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Our ref: AU213012164.001

Date: 11 December 2023

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

The Rottnest Island Authority respects the Whaduk people as the traditional custodians of Wadjemup

Dear Sir/Madam,

Clearing permit application: Parker Point Road, Rottnest Island

Please find attached a purpose permit clearing application to facilitate the building of staff accommodation at a site on Parker Point Road, Rottnest Island (Wadjemup).

The proposed clearing area (the site) is approximately 3.29hectares in size, comprising native vegetation. The site is at the southern end of a patch of extant native vegetation along Parker Point Road, terminating at Bickley Swamp and bounded by the railway line on the eastern side (Figure 1).

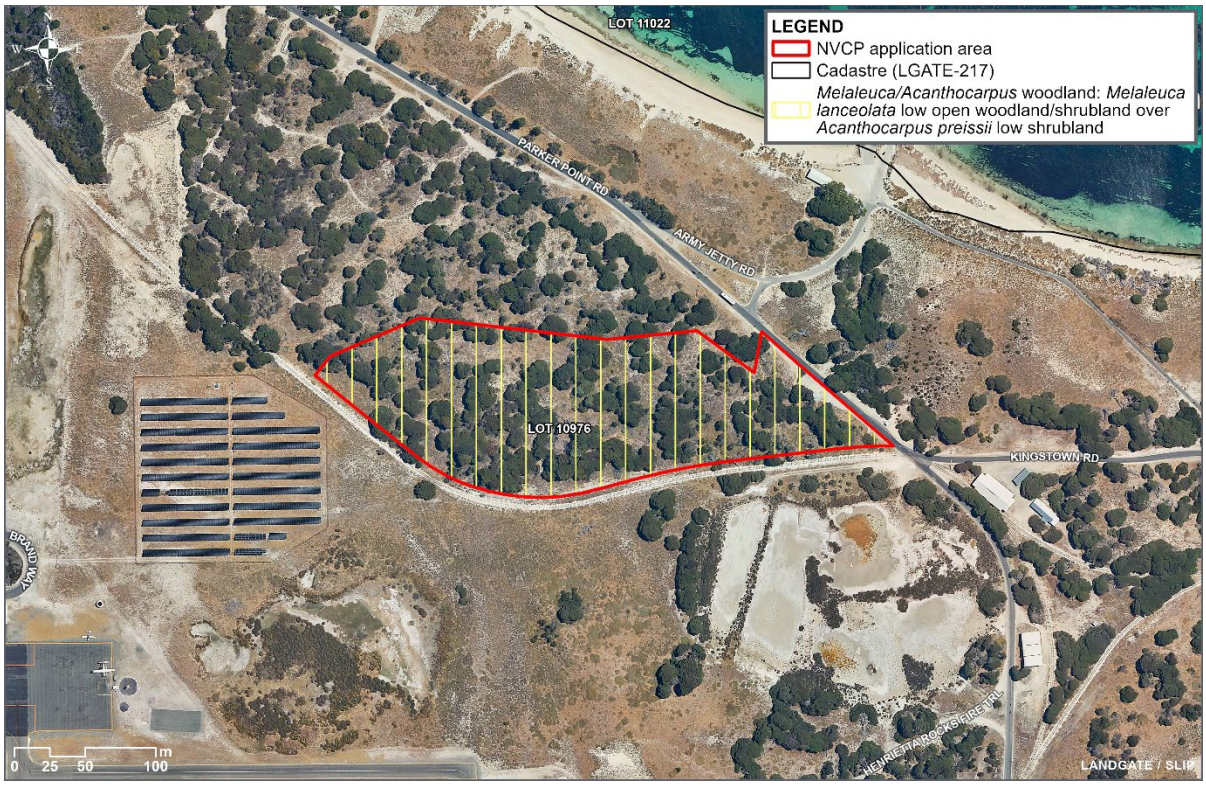

Figure 1 Site location and Native Vegetation Clearing Permit (NVCP) area

Background

The Rottnest Island Authority is seeking to clear the site to allow for the building of critical accommodation for workers employed by businesses on Rottnest Island.

This letter presents the results of an assessment of the clearing aspects of this proposal against the ten clearing principles as outlined in *A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the Environmental Protection Act 1986* (Department of Environmental Regulation, 2014), and identifies the potential environmental impacts associated with the proposal. The proponent responsible for implementation of the clearing described in this letter is the Rottnest Island Authority, Department of Biodiversity, Conservation and Attractions (DBCA).

