant disease:** There was no evidence of plant disease within Site M2.

**Connectivity:** Connectivity to other remnant vegetation is very good. There is a large area of remnant vegetation directly adjacent to Site M2 to the north (Tootanellup Nature Reserve), west (Reserve 39370) and east (private property).

**Management recommendations:** Retain remnant vegetation and consider Conservation and Restoration options provided (See Section 7).



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***Stylidium lepidum* (Redcaps Triggerplant) was identified on the Merfield Road property and is listed as a Priority 3 species (poorly-known species). Such species are in need of further survey.**

Photo: Melissa Howe, 22<sup>nd</sup> November 2021

## 8. APPENDICES

### APPENDIX 1: FLORA SPECIES RECORDED ON THE PROPERTY

Native Flora				
NO.	SCIENTIFIC NAME	COMMON NAME	M1	M2
1	<i>Acacia extensa</i>	Wiry Wattle	X	
2	<i>Actinodium cunninghamii</i>	Albany Daisy	X	
3	<i>Austrostipa species</i>			X
4	<i>Banksia littoralis</i>	Swamp Banksia	X	
5	<i>Burchardia monantha</i>		X	
6	<i>Callitris ?pyramidalis</i>	Native Cypress	X	
7	<i>Corymbia calophylla</i>	Marri	X	
8	<i>Desmoclodus asper</i>		X	X
9	<i>Elythranthera brunonis</i>	Purple Enamel Orchid		X
10	<i>Eucalyptus decipiens</i>	Redheart/Moit	X	
11	<i>Eucalyptus marginata</i>	Jarra	X	
12	<i>Eucalyptus occidentalis</i>	Flat-topped Yate		X
13	<i>Eucalyptus rudis</i>	Flooded Gum		X
14	<i>Gompholobium ?tomentosum</i>	Hairy Yellow Pea	X	
15	<i>Hakea ceratophylla</i>	Horn Leaf Hakea	X	
16	<i>Hakea prostrata</i>	Harsh Hakea	X	
17	<i>Hakea varia</i>		X	
18	<i>Hemiandra pungens</i>	Snakebush	X	
19	<i>Hibbertia stellaris</i>		X	
20	<i>Hypocalymma angustifolium</i>	White Myrtle	X	
21	<i>Lechenaultia formosa</i>	Red Leschenaultia		X
22	<i>Levenhookia ?pusilla</i>	Midget Stylewort	X	
23	<i>Melaleuca cuticularis</i>			X
24	<i>Melaleuca densa</i>		X	
25	<i>Melaleuca preissiana</i>	Stout Paperbark	X	
26	<i>Melaleuca spathulata</i>			X
27	<i>Patersonia occidentalis</i>		X	
28	<i>Phyllangium paradoxum</i>	Wiry Mitrewort	X	
29	<i>Podolepis gracilis</i>	Slender Podolepis		X
30	<i>Siloxerus species</i>			X
31	<i>Stylidium lepidum (Priority 3)</i>	Redcaps Triggerplant		X
32	<i>Stylidium repens</i>	Matted Triggerplant	X	
33	<i>Synaphea gracillima</i>		X	
34	<i>Tetradlea species</i>		X	
35	<i>Thelymitra species</i>		X	
36	<i>Trachymene pilosa</i>			X
37	<i>Utricularia multifida</i>	Pink Petticoats		X
38	<i>Verticordia plumosa</i>	Plumed Featherflower	X	
39	<i>Xanthorrhoea preissii</i>	Balga	X	
40	<i>Xanthorrhoea platyphylla</i>	Grass Tree	X	X

Introduced Flora				
NO.	SCIENTIFIC NAME	COMMON NAME	M1	M2
1	<i>Bellardia viscosa</i>	Yellow Glandweed	X	
2	<i>Hypochaeris species</i>	Flatweed	X	
3	<i>Ehrharta ?calycina</i>	Perennial Veldt Grass		X

## APPENDIX 2: FAUNA SPECIES RECORDED ON THE PROPERTY

Native Fauna				
NO.	SCIENTIFIC NAME	COMMON NAME	M1	M2
1	<i>Dromaius novaehollandiae</i>	Emu	X	
2	<i>Crinia pseudinsignifera</i>	False Western Froglet	X	
3	<u><i>Crinia pseudinsignifera</i></u>	False Western Froglet	X	
4	<i>Crinia glauerti</i>	Glauert's Froglet		X
5	<i>Macropus fuliginosus</i>	Western Grey Kangaroo	X	X



False Western Froglet (left) and Glauert's Froglet (right) were found and identified from the Merfield Road property.  
Photo left: Melissa Howe, 22<sup>nd</sup> November 2021; Photo right: Loxley Fedec, 22<sup>nd</sup> November 2021.

