# MANAGEMENT PLAN

KURRI KURRI CO-OPERATIVE SOCIETY LIMITED COUCH'S ROAD, NARINGAL, VICTORIA 3277



May 2019

TRUST FOR NATURE COVENANT C94

Front cover: Sugar gliders in a Kurri Kurri nest box. Photo: Peter Bolte Cite this publication as: Kurri Kurri Management Plan, May 2019

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#### 1 Vision and Aims

#### 1.1 Trust for Nature's Vision

Within two decades, protecting native plants and wildlife on private land will be recognised and valued as a central part of mainstream Australian environmental practice; just as water and energy conservation are today. There will be a shared expectation and responsibility among communities, landowners and governments that, just as national and state parks are protected, so too significant natural areas on privately owned land should be protected.

Kurri Kurri's conservation covenant is an integral part of this vision.

#### 1.2 Our Vision and Aims

The Kurri Kurri Board (referred to as the Board throughout this Plan) officially adopted the following mission statement on 24 April 2018.

**Vision**: A healthy ecosystem - country protected forever

#### Aims:

- Primarily to manage the Kurri Kurri bush block to maintain it as a healthy and protected ecosystem.
- To provide limited facilities to support low impact recreational activities by members.
- Where appropriate to collaborate in research, education and conservation activities with like-minded organisations or individuals.
- To foster positive relationships with our neighbours, local conservation groups, indigenous groups and Moyne Shire Council.
- As a not-for-profit conservation organisation to ensure funds are used for the long term benefit of the block and our members.

## 1.3 Scope of This Plan

This plan outlines management for the land owned by the Kurri Kurri Co-operative Society Limited. It also suggests management actions that contribute to the management of land adjoining and in the vicinity of the block but not owned by the Co-operative. Implementation of these broader actions is at the discretion of the Board.

### 2 Introduction

This plan will identify the:

- conservation assets to be targeted for conservation on our land;
- current condition of those assets in terms of habitat quality or abundance;
- threats to the conservation assets;
- management actions needed to help conserve those assets; and
- health of each asset that will help evaluate ecological trends over time and revise management as needed.

A Board review of this plan, including the health of conservation assets, the threats and threat levels, and the trends associated with management actions, is scheduled for 5 yearly intervals.

Next Review: by May 2024

This plan aims to provide relevant management guidance for up to 10 years, recognizing that adaptive management is an acceptable, and often necessary, approach. Adaptations to management may be required at a more frequent period than identified in the Management Plan. Where the Board believes that an event (fire, flood etc) or situation (new weed, unseasonal event, native faunal population boom, etc.) has arisen that requires a change in approach to that prescribed within this management plan, the Board can initiate a review of the actions.

#### 2.1 Role of Trust for Nature

The block was formally covenanted with Trust for Nature on 28 May 1996.

This Management Plan has been prepared using a template supplied by the Trust and has been approved by the Trust on <a href="XXXXXX">XXXXX</a>

The Board will inform Trust for Nature of any new and significant management situation and any consequent modification to the actions identified within this plan. The Trust will then inform the landowner of any of the following:

- acceptance of a modification to the plan in writing (or email);
- the need for a Trust for Nature staff member to review the plan and visit the site; or
- provide an alternative approach to dealing with the newly emerged issue.

## 3 Statement of landowner and property details

Covenant File No:	Trust for Nature Covenant C94
Title holder/s:	Kurri Kurri Co-operative Society Limited
Main contact name:	Dr John Sherwood, Secretary
Postal address:	PO Box 582, Warrnambool, Victoria 3280
email:	jsher@deakin.edu.au
Telephone (h):	(03) 5562 8064
Telephone (m):	0437 508 229
Covenant area	31.82 ha
Tier 1:	31.79
Tier 2:	
Domestic area:	Approximately 300m <sup>2</sup> (0.03 ha) cleared with shelter shed
Total covenant area:	31.82 ha
Date of registration:	28 May 1996
Existing infrastructure	
Dwellings:	None
Non-habitable	Shelter shed (treated pine walls, corrugated iron
structures:	roof) with rain water tank, septic tank toilet and internal storage areas
Dams:	None
Fences:	On north side (444m) and east side (712m). Unfenced government roads along west and south boundaries

### 3.1 Land and Vegetation Classification

**IBRA Region: SE Coastal Plain** 

Victorian Bioregion: Warrnambool Plain (WaP)

#### **Ecological Vegetation Classes**

Ecological Vegetation Class (EVC)	Approx. Area (ha)	Conservation status	EPBC Act - listed	FFG Act - listed
Lowland Forest (EVC 16)	31.79		No	No

### 3.2 Statement of Conservation Significance

The 31.82 ha block is classified as Lowland Forest (EVC16) and includes areas of ephemeral freshwater wetland. This area of remnant forest is dominated by Messmate (*Eucalyptus obliqua*), Swamp Gum (*E. ovata*) and Manna Gum (*E. viminalis*). It provides significant habitat and ecosystem services in an area dominated by agriculture where the vast majority of forest has been cleared. Incremental loss of remnant vegetation is continuing in the vicinity of the block. The block adjoins neighbouring blocks of remnant forest to the north and south west and several unmade road reserves along the west and south boundaries which support native vegetation. The block is one of several islands of remnant native vegetation in a 10 km radius and thus contributes significantly as habitat for mobile native species able to utilise roadside corridors of bushland or open farmland.

The block supports locally uncommon marsupial species such as potoroo, antechinus and sugar gliders and several uncommon plant species such as rusty green hood, tongue and bird orchids

### 3.3 Covenant History, Ecological Events and Processes

The property was last burnt in the 1983 Ash Wednesday bush fires. At that time the bushland was owned by Rosalie Duffield and had always been valued by her family. Some timber had been harvested from the property but it remained relatively undisturbed. It was offered for private sale to a local conservationist, Pat Urbonas (now Pat Laher) who conceived the idea of creating a conservation focussed cooperative to raise funds for its purchase. Seven Directors were appointed at a formation meeting on 17 February 1984, with Pat Urbonas as Chair. Members were

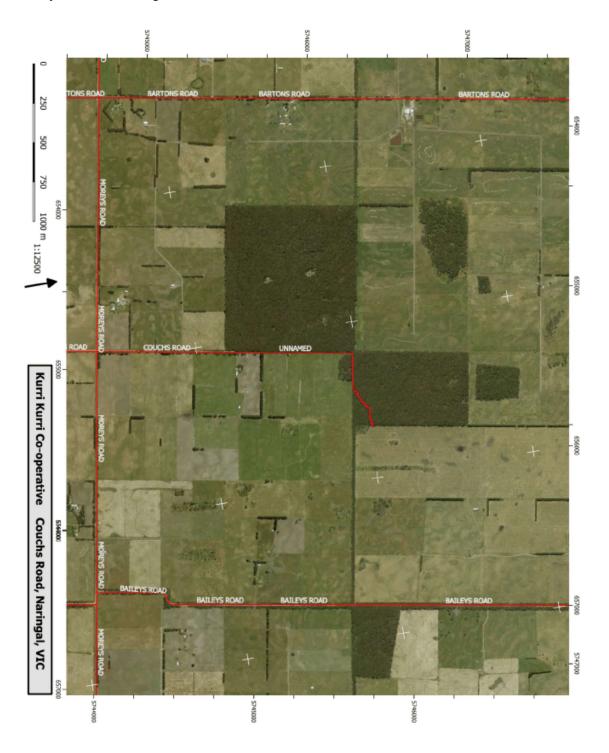
sought through local and Melbourne press advertisements, pamphlet distribution and presentations to local groups. Shares (\$1 each) were offered for sale in minimum parcels of 250. After 19 months the Co-operative had 140 members, about half from the local area and including members from Melbourne, regional Victoria, NSW and Queensland.

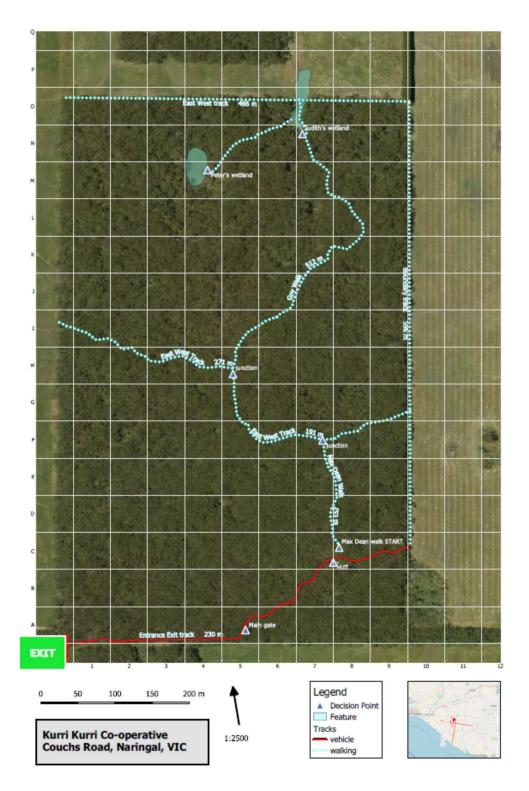
The block was purchased by the Co-operative for \$35,000 in September 1985. A shelter shed was constructed in April 1986 approximately 100m from the east and south boundaries. An access road was made from the south government road and a cleared area of about 300m² with barbecue fireplaces created to the shelter shed's north. Two walking tracks, one basically north-south in orientation and the other east –west are maintained for access to the block. A strip roughly 2-3m wide is maintained along the east and north fence lines.