Site selection – Alternatives

The Rottnest Island Authority Act 1987, Section 14.1 'Limit on Development', only allows housing to be built within the Settlement area. The Settlement area comprises a small portion of the Island, approximately 15 percent, with the process of site selection a complex matter. In the determination of a suitable site, RIA considered the following Site Selection Criteria:

- Within the Settlement boundary (no buildings to be constructed outside of settlement boundary)
- Outside of known Environmentally Sensitive Areas
- Outside of known State Heritage registered areas
- Proximity to the Lodge redevelopment and Samphire resort to reduce the need for transport between the sites (walking distance - reduced congestion management)
- Connectivity to sewer
- Connectivity to water
- Connectivity to 3 phase power

Several sites were considered, however, the site of Parker Point Road meets all the necessary site selection criteria as set out below. A ranking scale was applied whereby 1 = does not meet criteria, up to 5 = meets the criteria.

Table 1 Site selection matrix

	Within settlement boundary	Outside known ESAs	Outside known heritage areas	Proximity to Rottnest Hotel and Samphire	Connectivity to sewer	Connectivity to water	Connectivity to 3 phase power	**Total Score**
Parker Point Road	5	3*	5	3	4	4	4	**28**
Garden Lake	5	1	5	3	1	1	1	**17**
Geordie Bay	5	5	5	2	1	1	1	**20**
PFM Yard	5	1	3	5	3	3	3	**26**

*Cannot be developed due to Bushfire constraints and partially within an ESA.

The Parker Point Road site was chosen based on the scores in the matrix.

Site overview

A flora survey was conducted in 2022 (Focused Vision Consulting, 2022) which included the area subject to this application. This survey is provided as Appendix B in the report *Flora and fauna assessment, Parker Point Road Rottnest: Native Vegetation Clearing Permit: Supporting Documentation* (360 Environmental, 2022) which is included as Attachment A to this application. RPS conducted a qualitative assessment of the

site to ground-truth the reported results of this report, with a memo describing the search included as Attachment B and both have been used to inform this application.

Regional geology and soils

Surface geology mapping indicates that the geology of the site comprises Tamala Limestone (Qd); unconsolidated to strongly lithified calcarenite with calcrete/kankar soils; aeolian. Locally quartzose, feldspathic, or heavy-mineral-bearing (360 Environmental, 2022).

The proposed clearing site largely comprises vegetated dunes to a height of approximately 8 -11 metres AHD (Topographic-Maps.com, 2023).

A freshwater lens underlies the island, floating on saltier water due to density differences with hypersaline lakes the result of saltwater intrusion. The principal method of recharge of this lens is by rainfall (Bryan,2017). The movement of water within this lens as groundwater seepage is towards the coast and lakes, with groundwater movement from the site expected to occur in a northerly direction towards Thomson Bay with potential for some flow toward Bickley Swamp to the south.

There is a cluster of 18 lakes and swamps in the north-eastern part of Wadjemup. Seven lakes are permanent, two are seasonal and the smaller swamps are mostly seasonal. Water supply to the cluster is by direct precipitation and by groundwater seepage, the supply to the small swamps is primarily by groundwater seepage (DCCEEW, 2023).

Flora and vegetation

Vegetation types

The entire site is mapped as the vegetation type; **MIAp** (360 Environmental, 2022). This vegetation type comprises *Melaleuca lanceolata* Tall Shrubland over *Acanthocarpus preissii* Low Open Shrubland. This vegetation type is analogous to Vegetation Association 15 of Shepherd *et al* (2018) as reported in 360 Environmental (2022) and described as 'Low Forest. Acacia, Rottnest pine, coastal moort or mixed forest *Acacia rostellifera, Callitris preissii, Eucalyptus lehmanii, E. cornuta* (360 Environmental, 2022). The regional representation of this vegetation type and extent remaining is provided in Table 1.

Table 2 Vegetation Association 15 extents (Government of Western Australia 2019 and 360 Environmental 2022)

Pre-European Extent (ha)	Current Extent (ha)	Remaining (%)	Current extent in DBCA managed lands
Statewide Representation (Report 1a[1])			
2,374.16	1,576.52	66.40	56.23
Swan Coastal Plain Representation (Perth subregion SWA02, Report 3a[1])			
1,977.33	1,564.26	79.09	56.47
Local Government Area Representation (City of Cockburn[2], Report 4a[1])			
1,353.14	886.49	65.51	100

[1] Relevant report numbers within Government of Western Australia (2019)

[2] The City of Cockburn is the Rottnest Island Local Government Area.

