ROTTNEST ISLAND AUTHORITY

PARKER POINT ROAD (EAST)

STAFF HOUSING

REVEGETATION MANAGEMENT PLAN

October 2024

Rottnest Island Authority

ROTTNEST ISLAND AUTHORITY

Table of Contents

Table of Figures

ROTTNEST ISLAND AUTHORITY

1. Introduction

Land use planning activities have identified the area around the airport as suitable for a future light industrial area where the operational activities of the island's primary building and maintenance contractor can be located. Associated with this land use is the need for a dedicated area where operational and maintenance staff can be accommodated into a staff housing village.

The Parker Point Road site was selected to facilitate the development of staff housing for the island's operation and maintenance contractor for the following reasons:

- existing staff housing is on Parker Point Road - locating staff housing in one location demonstrates proper and orderly planning.
- the location will be in close proximity to the future operational base of the island's maintenance contractor.
- location is within the prescribed settlement boundary, which is approved for accommodation under the Rottnest Island Authority Act 1987.
- location can utilise existing water infrastructure on Parker Point Road and a scheduled electrical upgrade on Parker Point Road.
- location is identified in the RIMP Land Use Plan as 'Mixed Use'.

The Rottnest Island Authority (**RIA**) was granted a Native Vegetation Clearing Permit (NVCP) (CPS 9883/1) on 6 December 2023 to clear 2.78 hectares (ha) of native vegetation along the western end of Parker Point Road. It is noted that staff housing for both the Hotel Rottnest Samphire Resort (constructed and operational from late 2020) and The Lodge Wadjemup (under construction and operational from approx. 2024) developments is to be incorporated into the area covered under Clearing Permit CPS 9883/1.

A new application for a NVCP was submitted to the DWER and accepted by the DWER on 21 December 2023 to clear 3.29 ha of native vegetation along the eastern end of Parker Point Road (CPS 10450/1) (**Figure 1**). The clearing area located along the eastern end of Parker Point Road is physically separated from the western area because cultural heritage surveys identified three cultural sites that limited development in this area (**Figure 2**). Each NCVP area does not contain any cultural sites.

The NVCP application proposes to clear 3.29 hectares which has been mapped as *Melaleuca lanceolata* and *Acanthocarpus pressei* (MlAP) woodland (360 Environmental, 2022; Focus Vision Consulting, 2022; and RPS, 2023). This vegetation unit is analogous with the TEC 30a and is the subject of the proposed offset and this revegetation plan.

For this proposal:

- **Figure 1** identifies the location of proposed site for clearing.
- **Figure 2** identifies the cultural sites located along Parker Point Road.

The purpose of the Parker Point Road (East) Revegetation Management Plan (**this Plan**) is to address the environmental impacts associated with clearing of native vegetation for the development of staff housing.

This Plan is intended as a guide for the revegetation of three separate offset areas located in the center of the island, which is discussed further in Section 3.1.3.

The total indicative offset area in hectares has been calculated as 13.74, based upon the proposed clearing of 3.29 hectares of vegetation analogous to TEC. Areas of offset will be planted for conservation purposes and will be protected in perpetuity from future development. It is expected that this level of protection will be endorsed by the Rottnest Island Board and/ or Minister, and also the next version of the Rottnest Island Management Plan will include a provision for in-perpetuity protection of offset sites.

This plan has been developed by Rebecca Gabbitus who is employed by the Rottnest Island Authority. Rebecca holds a Bachelor of Science (honours) in Zoology and Geology and a Post Graduate Diploma in Environmental Management. Rebecca has over 20 years' experience in developing management plans, and approvals and on ground implementation of revegetation projects.

The Key Contacts for this works are:

Project Information

William Lieu

Project Manager

Email - william.lieu@dbca.wa.gov.au

Revegetation Information

Rebecca Gabbitus

Manager of Environment and Compliance

Email – rebecca.gabbitus@dbca.wa.gov.au

The RIA has undertaken woodland revegetation projects annually, since the 1990's, as part of operations and has the internal resources and expertise to deliver on completion criteria and onsite revegetation techniques.

Figure 1: Clearing Site (Red boundary)

Figure 2: Aboriginal Cultural sites – Red (Registered), Yellow (Lodged); Black lines (Buildings); Blue lines (Infrastructure).

