PRACTICAL ECOLOGY
ecological restoration & consulting

Swift Parrot Offset Monitoring

Year 3: Oct 2020 – Oct 2021

Old Glenorchy Road, Deep Lead

1st December 2021

Swift Parrot Offset
Monitoring Year 3: October 2020 – October 2021
Old Glenorchy Road, Deep Lead

Report by Emma Wilkin
Cover image: Deep Lead Offset Site, 2017

We acknowledge the Traditional Custodians of the land, the Wurundjeri Woi Wurrung people of the Kulin Nation, on which our office is located, and pay our respects to their Elders past, present and emerging. We also acknowledge the Traditional Custodians of the Lands on which we conduct our business throughout Australia. We pay our respects to their Elders, past and present and emerging, and those of other communities who may be present on those lands

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Contents

APPENDICES

TABLES

FIGURES

1. Introduction

Practical Ecology Pty Ltd was commissioned by Deep Lead Property Pty Ltd to implement the Offset Management Plan (Biosis 2017), hereafter referred to as the OMP, to undertake monitoring and associated annual reporting for Swift Parrot Habitat Offsets located at Old Glenorchy Road, Deep Lead.

The offset was created as part of infrastructure works undertaken by VicRoads requiring removal of vegetation that was identified as foraging habitat of critically endangered Swift Parrot (EPBC 2016/7809). A report summarising annual monitoring and works is required to be submitted to VicRoads, now recognised as Regional Roads Victoria, and to the Department of Environment, Land, Water and Planning (DELWP), as directed by the OMP.

This report presents information relating to the management works and monitoring of the site for Year 3 of a 10-year management plan.

1.1 Project Scope

The scope of works Practical Ecology was contracted to fulfil include annual monitoring and reporting, and ongoing works and compliance in relation to:

- fence condition
- weeds- woody and herbaceous
- pest animals
- tree and shrub recruitment and canopy condition

The results of monitoring are to support and inform adaptive management of the site over time and to guide the implementation of management actions as per the land use commitments as outlined in the OMP, which are mandatory to satisfy the requirements of the *EPBC Act 1999* approval conditions, and the commitment to providing ongoing foraging habitat for Swift Parrot within the site. Management actions specifically aim to protect existing large canopy trees, Yellow Gum *Eucalyptus leucoxylon* and Grey Box *Eucalyptus microcarpa* as a primary food source for Swift Parrot, ensuring the adequate regeneration and replacement of these trees over time in order to ensure foraging resources for the species long-term.

1.2 Subject Site

This site is located within the Wimmera Bioregion, with vegetation types having strong associations with the Goldfields Bioregion due to the proximity of the site. The Swift Parrot Offset Site lies within the larger Offset Property at 237-240 Old Glenorchy Road in Deep Lead (Bush Broker Credit Site BB-3018), and is owned by Deep Lead Property Pty Ltd. The property contains a mosaic of EVC 882_61 *Higher rainfall Shallow Sands Woodland* and EVC 283 *Plains sedgy Woodland*, dominated by Yellow Gum and Grey Box. The understory of the woodland has sparse shrub cover and a mosaic of indigenous ground storey, with natural litter dominated surface. Small areas of herbaceous weeds occur on site, mostly on the western boundary adjacent to Old Glenorchy Road.

2. Methods

The following methodology for monitoring and works has been implemented in response to directions stated in the OMP. Monitoring and management works are required to be completed annually.

2.1 Fencing

Fences are to be maintained and in working order and must remain so for the term of the plan- and in perpetuity – if required for the purposes of exclusion of stock, prevention of unauthorised access- particularly for firewood collection, minimising soil disturbance and compaction, and to reduce the spread of weeds and pathogens. The OMP states that any fencing in place must be in good condition according to the standards detailed in *BushBroker Information Sheet 12- Standards for Management – Fencing* (DSE 2012c).

Surveys of the property boundary and existing fence are conducted at each site visit and observations recorded in the property logbook (refer Appendix 3), which is maintained by the landowners.

2.2 Vegetation Condition Survey

2.2.1 Weed monitoring

The *Catchment and Land Protection Act 1994* lists noxious weeds and requires that all landowners take reasonable steps to prevent the spread of, eradicate or control noxious weeds on their land. The OMP requires that monitoring for all new and emerging weeds should be conducted in Spring each year for the term of the management plan, and that any new or emerging weeds are identified and controlled. All weed control works must comply with *BushBroker Information Sheet 8-Standards of management – Weeds* (DSE 2012b).

2.2.1.1 Woody weeds

Directions in the OMP for woody weed monitoring and control are as follows:

- Walking transects at 20m spacing; 8 transects lines extending for approximately 300m.
- All patches of infestations or individual plants are to be mapped with a GPS followed up with appropriate treatment by an experienced contractor.
- Weeds should be treated before flowering and indigenous plants must not be impacted during treatment. Monitoring of woody weed species will involve inspection of the entire offset area annually in Spring with subsequent monitoring to revisit previously mapped infestations to evaluate success of weed control

This monitoring was conducted over two days, on the 27th and 28th of September 2021, the results of which are to inform the annual works plan for Year 4.

2.2.1.2 Herbaceous weeds

The OMP states that during site transect monitoring for woody weeds, notes and location (GPS) of existing and emerging herbaceous infestations should be recorded. As such, this monitoring was also completed on 27th and 28th of September 2021, the results of which are to inform the annual works plan for Year 4.