The EPA considers that it is important that vegetation associations are maintained above the threshold level of 30% of the pre-European extent of the vegetation association as outlined in Guidance Statement No. 33 – *Environmental Guidance for Planning and Development*. The guidance recommends that vegetation associations with levels below the 30% threshold should be retained, where possible (EPA 2008). Vegetation Association 15 has a current extent above the abovementioned 30% threshold (Table 1).

Conservation significant vegetation

The vegetation type **MIAp** was assessed as being analogous to the state listed Threatened Ecological Community (TEC) '*Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands of the Swan Coastal Plain (floristic community type 30a as originally described by Gibson *et. al.* 1994)'. This community is located on calcareous sandy soils of the Quindalup Dunes, generally occurring between Trigg and Point Peron, and on the Swan River at Peppermint Grove. It also occurs on Garden Island and Rottnest Island.

The TEC is characterised by the presence of the Rottnest Island Pine (*Callitris preissii*) and/or the Rottnest Island Tea Tree (*Melaleuca lanceolata*), the TEC was Gazetted as Critically Endangered in 2023 (State of Western Australia, 2023).

A report produced by 360 Environmental (2022) to support a previous clearing permit application (No. 9883/1) also mapped the vegetation as analogous to the same TEC, and condition was mapped as Very Good.

Vegetation condition

Three vegetation condition inspections have been conducted:

- In May 2022 Focused Vision Consulting conducted an initial assessment, assessing the condition as Very Good by the scale of Keighery (1994)
- In September 2023 RPS conducted a qualitative assessment of the site and assessed the vegetation as in Degraded condition with patches of Good condition by the same scale
- The RIA, following its own inspection of the site, considers that the site is in Good condition with minor patches of Degraded condition (R. Gabbitus, *pers. comm* 2023).
- The relevant Keighery scale (1994) condition definitions are:Very Good: Vegetation structure (is) altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
- Good: Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
- Degraded: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weed at high density, partial clearing, dieback and grazing.
- Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'Parkland Cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.

Focused Vision Consulting 2022

A review of the Focused Vision report shows that the condition assessment was based on a quadrat (Quadrat 11) placed just to the north of the site boundary, and a walk through of the western side. A total of 5 taxa were recorded in this quadrat, one of which is introduced (**Trachyandra divaricata*). The photo provided of Quadrat 11 (Focused Vision 2022) shows the same vegetation type as is shown in the RPS qualitative assessment report (Attachment B). The quadrat in relation to the proposed clearing area is shown in Figure 2.

While the vegetation retains some structure in the upper stratum (trees *Melaleuca lanceolata* and *Allocasuarina huegeliana,* and the shrub/tree *Acacia rostellifera*) the lower stratum is represented by two taxa, *Acanthocarpus preissii* and the weed **Trachyandra divaricata*. This shrub/herb layer can be interpreted as depauperate in that it lacks diversity as it is dominated by one native taxon, and includes the presence of an aggressive weed.

RPS 2023

The RPS qualitative assessment assessed the vegetation within the proposed clearing area as also depauperate in the shrub layer, similarly being dominated by the *Acanthocarpus preissii*. Occasional *Guichenotia ledifolia* and *Lysianthus calycinus* were noted, however, the introduced species **Trachyandra divaricata* was more common and widely distributed.