2. Background

The RIA has been undertaking revegetation programs since the early 1990's. Since 2016 the RIA have implemented works under the Woodland Plan, a key initiative delivering against the Rottnest Island Management Plan's Strategic focus area - engage with, promote and preserve the islands environment and cultural heritage, with a focus on Aboriginal cultural heritage. Delivery of the plan shall result in the enhancement and expansion of Woodland habitat on Rottnest Island and increasing opportunities for visitors and volunteers to engage and contribute to the conservation of one of Rottnest Island's most important habitats.

Despite revegetation efforts, the woodland on Rottnest Island is not naturally regenerating. Quokka grazing has been identified as the principal factor limiting regeneration, therefore quokka exclusion vital to the success of revegetation efforts.

The Woodland Plan aims to:

- Expand, enhance and maintain the woodland community on Rottnest Island to contribute to the conservation of the threatened ecological community, and the provision of fauna habitat.
- Improve the natural recreation amenity of the Island, while providing unique woodland recreation opportunities for visitors.

Extensive research and partnerships since 2007 have integrated a framework and strategy for woodland restoration on the Island. In selecting revegetation sites, the following is considered:

- Suitability for woodland growth
- Providing connectivity between existing sites
- Recreational amenity needs
- Protection and enhancement of fauna habitat (birds, Perth slider, quokka, bats etc)
- Minimisation of impacts to groundwater recharge required for freshwater ecosystems
- Cultural heritage requirements
- Retention of coastal and wetland vistas.

2.1. Ownership Details

The Parker Point Road Development site is located on Lot 16713 Deposited Plan 216860, which is Crown Land managed under the *Rottnest Island Authority Act 1987* (RIA Act) by the Rottnest Island Authority. The area falls within the designated Settlement Area, which allows development for accommodation.

Rottnest Island is a Class A Reserve (no. 16713). The control and management of the Island is vested in the Authority for the purpose of enabling it:

(a) to provide and operate recreational and holiday facilities on the Island;

(b) to protect the flora and fauna of the Island; and

(c) to maintain and protect the natural environment and the man-made resources of the Island and, to the extent that the Authority's resources allow, repair its natural environment. The RIA Act clearly sets out the boundary of the settlement for the purpose of accommodation development within the Reserve. The remainder of the island is designated Reserve for the purpose of conservation and recreation, deemed as no development unless prescribed.

3. Clearing site

3.1. Site History

Based on inspection of aerial photos the Parker Point area has been cleared a number of times:

- Prior to 1941 it was partially cleared.
- Between 1941 and 1955 it was fully cleared of Melaleucas.

There is evidence that planting may have occurred in 1994, the RIA would suggest that the area is a mix of regrowth and planting.

3.2. Vegetation

RIA commissioned three flora and vegetation surveys between 2021 to 2023. One survey each by 360 Environmental, Focused Vision and RPS.

One vegetation type was identified within the clearing area, being MlAp that was represented by *M. lanceolata* low open woodland/shrubland over *Acanthocarpus preissii* low shrubland (**Figure 3**). RPS (2023) also observed examples of *Callitris preissii* alongside *M. lanceolata* within the areas as well. These species are the key taxa describing the SCP30a TEC, as well as the common community species *A. preissii*. For this reason, these vegetation types were considered analogous to the SCP30a TEC.

The proposal includes the clearing of up to 3.29 ha of potential TEC. The vegetation condition within the Survey Area ranged from Very Good to Degraded.

Figure 3 Vegetation types of the clearing site

3.3. Fauna

Conservation of significant fauna which are known to be located in the CPS 10450/1 clearing site includes:

- *Setonix brachyurus* (Quokka) – Vulnerable
- *Lerista lineata (*Perth slider, lined skink) – P3
- *Pseudonaja affinis exilis (*Rottnest Island dugite) – P4
- *Tiliqua rugosa konowi (*Rottnest Island bobtail) – Vulnerable.

3.4. Other ecological considerations

Quokkas are primarily nocturnal and on Rottnest Island they tend to rest under vegetative cover such as *Acacia rostellifera* or *Melaleuca lanceolata* thickets or *Acanthocarpus preissii* heath during the day, and move around to graze at night (Shield, 1958; Dunnet, 1962).