A conservation covenant was signed with Trust for Nature on 28 May 1996.

## 3.4 Covenant maps

The block is located at the northern end of Couch's Road and is approached from Morey's Road, Naringal.





This aerial photograph shows the walking tracks (dotted) and main access road (red solid line). This and the previous image courtesy of Gavin Prentice.

#### 4 Conservation Assets

The Kurri Kurri block consists predominately of Lowland Forest (EVC16) with small areas of ephemeral freshwater wetland. Drainage is poorly defined in the predominantly flat terrain but small changes in elevation (0.5 – 1m) define drainage lines dominated by sedges (lower areas). Bracken is common in higher areas. The soil is a brown sandy loam derived from the underlying Tertiary limestone.

A Flora list (Appendix 8.2) has been compiled by members over many years.

Fauna lists (Appendix 8.3) have been compiled by members and other researchers from trap surveys and photos including those captured on motion activated cameras. Limited data is available on reptiles, amphibians and invertebrates. This should be an on-going topic of research.

Ecological asset	Asset description	Associated assets	Current condition
Lowland Forest vegetation	The Lowland Forest vegetation includes predominately eucalypts with an understory of acacias, banksias, sedges including lomandra and gahnia and a variety of ground storey plants.	Marsupials such as echidnas, swamp wallaby, grey kangaroo, brown antechinus, potoroo, ring tail possum and sugar glider. Birds include grey thrush, blue wren, grey fantail, magpie and thornbills	Healthy and stable
Ephemeral Freshwater wetlands	These are scattered throughout the block with the larger areas in the north. In wetter years they fill during winter but are commonly dry in autumn	Water birds such as ducks and vertebrates such as frogs use the full wetlands.	Healthy and stable although weed species (eg. paspalum and thistles) tend to invade when the wetlands are dry only to die as they fill.

Threatened fauna (EPBC listed)	Long-nosed Potoroo (vulnerable), Southern Brown Bandicoot (endangered)	Forest cover and ground litter	unknown
Threatened fauna (FFG Listed)	Grey-headed flying fox	Forest cover	unknown
Threatened flora	Lobelia beaugleholei	Ground Litter	unknown

Non-ecological assets	Review Date	Condition	Trend Comment
Members	May 2019	Good	Stable but new members should be constantly sought as existing members age
Infrastructure assets including Shed and contents, septic tank, water tank, BBQ, table and seat could be lost or damaged.	May 2019	Good	Will slowly deteriorate over time unless subject to regular maintenance
Boundary fences and access track	May 2019	Fair	Access tracks and walkways require regular maintenance including resurfacing of roads and trimming vegetation. Fences require regular maintenance to remove fallen branches and to rewire damaged sections.

## 5 Threats

## 5.1 Ecosystem Threats

Threat No.	Threat class	Threat name	Threat description	Current threat Level	Potential threat Level
1	Introduced flora	Low threat weeds	Limited distribution species such as lawn daisy, dandelion, thistles.	Low	high
2	Introduced flora	High threat weeds	More widespread and potentially persistent species such as blackberry, ragwort, kikuyu, fog grass, paspalum	medium	Very high
3	Introduced fauna	Feral animals	Foxes, Deer, Rabbits, Cats, Honey Bees	medium	high
4	Introduced fauna	Wandering domestic stock	Cattle from neighbouring paddocks grazing and spreading weeds	low	high
5a		Unauthorised access	Shooting of wildlife, clearing of vegetation, arson by unauthorised visitors	low	Very high
6		Spray drift	Herbicide or insecticide spray drift from neighbouring land	med	Very high
7		Inappropriate fire regime	Fire interval too long or too short, fire at inappropriate time of year	med	med
8		Lack of habitat	Lack of breeding habitat for gliders, some birds due to	med	med

			absence of old tree hollows		
9	Introduced flora	Spread of Pathogens	Phytophthera (Cinnamon fungus), Chytrid (Frog Fungus) or other pathogens that impact native species	med	high
10.		Loss of Orchid species	Badly timed mowing of tracks may remove flowering orchids	low	high

<sup>\*</sup> A threat level is assigned to each listed threat based on knowledge of the threat's extent, magnitude, frequency, and consequence (scale from low to very high). Very high threats will typically require immediate attention to reduce the likelihood of long-term damage to a conservation asset or general environment. The potential threat level, in the far right column, is a qualitative assessment of the threat forecast within the timeframe of this plan (up to10 years) in the absence of any management intervention to reduce the threat (or following an unplanned ecological event such as fire, flood, disease, etc).

## 5.2 Non-Ecosystem Threats

Threat No.	Threat class	Threat name	Threat description	Current threat Level	Potential threat Level
5b		Unauthorised access	Vandalism, inappropriate use of facilities by unauthorised visitors	low	Very high
11		Physical injury to visitors	Members and visitors could be injured while visiting or doing volunteer work such as track maintenance, mowing or weeding on the block.	med	Very high

12	Loss or damage to infrastructure assets, by fire or lack of maintenance	Assets could be lost or damaged.	high	high
13	Bites and Stings	Leeches, snakes, ants and spiders can cause poisoning, infection and other illnesses in human visitors	med	med

## 6 Management actions

Management action	Description	Approximate Frequency	Threats mitigated (Refer Threat No. above)	Conservation asset/s to benefit	Priority*
Weed control	Review, update and continue to implement weed management plan	On-going	1 and 2	all	high
Fence monitoring and maintenance	Regularly monitor boundary fences and repair as required, including removing fallen trees/limbs	monthly	4 and 5, and 12	all	high
Boundary management	Mow east and north boundaries	Seasonally, with consideration of plant species needs (eg orchids)	1, 2, 12		high
Nest boxes	Create GPS register and map of existing nest boxes, maintain existing next boxes, install new nest boxes for specific species.	Seasonally (Autumn)	8	Birds, mammals (bats) and arboreal marsupials (possums)	med
Hygiene protocols	Review recommended hygiene	annually	1, 2 and 9	all	med

Working bees	Board to coordinate regular working bees to maintain infrastructure and do conservation management actions such as weed control	monthly	all	all	high
Maintain infrastructure and member facilities	Review maintenance schedule for buildings, track, tank etc. Board to ensure these tasks are carried out at working bees	annually	11 and 12	None?	high
Member induction	Ensure new members are inducted onto the block by a board member using approved induction checklist	As required	1, 2, 9, 11 and 13	not relevant	high
	protocols for footwear, tools, vehicles and equipment and communicate to members via newsletter and signage on site. This is to help prevent the introduction of pathogens and weed seeds.				

	and nest box maintenance .				
Signs and locks on gate	Review signs which identify the block as private property and dedicated to conservation	annually	5	all	low
Motion activated cameras	Install and maintain motion activated cameras to monitor wildlife using the block and deter unauthorised visitors	Maintain as required by a nominated member	3 and 5	all	med
Firewood policy	Board to review policy on collection and use of firewood for BBQ	annually	8	Forest floor organisms	med
Provide and maintain safety policies and equipment	Review safety guidelines and get all members to read and sign that they have read them. Provide and maintain basic first aid supplies and safety equipment (ear muffs, rubber gloves, safety glasses) and signs reminding visitors and volunteers to look after their own safety	Annually and as required	9, 11, 13	Not relevant	high

Track Maintenance	Slash tracks in autumn as recommended by Gary Backhouse to enable seeding of orchid species	annually	10	orchids	high
Liaise with neighbours	Develop good relationships with our neighbours	On-going	4,5,and 6	all	med
Controlled burning	Seek expert advice on the desirability, optimum frequency and techniques to undertake this	On-going	7	all	low
Update species list	Rely on member observations and expert assessments	On-going	7, 8	all	med

<sup>\*</sup> The priority assigned to each management action relates to any threats that the particular management action aims to address. However capacity to undertake various works, including financial capacity and physical health may at times limit the extent to which actions can be undertaken.

## 7. Our Agreement with Trust for Nature

## 7.1 Important information about our covenant and plan

#### 7.1.1 Legal framework

This management plan has been developed in consultation with Trust for Nature to guide our management actions, which are based on the conditions set out in our conservation covenant. The purpose of this management plan is to help protect and enhance the conservation values of our property in perpetuity. To this end, by carrying out the actions in this management plan we will be meeting some of the conditions and obligations of our conservation covenant.

We may not achieve all of the actions in the life of the plan, but should take note especially of the high priority actions. If an action is permitted in the Trust for Nature Deed or by an instrument made under the Deed, such as a 'letter of approval', and is permitted subject to a management plan, then the conditions in this management plan form part of the conditions under the Deed or instrument.

If our protected property is not managed in accordance with our management plan, it may constitute a breach of our covenant.

#### 7.1.2 Commencement and review

This plan commences on the day it is signed by both us and the Trust, and it remains in effect until a new plan is signed. Trust for Nature will work with the Board to review our management plan every five years.

Trust for Nature staff may visit Kurri Kurri, with our approval, at other times to maintain contact and help identify any new issues that may need to be addressed. Regional Trust for Nature staff can provide additional land management information, assistance and advice. The Melbourne office ((03) 8631 5888 or <a href="www.trustfornature.org.au">www.trustfornature.org.au</a>) can provide contact details for Trust for Nature regional staff.

### 7.1.3 Change of ownership

Both the trust and us want to ensure that if our property changes hands, that it continues to be managed in accordance with the conservation values of the covenant. The Kurri Kurri Board has a duty under the deed to inform potential purchasers of our property that a covenant and management plan exists. The Board also has a duty under the covenant to inform Trust for Nature when it enters into a contract of sale of our property and to provide to the Trust the contact information of

the new owners. This means Trust for Nature can contact the new owners and let them know of their obligations under the covenant and management plan.