2.2.1.3 Habitat Hectare Assessment

Vegetation Quality assessment is required in permanent plots/quadrats within the Swift Parrot offset area. Six (6) 30x30 meter plots are established across the 4.5 ha offset site with one (1) quadrat in Habitat Zone 1F and five (5) quadrats established in Habitat Zone 1G. Plots are marked by permanent posts, placed in the South-West corner and tagged with a plot number identifier. Figure 1 below shows the placement of permanent quadrats within the Swift Parrot offset site.

The Habitat scoring method is applied as the quadrats as directed by the OMP, and as outlined in the Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method (DSE 2004).

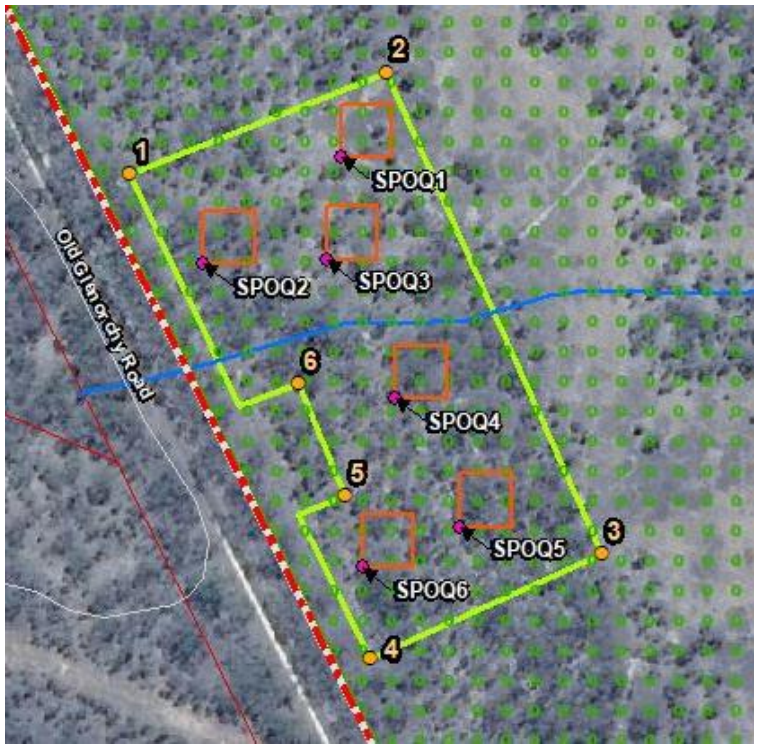

Figure 1. Map of property boundary (red), Swift Parrot offset boundary (green), Quadrats (Orange) and Photopoint location in the SW corners (Pink)

2.2.2 Tree and shrub recruitment and canopy condition

Data is to be collected across the entirety of the offset area at points of set distance – approximately every 20 meters along a transect line. These transect lines are the same as those for the woody/herbaceous weed survey, therefore both the weed survey and vegetation cover assessment can occur at the same time. Survey points are located through GPS navigation – note that as survey points are not permanently marked, survey locations and therefore results are considered approximate, and accurate to 5-10m. Data may be collected using Data Sheets or tablet with suitable software such as ArcCollecter, or data sheets.

A total of 131 points, each assessing a 10m radius area, are used to assign Vegetation Structure Scores across the extent of the site. At each survey point, assessor is to survey the area within a 10-meter radius of the point. The following information is to be recorded

- Presence and identification of Eucalypt species
- If Yellow Gum is present, collect information on the number of different cohort's present
- If Yellow Gum seedlings are present, estimation of number of seedlings
- Presence and identification of Wattle species or other shrubs
- If Golden Wattle *Acacia pynantha* is present (as opposed to low and sparse gold dust wattle), collect information on their number and proximity to Yellow Gum seedlings
- Information on weed species also recorded during this time, and GPS located as appropriate

Definitions of size classes are listed in Table 1.

Table 1. Classification and definition of cohorts/size classes

Eucalypt Species Yellow Gum and Grey Box				Acceptable Window (number trees/quadrat
Size Classes	Large Old Tree (LOT)	>70cm DBH	>15m tall	any
	Canopy Tree	<70cm DBH	8m- 15m tall	>5
	Immature Canopy Tree	>5cm D.	1.5m-8m tall	>5
	Seedlings/Saplings	<5cm D.	<1.5m tall	30-90
Acacia /Shrubs				
Size Class	Mature	>5cm	>1.5m tall	<40
	Seedlings/Saplings	<5cm D.	<1.5m tall	<1.5 x more than yellow Gum Seedlings

2.2.3 Photo points

Photo points for each quadrat are directed to be taken annually in Spring. Photographs taken from a position at the South-West corner marker of each quadrat (Figure 2) looking in a North-Easterly direction and including the corner marker post in the centre of the photograph. Photopoint locations are shown in Figure 1.

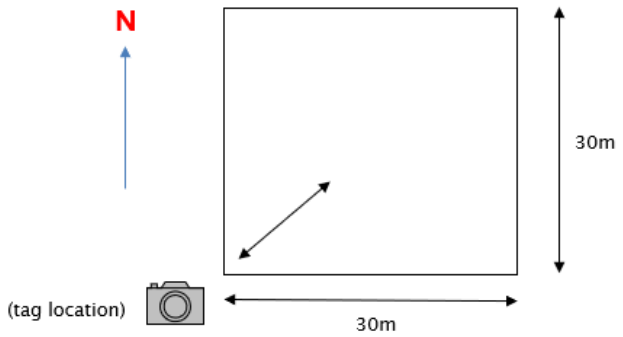

Figure 2. Diagram of quadrat and photo point setup.