Quokka Shelter species include:

- *Melaleuca lanceolata*
- *Callitris preissii*
- *Acanthocarpus preissii,*
- *Austrostipa flavescens.*

Quokkas have a varied diet and from previous studies preference for:

- *Melaleuca lanceolata*
- *Scaevola crassifolia*
- *Acacia rostellifera*
- *Rhagodia baccata*
- *Carpobrotus verensus*
- *Guichenotia ledifolia.*

4. Proposed Offset Sites

The RIA are proposing to revegetate three areas including:

- Northern TEC occurrence: Comprising an area of 1.71 ha of 'Good' condition vegetation.
- Central TEC occurrence: Comprising an area of 1.48 ha of 'Good' condition vegetation, 1.8 ha of 'Good-Degraded' condition vegetation and 0.47 ha of 'Degraded' condition vegetation.
- Buffer zone: Comprising an area of 8.28 ha located to the south of an existing TEC located adjacent to Lake Serpentine. The area will provide connectivity to the existing mapped area of TEC 30a and also the offset site for CPS 9883/1 to the west.

The offset areas are shown on **Figure 4** below and are discussed in further detail in the following sections.

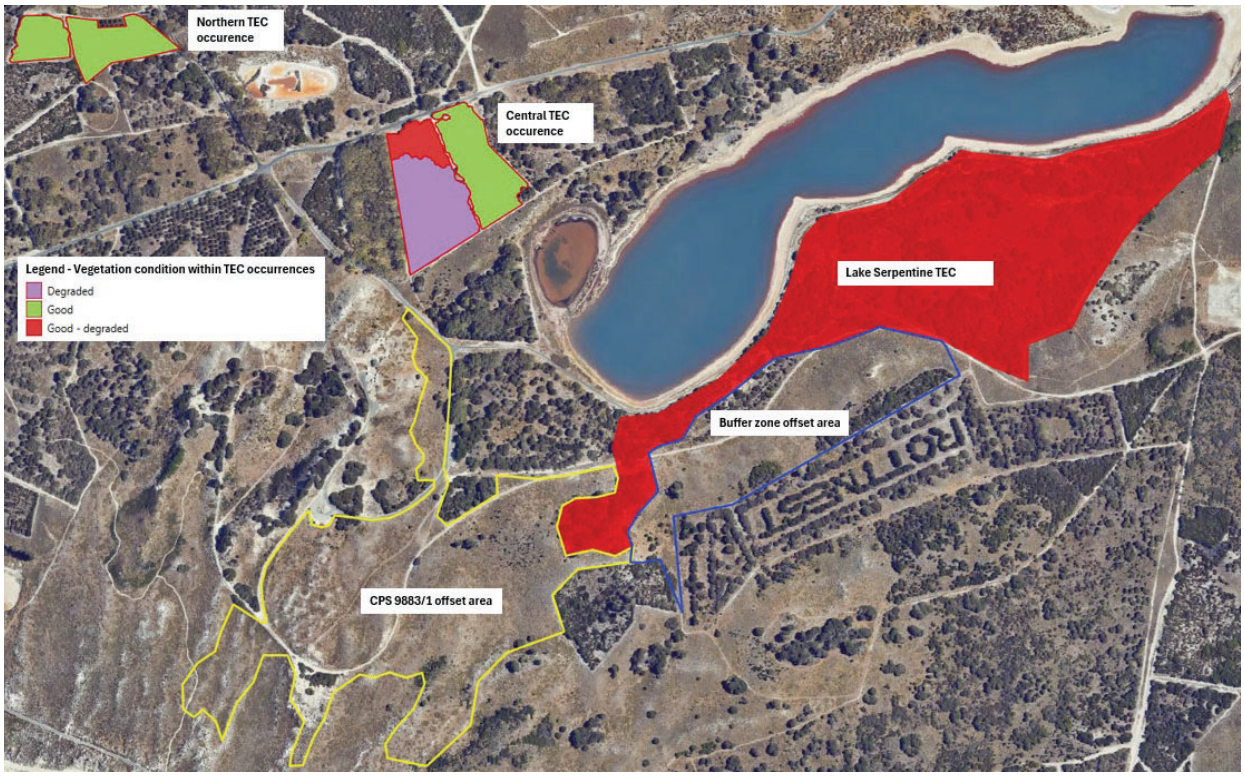

Figure 4: Proposed Offset sites including Northern and Central TEC occurrences and the buffer zone site. The existing Lake Serpentine TEC is shown (red) and CPS 9883/1 offset site (yellow).