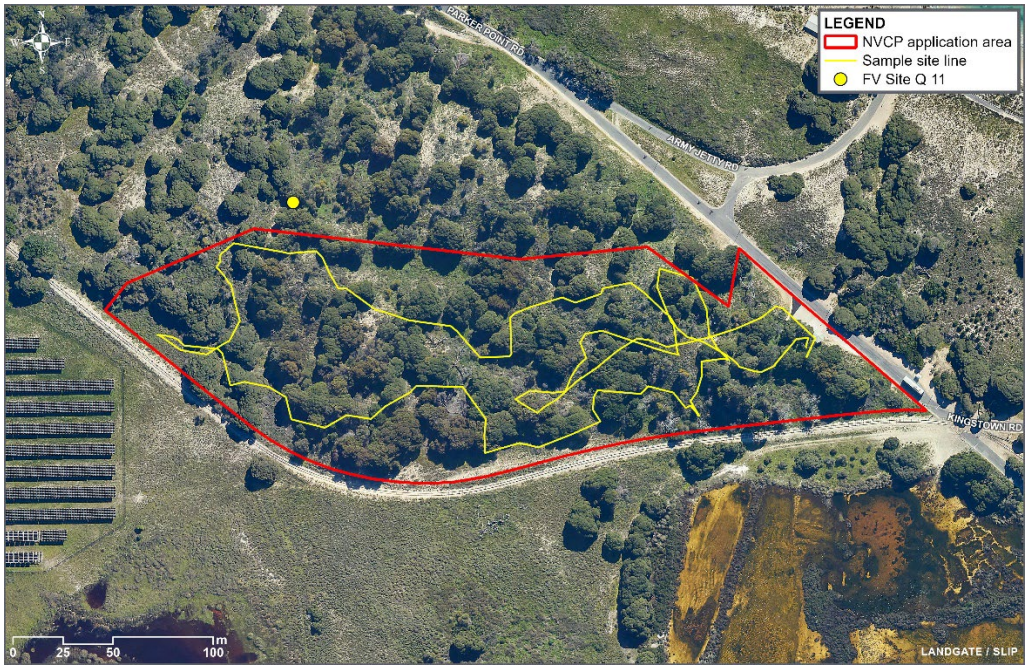

Figure 2 Location of Focused Vision 2022 quadrat 11 and RPS 2023 qualitative assessment tracks

Discussion

There have been multiple disturbances to the vegetation in the NVCP site:

- Historical photography (Plate 1) shows the area as cleared at the time (1981 – Plate 1);
- There is a railway line and associated buffer on the western and southern boundaries and a road on the eastern boundary; and
- Weed invasion particularly by **Trachyandra divaricata*, and deliberate introduction of non-endemic species.

Further:

- *Guichenotia ledifolia* is noticeably absent from the majority of the site, while it forms dense stands in other parts of the Island;
- Poole *et al* (2014) notes that intensive browsing by the Quokka has substantially impaired revegetation on Rottnest, and as *Acanthocarpus preissii* is not shown to be a preferred food plant it can be inferred that the taxon has benefitted from the selective grazing pressure reducing competition for space. As a food plant for Quokka, **Trachyandra divaricata* was recorded in 68.7% of faecal samples (second only to *Guichenotia ledifolia* at 77.6%) as opposed to 0% for *Acanthocarpus preissii* (Poole *et al*, 2014); and
- Phillips (2016) found that the density of Quokkas was significantly higher around the Settlement areas and this was correlated with tourism, escalating to its highest point around summer. It could be argued that this density is a man-made phenomenon and that overgrazing of palatable species (e.g. *Guichenotia ledifolia*) in the Settlement area or nearby is a result of human influence. DBCA Quokka monitoring in 2022, at a higher survey effort than Phillips (2016), recorded a higher quokka density in woodland (6/ha) compared to Phillips in 2016 (3.44/ha), with the highest density recorded around grassed areas within the Settlement (R. Gabbitus, *pers comm*). While the proposed clearing area is not within the Settlement area containing infrastructure and frequented by tourists, it is still closer to the areas of greater concentration.

Plate 1 1981 aerial photograph showing site almost entirely cleared (Photo courtesy of RIA)

RPS considers these disturbances to constitute a severe impact to the vegetation and its structure and therefore concludes that the vegetation to be in a Degraded condition over the majority of the proposed clearing area.

One small area at the eastern end of the proposed clearing area was assessed as 'Completely Degraded'. This area appears to have been established as an interpretive site for the Noongar seasons and various bush foods and other useful plants, with a gazebo and boardwalk in a fenced area. Currently, despite the upper stratum cover of *Melaleuca lanceolata*, there is little growing inside the fenced area except **Trachyandra divaricata*. The area can be said to be 'Parkland Cleared'.

Conservation significant flora

No conservation significant flora species listed under the EPBC Act or BC Act were identified within the site. However, one species recorded by Focused Vision (2022) had previously not been recorded on Rottnest Island.

Allocasuarina huegeliana is a tree 4-10 m high that is associated with granite (Western Australian Herbarium 1998-), although there is one record in the Western Australian Herbarium (PERTH 04864425) that was associated with the Tuart (*Eucalyptus gomphocephala*) which is known to grow on limestone.

This species was recorded at one site, quadrat 11. It has no conservation ranking, however, may be considered significant under the EPA Factor Guidelines (Environmental Protection Authority, 2016a) for local endemism.

Fauna

A desktop review of NatureMap and Protected Matters Search Tool results was used to identify significant fauna values by 360 Environmental (2022). Marine, wetland dependent and migratory species, identified in the desktop review but which require specific habitat not recorded in the study area, were excluded leaving a total of eight taxa potentially occurring (Table 2). Table 3 explains the conservation codes used in Table 2.