2.2.4 Plant identification

Species that could not be identified in the field were recorded to the nearest possible family or genera. These were then collected as per the protocols associated with Practical Ecology's *Flora and Fauna Guarantee (FFG) Act 1988 permit (No. 10004805)* for the collection of plant material. In order to assist in the identification of some flora, major features of the specimens were collected where possible, including leaves, parts of branches, fruit and/or flowers.

2.3 Pest animal monitoring

The *Catchment and Land Protection Act 1994* lists rabbits and foxes as established pest animals and requires that all landowners take reasonable step to prevent the spread of, and as far as possible eradicate, established pests on their land. Signs of pest animals are to be recorded during weed monitoring surveys, and all other times when visiting the site, with any identified areas to be supplied to a pest animal management contractor for treatment. The OMP states the following directions

- Foxes to be controlled if found on the property. Dens identified to be located (GPS) and destroyed through fumigation and hand collapse

- Rabbits monitored and controlled throughout the year- if rabbit activity is detected, burrows identified are to be recorded (GPS) and an integrated approach in accordance with *Bush Broker information Sheet 7*- Standards of Management – Rabbits (DSE 2012a) is to be implemented: Fumigation, hand collapsing of burrows and baiting; Removal of any carcasses to prevent poisoning of native predators; Monitor and control for any new and emerging pest animals

Site visits within the Year 3 monitoring period included inspections for signs of pest animals.

3. Results – Management

3.1 Fencing

In response to findings of the Year 1 Independent Audit of Offset Management (Biosis 2020), Deep Lead Pty Ltd agreed to install new boundary fencing in order to meet the requirements for effective protection of the site, and in line with *BushBroker Standards for Management – Fencing* (DSE 2012c). The threats are not associated with the risk of stock grazing, as most of the boundaries are shared with public land with no grazing on private land to the north. Threats instead relate primarily to unpermitted access by the public, with occurrences of illegal firewood collection noted within the broader offset site in 2019.

In letter response dated 23rd September 2020 to Biosis Year 1 Audit report, Deep Lead Property agreed to install new fencing of the perimeter boundary of the broader offset area, to be constructed by March 2021. The follow-up audit report states that at the time of site assessment in May 2021, these actions had not been completed. It is understood that difficulties have arisen resulting from the COVID-19 pandemic, which have included disruptions in availability of both contractors/labour and materials, as well as limited opportunity for landowners to initiate and supervise works, which was deemed necessary given the sensitivity of the site. Progress has been made in the months since, with the majority of fence installation works now finished, the fence scheduled for completion by the third-year anniversary of the site – December 2021.

The specifications of the new fence have been agreed upon by DELWP, stated as the construction of a fence with standard strainers, pickets/spacing and gates, and with initial spacing of 3 wires around the extent of the site, to be spaced to allow for additional wires to be added if deemed necessary in response to changes in neighbouring land management, such as introduction of stock.

3.2 Woody Weeds

No woody weeds have been identified within the Swift Parrot Offset Site at any time, including during initial assessments of the broader property conducted by Brett Lane and Associates (2017) and assessments conducted by Biosis for the establishment (2017) and subsequent audits (2020, 2021) of the Swift Parrot Offset area.

Sugar Gum **Eucalyptus cladocalyx* have been identified as the only woody weed within the broader offset site and does not occur within the Swift Parrot offset area. There is no intention to remove the existing large mature Sugar Gum as is considered habitat, with removal likely being detrimental. Treatment of Sugar Gums seedings is however identified as a priority for management of the broader offset site.

3.3 Herbaceous Weeds

Control of herbaceous weeds within the broader property was undertaken by Project Platypus in April and October 2021 (refer logbook, Appendix 2). Note that areas targeted for treatment largely occurred outside of the Swift Parrot offset area. Works within the offset area were restricted to spot-spraying of spear thistle **Circium vulgar*.

Species targeted for treatment are summarised in Table 2 below. All weeds were treated with the aim of ensuring that weed cover does not increase beyond December 2017 levels, as required in the OMP.

Table 2. Summary of herbaceous weed control works completed

Date	Weeds treated	Method
21/22/27 April, 2021	Stinkwort **Dittrichia graveolens*	Spot spray
21 October, 2021	Capeweed **Arctotheca calendula*	Spot spray
21 October, 2021	Spear Thistles **Circium vulgar*	Spot spray

3.4 Supplementary Planting

Yellow Gum and Grey Box seed was collected onsite by the landowners in April and October 2019 for the purposes of germinating seedlings for replanting within the site. The landowners adopted a social procurement strategy in placing the seed with local Nursery GreenFingers, a local nursery enterprise based in Stawell, employing staff with disability.

Seed germination occurred with varying success, and resulted in approximately 300 Grey Box and 200 Yellow Gum tube stock, available for planting back onto the site. The total of approximately 500 plants were installed at the property in late August and early September 2020. Plantings within the Swift parrot offset area were installed on the 24th August, 2020, and consisted of approximately 60 tube stock of approximately 40 Yellow Gum and 20 Grey Box, installed with TreeMax timber stakes and corflute guards.