4.1. Vegetation

The vegetation of the Northern and Central TEC occurrences were surveyed by Emerge Associates (2024) and provided as **Attachment 1**. The vegetation is summarised below:

- Northern TEC occurrence: The vegetation was observed to comprise vegetation unit **MlCp** – low open to closed woodland or shrubland of *Melaleuca lanceolata* and *Callitris preissii* over open to closed forbland of *Acanthocarpus preissii*, *Rhagodia baccata* subsp. *dioica, Poa poiformis* and *Austrostipa flavescens* (Emerge Associates 2024). The condition ranged from 'Good' to 'Very good-good' and was likely to be representative of TEC SCP 30a. Vegetation surrounding the site was observed to be similar in composition, dominated by *Melaleuca lanceolata* and *Callitris preissii*, and soils were noted to be calcareous sands of the Quindalup Dunes consistent with the TEC description. Photos of the site are provided in **Attachment 1**.

- Central TEC occurrence: The vegetation composition of this area was reported by Emerge Associates (2024) to be the same as the Northern TEC occurrence. Emerge Associates (2024) identified that the vegetation condition ranged from 'degraded' to 'good' and was likely to be representative of TEC SCP 30a. Vegetation surrounding the site was observed to be similar to the site in composition, and soils were noted to be calcareous sands of the Quindalup Dunes consistent with the TEC description. Photos of the site are provided in **Attachment 1**.

Buffer zone: Vegetation currently present in this area includes *M. lanceolata*, *C. preissii*, *Rhagodia baccata*, *A. preissii, Conostylis candicans, Lepidosperma gladiatum* and *Pittosporum longifolia.* Inspections by RIA of the area identified the vegetation condition to be in a 'Completely Degraded' condition. Weeds predominantly comprised Dune Onion Weed (*Trachyandra divaricata*). Photos of the sites are shown in **Figures 5** and **6**.

Weeds listed in these sites were identified as:

- *Asphodelus fistulosus*
- *Cerastium glomeratum*
- *Erodium cicutarium*
- *Euphorbia peplus*
- *Galium murale*
- *Isolepis marginata*
- *Leontodon rhagadioloides*
- *Lysimachia arvensis*
- *Poaceae sp.*
- *Trachyandra divaricate*
- *Urtica urens.*

Figure 5: Buffer Offset site – Looking North.

Figure 6: Buffer Offset site – Looking South-East.

5. Revegetation commitments

Vision: To establish in perpetuity a vegetation community reflective of the *Callitris preissii* / *Melaleuca lanceolata* Woodland TEC. The revegetation plan will ensure the viability of the rehabilitated area of *Callitris preissii* / *Melaleuca lanceolata* Woodland TEC at the proposed offset sites which will include understory species including:

- *Acanthocarpus preissii;*
- *Rhagodia baccata* (berry saltbush);
- *Austrostipa flavescens;*
- *Trachymene pilosa* (native parsnip); and
- *Guichenotia ledifolia.*

Objectives: The objective of this Plan includes:

- Improve connectivity of woodland vegetation;
- Increase in woodland areas; and
- Decrease weed species coverage.

Areas of offset will be planted for biodiversity conservation purposes as required by the Native Vegetation Clearing Permit which requires the RIA to establish and maintain vegetation and ensure it will be protected in perpetuity from future development.

5.1. Threats to revegetation success

The key threats to revegetation success are discussed below:

- **Quokka grazing** - Despite revegetation efforts, the woodland on Rottnest Island is not naturally regenerating. Quokka grazing has been identified as the principal factor limiting regeneration. Heavy quokka grazing reduces the survival rate of naturally recruited woodland seedlings. This means there is a limited succession of younger plants needed to replace old trees and prevent woodlands from dying out.
- **Clearing** – Direct clearing for development (current and future), agriculture (past) and military (past) has seen the loss of the majority of the island woodland community and continues to impact the ongoing survival of the woodlands.
- **Fire -** Large scale and frequent burns in the past have been cited as one of the main contributors of Type 30a TEC decline on Rottnest Island. Juvenile *Callitris preissii* are especially fire sensitive and is unlikely to recover following a fire event. It has been noted it would take nine years after a fire for substantial regeneration and for seedlings to produce cones. *Melaleuca lanceolata* and *Callitris preissii* reproduce only by seed.
- **Weeds** - Weed control is an important aspect of any revegetation project and must be incorporated into this Plan. Invasive weeds are an important competitor when establishing native vegetation and must be controlled at the outset and throughout the time that the revegetation site is establishing to ensure success. Weed pressures on Rottnest Island are mainly from species already established on the Island such as Dune Onion Weed (*Trachyandra divaricata)*, and possible introductions of other species from visiting members of the public and contractors carrying weed seed across from the mainland.

