GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9246/2
Permit Holder:	Harvest Road Oceans Pty Ltd
Duration of Permit:	From 6 August 2021 to 6 August 2026

The permit holder is authorised to clear native vegetation subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of power supply upgrade.

2. Land on which clearing is to be done

Lot 501 on Deposited Plan 64940 (Crown Reserve 42964)

Lot 500 on Deposit Plan 64940 (Crown Reserve 6862)

Swarbrick Street road reserve (PIN 1266769), Emu Point

3. Clearing authorised

The permit holder must not clear more than 0.0513 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

PART II – MANAGEMENT CONDITIONS

4. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

5. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, *mulch, fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

6. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity

7. Fauna management – Western ringtail possum

(a) In relation to the area cross-hatched yellow in Figure 1 of Schedule 1, the permit holder must engage a fauna specialist to inspect that area immediately prior to, and for the duration of clearing activities, for the presence of western ringtail possum(s) (*Pseudocheirus occidentalis*).

(b) Clearing activities must cease in any area where fauna referred to in condition 7 (a) are identified until either:

  (i) the western ringtail possum(s) individual has moved on from that area to adjoining *suitable habitat*; or

  (ii) the western ringtail possum(s) individual has been removed by a *fauna specialist*.

(c) Any western ringtail possum individual(s) removed in accordance with condition 7(b)(ii) must be relocated by a *fauna specialist* to a *suitable habitat*, or as otherwise approved by the *CEO*.

(d) Where fauna is identified under condition 7(a), the permit holder must within two months provide the following records to the CEO:

  (i) the number of individuals identified;

  (ii) the date each individual was identified;

  (iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

  (iv) whether the individual naturally dispersed;

  (v) the number of individuals removed and relocated;

  (vi) the relevant qualifications of the western ringtail possum specialist undertaking removal and relocation;

  (vii) the date each individual was removed;

  (viii) the method of removal;

  (ix) the date each individual was relocated;

(x) the location where each individual was relocated to, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and

(xi) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

PART III - RECORD KEEPING AND REPORTING

8. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 4; and (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 5.

9. Reporting

The permit holder must provide to the *CEO* the records required under condition 8 of this permit when requested by the *CEO*.

DEFINITIONS.

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
drey	means the nest of a western ringtail possum (*Pseudocheirus occidentalis*)
dieback	means the effect of *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.
fauna survey	means a field-based investigation, including a review of established literature, of the biodiversity of fauna and/or fauna habitat of the permit area and where conservation significant fauna are identified in the permit area, also includes a fauna survey of surrounding areas to place the permit area into local context.
fill	means material used to increase the ground level, or to fill a depression.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
suitable habitat (western ringtail possum)	means habitat known to support to support western ringtail possums (*Pseudocheirus occidentalis*) within the known current distribution of the species, typically characterised by abundant foliage, presence of suitable nesting structures such as tree hollows, as well as high canopy cover and continuity. Known habitat includes peppermint (*Agonis flexuosa*) dominated woodlands, jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) forests, riparian vegetation with a canopy of Bullich (*Eucalyptus megacarpa*) or flooded gum (*Eucalyptus rudis*), karri (*Eucalyptus diversicolor*) forests, sheoak (*Allocasuarina fraseriana*) dominated woodlands, and other stands of myrtaceous trees growing near swamps, watercourses or floodplains.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and*

Term	Definition
	Agriculture Management Act 2007; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

5 May 2022

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9246/2
Permit type:	Purpose permit
Applicant name:	Harvest Road Oceans Pty Ltd
Application received:	23 March 2021
Application area:	0.0513 hectare of native vegetation
Purpose of clearing:	Power supply upgrade
Method of clearing:	Mechanical
Property:	Lot 501 on Deposited Plan 64940 (Crown Reserve 42964) Lot 500 on Deposit Plan 64940 (Crown Reserve 6862) Swarbrick Street road reserve (PIN 1266769)
Location (LGA area/s):	City of Albany
Localities (suburb/s):	Emu Point

1.2. Description of clearing activities

The amount of vegetation proposed to be cleared has increased from 0.003 hectares to 0.0513 hectares, to include the connection route around the Fishing Club and a linear strip of vegetation along the Swarbrick Street road reserve. It is proposed that electrical cables be placed underground by directional drilling along the road reserve. The proposed clearing is to allow for an upgrade of power supply servicing the Emu Point Boat Harbour.