No additional supplementary planting has occurred within the Year 3 period. The landowners still have tubestock on order for planting in 2022 Additional information collected through cohort monitoring has identified locations for further revegetation within the Swift Parrot Offset Area, to be incorporated into future Annual Works Plans – Refer to Appendix 1, Map 3 for areas identified for planting.

4. Results – Monitoring

4.1 Vegetation Condition Survey

4.1.1 Weed Assessment

A survey for woody and herbaceous weeds was conducted on the 27 – 28th September 2021, in conjunction with the assessment for tree and shrub recruitment and canopy condition. Observations and locations are incorporated into the Annual Works Plan for Year 4. The following observations were made regarding weeds:

Woody weeds – none observed

Herbaceous weeds

- Patches of chickweed **Stellaria media* widespread across offset area but sparse in cover – drying off
- Spear thistles **Circium vulgar* present throughout – sparse– easily targeted for removal as not extensive, and comparatively less heathy/advanced than those growing wetter areas of the site, external to Swift Parrot area
- Small flushes of annual veldt grass **Ehrharta erecta* throughout, notably north-western section around large trees and in/around mullock heaps – priority for targeting
- Patches of soursob **Oxalis pes-caprae*, mostly south-eastern half

4.1.2 Habitat Hectare Assessment

The assessments were conducted on 27th September 2021 by DELWP accredited assessor and co-owner of the property Lincoln Kern. Assessments were conducted within each of the 6 quadrats, as outlined in the *Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method* (DSE 2004). Results are presented in Table 3.

While the site presents as having relatively good quality vegetation in general, it must be noted that the property and broader region has a history of extensive goldmining, with evidence of this found as mullock heaps, open mines, and other indications of significant soil disturbance in the past. Drought and historic disturbance are likely factors in the generally low scores relating to understory species. Large canopy trees are well represented within the plots, and in general across the site– and are an important indication of the availability of foraging resources for Swift Parrot.

Changes in Habitat Scoring are largely reflected through variation in weed scores, where presence of high-threat weeds spear thistles and annual veldt-grass were noted as present.

Table 3. Summary of Habitat Hectare Assessment results

Habitat Zone/Quadrat			SPOQ1	SPOQ2	SPOQ3	SPOQ4	SPOQ5	SPOQ6
Bioregion			WIM	WIM	WIM	WIM	WIM	WIM
EVC Name (initials)			PSW	SSW	SSW	SSW	SSW	SSW
EVC Number			283	882_61	882_61	882_61	882_61	882_61
EVC Conservation Status			DE	EN	EN	EN	EN	EN
Size of Zone/Quadrat (ha)			0.009	0.009	0.009	0.009	0.009	0.009
		Max Score	Score	Score	Score	Score	Score	Score
Site Condition	Large Old Trees	10	0	10	9	10	10	9
	Canopy Cover	5	5	2	4	3	3	5
	Understorey	25	15	10	10	10	15	15
	Lack of Weeds	15	9	9	9	13	13	13
	Recruitment	10	0	3	10	5	3	10
	Organic Litter	5	5	3	5	5	5	5
	Logs	5	0	3	3	5	5	2
	EVC Standardiser	n/a	1	1	1	1	1	1
	Standardised Score	75	35	41	51	52	55	60
Landscape value	Patch Size	10	19	19	19	19	19	19
	Neighbourhood	10						
	Distance to Core	5						
Habitat points		100	54	60	70	71	74	79
Habitat Score		**1**	**0.54**	**0.60**	**0.70**	**0.71**	**0.74**	**0.79**

4.1.3 Tree and shrub recruitment and canopy condition

September 2021 was the second implementation of addition methodology being applied at the site to accurately identify circumstances where Yellow Gum may not be seen to be regenerating effectively or where ecologically thinning of understory species should be considered in order to ensure adequate recruitment of Yellow Gum as the key food source for Swift Parrot. The mapped results of this monitoring are displayed in Appendix 1 – Map 2.

A total of 131 points, each assessing a 10m radius area, were used to assign Vegetation Structure Scores across the extent of the site. The Vegetation Structure Score was determined by the identifying the presence of each of the following four circumstances, or factors, where 0 factors present = "good", all 4 factors present = "poor", with a scale of values between. The factors for identifying the vegetation structure score are as follows;

- *Acacia spp.* seedling/saplings are present
- number of *Acacia* seedlings/saplings are greater than 1.5 times the number of eucalyptus seedlings/saplings present
- there are more than 10 tall acacia (golden wattle *Acacia pycnantha*) individuals present of at least 1.5m tall (tall acacia, >1.5m high0
- tall *Acacia* are growing within the dripline of mature Yellow Gum

Figure 3 below summarises the results in Year 3 against the first years (baseline) monitoring conduction in Year 2 of the OMP management period, providing an overview of frequency of the Vegetation Structure Scores across the extent of the site. Given that no works for either ecological thinning or planting have taken place in Year 3, any changes in scoring are likely due to slight differences in survey location along the transect, in line with GPS accuracy that is typically between 5 – 10m. This variation is a consequence of the approach of using approximate survey locations, rather than fixed and physically marked survey points. Cohort monitoring methodology was originally developed to identify patterns within the Offset area that require treatment, rather than for detection of small-scale changes. The data therefore remain clear and fit-for-purpose in identifying areas that should now be considered for treatment.