6. Reference site floristic data collection

Vegetation mapping completed by Focus Vision Consulting in 2022 and RPS in 2023 did not include any quadrats within the clearing area. The entire area was mapped as comprising the vegetation unit of MlAp (*Melaleuca/Acanthocarpus* Woodland) and is considered to be in a good to degraded condition (RPS, 2023), therefore for the purposes of this Plan, the entire clearing area can be considered as a reference site. The upper level of the vegetation condition (i.e. Good) will be utilised for the offset.

In addition, the selected understory species mix outlined in Section 5.0, takes into consideration the above, the DBCA interim recovery plan No 340 and Methods for survey and identification of Western Australian threatened ecological communities.

- *Acanthocarpus preissii;*
- *Rhagodia baccata* (berry saltbush);
- *Austrostipa flavescens;*
- *Trachymene pilosa* (native parsnip); and
- *Guichenotia ledifolia.*

7. Targets and completion criteria

This revegetation will be implemented over 10 years, with at least 3 years of active planting. Target completion criteria include:

Tree species richness:	Minimum two dominant tree species present.
Species density:	Minimum 1,000 stems per hectare, which includes a minimum of 200 stems per hectare of tree species.
Weeds:	No declared weeds present.
Condition:	Vegetation condition rank maintained, or improved, based on impact area condition of vegetation surveys by RPS and Focus Vision Consulting.

8. Site preparation

The following section pertains to preparation of the offset areas for planting. The activities apply to all offset areas unless any specific deviations are noted.

Seed Collection and Propagation

Seed is collected only from native plants established on the Island. The Rottnest Island Conservation Centre provides facilities for seed storage, seed treatment and seedling propagation of native Rottnest species.

Site Preparation

There is no requirement for mulching or topsoil spreading as part of this project.

Weed treatment

Weeds within the offset areas will be managed according to the Weed Management outlined in Appendix A.

Timing

Planting will take place in the cooler wetter months of the year in late autumn and early winter and programmed around adequate rainfall.

Tree Guards

Tree guards are used to protect individual 50 mm tube stock. Each guard being a height of 0.5 m and made of plastic mesh. The mesh pattern allows for air flow and for trees to grow outside the confines of the guard. The current tree guards utilised by the RIA have shown to have the best combination of being long lasting and quokka resistant. There appears to be no evidence of guards fragmenting into smaller pieces of plastic over their 10-year life, as is often observed with corflute guards.

Methodology

With regards to planting density, this will occur at the maximum rate of 1 stem per 5 m^2 in areas with minimal vegetation density such as the Buffer offset area. In areas where vegetation is already present to some degree (i.e. the TEC occurrences), planting density will occur at a rate consistent with the surrounding vegetation density in order to meet the target completion criteria stated in Section 7.

Planting ratios:	Melaleuca, Callitris and understory
Understory species:	Acanthocarpus preissii
	Rhagodia baccata (berry saltbush)
	Austrostipa flavescens
	Trachymene pilosa (native parsnip)
	Guichenotia ledifolia
Planting density:	1 stem per 5 m^2 (0.2 plants per meter square) (all species), or at a rate consistent with the existing vegetation density.
Planting:	Forestry tubes
	Tree guards (fence sites to be investigated – smaller areas)

The planting method for woodland revegetation consists of:

1. Using an auger bit attached to a cordless drill to create a hole for planting.
2. Adding slow release fertiliser to each hole in the form of one low P Arbortab: ArborTab Native Tree Tablets - 20g - StrataGreen
3. Gently planting into hole.
4. Protecting each plant with a tree guard consisting of black plastic mesh cabled tied to two stakes.
5. All plants planted are 50mm forestry tubes.
6. Planting is undertaken by RIA staff, contractors or volunteers.
7. There is no watering planned for revegetation on the Island.

9. Maintenance, monitoring and contingency measures

Maintenance activities will be undertaken periodically over the 10 year period, which will be tied to monitoring. Revegetation data will be maintained using an online geographical information system (GIS) database to enable consistent documentation.

Monitoring will include establishment of five 10 x 10 meter quadrat monitoring sites within rehabilitated areas. Each quadrat is to include the two dominant tree species (*Callitris preissii* and *Melaleuca lanceolata*).