#### 7.1.4 Participation in tender, incentive or offset agreements

If our covenanted land is, or becomes, subject to a tender agreement (i.e. Bush Tender, Plains Tender, Habitat Tender, Wetland Tender), an incentive agreement or a Native Vegetation Offset agreement through Trust for Nature or Bush Broker, the management plan adopted under those agreements takes precedence over this covenant management plan for the life of the agreement. When the agreement has ended, the Board must resume management of Kurri Kurri property as per the most current covenant management plan. Regardless of Kurri Kurri's involvement in a tender, incentive or offset agreement, the Board must ensure that the co-operative adheres to the obligations of the deed of covenant. These obligations are not waived during the period in which a covenanted property is subject to a tender, incentive or offset agreement.

#### 7.1.5 Cultural heritage considerations

The identification and preservation of indigenous cultural heritage on land in Victoria is regulated under the *Aboriginal Heritage Act 2006*. It is an offence to unlawfully disturb or remove indigenous cultural heritage (artifacts or sites). If artifacts or sites are identified or suspected on the land, please contact Aboriginal Affairs Victoria for further information.

#### 7.1.6 Wildfire management

The Vic Emergency website (<u>www.emergency.vic.gov.au</u>) or the Victorian Bushfire Information Line (1800 240 667) can provide important information about:

- warnings and fire danger ratings;
- fire restrictions;
- total fire ban days; and
- vegetation clearance for fire prevention (including any requirements for a planning permit).

The Department of Environment, Land, Water and Planning (DELWP) website also has useful information on current fires at <a href="https://www.delwp.vic.gov.au">www.delwp.vic.gov.au</a>.

Before any clearance of vegetation or soil disturbance for wildfire management the relevant authorities should be consulted and Trust for Nature advised.

The Board has a duty under our covenant to ensure that any vegetation clearance for wildfire management first avoids, and then minimizes the loss of the conservation values of our covenanted property.

#### 7.2 Trust for Nature Use of Information

- (a) Trust for Nature is given permission to use our property details, including photos, for promotion.
- (b) Trust for Nature is authorised to provide DELWP, CMA, or other government agencies with flora/fauna information from our property for use in the Victorian Biodiversity Atlas.

### 7.3 Acknowledgements by the Trust

Trust for Nature acknowledge that compliance with the prohibitions and restrictions set out in the Deed of Covenant may be treated as waived pursuant to clause 4 of the deed of covenant.

This includes to the extent necessary for:

- reasonable fire protection, weed and pest control;
- acts outside the control of the owner (outlined in Section 4 of the Deed);
- reasonable maintenance of fences, culverts, dams, bridges, watercourses, buildings, tracks, paths, roads and other services;
- any act required under any law, rule or regulation of any government or governmental agency, executive or administrative order or act of general or particular application; and
- the proper management of our property as a protected environment for indigenous flora and fauna.

## 7.4 Signatures

Kurri Kurri Co-operative Society Limited is obliged under the deed of covenant number C0094 to manage our property for its conservation. The actions specified in this management plan and any subsequent monitoring and condition reports are

A	(	
under the Deed.		
designed to assist this manager	nent and are considered to be part of the agreeme	∍nt

Agreed on	Click here to enter a date.	(execution date)	
On behalf of	the landowner(s);		
Print name		Signature	
On behalf of	Trust for Nature (Victoria	);	
Print name of	f authorised officer	Signature	
	uthorised officer		

## 8. Appendices

## 8.1 Appendix 1: Vegetation Quality

### (a) Vegetation Quality Assessment (VQA)

Vegetation is assessed against a benchmark level representing 'long-undisturbed' remnant vegetation. All attributes may not be applicable to all vegetation types. See section (c) for basis of scores.

Vegetation quality assessment for [Lowland Forest (EVC 16)]					
Attribute	Score	Notes (relating to benchmarks as per VQA criteria)			
Large Trees	1/2	Some past timber harvesting has reduced the number of large old trees			
Canopy Cover	1/1	Excellent cover			
Understorey	3/5	Bracken and sedges now dominate as shrubs regenerated by the 1983 wildfire have died.			
Lack of weeds	2/3	Constant recruitment from adjoining land, mostly along boundaries, tracks and the BBQ area.			
Recruitment	1/2	Some short-lived plant species (eg wattles) have now reduced in numbers since the 1983 wildfire			
Organic Litter	1/1	thick			
Logs	1/1	Most are left where they fall. Those across tracks or fences are removed.			

### (b) Description of EVC

Open forest to 25 m tall characterised by the diversity of species and life forms in each stratum. Includes a variety of healthy understorey shrubs. It grows on a wide variety of geology and soils.

Source: www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks

## (c) Vegetation Quality Assessment criteria

Attribute	Benchmark	Quality Measurement	Score
	Number of trees over 60	No large trees	0
LARGE TREES	cm DBH (diameter at breast height): Woodlands - 10-15/ha Forests - 20/ha	Present but not common: Woodlands & Wetlands up to 7/ha Forests up to 12/ha	1
	Wetlands - 10-15%	Common: - Woodlands & Wetlands more than 7/ha - Forests more than 12/ha	2
	50+% in Rainforests 10-20% in Woodlands &	Very substantially reduced < 25% of benchmark	0
CANOPY COVER	Wetlands 20-50% in Forests	Significantly reduced: 25-50% of benchmark	0.5
	50% in Scrubs 20% in Shrublands	Comparable to benchmark, although maybe reduced > 50% benchmark	1
	Cover of Indigenous	Absent or virtually so < 10% total expected cover	0
	Species: 90-100% in Woodlands, Forests and Grasslands 70-85% in Wetlands  Diversity of Lifeforms: 25-35 species in Woodlands, Forests, Shrublands, Grasslands 15-20 species in Wetlands	Indigenous cover greatly reduced 10-25% total expected cover	2
UNDER		Indigenous cover somewhat reduced, low diversity 25-75% total expected cover, < 50% diversity	3
UNDERSTOREY		Indigenous cover somewhat reduced, high diversity 25-75% total expected cover, > 50% diversity	4
		Indigenous cover little reduced, high diversity > 75% total expected cover, > 50% diversity	5
	% Cover	Dominated by exotic species > 50% cover	0
LACK OF		Weeds common but not dominant 25-50% cover	1
WEEDS		Weeds present but not common 5-25% cover	2
		Weeds absent or very rare < 5% cover	3
R	Woodlands, Forests, Shrublands, Scrubs &	Recruitment absent or, if present then only for a minority of species, < 25% of species Small herbs few or absent	0
RECRUITMENT	Heathlands - Percentage of woody species present on site  Grasslands & Wetlands -	Recruitment common but not for all species: 25-75% Some small herbs observable	1
ENT	Diversity of Herbs within inter-tussock spaces	Very common for most life forms, 75% of species  Diverse number of small herbs	2

60% cover in Rainfore 40% cover in Forests 20% cover in Woodlar		Absent or significantly reduced from benchmark < 50%	0
ORGANIC LITTER	Shrublands 10% cover in Grasslands & Wetlands	Present and not significantly reduced from benchmark > 50%	1
1.000	Length of fallen trees/branches >10cm diameter	Logs and/or cut stumps absent or significantly reduced from benchmark < 50%	0
LOGS	100 m/ha in Woodlands 150 m/ha in Forests 50 m/ha in Red Gum Wetlands	Logs and/or cut stumps present and not significantly reduced from benchmark > 50%	1