Table 3 Potential conservation significant fauna

Taxon	Common name	Status (BC Act)	Status (EPBC Act)
	Birds		
Zanda latirostis	Carnaby's Black-Cockatoo	EN	EN

Falco peregrinus	Peregrine Falcon	OS	
	Invertebrates		
Hesperocolletes douglasii	Douglas' Broad-headed Bee; Rottnest Bee	CR	CR
Idiosoma sigillatum	Swan Coastal Plain shield-backed trapdoor spider		
	Mammals		
Setonix brachyurus	Quokka	VU	VU
	Reptiles		
Lerista lineata	Perth slider; Lined skink	P3	
Pseudonaja affinis exilis	Rottnest Island dugite	P4	
Tiliqua rugosa konowi	Rottnest Island bobtail; Rottnest Island shingleback	VU	

Table 4 Conservation codes

Conservation code	Description
CR – Critically Endangered	Taxa facing an extremely high risk of extinction in the wild in the immediate future
EN - Endangered	Taxa facing a very high risk of extinction in the wild in the near future
VU – Vulnerable	Taxa facing a high risk of extinction in the wild in the medium-term
OS – Specially Protected	Species otherwise in need of special protection. Listed by order of the Minister as specially protected under section 13(1) of the BC Act.
P3 – Priority 3	Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.
P4 – Priority 4	(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy

The conservation significant taxa in Table 1 are discussed and their likelihood of occurrence (360 Environmental, 2022) are presented below.

Carnaby's Black Cockatoo

Listed as Endangered under both state and federal legislation. The species has been recorded on Rottnest Island (Cale, 2003), however, the Island does not provide foraging or roosting habitat. The species may be a rare visitor, however, the proposed clearing area does not provide significant habitat trees or suitable foraging and it is unlikely that it would occur.

Peregrine Falcon

The Peregrine Falcon is a wide ranging species across Australia. It typically nests on cliff ledges or refurbished nests built by other raptors. No suitable nesting habitat is available within the site and they are not expected to be seen on the Island (Birds Australia, 2010), however, occasional visitors may use the area for hunting.

Douglas' Broad-headed Bee

Previously listed as 'Presumed Extinct', due to changes in Rottnest Island vegetation since a 1938 collection, a single specimen was more recently collected in Banksia Woodland at Muchea and the species was reassessed as Critically Endangered. It is unlikely that the Bee is extant on Rottnest Island.

Swan Coastal Plain shield-backed trapdoor spider

This species occurs from Dalyellup in the south to Gingin in the north and east to the Darling Scarp, and includes Rottnest and Garden Islands. It is unlikely to occupy its full range due to urbanisation and habitat loss.

Burrows usually occur in Banksia woodland and heathland on sandy soils. As the proposed clearing area is on sandy soil this species may occur on the site.

Quokka

Rottnest Island supports the largest known population of this mammal. Rottnest Island staff, and the RPS botanist who walked over the site, observed Quokka scats within the site and it is likely that suitable habitat for this species is present within the site. Poole *et al* (2014) report that the highest number of rest site observations for the Quokka (34%) occurred in *Acanthocarpus preissii*, which dominates the ground stratum of the site.

Rottnest Island dugite

Dugites live in abandoned burrows or hollow logs and prefer coastal habitat, limestone heath, woodland and the Settlement area of the Island. Dugites are likely to utilise the proposed clearing area.

Perth Slider, Lined skink

A small burrowing skink, the Perth slider is found predominantly on the Swan Coastal Plain, and has been observed on Rottnest Island. The species was recorded in 1986, and a survey conducted between 2002-07 failed to record the species (Maryan *et.al.* 2015). The most recent observations were in 2015 (Maryan & Gaikhorst 2017) in *Acacia rostellifera* scrub, but it is not stated that this is its preferred habitat. As *Acacia rostellifera* was noted in the proposed clearing area, it is possible that this species utilises the area.

Rottnest Island bobtail

Bobtails prefer limestone heath, woodland and coastal habitats and are likely to use the vegetation within the proposed clearing area as habitat.

Conservation features

Rottnest Island is declared as a Class A Nature Reserve under the *Permanent Reserve Act 1899*.

Portions of the site are mapped as Environmental Sensitive Areas (ESA; Figure 3). The ESA on the southern boundary is the Bickley Swamp ESA. The north-western section of the proposed clearing area is mapped as the TEC (see Conservation significant vegetation above), and the existing vegetation is analogous to the TEC.