1.3. Decision on application

Decision:	Granted
Decision date:	5 May 2022
Decision area:	0.0513 hectares of native vegetation

1.4. Reasons for decision

This clearing permit amendment application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has considered the site characteristics (see Appendix A), the Clearing Principles set out in Schedule 5 of the EP Act (Appendix B), a targeted Western Ringtail Possum survey (see Appendix D), relevant datasets (See Appendix F), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Section 3 and 4).

In particular, the Delegated Officer has determined that:

- the implementation of a suitable weed and dieback management condition is appropriate to mitigate the impact of spreading weeds and dieback into adjacent vegetation; and
- the clearing will result in the loss of 0.0513 ha of native vegetation which is suitable habitat for *Pseudocheirus occidentalis* (western ringtail possum)

Although the assessment determination has not changed since the assessment for CPS 9246/1, the assessment has considered environmental values of the additional area applied for under the amendment. A targeted Western Ringtail Possum Survey (BioDiverse Solutions, 2022) was requested by DWER during the assessment with the results of this survey discussed in Section 3.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed amendment is unlikely to lead to long-term adverse impacts on environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of dieback and weeds;
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity; and
- engage a Western Ringtail Possum specialist to inspect the area prior to, and for the duration of clearing activities and if required, appropriately remove any individual Western Ringtail Possums prior to the clearing.

1.5. Site map

Figure 1 Map of the application area

The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures have been considered. The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

In order to deliver a cost-effective solution whilst minimising the amount of native vegetation clearing required, Horizon Power will be using a combination of drilling and trenching to complete this project. As indicated in the application documentation, the installation method proposed is open trenching for an underground cable. As opposed to poles and overhead wire, underground installations do not require permanent clearing for maintenance or fire protection. Based on the narrow and linear nature of the clearing, and condition of surrounding vegetation, regrowth is expected to occur in the short-term.

Along the Swarbrick Street road reserve, horizontal boring will be utilised to minimise potential environmental impacts. The applicant has indicated that the entire clearing area is proposed to be kept to a minimum; trimming, trenching and tunnelling will be undertaken where possible to support the installation of the commercial power supply cables. Site briefing of operators to trim trees where possible and minimise the footprint of works is proposed to take place before commencement of clearing.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

A review of current environmental information (Appendix E and Appendix D) reveals that the assessment against the clearing principles has not changed from the Clearing Permit Decision Report CPS 9246/1. The additional area of proposed clearing contains similar values to those previously assessed under CPS 9246/1, including an additional amount of suitable habitat for *Pseudocheirus occidentalis* (western ringtail possum). The assessment of the environmental values in the additional areas that required further consideration is below.

3.2.1. *Biological values (Fauna) – Clearing Principles (a) and (b)*

Assessment:

There are 95 conservation significant fauna records within a 20 km radius from the application area. These include aquatic and marine species, migratory birds, Main's assassin spider, Quenda, Western Ringtail Possum and Black cockatoos. The aquatic and marine species would be unlikely to be directly impacted by the proposed clearing. Migratory birds may use the vegetation in the proposed clearing area in their transits. Given the small clearing extent and the considerable presence of similar vegetation within the local area, the vegetation proposed to be cleared is unlikely to comprise significant habitat for migratory birds.

Noting the proximity of records of black cockatoos to the application area, the peppermint trees proposed to be cleared may also provide a habitat for black cockatoo species. However, this is not a preferred foraging or roosting tree species and given the availability of other food sources, including Banksia within nearby vegetated areas, the proposed clearing is unlikely to have a significant impact on threatened black cockatoo species.