## 8.2 Appendix 2: Flora species records

## (a) Plant List# (as at January 2019; compiled by Kevin Sparrow)

## # 167 species identified to date

	Plant				Who	Date
Туре	Family	Genus	Species	Common Name	Identified	Identified
					J.	
Dicot.	Lamiaceae	* Mentha	pulegium	Pennyroyal	Rutherford	Oct 95
D:+	Gentianacea	***************************************		0	J.	0-4.05
Dicot.	е	*Centaurium *Gnaphaliu	erythraea candidissimu	Common Centaury	Rutherford	Oct 95
Dicot.	Asteraceae	m Griapilaliu	m	White Cudweed	Rutherford	Oct 95
Dicot.	71010140040			Willia Cadwood	J	00.00
	Asteraceae	*Leontodon	taraxicoides	Hairy Hawkbit	Rutherford	Oct 95
Dicot.				Hairy-bird-foot	J.	
	Fabaceae	*Lotus	hispidus	Trefoil	Rutherford	Oct 95
Dicot.	Scrophularia	*Parentucelli			J.	
	ceae	а	viscosa	Sticky Bartsia	Rutherford	Oct 95
Dicot.			fruiticosa sp.	5	J.	0.405
Disat	Rosaceae	*Rubus	agg	Blackberry	Rutherford	Oct 95
Dicot.	Polygonacea	*Dumov	acetosella	Chaon Carroll	J. Rutherford	Oct 05
Dicot.	е	*Rumex	ssp. Agg	Sheep Sorrell	.l	Oct 95
Dicot.	Asteraceae	*Senecio	iacobaea	Ragwort	Rutherford	Oct 95
Dicot.	71010140040	20110010	Jacobaca	ragiron	J	00.00
	Asteraceae	*Taraxacum	officionale	Dandelion	Rutherford	Oct 95
Dicot.						
	Mimosaceae	Acacia	melanoxylon	Blackwood	L. Jacka	Oct 86
Dicot.					J.	
	Mimosaceae	Acacia	mucronata	Narrow-leaf Wattle	Rutherford	Oct 95
Dicot.	1					
D:+	Mimosaceae	Acacia	myrtifolia	Myrtle Wattle	L. Jacka	Oct 90
Dicot.	Mimosossos	Acceio	stricta	Han Mattle	J. Rutherford	Oct 95
Dicot.	Mimosaceae	Acacia	Stricta	Hop Wattle	Rullieriord	Oct 95
Dicot.	Mimosaceae	Acacia	verticillata	Prickly Moses	L. Jacka	Oct 90
Dicot.	Willinggaggag	7100070	Vortioniata	1 Holdy Widoco	.l	00.00
	Rosaceae	Acaena	anserinifolia	Bidgee Widgee	Rutherford	Oct 95
	Epacridacea				J.	
Dicot.	е	Acrotriche	serrulata	Honey-pots	Rutherford	Oct 95
Dicot.	Casuariniace	Allocasuarin			J.	
D: 1	ae	а	littoralis	Black She-oak	Rutherford	Oct 95
Dicot.	Casuariniace	Allocasuarin		0	J.	0-4.05
Dicot.	ae	A // //	palludosa	Swamp She-oak	Rutherford	Oct 95
Dicot.	Amaranthac eae	Alternanther a	denticulata	Lesser Joy-weed	J. Rutherford	Oct 95
Dicot.	Euphorbiace	a	deriticulata	Lesser Joy-Weed	J.	00193
	ae	Amperea	xiphoclada	Broom-spurge	Rutherford	Oct 95
Dicot.		,50.00			J.	
	Rubiaceae	Asperula	conferta	Common Woodruff	Rutherford	Oct 95
Dicot.	Epacridacea				J.	
	e	Astroloma	humifusum	Cranberry Heath	Rutherford	Oct 95
D: .		5		0.1 5	J.	0 / 05
Dicot.	Proteaceae	Banksia	marginata	Silver Banksia	Rutherford	Oct 95
Dicot.	Pittosporace	Rillardiara	longifolio	Durnle Applehers	K Malina	Oct 99
Dicot.	ae Pittosporace	Billardiera	longifolia	Purple Appleberry Common	K. Mylius	Oct 88
Dioot.	ae	Billardiera	scandens	Appleberry	L. Jacka	Oct 90
	_ uc	Dilla alora	0001100110	/ (pprobotty	L. Jaoka	00000

Dicot.						
	Fabaceae	Bossiaea	prostrata	Creeping Bossiaea	K. Mylius	Oct 88
Dicot.	Brunoniacea	Brunonia	australis	Blue Pin-cushion	J. Rutherford	May 08
Dicot.	Pittosporace ae	Bursaria	spinosa	Sweet Bursaria	J. Rutherford J	Oct 95
Dicot.	Brassicacea e	Cardamine	sp.	Cress	J. Rutherford	Oct 95
Dicot.	Lauraceae	Cassytha	melantha	Coarse Dodder- laurel	J. Rutherford	Oct 95
Dicot.	Asteraceae	Centipeda	minima	Spreading Sneeze- weed	J. Rutherford	Oct 95
Dicot.	Ranunculace ae	Clematis	aristata	Austral Clematis	J. Rutherford	May 95
Dicot.	Polygalacea e	Comesperm a	volubile	Blue Love-creeper	K. Mylius	Oct 88
Dicot.	Convolvulac eae	Dicondra	repens	Kidney-weed	J. Rutherford	Oct 95
Dicot.	Droseraceae	Drosera	macrantha	Climbing Sundew	J. Rutherford	Oct 95
Dicot.	Epacridacea e	Epacris	impressa	Common Heath	L. Jacka	Oct 90
Dicot.	Onagraceae	Epilobium	billiardiernu m ssp cinereum	Hoary Willow-herb	J. Rutherford	Oct 95
Dicot.	Apiaceae	Eryngium	vesiculosum	Prickle Foot	J. Rutherford	Oct 95
Dicot.	Myrtaceae	Eucalyptus	obliqua	Messmate	J. Rutherford	Oct 95
Dicot.	Myrtaceae	Eucalyptus	ovata	Swamp Gum	J. Rutherford	Oct 95
Dicot.	Myrtaceae	Eucalyptus	viminalis	Manna Gum	J. Rutherford	Oct 95
Dicot.	Asteraceae	Euchiton	gymnocepha lus	Creeping Cudweed	J. Rutherford	Oct 95
Dicot.	Rubiaceae	Galium	australe	Bedstraw	J. Rutherford	Oct 95
Dicot.	Geraniaceae	Geranium	potentilloides	Cinquefoil	J. Rutherford	Oct 95
Dicot.	Asteraceae	Gnaphalium	involucratum	Star Cudweed	J. Rutherford	Oct 95
Dicot.	Asteraceae	Gnaphalium	sphaericum	Common Cudweed	J. Rutherford	Oct 95
Dicot.	Haloragacea e	Gonocarpus	micranthus	Creeping Raspwort	J. Rutherford	Oct 95
Dicot.	Haloragacea e	Gonocarpus	sphaericum	Raspwort	J. Rutherford	Oct 95
Dicot.	Haloragacea e	Gonocarpus	tetragynus	Common Raspwort	J. Rutherford	Oct 95
Dicot.	Goodeniace ae	Goodenia	blackiana	Goodenia	J. Rutherford	May 08
Dicot.	Goodeniace ae	Goodenia	humilis	Swamp Goodenia	J. Rutherford	Oct 95
Dicot.	Goodeniace ae	Goodenia	lanata	Trailing Goodenia	J. Rutherford	Oct 95
Dicot.	Goodeniace	Goodenia	ovata	Hop Goodenia	J. Rutherford	May 95
Dicot.	Scrophularia ceae	Gratiola	pedunculata	Stalked Brooklime	J. Rutherford	Oct 95
Dicot.	Scrophularia ceae	Gratiola	peruviana (k)	Austral Brooklime	J. Rutherford	Oct 95

		ı				
Dicot.	Asteraceae	Helichrysum	scorpioides	Button Everlasting	J. Rutherford	May 08
Dicot.	Apiaceae	Hydrocotyle	laxiflora	Stinking Pennywort	J. Rutherford	Oct 95
Dicot.		, , .	sibthorpioide	, , , , , , , , , , , , , , , , , , ,	J.	
	Apiaceae	Hydrocotyle	S	Shining Pennywort	Rutherford	Oct 95
Dicot.	Hypericacea			Matted St. John's	J.	
	e	Hypericum	japonicum	Wort	Rutherford	Oct 95
Dicot.					J.	
	Asteraceae	Hypochoeris	radicata	Cat's Ears	Rutherford	Oct 95
Dicot.	Fabaceae	Kennedia	prostrata	Running Postman	L. Jacka	Oct 90
Dicot.	Astoropoo	Lagenophor	atinitata	Laganifora	J. Rutherford	Oat 05
Dicot.	Asteraceae	a	stipitata	Lagenifera	Rutheriora	Oct 95
Dicot.	Myrtaceae	Leptosperm um	continentale	Prickly Teatree	J. Rutherford	Oct 95
Dicot.	Wyrtaccac	um	continentale	1 Holdy Toddioc	J	00:33
Dicot.	Rubiaceae	Leptostigma	reptans	Dwarf Nertera	Rutherford	Oct 95
	Epacridacea		roptano	2 114.1 11011014		00100
Dicot.	' e	Leucopogon	australis	Spiny Beard-heath	L. Jacka	Oct 90
Dicot.	Campanulac		beaugleholei		J.	
	eae	Lobelia	(Rr)	Lobelia	Rutherford	Oct 95
Dicot.	Campanulac					
	eae	Lobelia	pedunculata	Matted Pratia	B. Mylius	Oct 88
Dicot.					J.	_
	Lythraceae	Lythrum	hyssopifolia	Small Loosestrife	Rutherford	Oct 95
Dicot.	Scrophularia				J.	
D:4	ceae	Mazus	pumilio	Swamp Mazus	Rutherford	Oct 95
Dicot.	M	Malalaviaa		0 t   D	J.	0-4.05
Dicot.	Myrtaceae	Melaleuca	squarrosa	Scented Paperbark	Rutherford	Oct 95
Dicot.	Fabaceae	Mirbelia	oxylobioides	Mountain Mirbelia	B. Mylius	Oct 88
Dicot.	Portulacacea	Will Della	Oxylobioldes	Mountain Minbella	D. Wyllus	OCI 66
Dicot.	e	Neopaxia	australasica	White Purslane	K. Sparrow	Nov 11
Dicot.	<u> </u>	Пооража	uu oti uru orou	VVIIICO I GIOIGIIO	J.	1107 11
	Asteraceae	Olearia	ramulosa	Twiggy Daisy-bush	Rutherford	Oct 95
Dicot.				Yellow Wood-	J.	
	Oxalidaceae	Oxalis	corniculata	sorrell	Rutherford	Oct 95
Dicot.					J.	
	Asteraceae	Ozothamnus	ferrugineus	Tree-everlasting	Rutherford	May 95
Dicot.					J.	
	Geraniaceae	Pelargonium	australe	Austral Storks-bill	Rutherford	Oct 95
Dicot.	Polygonacea				J.	
D:4	e	Persicaria	decipiens	Slender Knotweed	Rutherford	Oct 95
Dicot.	Polygonacea	Doweicowie	nunctuata.	Creeping	J.	Oat OF
Dicot.	e	Persicaria	prostrata	Knotweed	Rutherford	Oct 95
Dicot.	Proteaceae	Persoonia	juniperinum	Prickly Geebung	J. Rutherford	Oct 95
Dicot.	Euphorbiace	r Graddilla	jumpemum	i-nonly deepung	I	OCI 90
2.000.	ae	Phyllanthus	hirtellus	Thyme Spurge	J. Rutherford	Oct 95
Dicot.	Rhamnacea	yılanını		Rough Hazel-	. tationora	30.00
	е	Pomaderris	aspera	pomaderris	K. Mylius	Oct 88
Dicot.	Euphorbiace		,	,	Ĵ.	-
	ae	Poranthera	micophylla	Small Poranthera	Rutherford	Oct 95
Dicot.	Potamogeto	Potamogeto		Floating Pond-		
	naceae	n	cheesemani	weed	K. Sparrow	Nov 11
Dicot.					J.	
	Lamiaceae	Prunella	vulgaris	Self-heal	Rutherford	Oct 95
Dicot.						
5,001.			-4-:-4-	Rigid Bush-pea	L. Jacka	Oct 90
	Fabaceae	Pultenaea	stricta	Trigia busii-pea		001 30
Dicot.	Fabaceae Ranunculace ae	Pultenaea Ranunculus	stricta sp.	Buttercup	J. Rutherford	Oct 95