Monitoring of revegetation is broken into mortality counts at year 1 and 3, to assess the early success of revegetation. Infill planting will take place at year 5 if required. The 3-year survival count will provide a good indication of how the revegetation is tracking to a survival rate of a minimum of 50%. If the mortality rate at year 3 is 40% and the site is unlikely to meet the completion criteria of 50%, infill planting should take place at the 5-year mark. See Schedule 1 for an outline of the program.

A final cover assessment of the site takes place at 10 years when tree guards are removed. Sites that are deemed to meet the criteria are 'complete' and sites that do not meet the criteria receive infill planting, and another round of monitoring takes place.

See below for the full list of revegetation monitoring undertaken by RIA:

- 1 year - survival count and removal of dead plants and guards
- 3 year - survival count and removal of dead plants and guards
- 5 Year - infill planting if required
- 10 year - guard removal and cover assessment.

Weed control will be undertaken prior to planting as per the Weed Management outlined in Appendix A.

10. Schedule and Budget

A preliminary schedule is presented in Table 1, which includes seed collection, propagation, planting, and monitoring. The Rottnest Island Authority is responsible for the implementation of this Plan and will resource activities.

This project is fully funded and supported by the Rottnest Island Authority; funds will be sourced from the RIA.

Table 1: Works Schedule

	Year 0 (Plan)												Year 1 (Plant)												Year 2												Year 3												Year 4											
	2025												2026												2027												2028												2029											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Seed Collection																																																												
Propagation																																																												
Ground Disturbance form																																																												
Site Preparation - waste removal																																																												
Site Maintenance – rubbish																																																												
Weed Treatment and Assessment																																																												
Black Flag																																																													
Onion Weed																																																													
Planting of Tube Stock																																																												
Monitoring																																																												
Year 1 count																																																												
Year 3 count																																																												
Seed collection for year 5 infill (if required)																																																											
Propagation for year 5 infill (if required)																																																											
Year 5 infill																																																												
Year 10 count and guard removal																																																											
Year 5 infill Guard Removal and check (if required)																																																										

	Activity to complete
	Activity as required

	Year 5												Year 6												Year 7-8-9												Year 10											
	2030												2031												2032												2033											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Seed Collection																																															
Propagation																																															
Ground Disturbance form																																															
Site Preparation - waste removal																																															
Site Maintenance – rubbish																																															
Weed Treatment and Assessment																																															
Black Flag																																															
Onion Weed																																															
Planting of Tube Stock																																															
Monitoring																																															
Year 1 count																																															
Year 3 count																																															
Seed collection for year 5 infill (if required)																																															
Propagation for year 5 infill (if required)																																															
Year 5 infill and guard replacement																																															
Year 10 count and guard removal																																															
Year 5 infill Guard Removal (if required)																																															

	Activity to complete
	Activity as required

Appendix A: Weed Management for the Proposed Offset

Weed Management

SITE ASSESSMENT						
Site characteristics						
Site name	CPS 10450/1 Offset Sites and Remnant Vegetation present between CPS 9883/1 and CPS 10450/1 Clearing areas (see map below)					
DBCA District	Wadjemup / Rottnest Island		Disease Risk Area (Y/N)			N
Land size	1,859 ha		Size of weed management area			18.63 ha
Land category	National Park	**Nature Reserve**		Cons Park		Cons Reserve
	Other Reserve	State Forest		Timber Reserve		Forest Cons Area
Terrain type	**Trafficable**	Flat	**Undulating**	Steep	Rough	Non-trafficable
Site accessibility	Standard vehicle	4-wheel-drive only		All-terrain vehicle		**on-foot only**
What are the surrounding land uses?	Offset areas are surrounded by nature reserve Remnant Vegetation is within the settlement of Wadjemup with adjacent road, rail and housing.					
What stakeholders should be informed about weed management? (tick all relevant)						Neighbours
						Local Government
						Public visitors
						Local apiarists

Maps

CPS 10450/1 Offset Sites

Remnant Vegetation present between CPS 9883/1 and CPS 10450/1 Clearing areas

Weeds

Flora surveys completed in 2024 identified the following weed species:

- *Asphodelus fistulosus*
- *Cerastium glomeratum*
- *Erodium cicutarium*
- *Euphorbia peplus*
- *Galium murale*
- *Isolepis marginata*
- *Leontodon rhagadioloides*
- *Lysimachia arvensis*
- *Poaceae sp.*
- *Trachyandra divaricata*
- *Urtica urens.*