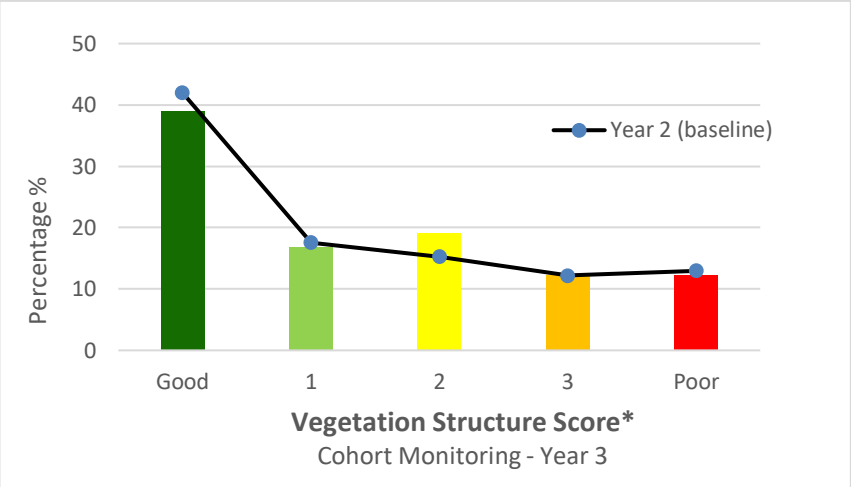

Figure 3. Summary of cohort assessment findings- 2021

4.1.4 Photopoints

Photopoints were taken on the 28th September 2021. The results are presented in Appendix 3 – Photopoints

4.2 Pest animals

Observations of indirect evidence of rabbits have increased in Year 3. There are several old and partially collapsed warrens within the Swift Parrot offset area that appear to have been long dormant which now are seen to have fresh scratching's and scats in the surrounding area. No rabbits have been seen at the site, but the increase in evidence is an indication that control is necessary. Site visits by the landowners in September identified what appears to be recent activity at a previously inactive warren at the south east boundary of the broader property, outside of the Swift Parrot Offset area.

Site visits in Year 4 must therefore include inspection of all inactive warrens, and include treatment (ferreting) to confirm occupancy, before introduction of targeted pindone baiting and strategic collapsing of all identified warrens, both active and inactive. Where possible, the landowners must also seek collaboration with neighbouring property owners to identify and treat active warrens in the area.

No observations of foxes, direct or indirect, or of other pest animals have been recorded.

5. Discussion

Monitoring and management actions prescribed in the OMP for Year 3 of monitoring at Old Glenorchy Road, Deep Lead have been completed with relative success. A summary of the achievement of management actions is listed in Appendix 4 of this report.

Outstanding non-compliance – Year 1

There is one outstanding item of non-compliance as identified in Biosis Year 1 Audit Report, which is the matter of the boundary fence of the broader property. As discussed in Section 3.1, the new fence is due to be completed by the anniversary of OMP commencement, being December 2021.

Non-compliance – Year 3

There is one matter of non-compliance for Year 3- where Objective 5 states that there must be no fresh ground disturbances by pest animals observed in the offset area. Rabbit control is therefore to be prioritised in Year 4, both within the Swift Parrot Offset area, and across the broader offset site.

Weed control

It is noted that works at the site have been prioritised only to the most urgent matters, being the installation of the boundary fence, and the treatment of high-threat weeds stinkwort, *s*pear thistle and capeweed **Arctotheca calendula* across the broader offset property.

Treatment of Bridal Creeper **Asparagus asparagoides* in previous years within Swift Parrot Area appears to have been effective, with none observed during the Year 3 period, though this should continue to be monitored during Autumn site visits, as opposed to Spring.

Species highlighted for control in the Swift Parrot area in Year 4 are;

- Spear thistles **Cirsium vulgar*
- Chickweed **Stellaria media*
- Annual veldt Grass **Ehrharta erecta*

Revegetation and ecological thinning

It is recommended that revegetation works should be prioritised over any ecological thinning of indigenous species i.e., golden wattle. While large sections of the offset area are highlighted as having a high presence of golden wattle understory, this may be viewed in some areas as a natural succession of species. This occurrence is notably visible at eastern section of the survey area where golden wattle germination is adjacent to the open, low-lying areas that are a feature of the centre of the property, where canopy trees are absent, and in areas where survival rates of revegetation of canopy species have been relatively low at 30%. It is recommended that vegetation assessment in Year 4 include general observations of canopy health in areas where a vegetation structure score of 4 is identified.

The data also confirm that swift parrot foraging trees are ubiquitous throughout that site, and generally present as 2-3 cohorts, indicating that risk to the resource is low, which does not support removal of indigenous understory species at this time.

6. Summary of Management Actions – Year 3

Objective	Standard to be achieved	
1- Exclusion of stock, unauthorised activities and vehicle access	Exclusion of domestic stock from offset area	
	Exclusion of vehicles from offset area	X
	Exclusion of unauthorised access or unauthorised firewood collection	X
	Maintain perimeter fencing to BushBroker Information Sheet 12 (DSE 2012c)	X
2- remove all woody weed infestations	No woody weeds present within offset area (<1% cover)	
	woody weeds not to interfere with shrub or canopy recruitment	
	minimise off target damage to all native plants during weed control works	
3- monitor and control herbaceous weeds	Herbaceous weeds cover not exceed current levels	
	herbaceous weeds not to interfere with shrub or canopy recruitment	
	minimise off target damage to all native plants	
4- monitor and control new and emerging weeds	New outbreaks of woody weeds to be removed as soon as detected	
	no woody weeds present within offset area	
	minimise off target damage to all native plants	
5- monitor and control Rabbits Hares and Foxes	no fresh ground disturbances by pest animals observed in the offset area	
	no active rabbit warrens within offset area	
	minimal surface harbour for rabbits and hares present	
6- monitor and control all new and emerging pest animals	control numbers of any new and emerging pests	
7- Monitor tree and shrub regeneration and overstory condition	tree layer continues to regenerate and provide habitat for swift parrot	
	Maintain cover of immature canopy trees and understory trees or large shrubs to a level < 20% higher than the EVC benchmark. If cover levels exceed 20% then they will be thinned to achieve a cover of ~5%. if the cover is significantly <5% than action to encourage generation of yellow gum and other shrubs will be implemented by addressing threats or planting tube stock to achieve cover closer to 5% (Vegetation Structure methodology is used to measure)	