	Ι	1	I			
Dicot.	Polygonacea e	Rumex	brownii	Slender Dock	J. Rutherford	Oct 95
Dicot.	6	rumex	DIOWIII	Olerider Dock	J	00193
Dicot.	Asteraceae	Senecio Sphaerolobi	minimus	Shrubby Fire-weed	Rutherford	Oct 95
Dicot.	Fabaceae	Spnaerolobi um	vimineum	Leafless Globe-pea	B. Mylius	Oct 88
Dicot.	Stackhousia			Creamy	J.	
	ceae	Stackhousia	monogyna	Stackhousia	Rutherford	Oct 95
Dicot.	Stylidiaceae	Stylidium	graminifoliu m	Grass Trigger-plant	J. Rutherford	Oct 95
Dicot.	Tremandrac eae	Tetratheca	ciliata	Pink Bells	L. Jacka	Oct 90
Dicot.	Lentibulariac eae	Utricularia	australis	Fairies Aprons	J. Rutherford	Oct 95
Dicot.	Scrophularia ceae	Veronica	calycina	Hairy Speedwell	K. Sparrow	Nov 11
Dicot.	Menyanthac	Veronica	Carycina	nally Speedwell	J.	INOV I I
	eae	Villarsia	exaltata	Erect Marsh-flower	Rutherford	Oct 95
Dicot.	Menyanthac eae	Villarsia	reniformis	Running Marsh- flower	J. Rutherford	Oct 95
Dicot.					J.	
Dicot.	Violaceae	Viola	betonicifolia	Showy Violet	Rutherford	Oct 95
	Violaceae	Viola	hederaceae	Ivy-leaf Violet	L. Jacka	Oct 90
Dicot.		Va ette e e		0.11 ()/ 11 :	J.	0.105
	Apiaceae Adianthacea	Xanthosia	dissecta	Cut-leaf Xanthosia	Rutherford I	Oct 95
Fern	e	Adiantum	aethiopicum	Maiden hair fern	Rutherford	Oct 95
_	Lindsaeacea				J.	
Fern	e Dennstaedtia	Lindsaea	linearis	Screw Fern	Rutherford	Oct 95
Fern	ceae	Pteridium	esculentum	Common Bracken	Rutherford	Oct 95
		*Anthoxanth		Sweet Vernal	J.	
Monocot.	Poaceae	um	odoratum	Grass	Rutherford	Nov 08
Monocot.	Poaceae	*Agrostis	capillaris L.	Brown top bent	J. Rutherford	Oct 07
Monocot.		*Desmayeri			J.	
Monocot.	Poaceae	а	rigida	Fern Grass	Rutherford	Oct 95
MONOCOL.	Poaceae	*Holcus	lanatus	Yorkshire Fog- grass	J. Rutherford	Oct 95
Monocot.	1 000000	7707040	ianatao	grado	J.	00100
	Poaceae	*Paspalum	dilitatum	Paspalum	Rutherford	Oct 95
Monocot.	D	*0-4		Slender Pigeon-	J.	0-4.05
Monocot.	Poaceae	*Setaria	gracilis	grass Whorled Pigeon-	Rutherford I	Oct 95
Monoco.	Poaceae	*Setaria	verticillata	grass	Rutherford	May 08
Monocot.	_				J.	
Monocot.	Poaceae	*Sporobolus	indicus	Rat-tail grass	Rutherford	Oct 95
	Orchidaceae	Acianthus	caudatus	Mayfly Orchid	J. Rutherford	Oct 95
Monocot.	Orabid	A sis attacas	A. (a. !!!	Mayely Oneleid	J.	O-t-05
Monocot.	Orchidaceae	Acianthus Austrodanth	pusillus	Mayfly Orchid	Rutherford	Oct 95
WICH 1000L	Poaceae	onia	laevis	Pale Wallaby-grass	J. Rutherford	Oct 95
Monocot.		Austrofestuc		, ,	J.	
Monas-4	Poaceae	а	hookeriana	Hooker's Fescue	Rutherford	May 08
Monocot.	Cyperaceae	Baumea	acuta	Pale Twig Rush	J. Rutherford	Oct 95
Monocot.	1.70	D ::/ "		NA:II	J.	
Monocot.	Liliaceae	Burchardia	umbellata	Milkmaids	Rutherford .I	Oct 95
L	Orchidaceae	Caladenia	carnea	Pink Fingers	Rutherford	Oct 95
						20

Monocot.	I					
	Orchidaceae	Caladenia	pusilla	Tiny Caladenia	J. Sherwood	Oct 18
Monocot.	Cyperaceae	Carex	sp	Sedge	J. Rutherford	Oct 95
Monocot.	Orchidaceae	Chiloglottis	valida	Bird Orchid	K.Sparrow	Oct 18
Monocot.	Orchidaceae	Corybas	sp	Helmet Orchid	G.Backhous e	Sep 00
Monocot.	Orchidaceae	Cryptostylis	subulata	Large Tongue- orchid	J. Rutherford	Oct 95
Monocot.	Cyperaceae	Cyperus	tennellus	Tiny Flat Sedge	J. Rutherford	Oct 95
Monocot.	Poaceae	Deyeuxia	quadriseta	Reed Bent-grass	J. Rutherford	Oct 95
Monocot.	Liliaceae	Dianella	revoluta	Spreading Flax-lily	J. Rutherford	Oct 95
Monocot.	Liliaceae	Dianella	tasmanica	Rasman Flax-lily	J. Rutherford	Oct 95
Monocot.	Orchidaceae	Dipodium	roseum	Hyacinth Orchid	J. Rutherford	Oct 95
Monocot.	Cyperaceae	Eleocharis	acuta	Common Spike- rush	J. Rutherford	May 08
Monocot.  Monocot.	Restionacea e	Empodisma	minus	Spreading Rope- rush Australian Sweet-	J. Rutherford	Oct 95
N4	Poaceae	Glyceria	australis	grass	K.Sparrow	Nov 11
Monocot.	Poaceae	Imperata	cylindrica	Blady-grass	J. Rutherford	Oct 95
Monocot.	Cyperaceae	Isolepis	inundata	Swamp Club-rush	J. Rutherford	Oct 95
Monocot.	Juncaceae	Juncus	bufonius	Toad Rush	J. Rutherford	Oct 95
Monocot.  Monocot.	Juncaceae	Juncus	capitatus	Capitate Rush	J. Rutherford	Oct 95
	Juncaceae	Juncus	holoschoenu s	Joint-leaved Rush	J. Rutherford	Oct 95
Monocot.	Juncaceae	Juncus	pallidus	Pale Rush	J. Rutherford	Oct 95
Monocot.	Juncaceae	Juncus	pauciflorus	Loose-flower Rush	J. Rutherford	Oct 95
Monocot.	Juncaceae	Juncus	planifolius	Broad-leaved Rush	J. Rutherford	Oct 95
Monocot.	Poaceae	Lachnogrost is	filiformis var. 1	Common Blown- grass	J. Rutherford	Oct 95
Monocot.	Cyperaceae	Lepidosper ma	laterale var. elatius	Broad Sword- sedge	J. Rutherford	Oct 95
Monocot.	Cyperaceae	Lepidosper ma	longitudinale	Common Sword- sedge	J. Rutherford	Oct 95
Monocot.	Restionacea e	Leptocarpus	brownii	Coarse Twine-rush	J. Rutherford	Oct 95
Monocot.	Orchidaceae	Leptoceras	menziesii	Hare Orchid	G.Backhous e	Sep 00
Monocot.	Restionacea e	Lepyrodia	muelleri	Common Scale- rush	J. Rutherford	Oct 95
Monocot.	Xanthorrhoe aceae	Lomandra	filiformis	Wattle Mat-rush	J. Rutherford	Oct 95
Monocot.	Xanthorrhoe aceae	Lomandra	longifolia	Spiny-headed Rush	J. Rutherford	Oct 95
Monocot.	Xanthorrhoe aceae	Lomandra	nana	Pale Mat-rush	J. Rutherford	Nov 08