Under section 51B of the EP Act, exemptions for clearing native vegetation do not apply in ESAs.

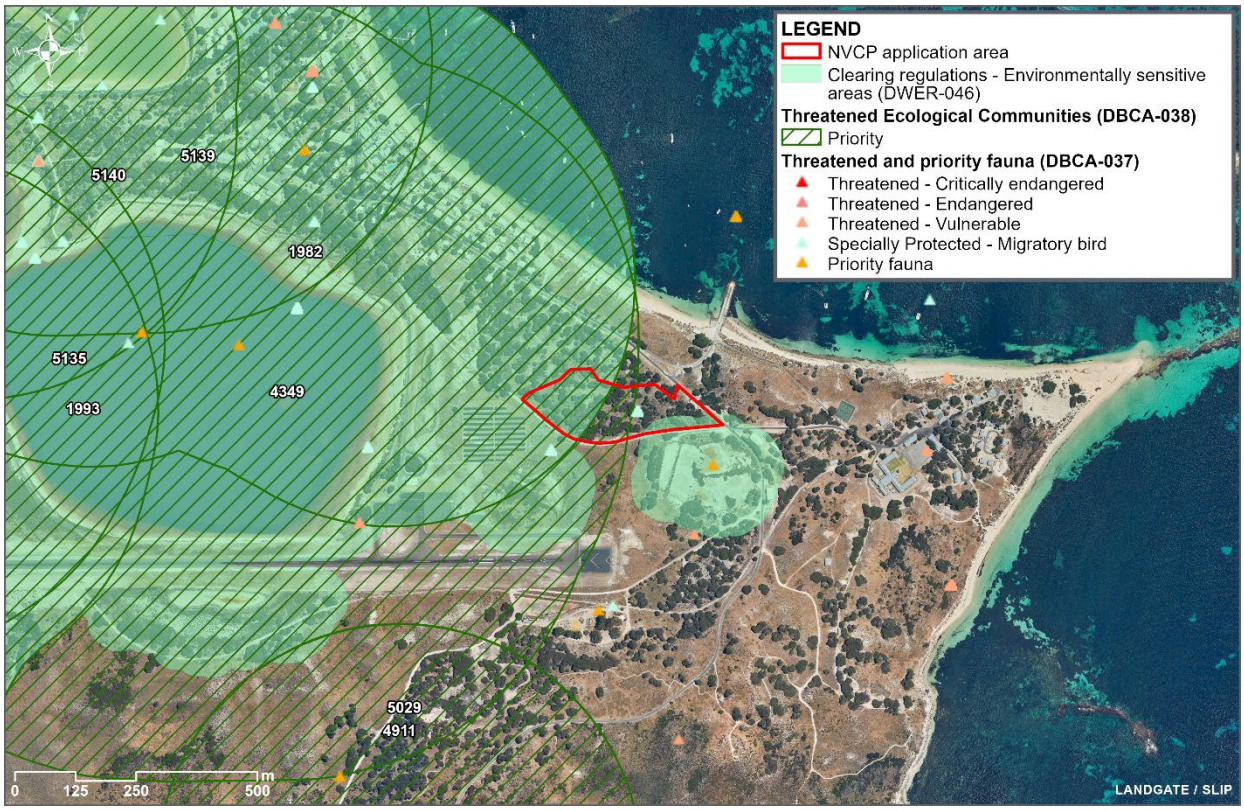

Figure 3 Environmentally Sensitive Areas

Heritage

The site is adjacent to a cultural site PP22-A-01 and its buffer zone to the north. This site will not be impacted either directly or indirectly by the proposed clearing.

A search of the DPLH Aboriginal Heritage Enquiry System did not identify any Aboriginal Cultural Heritage (Directory or Pending) mapped across the site. Historically, Rottnest Island was listed as Place ID 20862 (Rottnest Island (Wadjemup)).

Assessment against the 10 clearing principles

Table 3 provides and assessment of the proposed clearing against the 10 clearing principles as outlined in Schedule 5 of the *Environmental Protection Act, 1986* to determine whether the proposed clearing is at variance to the principles.