X – outstanding non-compliance item – Year 1

not achieved	
partially achieved	
achieved	

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DSE (2012c). BushBroker information sheet number 12. Standards for management - Fencing. Department of Sustainability and Environment, Melbourne.

Appendix 1. Maps

Map 1– Site Map

Map 2– Vegetation Cohort Monitoring – Potential thinning areas

Map 3 – Vegetation Cohort Monitoring – Potential revegetation areas

Legend

- Subject site
- Contours (10m)
- Watercourse
- Parcels
- Potential dwelling envelope
- Superb parrot Offset site
- Swift Parrot Offset site corners
- Swift Parrot Offset quadrat SW corner
- Swift Parrot Offset quadrats (30m x 30m)

Land Management Zones

- Domestic Zone
- Offset Zone

Details

Data Source: Base layers courtesy of VicMap, Copyright © State of Victoria. Aerial photography from Google Earth Pro (Nov 2015).

Date: 15/01/2020

Swift Parrot Offset site

237-240 Old Glenorchy Road
Deep Lead

N

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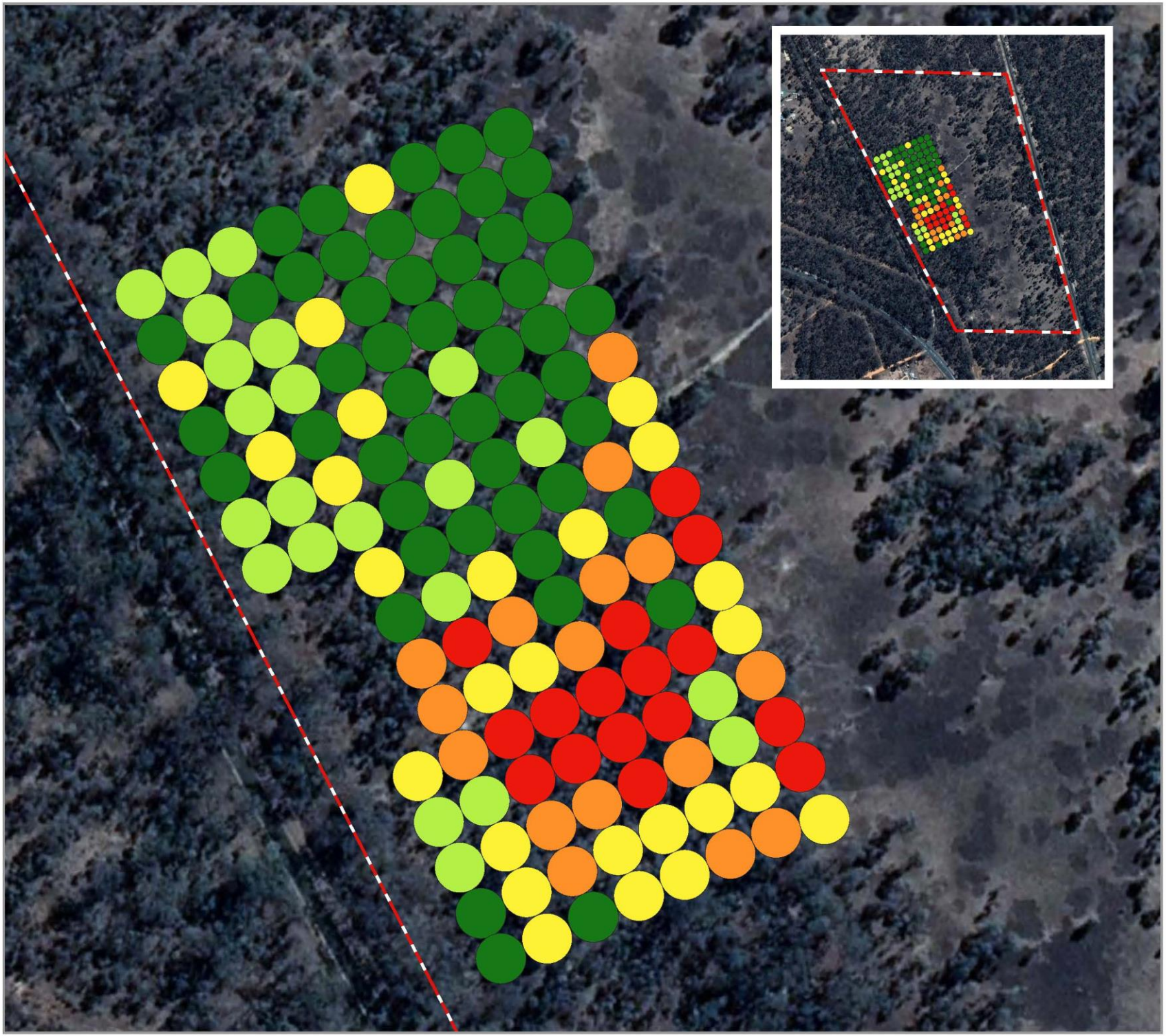