Monocot.					J.	
Wioriooot.	Poaceae	Microlaena	stipoides	Weeping Grass	Rutherford	Oct 95
Monocot.			0	Trooping Crass	J.	00100
	Orchidaceae	Microtis	sp.	Onion Orchid	Rutherford	Oct 95
Monocot.		Notodantho	semiannulari	Tasmanian Blown-	J.	
	Poaceae	nia	s	grass	Rutherford	Oct 95
Monocot.						
	Iridaceae	Patersonia	occidentalis	Purple Flag	K. Mylius	Nov10
Monocot.				Purple-sheath	J.	
	Poaceae	Poa	ensiformis	Tussock	Rutherford	Oct 95
Monocot.					J.	
	Poaceae	Poa	labilliarderi	Tussock Grass	Rutherford	Oct 95
Monocot.					J.	0 105
Managat	Poaceae	Poa	sieberiana	Tussock Grass	Rutherford	Oct 95
Monocot.	Danasa	Doo	tomovo	Slender Tussock-	J.	O-t 05
Monocot.	Poaceae	Poa	tenera	grass	Rutherford .I	Oct 95
Wioriocot.	Orchidaceae	Prasophyllu m	sn.	Leek Orchid	J. Rutherford	Oct 95
Monocot.	Orchidaceae	III	sp	Leek Olcilla	.l	00193
Wioriocot.	Orchidaceae	Pterostylis	melagramma	Tall Greenhood	Rutherford	Oct 95
Monocot.	Oromadodae	, toroctyne	moragramma	Nodding	.l	00.00
	Orchidaceae	Pterostylis	nutans	Greenhood	Rutherford	May 08
Monocot.		Í			G.Backhous	,
	Orchidaceae	Pterostylis	pedunculata	Maroonhood	е	Sep 00
Monocot.					J.	•
	Cyperaceae	Schoenus	apogon	Common Bog-rush	Rutherford	Oct 95
Monocot.					J.	
	Poaceae	Tetrarhena	juncea	Wire-grass	Rutherford	Oct 95
Monocot.					J.	
	Orchidaceae	Thelmytra	ixioides	Dotted Sun-orchid	Rutherford	Oct 95
Monocot.					G.Backhous	
	Orchidaceae	Thelymitra	sp	Sun-orchid	е	Sep 00
Monocot.	Juncaginace				J.	
	ae	Triglochin	alcockii	Water Ribbons	Rutherford	Oct 95
Monocot.	T. m.h	Trans-	aniant-li-	D. II	J.	O-t-05
Managat	Typhaceae	Typha	orientalis	Bull-rush	Rutherford	Oct 95
Monocot.	Xanthorrhoe	Xanthorrhoe	australis	Austral Cross tree	J.	Oct 95
Monocot.	aceae	a Vantharrhan	australis	Austral Grass-tree	Rutherford	Oct 95
IVIUI IUCUL.	Xanthorrhoe	Xanthorrhoe	minor	Small Grass-tree	J. Rutherford	Oct 95
	aceae	а	HIHHOI	Jillali Grass-liee	Nullienoid	OCI 95

## 8.3 Appendix 3: Fauna species records

(a) Bird List (Compiled by Peter Bolte; 2016; biological names to be added)

No.	Common Name	Biological Name	Status
1.	Brown Thornbill		
2	Striated Thornbill		
3	Yellow-rumped Thornbill		
4	White-browed Scrubwren		
5	Superb Fairy-wren		
6	Eastern Yellow Robin		
7	Scarlet Robin		
8	Flame Robin		
9	Grey Fantail		
10	Willie Wagtail		
11	Crested Shrike-tit		
12	White-throated Treecreeper		
13	Silvereye		
14	Red-browed Finch		
15	Golden Whistler		
16	Rufous whistler		
17	Fan-tailed Cuckoo		
18	Horsfield's Bronze-cuckoo		
19	Noisy miner		
20	White-naped Honeyeater		
21	White-eared Honeyeater		
22	Brown-headed Honeyeater		
23	Crescent Honeyeater		
24	New Holland Honeyeater		
25	Yellow-faced Honeyeater		
26	Red Wattlebird		
27	Eastern spinebill		
28	Bassian Thrush		
29	Grey Shrike-thrush		
30	Little Raven		
31	Australian Magpie		
32	Satin flycatcher		
33	Eastern rosella		
34	Yellow-tailed Black-		
J.	cockatoo		
35	Galah		
36	Sulphur-crested Cockatoo		
37	Long-billed Corella		
38	Gang-gang Cockatoo		
39	Crimson Rosella		
40	Blue-winged Parrot		
41	Purple-crowned Lorikeet		

42	Rainbow lorikeet
43	Wedge-tailed Eagle
44	Brown Falcon
45	Peregrine Falcon
46	Brown Goshawk
47	Grey Goshawk
48	Laughing Kookaburra
49	Sacred Kingfisher
50	Black-faced Cuckoo-shrike
51	Grey Currawong
52	Grey Butcherbird
53	Magpie Lark
54	Common Starling*
55	Common Blackbird*
56	European Goldfinch*
57	Australian Wood Duck
58	Pacific Black Duck
59	Grey Teal
60	Chestnut Teal
61	Australian Shelduck
62	White-faced Heron
63	White-necked Heron
64	Welcome Swallow
65	Southern Boobook Owl

#### Notes:

EPBC Act = status under the Federal Environment Protection and Biodiversity Conservation Act 1999

CE = Critically Endangered EN = Endangered VU = Vulnerable NT = Near Threatened

FFG Act = listed as threatened under the Victorian Flora and Fauna Guarantee Act 1988

L = listed N = nominated for listing

DELWP = status on the Advisory List of Rare and Threatened (Plants, Fauna, Invertebrates) in Victoria.

r = rare v = vulnerable e = endangered c = critically endangered k = poorly known in Victoria n = near threatened

#### Origin

\* = Not native to Australia and / or not indigenous to the local area.

## (b) Marsupial and Mammal List (as at November 2018)

Common Name	Species Name	Comments		
Short-beaked echidna#	Tachyglossus aculeatus	Camera image. Digging		
		signs		
Brown antechinus #^^	Antechinus stuartii	Resident in shed		
Agile antechinus	Antechinus agilis	Trapped during fauna survey		
_		March 2002		
Southern brown	Isoodon obesulus	Camera image. Digging		
bandicoot		signs?		
Long-nosed bandicoot #	Perameles nasuta	To be confirmed		
Sugar glider	Petaurus breviceps	Occupies nest boxes		
Ringtail possum #	Pseudocheirus	Occupies nest boxes		
	peregrinus			
Brushtail possum	Trichosurus vulpecula	Camera image?		
Long-nosed potoroo #^^	Potorous tridactylus	Trapped during fauna survey		
		February 2010; Camera		
		image		
Eastern grey kangaroo	Macropus giganteus	Common sighting in block		
#		and surrounding paddocks		
Black (swamp) wallaby	Wallabia bicolor	Camera and sightings		
#				
Red-necked wallaby	Macropus rufogriseus	Reported sightings by		
		members		
Koala	Phascolarctos cinereus	Sightings but apparently not		
		resident		
Bush rat #^^	Rattus fuscipes	Trapped during fauna survey		
		February 2010		
		<i>"</i>		
White-striped mastiff bat	Tadarida australis	"heard"		
++	Obstitution of the			
Gould's wattled bat ++	Chalinolobus gouldii			
Chocolate wattled bat	Chalinolobus morio			
++^^	Estada de disertad			
Large forest eptesicus	Eptesicus darlingtoni			
++^^	Entocious regulus			
King River eptesicus ++	Eptesicus regulus			
Little forest eptesicus	Eptesicus vulturnus			
	Falsistrollus			
Great pipistrelle ++	Falsistrellus tasmaniensis			
Common bent wing bet				
Common bent-wing bat	Miniopterus schreibersii			
	Nyotophilus asoffravi			
Lesser long-eared bat	Nyctophilus geoffroyi			
Gould's long-eared bat	Nyctophilus gouldii			
++	Tvyctoprilius gouldii			
TT				

House Mouse *#	Mus musculus	
Rabbit *#^^	Oryctolagus cuniculus	sighted
European Hare	Lepus europaeus	sighted
Fox *#^^	Vulpes vulpes	Camera image and sighted in surrounding paddocks
Cat *^^	Felis catus	Sighted and camera image
Samba deer *	Cervus unicolor	Camera images. Not resident?

#### Notes:

#### \* Non-native species

#Recorded by Bennett (1987) Biogeography and Conservation of Mammals in a Fragmented Forest Environment in South Western Victoria (MSc Thesis 1987). Unconfirmed sightings by Bennett on the block of red-necked wallaby (Macropus rufogriseus). He also believed long-nosed bandicoot (Perameles nasuta) would be on the block based on trappings in surrounding areas. See also Bennett A.F.(1989) Wildlife Conservation in the Naringal Area, Southwestern Victoria. Arthur Rylah Institute for Environmental Research, report ++ From Andrew Bennett report (1992) Bats in the Naringal Area – An Update. Based on trapping surveys in the area (often at Ralph Illidge Sanctuary) not on our block.

^^ Rebecca McNaught and John Sutherland (2001). A Mammal Survey at Kurri Kurri Reserve, Naringal, SW Victoria. SW TAFE, Warrnambool.