Western Ringtail Possum

Of the vertebrate fauna species of conservation significance identified, the one species known to occur over the application area is the Western Ringtail Possum. The Western Ringtail Possum (*Pseudocheirus occidentalis*) is listed as Critically Endangered under the *Biodiversity Conservation Act 2016*, and Critically Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

There are twenty-one records of the Western Ringtail Possum within one kilometre of the application area (DBCA 2007). Peppermint leaves form the basis of the Western Ringtail Possum's diet in coastal areas (Jones *et al*. 1994), and home ranges in Peppermint dominated habitat average 0.4 hectares and 0.3 hectares for females and males respectively (DPaW 2014; Jones *et al.* 1994). Recent research in the Albany area has shown that the diet of Western Ringtail Possums in the region may be more varied than previously thought, with other eucalypt species and sheoak also providing suitable foraging opportunities, as well as other non- myrtaceous species such as *Adenanthos* spp., *Banksia* spp., *Gastrolobium* spp., *Hakea* spp. and *Nuytsia floribunda* (BioDiverse Solutions, 2022). Resting sites include constructed dreys and tree hollows, with dreys constructed in the canopy when hollows are not available.

A targeted Western Ringtail Possum Survey was undertaken over the application area on 9 February 2022 (BioDiverse Solutions, 2022) (Appendix D). The survey area and adjacent vegetation was assessed for indicators of Western Ringtail Possum (*Pseudocheirus occidentalis*) presence through systematic searching for tree scratching, scats, dreys, individuals and any trees with suitably sized hollows (BioDiverse Solutions, 2022).

BioDiverseSolutions (2022) reported that the fauna habitat present within the survey area is described as an open woodland of *Agonis flexuosa*. The midstorey consists of occasional *Adenanthos sericeus, Spyridium globulosum, Leucopogon obovatus, Rhagodia baccata, Acacia pulchella* and *Acacia* sp. The understorey consists of *Hibbertia sp., Lepidosperma gladiatum, Lepidosperma sp., Desmocladus flexuosus, Ficinia nodosa, Billardiera fusiformis*, and introduced species such as *Cenchrus clandestinus* (Kikuyu), *Lagurus ovatus* (Hare's Tail Grass), *Pelargonium capitatum* (Rose pelargonium), *Asparagus asparagoides* (Bridal creeper), *Oxalis* sp., *Trifolium* sp., *Asparagus* sp., and *Gladiolus* sp.. The vegetation located along the northern and western edge of the Albany Boating and Fishing Club building is more open and lacks a consistent mid and understorey layer. The vegetation in the survey area is considered to be in a Good to Very Good condition (Keighery, 1994) (see Appendix E for photographs of the site). There is a high level of canopy connectivity both throughout the survey area and to the surrounding vegetation (BioDiverse Solutions, 2022).

BioDiverse Solutions (2022) reported that one Western Ringtail Possum drey (Drey 1) was observed on the edge of the survey area, with an additional three dreys observed outside of the survey area (Figure 2). The applicant has indicated that there is adequate cleared area below the canopy of the relevant tree to not necessitate the removal of the tree for the installation of the powerline.

BioDiverse Solutions (2022) indicated that the three additional dreys observed outside of the survey area showed varying degrees of maintenance indicating that they have recently, or are currently being utilised by a Western Ringtail Possum (*P. occidentalis*) (Figure 2). This is further reinforced given that an individual was observed in the canopy of the tree that contains Drey 3 (BioDiverse Solutions, 2022).

Figure 2. Location of surveyed Western Ringtail Possum dreys in relation to the CPS 9246/2 application area

At a broader scale, the application area forms part of the Strategic Zone A of the Western Australian South Coast Macro Corridor Network, characterised by areas of woody vegetation where polygons greater than 30 ha in size are spaced no greater than 1 km apart and potentially form the most strategic link between major protected areas (Wilkins et al 2006). The application area forms part of a larger connected belt of native vegetation (Figure 3) with numerous Western Ringtail Possum recorded locally (DBCA 2007). Lot 500 on Deposit Plan 64940 (Crown Reserve 6862) is located adjacent to the north and west of the application area. Broader areas of reserved lands form a larger connected belt of native vegetation (Figure 3).