Table 5 Assessment of the proposed clearing against the 10 clearing principles

Principle	Assessment	Outcome
Principle (a) – native vegetation should not be cleared if it comprises a high level of biological diversity	A qualitative assessment of the site by RPS Lead Botanist Martin Henson (Attachment B) assessed the vegetation as in Degraded to Completely Degraded condition by the scale of Keighery (1994). The vegetation in the lower stratum is dominated by the Prickle Lily, *Acanthocarpus preissii* and the introduced Dune Onion Weed **Trachyandra divaricata*. Occasional individuals of *Guichenotia ledifolia* and *Lysiandra calycina* were also observed. Poole *et al* (2014) observe that the *A. preissii* is not a favoured food plant for the Quokka, being recorded in 0% of faecal samples analysed. They also report the 77.6% of faecal samples analysed contained fragments of *Guichenotia*	Clearing of vegetation at this site is not at variance with this Principle

	ledifolia, the highest percentage recorded, indicating it as a favoured food plant. It is suggested that selective grazing pressure by the Quokka has removed palatable species from the vegetation and allowed the increased growth of *A. preissii* due to decreased competition, resulting in a reduced diversity in the vegetation and allowing the ingress of weeds such as the **Trachyandra divaricata*. The site is therefore depauperate in the lower shrub stratum and is heavily infested with weeds such as **Trachyandra divaricata*. *Eucalyptus utilis* has also been planted through the area, and while it favours coastal habitat this species is not endemic to the island. The botanical biodiversity of the site has been reduced by clearing, overgrazing by Quokkas, deliberate introduction of non-endemic species, and weed invasion. As such, based on the site visit undertaken by RPS, the site is not considered to comprise a high level of biological diversity.	
Principle (b) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant habitat for, fauna indigenous to Western Australia	The flora and fauna assessment conducted by 360 Environmental (2022) recorded a total of 172 conservation significant fauna taxa, however an assessment of Likelihood of Occurrence identified only 4 likely to occur, and one as possible, as discussed below: • Quokka (*Setonix brachyurus*) (Vulnerable; EPBC Act and BC Act). The species maintains group territories that fluctuate with changes to shelter availability and foraging suitability. Quokkas were observed utilising the site during the RPS qualitative assessment • Rottnest Island dugite (*Pseudonaja affinis exilis*) (Priority 4). The dugite prefers coastal habitats, and is likely to use the site for hunting. The dugite has been observed at the site (R. Gabbitus, *pers comm*) • Rottnest Island bobtail (*Teliqua rugosa konowni*) (Vulnerable, BC Act). Prefers coastal habitats, likely uses the site for general habitat. The bobtail has been observed at the site (R. Gabbitus *pers comm*) • Perth Slider (*Lerista lineata*) (Priority 3). This species was last recorded on Rottnest in *Acacia rostellifera* scrub. As this flora taxon was observed in the proposed clearing area it is possible that it may occur in the proposed clearing area. The remaining conservation significant fauna species identified within the database searches are considered to have a low likelihood of occurrence within the site due to the lack of suitable habitat. Vegetation within the site is well represented on Rottnest Island. While it is in Good to Completely Degraded condition in the proposed clearing area, observations of conservation significant fauna have been made in the area and it can be assumed that it is used by other species including native birds. The clearing of 3.29 hectares is unlikely to have a significant impact on these species.	The clearing of vegetation at this site may be at variance with this Principle
Principle (c) Native vegetation should not be cleared if it includes or is necessary for the	No Threatened or priority flora were identified within the site during flora and vegetation surveys and the site visit	The proposal is not at variance with this Principle