## (c) Reptiles and Amphibians (Incomplete) List

Phylum	Scientific name	Common name	EP BC	FF G	DEL WP	Record by	Date
Reptilia	Notechis scutatus	Tiger snake				P. Bolte	1994
	Austrelaps superbus	Copperhead snake				P. Bolte	1991
	Tiliqua scincoides	Blue tongue lizard				K. Mylius	1988
	Drysdalia coronoides	White lip snake				P. Hartrick	2017

Phylum	Scientific name	Common name	EP BC	FF G	DEL WP	Record by	Date
Amphibia	Limnodynas tes dumerili	Pobblebonk Frog				J.Sherwood	1998
	Limnodynas tes peroni	Striped Marsh Frog				L. Prentice	2017
	Geocrinia laevis	Southern Smooth Froglet				C. Draper	Heard 2006 and 2007
	Crinia signifera	Common Eastern Froglet				L. Prentice	2017 and 2019
	Crinia parinsignifer a	Eastern sign-bearing froglet				P. Hartrick	Heard 2017

#### Notes:

EPBC Act = status under the Federal Environment Protection and Biodiversity Conservation Act 1999

CE = Critically Endangered EN = Endangered VU = Vulnerable NT = Near Threatened

FFG Act = listed as threatened under the Victorian Flora and Fauna Guarantee Act 1988

L = listed N = nominated for listing

DELWP = status on the Advisory List of Rare and Threatened (Plants, Fauna, Invertebrates) in Victoria.

r = rare v = vulnerable e = endangered c = critically endangered k = poorly known in Victoria n = near threatened

#### Origin

<sup>\* =</sup> Not native to Australia and / or not indigenous to the local area.

## 8.4 Appendix 4: Significant Species

The following table outlines significant flora and fauna species (with official threatened species listings) that have been documented on the property and/or in the local area. Those recorded in the local area, have potential to also be present in, or to use, habitat on the property (such potential varies between species though).

Scientific name	Common name	EPBC Act	FFG Act	DEL WP	Estimated popn size	Successful recruitmen t
Flora						
Lobelia beaugleholei	Showy Lobelia			(Rr)	unknown	unknown
Fauna						
Potorous tridactylus	Long nosed Potoroo	vulnerable	listed		unknown	unknown
Isoodon obesulus	Southern brown bandicoot	endangere d	listed		unknown	unknown

#### Notes:

EPBC Act = status under the Federal Environment Protection and Biodiversity Conservation Act 1999

CE = Critically Endangered EN = Endangered VU = Vulnerable NT = Near Threatened

FFG Act = listed as threatened under the Victorian Flora and Fauna Guarantee Act 1988

L = listed N = nominated for listing

DELWP = status on the Advisory List of Rare and Threatened (Plants, Fauna, Invertebrates) in Victoria (2014).

r = rare v = vulnerable e = endangered c = critically endangered k = poorly known in Victoria n = near threatened

## 8.5 Appendix 5: Weeds

## (a) Kurri Kurri Weed Management Plan

#### Aim:

To have only local indigenous plants on the property.

### **Background**

The most affected areas are, and will always be, the boundary, internal walking tracks and the carpark/BBQ area. Blackberry is uncontrolled on roadsides all around the block and will need on-going monitoring in the block's damp areas. Monitoring and control work on the public roads leading to the block (Couch's Road) and roads along its western (unnamed) and southern (Duffields Road) margins will help protect the block from weeds. Kikuyu is a serious environmental weed invading bushland adjoining Couch's Road and its unmade extension. Its control is a community service.

Pasture grasses, particularly paspalum, fog grass and sweet vernal can be brought into the block by kangaroos. Lawn daisy has long-lived seed and has had many years of seed setting around the BBQ.

All weeds present only need a continuing commitment to quite simple eradication procedures.

#### **Eradication Techniques Available**

- Hand weeding
- 2. Herbicide sprays (using species specific herbicides, Fusillade or *Roundup*)
- 3. Heat wand (only to be used in wetter months because of the risk of fire)
- 4. Hoe or garden spade (the latter is less disruptive than the hoe when a 'lift and pull' technique is used. The hoe tends to turn up large clods of earth)
- 5. 'Cut and paint' for woody weeds
- 6. Inundation (not a 'technique' under our control but natural flooding of wetland areas does remove weeds effectively)
- 7. Replacement (i.e. where suitable, replace localised, high-density infestations with more manageable materials, e.g. spray out barbeque area surroundings and treat with gravel)

Selection of the most appropriate technique will vary with the weed species, its abundance and distribution, and the season (e.g. is it seeding/spreading or not?). Grass specific sprays should be used among broad-leafed pioneer natives (ie recolonisers of previously sprayed areas such as kidney weed and native geranium). Broad leaf specific sprays will be appropriate when native grasses or sedges are growing amongst blackberry or lawn daisies for example.

Collected weeds that are not seeding may be left upside down at the site. Any seed heads should be placed in durable plastic bags and removed from the block for appropriate disposal.

ACTION: Purchase a supply of durable black garbage bags for this purpose and place them in the shed.

A record of weed observations and control measures taken should be placed in a weed diary. A map of the block should be available to mark identified weed occurrences. It may be preferable to mark infestations with plastic tape.

ACTIONS (a) Purchase a note book to be labelled as the Weed Diary and placed in the shed.

- (b) Investigate whether GHCMA can supply a GIS map of the block.
- (c) Obtain a roll of plastic tape for weed site identification

#### **Priority Weeds**

The following weeds are identified as more invasive and so are the highest priority for active management. The list is current in 2013 and should be reviewed over time (at least every 2-5 years):

- 1. Kikuyu grass
- 2. Blackberry (which should not be confused with the native raspberry)
- 3. Rat-tail grass
- 4. Fog grass
- 5. Ragwort
- 6. Thistle

ACTION: To aid identification of these weeds and avoid confusing them with "look alike" similar native species an illustrated guide will be prepared and placed in the shed

**Classifying the Block for Weed Management Purposes** 

#### 1. Access Roads

These areas are a source of weeds as cars travel to the block.

Issues: (i) Tall weeds brush along the underside of cars driving into the block – increasing the chance of seeds coming in.

(ii) Vehicles and equipment may bring new weed species from other sites onto the block via seeds and plant material attached.

ACTIONS: (a) Spray grass along centre swathe and edges of Couch's Road Locate source of a boom sprayer or else investigate paying a contractor.

- (b) Heat wand/spot spray/ hand weed along the Duffield's Road south of the block.
- (c) Ensure that vehicles and equipment entering the block do not carry weed seed or plant material that may introduce weeds through proactive discussion of the need for vehicle and equipment hygiene to members, visitors and contractors in newsletters and personal communications.

Issues: (iii) Cutting and painting English Broom (*Cytisus scoparius*) along the drain beside Couch's Road has been done. This saw successful removal of weeds for at least 100m south of the entry to Couch's house - reducing the chance of weed transfer into the block. Broom still occurs further south along the drain.

ACTION: Monitor spread of broom plants along the drain

#### 2. Boundaries to east, north and west

Issues: (i) Water and wind-borne seed has been transferred from farmland north of the block into Judith's Swamp resulting in colonisation by paspalum and other weeds (thistles). Hand weeding over several dry years had limited success. All weeds were lost when the wetland flooded after "normal" winter rains.

#### ACTION: Regular monitoring required particularly as wetland dries out.

Issues: (ii) Regular spraying of kikuyu has occurred along the western boundary – this is an unmade public road which acts as a buffer for our block. Two or 3 extensive grass "carpets" have spread from the adjoining farmland. These are most visible during autumn because they remain green when other grasses are dead (brown)

ACTION: Spraying with Round-up has reduced the area substantially but continued spraying needed.

Issues: (iii) Wind blown thistle seed from surrounding farmland.

ACTION: Regular boundary inspections. Hoeing thistles before seed is mature. Where a neighbour is sympathetic (e.g. Morris Duffield) hoe thistles within say 20 – 25m outside of our boundary fence also.

#### 3. Internal tracks

Issues (i) Fog grass along tracks (particularly on the eastern boundary) near their junction with the boundary.

ACTION: No action has been taken as yet to control this weed. It is an annual and should be sprayed with Fusillade, heat wanded, or hand-pulled before seeding. Fusillade only attacks grasses – not sedges or broad leafed plants.

Issues: (ii) Animals can carry seed on their fur and also deposit them in their droppings.

ACTION: Monitoring needed along all tracks.

#### 4. Car park/BBQ area

Issues: (i) There are many weeds in this area probably from vehicles, member's lawn mowers and other equipment and decades of seed setting. It has few natural species. Regular mowing and direction of throw of cut grass exhaust (into centre or to edges of area) may be spreading weeds.

ACTIONS: (a) Mark the area of imported crushed stone around the BBQ area and spray to keep free of weeds. It may also be necessary to spread more crushed rock here.

- (b) Reduce reliance on member's lawnmowers now we have our own slasher. Clean mowers before bringing them to the block.
- (c) Hand weeding/ spot spraying of weeds such as rat-tail grass, lawn daisy and centaury.
- (d) Wanted native species in the mown areas should be marked with stakes
  - (e) Review the mowing policy in this area. There should be clear demarcation of areas to be mown with stakes. The need to mow the eastern side of the recreation area should be re-considered.
  - (f) When mowing start on the outside of the area to be mown and spiral toward the centre throwing cut waste in towards the centre to reduce areal spread of weeds.

#### 5. Interior of block

Issues: (i) Hand weeding of blackberry from drainage line south of the recreation area – especially near the access road – and in the southeast corner of the block has been fairly successful.

ACTION: Monitoring needed still with hand weeding as necessary.

Issues: (ii) Large parts of block are rarely visited – their weed status is unknown.

ACTION: When walking through the block check for weeds. If immediate removal is not feasible mark occurrences with tap. Note all observations in the Weed Diary.