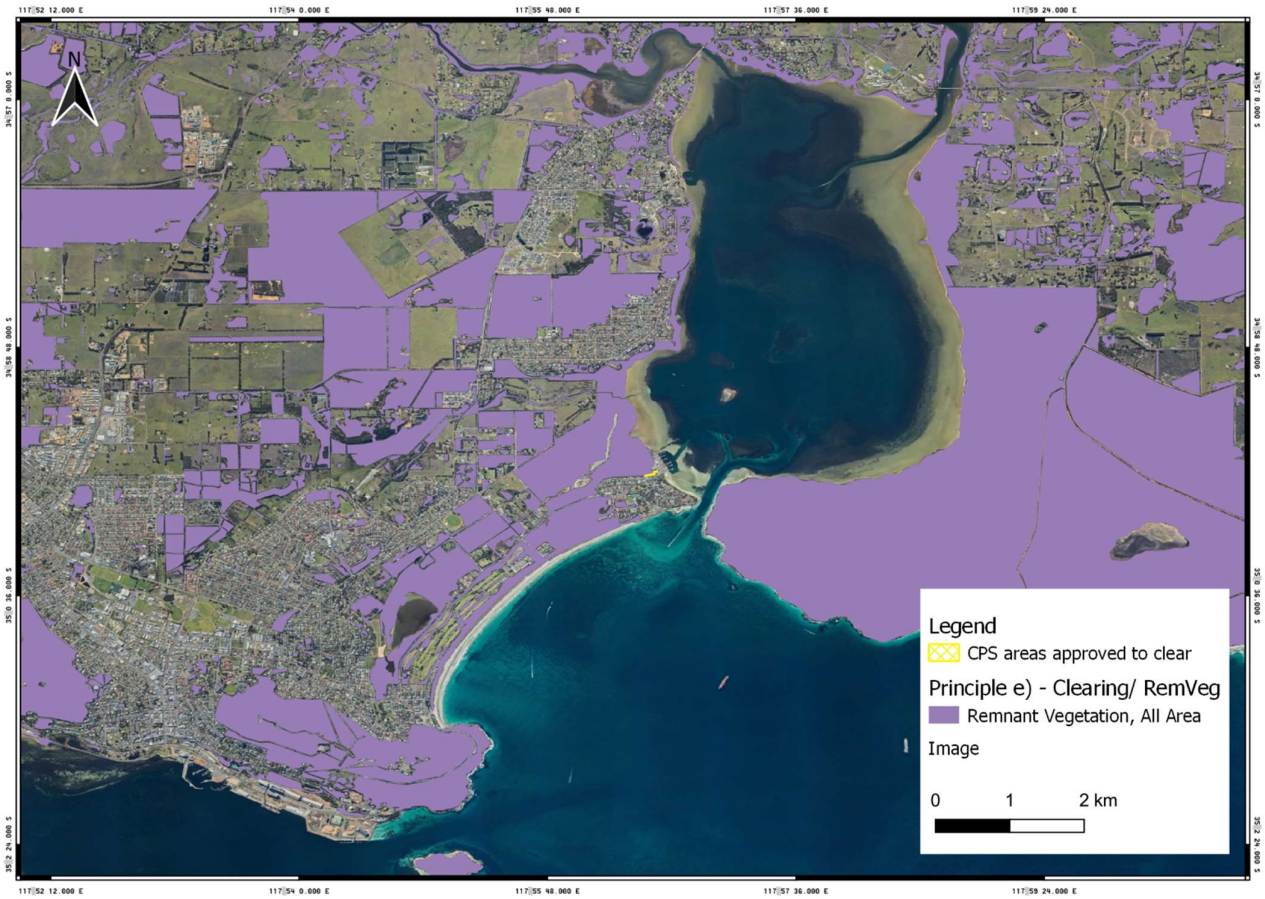


Figure 3. Remnant vegetation in relation to the CPS 9246/2 application area

There is a high level of connectivity throughout the survey area, which ultimately extends into the broader, surrounding vegetated areas. It is expected that Western Ringtail Possums (*P. occidentalis*) are utilising the survey area and the surrounding vegetation as part of their home range. Given the amount of vegetation proposed to be cleared under CPS 9246/2 is small in size, the overall impact to the broader habitat in the area is unlikely to be significant, particularly if Drey 1 is retained and other trees are retained where possible. It would be expected that any individual(s) utilising the survey area will remain in the general vicinity post-clearing activities (BioDiverse Solutions, 2022).