Assets	
Is weed infestation close to a sensitive area(s)? Include all assets – biodiversity, social, cultural and economic	Yes If yes, list all: • Rottnest Island Lakes • TEC 30a • Remnant vegetation is within a registered heritage site.
Are weeds providing an ecosystem service to be considered (e.g. shelter)	No

Risks	
Are there any Occupational Safety and Health risks on site?	Yes If yes, list all and complete a JSA • Snakes • Slips trips and falls.
Are there any Environmental risks on site?	No

Other Management Issues	
Are there any other management issues that need to be considered to ensure the weed management program is effective? E.g. Disease Risk Area hygiene	No

DEVELOP STRATEGIES AND MEASURES

Strategies and measures

Set measurable objectives then define actions and measures required

Refer to Notes section below for more information. Develop a list as a group and choose from list.

	Objectives, Actions and Measures	Timeframe
Long-term objectives (choose two)	- Restore the site with indigenous native vegetation. - Stop site from being a source of weed infestation upstream or downstream.	7 years
Medium-term objectives	- Reduce *Trachyandra divaricata or Urtica urens* infestation area by 50%.	5 years
Short-term Objectives	- Protect populations of threatened and priority flora from declared and WONS. - No further spread of *Trachyandra divaricate or Urtica urens.* - Protect the area from new weed infestations	2 years
Strategic Actions Required		
Restoration of native vegetation	Implementation of the Parker Point Housing (East) Revegetation Plan.	
Stop site from being a source of weed infestation upstream or downstream Reduce Trachyandra divaricate or Urtica urens infestation area by 50% Protect populations of threatened and priority flora from declared and WONS or other new weeds No further spread of Trachyandra divaricate or Urtica urens.	Application of herbicides to weed infestations as per Table 1 and 2.	
Measures Required	• Change in % of weed cover. • Infestations of upstream weeds observed downstream. • Weed infestation containment within original mapped boundary.	

IMPLEMENTATION

Safety Documentation	
Has a JSA been completed? (select)	Yes – To be developed
Has a Chemical Application Plan been completed? (select)	Yes

MONITOR AND REVIEW	
What steps are you required to follow once you have implemented your actions?	Establishment of photo-point monitoring points in each location. Analysis annually.

Table 1: Weed Treatment Plan

Species	Common Name	Treatment
Asphodelus fistulosus	Onion Weed	Spot Spray - Metsulfuron methyl 0.1 g / 10 L plus 100 ml oil
Cerastium glomeratum	Sticky Mouse – ear chickweed	Spot Spray - Glyphosate 100ml / 10L and Pulse
Erodium cicutarium	Redstem Stork's – Bill	Broadleaf herbicide like MCPA or Spot Spray - Glyphosate 100ml / 10L and Pulse
Euphorbia peplus	Spurge	Spot Spray - Metsulfuron methyl 0.2 g / 15L and Pulse 20ml / 10L
Galium murale	Goosegrass	Broadleaf herbicide like MCPA or Spot Spray - Glyphosate 100ml / 10L and Pulse
Isolepis marginata	Coarse club rush	Spot Spray - Glyphosate 100ml / 10L and Pulse
Leontodon rhagadioloides	Cretan Weed	Broadleaf herbicide like MCPA or Spot Spray - Glyphosate 100ml / 10L and Pulse
Lysimachia arvensis	Scarket pimpernel	Spot Spray - Glyphosate 100ml / 10L and Pulse
Poaceae sp.	Poas	Spot Spray - Glyphosate 100ml / 10L and Pulse
Trachyandra divaricata	Dune Onion weed	Spot Spray - Glyphosate 100ml / 10L and Pulse
Urtica urens	Stinging nettle	Spot Spray - Glyphosate 100ml / 10L and Pulse

Table 2: Annual Program Timing

Species	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Asphodelus fistulosus							x	x	x	x	x	x
Cerastium glomeratum					x	x	x					
Erodium cicutarium						x	x	x				
Euphorbia peplus						x	x	x	x			
Galium murale							x	x	x			
Isolepis marginata					x	x	x	x	x			
Leontodon rhagadioloides								x	x	x		
Lysimachia arvensis	x	x	x						x	x	x	x
Poaceae sp.								x	x	x	x	x
Trachyandra divaricata						x	x	x				
Urtica Urens				x	x	x	x	x	x	x		