Introduced Fauna				
NO.	SCIENTIFIC NAME	COMMON NAME	M1	M2
1	<i>Felis catus</i>	Cat		
2	<i>Sus scrofa</i>	Pig		
3	<i>Oryctolagus cuniculus</i>	Rabbit		
4	<i>Vulpes vulpes</i>	Red Fox		



## APPENDIX 3: VEGETATION CONDITION SCALE

VERY DEGRADED - 1	DEGRADED - 2	GOOD - 3	VERY GOOD - 4	EXCELLENT - 5
The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires; the presence of very aggressive weeds; partial clearing; dieback; & grazing.	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires; the presence of some very aggressive weeds at high density; partial clearing; dieback; & grazing.	Vegetation structure altered; obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires; the presence of some more aggressive weeds; dieback; logging; & grazing.	Vegetation structure intact; disturbance affecting individual species; weeds are non-aggressive species.

**Note:** Condition scale adapted from Keighery Condition Scale (*Keighery, 1994 and Casson et al., 2009*).

Five central scores are mainly used from “VERY DEGRADED” (1) to “EXCELLENT” (5). At either side of these could be “ALIENATED” (A) and “PRISTINE” (P). In general, it is unlikely that “A” will apply because it refers to the built environment or land that is under agriculture or horticulture, which lacks any native plants and most other native organisms. In general, it is likely that “P” will not commonly be used because there are very few places that have not been subject to feral animal grazing (rabbits, camels, goats, etc) or that have remained unaffected by exacerbated wind-borne dust deposition, or emissions (*Casson et al., 2009*).



**Impressive-sized healthy Grass trees encountered on the Merfield Road property.**

Photo: Melissa Howe, 22<sup>nd</sup> November 2021

## APPENDIX 4: VEGETATION SNAPSHOT SURVEY - 2021 SITE DATA FORM

<b>SITE</b>			
<b>Date:</b>		<b>Recorder/s:</b>	
<b>Photo numbers</b>		<b>Connectivity to other bushland (Y/N)</b>	

<b>Remnant Vegetation</b>		Y/N	<b>Coordinates</b>	E
<b>Restoration/Revegetation</b>			<b>Zone: 50</b>	N

Site Vegetation							
Tick box	Woodland	Shrubland	Mallee Heath	Heath	Open	Mid dense	Closed
<b>Upper</b>							
<b>Mid</b>							
<b>Lower</b>							
<b>Ground</b>							

<b>Land Formation</b> Tick box	Level		Gentle		Moderate	
	Steep		Very steep		Precipitous	
<b>Wetlands/creek present (describe)</b>						

<b>Disturbance/Threats</b> Tick boxes	Animal paths		Stock grazing		Flooding	
	Erosion		Recent fire (<5 yrs)		Weeds	
	Salinity		Dieback disease			
<b>Other notes</b>						

<b>FLORA - DOMINANT SPECIES</b>
<b>FAUNA SPECIES</b>

SITE NO.	AREA (hectares)/ PERIMETER (metres)	VEGETATION TYPE	VEGETATION CONDITION 1-VERY DEGRADED TO 5-EXCELLENT	PRIORITY FOR MANAGEMENT LOW, MEDIUM, HIGH, VERY HIGH

<b>PHOTOS &amp; DESCRIPTOR</b>

<b>MANAGEMENT RECOMMENDATIONS AND/OR REASON FOR PRIORITY</b>

## APPENDIX 5: DRONE PHOTOGRAPHS OF MERFIELD AND SURROUNDS





**Figure above:** View of Tootanellup Lagoon, which lies directly north of the Merfield Road property.



**Figure above:** View of Boggy Lake wetland, north-east of the Merfield Road property.





**Figure above:** View of Boggy Lake wetland, part of the same eco-Link between Tootanellup and Poorrarecup.



**Figure above:** View of part of stock free conservation bushland areas on the York and Beech properties, part of the same Eco-Link between Tootanellup and Poorrarecup.





**Figure above:** Randall Road Nature Reserve, approximately 6km north-east of Merfield Road property and part of the same eco-link between Tootanellup and Poorrarecup.



**Figure above:** View of part of Tootanellup Green Skills property and adjoining Boggy Lake in the Tootanellup Lagoon DWER property, north-east of Merfield Road property. Part of the same Eco-Link between Tootanellup and Poorrarecup.





**Figure above:** View of Tootanellup Green Skills property, adjoining Boggy Lake/Tootanellup Lagoon DWER property, north-east of Merfield Road property showing cleared area being revegetated, looking south to Tootanellup Nature Reserve and Mt Roe National Park. Part of the same Eco-Link between Tootanellup and Poorrarecup and Mt Roe National Park.



**Figure above:** View of part of Tootanellup Green Skills property and adjoining Boggy Lake in the Tootanellup Lagoon DWER property, north-east of Merfield Road property. Part of the same Eco-Link between Tootanellup and Poorrarecup. Note direct seeding rows on cleared land from August sowing.