There were no signs of foraging by Western Ringtail Possums (i.e. chewed leaves and flower buds / nuts etc.) observed within the survey area. Given the height of the canopy, feeding signs were difficult to ascertain, however, there is suitable foraging habitat present and it is expected the area is being utilised for this purpose (BioDiverse Solutions, 2022).

The application area is likely being used by Western Ringtail Possums for foraging and movement between adjacent habitats, rather than for refuge and diurnal nesting (BioDiverse Solutions, 2022). The proposed clearing of 0.0513 hectares of native vegetation equates to approximately 17 per cent of an estimated Western Ringtail Possum home range in Peppermint dominated habitat (average 0.4 hectares and 0.3 hectares for females and males respectively) (DPaW 2014; Jones *et al*. 1994) and is unlikely to disrupt habitat linkages, or significantly impact foraging habitat availability.

Quenda

Numerous sightings of the Priority 4 Quenda (*Isoodon fusciventer*) are recorded from the local area (DBCA 2007). Quenda require a dense understorey for cover (van Dyck and Strahan 2008). The presence of Quenda was observed within the survey area and surrounds through detection of runnels, diggings and one individual outside of the survey area (BioDiverse Solutions, 2022). This species is quite mobile and have home ranges varying from 1 to 3 hectares for females and 2 to 7 hectares for males (DEC, 2012). The level of disturbance resulting from clearing the survey area is unlikely to result in significant impacts to the broader remnant vegetation and suitable quenda habitat. Therefore, it is unlikely this will significantly impact any individual(s) in the area.

Main's assassin spider

BioDiverse Solutions indicated that the survey also identified marginal suitable habitat for the Threatened (VU) *Zephyrarchaea mainae* (Main's assassin spider). This species is known to prefer habitats with suspended leaf litter in sedge species such as *L. gladiatum* and *L. effusum* and shrubs which grow under coastal or near-coastal long-unburnt stands of *A. flexuosa* (BioDiverse Solutions, 2022). The most suitable areas of this habitat are found within thickly vegetated groves that develop in gullies and depressions in the landscape (BioDiverse Solutions, 2022). Limiting factors in habitat suitability within the survey area itself is the inconsistent spread of truly suspended leaf litter and the presence of habitat on the edge of the remnant vegetation (i.e. not in depressions or gullies) (BioDiverse Solutions, 2022). There is potentially more suitable habitat outside of the survey area to the north in the natural depressions.

No other Threatened or Priority fauna species were observed within the survey area and surrounds.

Conclusion: Based on the above assessment, the proposed clearing may result in dieback and weeds being inadvertently introduced into adjacent areas of native vegetation, or death or injury to any Western Ringtail Possums present in the application area during the time of clearing. One diurnal shelter was located on the edge of the application area, but the applicant has committed to avoiding impacts to the drey. No diurnal shelters will be impacted by the proposed clearing and the likelihood of individual possums being present at the time of diurnal clearing is likely to be low. The implementation of slow and directional clearing will mitigate any impacts in the unlikely event of any Western Ringtail Possums occupying a diurnal roost within the application area at the time of clearing. An experienced Western Ringtail Possum specialist will be required to inspect the area prior to, and for the duration of clearing activities, with clearing activities to cease where any possums are identified until they either move on, or are appropriately removed by the specialist.

For the reasons set out above, it is considered that the impacts of the proposed clearing on adjacent native vegetation and Western Ringtail Possums can be managed by taking steps to minimise the risk of the introduction and spread of dieback and weeds, slow directional clearing to allow fauna to move into adjacent vegetation, and the engagement of an experienced Western Ringtail Possum specialist to monitor clearing activities.

The applicant may have notification responsibilities under the EPBC Act for impacts to Western Ringtail Possums and their habitats, as set out in the EPBC Act significant impact guidelines (Government of Australia 2009). The applicant has been advised to contact the federal Department of Water, Agriculture and the Environment (DAWE) to discuss EPBC Act referral requirements.

Conditions: To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- management actions to minimise the risk of the introduction or spread of dieback disease and weeds;
- slow, directional clearing from south to north to allow fauna to move into adjacent vegetation ahead of the clearing;
- engagement of an experienced Western Ringtail Possum specialist to monitor the clearing activity.