Cohort Monitoring

237-240 Old Glenorchy Road
Deep Lead

Legend

Subject Site

Vegetation Structure Score

- 0 - Good
- 1
- 2
- 3
- 4 - Poor

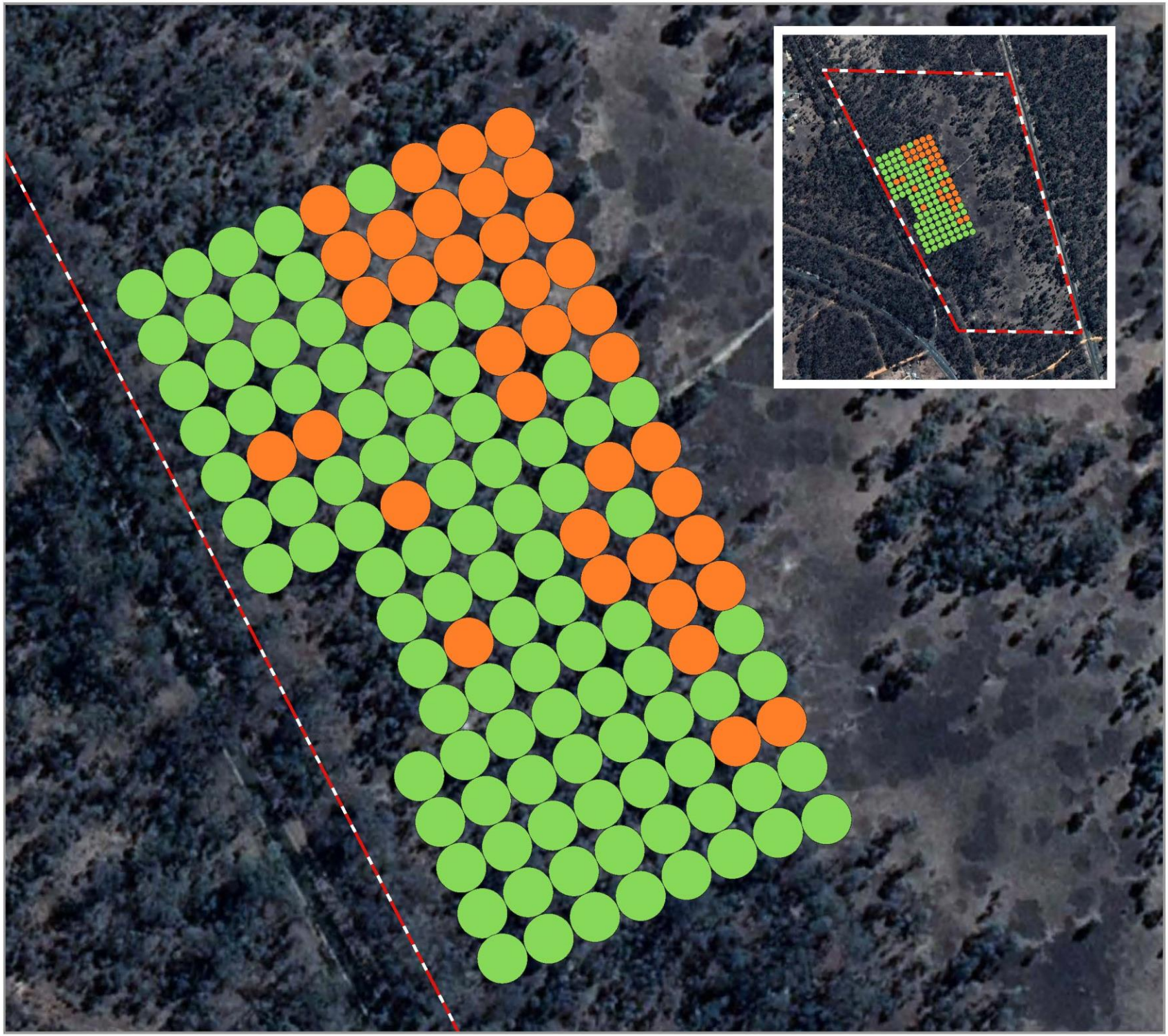
Details

Data Source: Base layers courtesy of Vicmap,

Aerial photography from Google Earth Pro (Nov 2015)

Date: 26/11/2021

0 25 50 m



Cohort Monitoring

237-240 Old Glenorchy Road
Deep Lead

Legend

Subject Site

Revegetation Locations

potential

Details

Data Source: Base layers courtesy of Vicmap,
Copyright © State of Victoria.
Aerial photography from Google Earth Pro (Nov 2015)