continued existence of rare flora	undertaken by RPS. As such, the proposed vegetation clearing will not impact rare flora.	
Principle (d) – Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a Threatened Ecological Community (TEC)	The vegetation is mapped as *Melaleuca/Acanthocarpus Woodland* (Focused Vision, 2022). This vegetation type is analogous to the state listed TEC "*Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands of the Swan Coastal Plain (floristic community type 30a as originally described by Gibson *et. al.* 1994)", which is listed as Critically Endangered under the BC Act. The northern part of the site is in the buffer zone for recorded examples of this TEC, the southernmost part isn't and the site itself is not recognised as an ESA for supporting a TEC. Approximately 627 ha (360 Environmental, 2022) of the TEC occurs on Rottnest and Garden Islands, and on the mainland the remaining occurrences extend from Trigg in the north to Woodman Point and along the Swan River at Mt Henry and Peppermint Grove (Pride, J, 2008).	As up to 3.29 ha of TEC will be cleared this proposal is at variance with this Principle
Principle (e) – Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	Historical Landgate photography from 1955 shows the site as was historically partly cleared. Revegetation has been occurring since 1963 (360 Environmental, 2022), however natural regeneration is low due to grazing by Quokkas. Locally, the site is an example of remnant vegetation in an area that has been extensively cleared, and represents the TEC "*Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands of the Swan Coastal Plain (floristic community type 30a as originally described by Gibson *et. al.* 1994), albeit in degraded condition. This condition assessment may reduce the significance of the vegetation stand. The TEC is part of a broad vegetation type described in Shepherd *et al* (Government of Western Australia, 2019) as "Low forest. Cypress pine" (Vegetation Association 15), with associated taxa *Acacia rostellifera, Melaleuca lanceolata* and *Callitris preissii.* Over 79% of the pre-European extent of this vegetation type remains, with over 56% of the current extent in DBCA managed lands.	The proposal is unlikely to be at variance with this Principle
Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	There are no wetlands within the site and vegetation present within the site does not reflect wetland characteristics and is more reflective of dune vegetation. However, Bickley Swamp is located less than 50 m downslope of the site's southern edge at the rail line, and the ESA boundary around this wetland intersects the boundary of the proposed clearing area. Government House Lake is approximately 350 m to the west, and an unnamed wetland lies approximately 80 m to the south-west. These three wetlands are all classified as Environmentally Sensitive Areas and listed under the Directory of Nationally Important Wetlands (DCCEEW, 2023).	The proposal is unlikely to be at variance with this Principle

	Due to the distance from the site, Government House Lake and the wetland to the south west are unlikely to be impacted by the proposed development. Bickley Swamp is separated from the site by the rail line, which will minimise potential direct impacts from vegetation clearing and construction activities. Potential indirect impacts to the wetland will be managed through implementation of a Construction Environmental Management Plan.	
Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	The substrate of the site is unconsolidated sand formed into a dune. Sandy soils are prone to wind erosion, however as the site is proposed to be developed it will not contribute to land degradation Implementation of a Construction Environmental Management Plan will ensure that the risk of erosion and the introduction of weed species is minimised and managed during clearing and construction activities. The increase in human activity in the area may cause degradation to the surrounding area from - increased erosion following construction - increased access to the surrounding bushland people using the buildings - the potential for increased litter	The proposal is not at variance with this Principle
Principle (h) – Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation areas	Land to the west and south of the site has previously been cleared (except for Bickley Swamp which is discussed earlier). The proposed clearing will fragment the contiguous vegetation extending along Parker Point Road and through Bickley Swamp, and to a certain extent remnant vegetation across Parker Point Road to the east around the Army Jetty. This will reduce the connectivity of the vegetation between the listed TEC and examples to the south and south-east. This impact cannot be avoided. Direct impacts will be managed by a Construction Management Plan.	The proposal may be at variance with this Principle
Principle (i) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	No surface water features are located within the site. Although no groundwater investigations have been conducted it is assumed that a shallow unconfined aquifer lies beneath the site and that regional groundwater flow is towards Thomson Bay (360 Environmental, 2022), although there may be some groundwater flow towards Bickley Swamp based on topography. Rainwater collected from new buildings at the site will be directed to soakwells installed for this purpose, where it will infiltrate. Given that the proposed change to the site would remove deep rooted vegetation and replace it with buildings and hardstand it is possible that there would be an increase in groundwater level and flow. The quality of the runoff may be reduced due to the different usage of the area but landscaping will use native plants that do not require fertilisation or irrigation, reducing the risk of an increase in nutrient levels.	The proposal is not at variance with this Principle

Principle (j) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence of flooding	Rottnest Island receives a mean rainfall of 564.6 mm per annum, with the local climate consisting of cool wet winters and warm dry summers. Maximum mean rainfall occurs in July, with 111.5 mm. Flooding is not an issue as the soil is sandy and porous, and given the small area subject to this proposal this is not likely to change.	The proposal is not at variance with this Principle

Proposed Offset

The Rottnest Island Authority will be guided by the Department of Water and Environmental Regulation on the matter of suitable offsets to the proposed clearing, based on the precedent created by CPS 9883-1.

Yours sincerely,
for RPS AAP Consulting Pty Ltd

Martin Henson
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Attachments:

- Figure A & B showing the vegetation type and condition (reproduced from 360 Environmental, 2022)
- Attachment A: Flora and fauna assessment *Parker Point Road Rottnest: Native Vegetation Clearing Permit: Supporting Documentation* (360 Environmental, 2022)
- Attachment B: RPS memo report: *RPS Qualitative vegetation assessment memo report* (RPS, 2023)
- Appendix C: Application for a Clearing Permit (Purpose Permit)
- Shapefile data

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