3.2.2. *Land and water resources - Clearing Principles (g)*

Acid sulphate soils (ASS) risk mapping indicates that the site is located within an area identified as representing a risk of ASS occurring within 3 metres of the natural soil surface. Horizon Power's design detail indicates that trenching will only take place to a maximum depth of 1.6 metres, thus reducing the potential disturbance of ASS.

The risk of exposure and subsequent oxidation of potential acid sulphate soils is considered to have been further mitigated using a horizontal boring installation technique along the road reserve. Surface soils will not be disturbed as would otherwise occur with traditional open trenching methods. There is likely to be no complete exposure pathway for the exposure of acid sulphate soils in this area of the project.

As a precaution, it is recommended that the applicant refers to DWER's ASS guidelines for information to assist with the management of ground and/or groundwater disturbing works.

Conclusion
Given the small extent and linear configuration of the clearing, the proposed construction methods and the capacity of cleared areas to regenerate, the Delegated Officer determined that the proposed clearing is unlikely to result in appreciable land degradation impacts.

Conditions
No conditions are proposed due to the temporary and minimal impact likely from the proposed clearing.

3.3. Relevant planning instruments and other matters

The City of Albany, who is also the landowner of the property within which clearing is proposed, provided its statement of agreement for the proponent to apply for a clearing permit. After an inspection, the City advised that the proposed clearing area around the Fishing Club was already disturbed with most of the area cleared due to historical filling of the area and construction of a fence. The City further advised that the section along Swarbrick Street is well vegetated but impacted by weeds and that clearing in this section will be by directional drilling to minimise the amount of clearing and pruning required. However, the City stipulated the need to avoid and minimise clearing of mature peppermint trees to conserve the Western Ringtail Possum in the area (City of Albany, 2021b)

It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

A.1 Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is around the Fishing Club and along the Swarbrick Street Road reserve. The proposed clearing area borders a large tract of native vegetation in the Boronia Reserve and surroundings. Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 41 per cent of the original native vegetation cover.
Ecological linkage	The application area is mapped within Strategic Zone A of the Western Australian South Coast Macro Corridor Network. The removal of vegetation proposed to be cleared will not impact ecological linkage function at a local scale.
Conservation areas	There are no conservation areas in the application area. The nearest conservation area is the Gull Rock National Park, located approximately 2.2 km to the east and across the channel.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Peppermint trees (*Agonis flexuosa*) over native and non-native species. The midstory consists of occasional *Adenanthos sericeus, Spyridium globulosum, Leucopogon obovatus, Rhagodia baccata, Acacia pulchella* and *Acacia* sp. The understory vegetation consists of *Hibertia sp*., *Lepidosperma sp*., *Desmocladus flexuaosa*, *Ficinia nodosa*, *Cenchrus clandestinus* (Kikuyu grass), *Aparagus aspargoides*, *Oxalis sp*., *Trifolium sp*., *Asparagus sp*., and *Gladiolus sp* (Kinnear, 2021). This is typical of the Coastal *Banksia ilicifolia* / Peppermint Low Woodland vegetation complex mapped by the Albany Regional Vegetation Survey (Sandiford & Barrett, 2010).
Vegetation condition	The vegetation located along the northern and western edge of the Albany Boating and Fishing Club building is more open and lacks a consistent mid and understorey layer. The vegetation in the survey area is considered to be in a Good to Very Good condition (Keighery, 1994). The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix E.
Climate and landform	Landforms around the application area include beach ridges with gentle slopes. Geologically the area is underlain by Proterozoic rocks including granite with Eocene marine sediments lying above the base rocks. Local climate is characterised by mean annual rainfall of 930 mm and evapotranspiration 800 mm.
Soil description	The soil is mapped as Meerup beach ridges phase (242MmMRr) which is characterised by beach ridges, peppermint heath and banksia woodland.
Land degradation risk	The soils in the application area and its surroundings are not susceptible to land degradation due to salinity, waterlogging or flood. Being close to the ocean, the application area it is prone to wind erosion. ASS risk mapping indicates that the site is located within an area identified as representing a risk of ASS occurring within 3 metres of the natural soil surface.
Waterbodies	The nearest waterbody is the Oyster Bay. The proposed clearing does not intersect any watercourses.
Hydrogeography	The application area is mapped within the Lake Seppings consanguineous wetland suite.
Flora	There are 46 records of conservation significant flora within the local area, twelve of which are threatened. None of these records occur within the application area, with the nearest record being 0.37 km away.