#### **Priority Areas for Weed Control**

The following areas will be the main focus for weed control:

- 1. The car park/BBQ area
- 2. Access roads
- 3. Internal tracks

#### **Factors to Consider When Timing Weed Control**

Spraying when wetlands contain water can harm invertebrates.

Weeds should be treated before they set seed - for most species this means in Spring.

ACTION: A roster should be developed during October, November and December so the block is visited once a fortnight to check on and control weeds such as fog grass

Kikuyu should be sprayed in summer and autumn when it is actively growing.

#### ACTION: Plan for this activity in at least one working bee

Adopted by the Board 18 June 2013

Review Date: June 2016

# Weed Management Plan, Appendix 1: Exotic Plants Recorded on the Block to 1995

(mostly from Judith Rutherford's records)

- 1. Blackberry (Rubus fruticosus)
- 2. Cat's ears (Hypochoeris radicata)
- 3. Common centaury (Centaurium erythraena)

- 4. Dandelion (Taraxacum officinale)
- 5. English lawn daisy (Bellis perrennans)
- 6. Fern grass (Desmazeria rigida)
- 7. Hairy birds foot trefoil (Lotus hispidus)
- 8. Hairy hawkbit (Leontodon taraxacoides)
- 9. Kikuyu (Pennisetum clandestinum)
- 10. Paspalum (Paspalum dilatatum)
- 11. Penny royal (Mentha pulegium)
- 12. Pigeon grass (Setaria gracilis)
- 13. Ragwort (Senecio jacobaea)
- 14. Rat-tail grass (Sporobolus indicus)
- 15. Scotch thistle (Onopordum acanthium)
- 16. Sheep sorrel (Rumex acetosella)
- 17. Sticky bartsia (Parentucellia viscosa)
- 18. Sweet vernal grass (*Anthoxanthum odoratum*)
- 19. White cudweed (Vellereophyton dealbatum)
- 20. Yorkshire fog grass (Holcas lanatus)

### (b) Significant Weeds

Scientific name	Common name	WoNS	CALP	Last recorded on	Freq	Comment on occurrence
Rubus fruticosus	Black berry	X		2018		Occasional colonies on SE corner and East boundary
Senecio jacobaea	Ragwort		Х			

#### Notes:

CALP = status under the Victorian Catchment and Land Protection Act 1995 (CaLP Act). Four categories:

SPW = State Prohibited Weed RPW = Regionally Prohibited Weed RCW = Regionally Controlled Weed RRW = Regionally Restricted Weed

(refer to Appendix 4b for definitions)

WoNS = Weed of National Significance

#### Frequency key

- 1 = Not commonly encountered at site; scarce and either low in numbers; single, widely scattered plants, or small isolated patches.
- 2 = Neither common nor scarce; encountered occasionally and well represented as either scattered plants or multiple patches.
- 3 = Moderately common and frequently encountered; often an obvious component of the vegetation, but may be ecosystem specific.

Freq = Frequency

### (c) Definitions of declared noxious weeds

Under the *Catchment and Land Protection (CaLP) Act 1994* certain plants are declared as noxious weeds in Victoria. These plants cause environmental or economic harm or have the potential to cause such harm. They can also present risks to human health. The CaLP Act defines four categories of noxious weeds:

**State Prohibited Weeds:** weeds that either do not occur in Victoria, but pose a significant threat if they invade, or are present and pose a serious threat. They are to be eradicated if possible from Victoria or excluded from the State. The Victorian Government is responsible for their eradication, but under Section 70(1) of the CaLP Act it may direct land owners to prevent their growth and spread.

**Regionally Prohibited Weeds:** weeds not widely distributed in a Region but are capable of spreading further. It is reasonable to expect that they can be eradicated from a Region and they must be managed with that goal. Land owners, including public authorities responsible for Crown land management, must take all reasonable steps to eradicate Regionally Prohibited weeds on their land

**Regionally Controlled Weeds:** weeds usually widespread and are considered important in a particular Region. To prevent their spread, continuing control measures are required. Land owners have the responsibility to take all reasonable steps to prevent the growth and spread of Regionally Controlled weeds on their land.

**Restricted Weeds:** This category includes plants that pose an unacceptable risk of spreading in this State or to other parts of Australia if they were to be sold or traded in Victoria, and are a serious threat to another State or Territory of Australia. Trade in these weeds and their propagules; either as plants, seeds or contaminants in other materials is prohibited.

Weed of National Significance (WoNS): Thirty two Weeds of National Significance (WoNS) have been identified by Australian governments based on their invasiveness, potential for spread and environmental, social and economic impacts. Individual landowners and managers are ultimately responsible for managing WoNS, however require coordination among all levels of government, organisations and individuals with weed management responsibilities. For further information, visit: <a href="http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html">http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html</a>

## 8.6 Appendix 6: Pest animals

## (a) Records

Scientific name	Common name	CALP	Last recorded on	Freq	Comment on occurrence
Vulpes vulpes	Red Fox	EPA		3	Sightings of individuals in surrounding paddocks, images caught on motion sensing cameras, dens previously located on the block by Paul Hartrick
Cervus unicolor	Samba Deer			1	Detected infrequently on motion sensing cameras
Oryctolagus cuniculus	Rabbit			1	Occasional burrows, scats
Felis catus	cat			1	Detected infrequently on motion sensing cameras(?)
Mus musculus	House Mouse			1	Recorded by Bennett (1987)
Apis mellifera	Honey Bee			2	Occupy nest boxes periodically.

## (b)Definition of pest animals

Under the CaLP Act pest animals are classified into several groups which dictate the level of control that needs to be applied in their management:

Prohibited pest animals: cannot be kept at all.

Controlled pest animals: can only be kept in statutory zoos.

**Regulated pest animals**: may be kept with a permit by commercial or scientific facilities for educational or scientific purposes.

**Established Pest Animal:** Landowners are required to take all reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals. Landowners are also required to take all reasonable steps to prevent the spread of these animals on any roadside adjoining their land.

## 8.7 Appendix 7: Definitions

The following terms may be used throughout this plan.

**Associated Asset** – assets such as EVCs, threatened species, and indicator species that are part of the primary conservation asset and likely to respond to the same management actions proposed for that broader asset category.

**Benchmark (Vegetation)** – the 'ideal' or original state or condition of a structural component (e.g. shrub layer cover, amount of fallen timber) of a vegetation community or EVC.

**Biodiversity** – a term that refers to the diversity of living things.

**Bioregion** – a landscape-scale area of land that shares certain characteristics of climate, geology, topography, and vegetation types. Victoria is recognized as having 23 different bioregions.

**Conservation Asset** – an element of biological diversity selected for protective action. These assets are chosen as they belong to a limited suite of species, communities, and ecological systems that are chosen to represent and encompass the biodiversity found on the covenant area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. In theory – and hopefully in practice – conservation of the focal targets will ensure the conservation of all native biodiversity within functional landscapes (The Nature Conservancy 2007).

**Ecological Vegetation Class (EVC)** – an assemblage of plants that occur in association with one another due to a common preference for the soil type, climate, topography, etc. occurring in a particular area or ecological niche. Any one type of Ecological Vegetation Class is comprised of a number of more 'closely-knit' vegetation associations called "floristic communities". Although to a large degree an artifact of the human need to categorize (EVCs are statistically-determined aggregations of plant species), EVCs enable us to more systematically communicate the variation in vegetation types that occur across the landscape.

**Ecotone** – a transition area between two adjacent but different patches of landscape It can be narrow or wide, and it may be local (the zone between a field and forest) or regional (the transition between forest and grassland ecosystems. An ecotone may appear on the ground as a gradual blending of the two communities across a broad area, or it may manifest itself as a sharp boundary line.

**Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)** – The primary Australian federal legislation addressing flora and fauna conservation .

Species or communities considered threatened at the National scale are 'listed' under the Act.

**Exotic** – a plant or animal that has been introduced to a particular locality from another part of Australia or from overseas.

**Flora and Fauna Guarantee Act 1988 (FFG Act)** - Victorian legislation addressing flora and fauna conservation. Species or communities considered threatened on the State scale are 'listed' under the Act.

**Indigenous** – native to a particular locality.

Key Indicator - a measurable entity related to a specific information need such as the status of a target/factor, change in a threat, or progress toward an objective. A good indicator meets the criteria of being: measurable, precise, consistent, and sensitive.

**Overstorey** – the tallest stratum in a vegetation community (or EVC), often comprising the trees.

**Significant species** – a plant or animal whose abundance is considered low enough on a regional, State, or National scale to warrant a conservation status of 'depleted', 'vulnerable', 'endangered', etc. The application of this term in this context to some species does not imply that all other species are not 'significant' in an ecological or conservation sense.

**Species** – a 'type' or 'variety' of plant or animal, or any other organism.

**Threat** – an action occurring that is having an adverse impact upon a conservation asset. A threat will have a source, severity level, and scope.

**Understorey** – a term that refers to the plants (usually shrubs, but may include saplings of trees) occurring below the uppermost stratum (usually trees) of a vegetation community.

**Vegetation Quality Assessment (VQA)** - ascertains the quality and condition of the vegetation and habitat occurring within the area being assessed. Vegetation is assessed against a benchmark level representing 'long-undisturbed' remnant vegetation A score (out of a possible maximum) is given for each of a series of structural or habitat features to be found within the covenanted area. The point of the assessment is not so much the 'total score', as it is about helping to focus on each of the structural or habitat features, individually.

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