Date: 26/11/2021

0 25 50 m

Appendix 2. Logbook– Year 3

Date	Visitor	Tasks completed	Observations
5-6th Oct 2020	Emma Wilkin Lincoln Kern	Swift Parrot Vegetation monitoring and Habitat Hectare Assessment Photopoints	
5-Oct-2020	Paul Guest	Paul Guest - photopoints. Site inspection. 1 acre property near SW facing Cross St has been sold. There is a crown reserve between our site and the acre but PG to approach new neighbour when onsite to indicate importance of retaining all fallen timber. Incidentally found one to two dead seedlings from recent plantings - will review on next trip. Rain forecast for following week.	Spent *Senecio macrocarpus.* Kangaroos
10-Dec-2020	Lincoln Kern	Quick site visit to assess fences and weeds, no more firewood losses	
6-Feb-2021	Lincoln Kern	Inspected all boundaries to consider new fencing. Decided to replace all boundaries and considered access for building strainers and laying fence.	Inspected around 50 planted trees with only about 1 in 3 surviving
15-Mar-2021	Lincoln Kern	Inspected entire block again and found no breaches in poor fencing nor evidence of firewood gathering etc. Many tree branches had fallen in north end (summer storm?) with northern land owner clearing wood on his side of the fence and a little bit on our side. The Stinkweed has really taken off and a good round of spraying is essential. Further considered fencing strategy and it should be possible to limit access to strainer assemblies.	Dittrichia graveolens has gone a bit crazy and much spray work is required.
21-April-2021	Project Platypus	Stinkwort treatment - Daily works record received	
22-April-2021	Project Platypus	Stinkwort treatment - Daily works record received	
27- April-2021	Project Platypus	Stinkwort treatment - Daily works record received	
10- May 2021	Paul Guest Lincoln Kern	Marked out fencing and gate locations considered method of voidance of vegetation. Walk the boundaries for risk assessment	
13-June- 2021	Lincoln Kern	Inspected all boundaries- no disturbances. stated removing old fence on southeast corner. Removed wire along south edge and east edge with 100m of corner, twisted into bundles and stacked for collection	
30-June-2021	Paul Guest Project Platypus	Site inspection – Additional weed control required as follow-up. Large mine shaft falling in-	
20-September 2021	Paul Guest Project Platypus	Met onsite to talk through the fencing requirements, identified location of Spiney Rice Flower along boundary and fence alignment for avoidance/protection during fence installation works. Discussed weed control and potential for burning. Inspected results of Stickwort treatment. Discussed removal of the old existing fence and method to protect fallen timber by moving it back onto our land.	Rabbit activity – possible active warren at South East corner of the site, adjacent to powerline easement
27-28 September 2021	Emma Wilkin Lincoln Kern	Swift Parrot Vegetation monitoring Habitat Hectare Assessment, Photopoints	
21- September -2021	Project Platypus	Stinkwort treatment - Daily works record received	
21 October 2021	Project Platypus	Fence installation + Capeweed and Thistles – Daily works record received	

Appendix 3. Photopoints

	Year 1 7th January 2020	Year 2 7th September 2021	Year 3 28th September 2021
Quadrat 1 (SPOQ1)			
Quadrat 2 (SPOQ2			

	Year 1 7th January 2020	Year 2 7th September 2021	Year 3 28th September 2021
Quadrat 3 (SPOQ3)			
Quadrat 4 (SPOQ4			

	Year 1 7th January 2020	**Year 2** 7th September 2021	**Year 3** 28th September 2021
Quadrat 5 (SPOQ5			
Quadrat 5 (SPOQ5)			

Appendix 4. Management actions – Year 3

OMP Section	Management Action	Parameters Measured	Survey/monitoring Guidelines	Where	When	Actions/Notes from Year 1
3.9.1	Fence Condition	Condition of boundary fences	Survey the perimeter of the offset site – any damage that allows entry of stock/vehicles must be repaired immediately	Offset site perimeter	Quarterly	Fences not adequate – New fence completed by Dec 2021 (outstanding non-compliance)
3.9.2	Weed monitoring	Cover of woody and herbaceous weed species present	Vegetation survey to be conducted – transect lines 20m apart, complete coverage of site- identify woody and herbaceous weed species to determine cover. Woody species to be mapped using GPS and treated. Herbaceous weed cover (% cover) to be estimated for each habitat zone (suitable patches mapped and treated) All weed species present to be identified to species level	Offset Area (Habitat Zones 1F and 1G)	Annual- Spring	Vegetation assessment completed. No woody weeds identified Result of herbaceous weed assessment incorporated into Annual works plan for implementation in Year 4.
3.9.3	Pest animal monitoring – Rabbits/Hares/Fox/ New and emerging	Presence of pest animals or signs; scats, diggings, browsing or grazing	Signs recorded during vegetation surveys Locations of Rabbit warrens to be mapped (GPS) and treated (with addition further monitoring)	Offset Area (Habitat Zones 1F and 1G)	Annual- Spring	Observations recorded – increased occurrence of fresh scratching's/ indirect evidence. No control measures implemented.
3.7.4	Tree and Shrub recruitment	Vegetation Condition Survey	-Tree and shrubs species and size classes to be – assessed within permanently marked quadrats. -Photo point monitoring -Habitat Scoring Assessment	Offset Area (Habitat Zones 1F and 1G)	Annual- Spring	Completed. Use of HabHectare Assessment and additional methodology for cohort monitoring

Type of Report	Approval condition		Timing	Reporting Authority	Trigger (if any)
Annual Management Actions	To be completed	Offset site owner	Completed 31st August	DOEE BushBroker	NA
Annual Monitoring Report	To be completed	Offset site owner	Monitoring completed in spring Report completed Nov 30	DOEE BushBroker	Completion of annual reporting
Review of OMP	To be completed	Offset site owner	As required	DOEE BushBroker	Significant environmental event- widespread damage
Audit Report	To be completed	VicRoads	End of years 1, 4, 8, 10	DOEE	NA