Characteristic	Details
Ecological communities	The application area does not intersect any mapped priority or threatened ecological communities. The nearest mapped priority ecological community is the 'Subtropical and Temperate Coastal Saltmarsh' ecological community (Priority 3), located approximately 0.25 km away from the application area.
Fauna	There are records of 93 conservation significant fauna within the local area, which include aquatic marine fauna and migratory birds. The terrestrial fauna of conservation significance includes black cockatoos and Western Ringtail Possum, which have been recorded within a 1 km radius of the application area.

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Jarrah Forest	4,506,660	2,399,838	53.25	1,673,614	69.73
Vegetation complex					
Beard vegetation association: Albany	46,537	12,694	27.28	3,358	26.46
Vegetation complex name Coastal *Banksia ilicifolia* / Peppermint Low Woodland (Albany Regional Vegetation Survey) (Sandiford and Barret, 2010)	506		1.1		
20km radius	80,249	33,093	41	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Land degradation risk table

Risk categories	*Land Unit 1*
Wind erosion	H1: (>70% has high to extreme risk)
Water erosion	M1: 3-10% of the map unit has a very high to extreme hazard
Salinity	L1: <3% of the map unit has a moderate to high hazard saline
Subsurface Acidification	L1: <3% of the map unit has a moderate to high hazard
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L1: 3-10% of the map unit has a moderate to very high to risk
Phosphorus export risk	M1: 3-10% of the map unit has a high to extreme hazard

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared is within the buffer of the 'Subtropical and Temperate Coastal Saltmarsh' ecological community (Priority 3). The application does not contain regionally significant assemblages of flora or fauna, however, conservation significant fauna have been recorded in close proximity to the application area. A likelihood of occurrence assessment was conducted during the assessment of CPS 9246/1 for all conservation significant flora species identified within a 20 km radius of the proposed clearing area. This assessment considered previous records and habitat requirements and found that it is unlikely that any conservation listed taxa would occur within the application area due to a lack of suitable habitat. For the amendment application. The likelihood of occurrence assessment for the amended area has similarly determined that there would be a low likelihood for conservation significant flora to occur within the area proposed to be cleared.	May be at variance as per CPS 9246/1	Yes Refer to Section 3.2.1 above
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."* Assessment: There are 95 records of conservation significant fauna within a 20 km radius of the proposed clearing area. These include the Western Ringtail Possum (*Pseudocheirus occidentalis*), Quenda (*Isoodon fusciventer*) and Black cockatoos which are recorded within 1-kilometre radius from the application area. Clearing may have impact on the habitat of these species.	May be at variance as per CPS 9246/1	Yes Refer to Section 3.2.1 above.
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: A likelihood of occurrence assessment was conducted during the assessment of CPS 9246/1 for all significant flora species identified within a 20 km radius of the proposed clearing area. This assessment considered previous records and habitat requirements and found that it is unlikely that any threatened taxa occur within the application area due to a lack of suitable habitat. The likelihood of occurrence assessment for the amended area has similarly determined that there would be a low likelihood for threatened flora to occur within the area proposed to be cleared. The area proposed to be cleared is unlikely to contain flora species listed as threatened under the BC Act.	Not likely to be at variance as per CPS 9246/1	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared is not within any threatened ecological community listed under the BC Act or EPBC Act.	Not likely to be at variance as per CPS 9246/1	No.

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: significant remnant vegetation and conservation areas		
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."* Assessment: The application area is mapped within the 'Albany' vegetation association and 'Coastal *Baksia ilicifolia* / Peppermint Low Woodland' (Sandiford and Barrett, 2010), which retain 27 % and 1.1% of their original vegetation cover respectively. The small amount of vegetation proposed to be cleared is not considered to be significant as a remnant and is located adjacent to a large tract of vegetation which is likely to be of equal or better quality.	Not likely to be at variance as per CPS 9246/1	No
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 area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance as per CPS 9246/1	No
Environmental value: land and water resources		
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."* Assessment: The proposed clearing area is located 0.15 km away from the shore of Oyster Bay, a wetland listed in the Directory of Important Wetlands of Western Australia. Built up area separates the proposed clearing from the Bay. Given the separation and extent of clearing, the proposed clearing is unlikely to impact on the wetland.	Not likely to be at variance as per CPS 9246/1	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to water erosion, nutrient export, salinity or compaction risk. Being on the coastline, wind erosion and water logging may present risks to the area. ASS risk mapping indicates that the site is located within an area identified as representing a risk of ASS occurring within 3 metres of the natural soil surface. Noting the extent of the application area, the proposed construction methods and the condition of the surrounding vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance as per CPS 9246/1	Yes Refer to Section 3.2.2 above.
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."* Assessment: The proposed clearing and associated works will not intercept any water courses or local groundwater. It is unlikely to impact on the quality of surface or groundwater.	Not likely to be at variance as per CPS 9246/1	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils in the surrounding area are not susceptible to flooding. The proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance as per CPS 9246/1	No

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from.

Measuring vegetation condition for the South West and Interzone Botanical Province *(Keighery, 1994)*

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or 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 or shrubs.

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Appendix D. Targeted Western Ringtail Possum Survey

Bio Diverse Solutions was commissioned as Environmental Consultants to undertake a targeted Western Ringtail Possum (*Pseudocheirus occidentalis;* CR) survey of the approximately 0.05 ha survey area within Lot 501 Swarbrick Street, and the adjacent road reserves to assist with the CPS 9246/2 application.

The field survey was undertaken by Bianca Theyer (Ecologist / Conservation and Wildlife Biologist) and Charlize van der Mescht (Environmental Consultant) of Bio Diverse Solutions on 2 February 2022.

The scope for this survey was to undertake a targeted Western Ringtail Possum (*Pseudocheirus occidentalis*; CR) survey of the approximately 0.05 ha survey area within Lot 501 Swarbrick Street, and the adjacent road reserves to assist with the CPS 9246/2 application. One Western Ringtail Possum drey (Drey 1) was observed on the edge of the survey area, with an additional three observed outside of the survey area / proposed clearing area. Drey 1 is located in a tree which could potentially be left undisturbed for the purpose of the clearing activities (i.e., power upgrade to the area). It is recommended that, if possible, this tree should remain so as to preserve the existing breeding habitat (drey) within the area. Particularly as this drey appeared to be in use at the time of the survey.

The three additional dreys observed outside of the survey area showed varying degrees of maintenance indicating that they have recently or are currently being utilised by a Western Ringtail Possum (*P. occidentalis*). This is further reinforced given that an individual was observed in the canopy of the tree that contains Drey 3. There is a high level of connectivity throughout thesurvey area, which ultimately extends into the broader, surrounding vegetated areas. It is expected that Western Ringtail Possums (*P. occidentalis*) are utilising the survey area and the surrounding vegetation as part of their home range. Given the amount of vegetation proposed to be cleared under CPS 9246/2 is small in size and equates to approximately 33 individual trees, the overall impact to the broader habitat in the area is unlikely to be significant particularly if Drey 1 is retained and other trees are retained where possible. It would be expected that any individual(s) utilising the survey area will still remain in the general vicinity post clearing activities.

There were no signs of foraging by Western Ringtail Possums (i.e. chewed leaves and flower buds / nuts etc.) observed within the survey area. Given the height of the canopy, feeding signs were difficult to ascertain, however, there is suitable foraging habitat present and it is expected the area is being utilised for this purpose.

The presence of quenda (*Isoodon fusciventer*) was also observed during the survey through diggings, runnels and one individual sighted outside of the survey area. This species is quite mobile and have home ranges varying from 1-3 ha for females and 2-7 ha for males (DEC, 2012). The level of disturbance resulting from clearing the survey area is unlikely to result in significant impacts to the broader remnant vegetation and suitable quenda (*I. fusciventer*) habitat. Therefore, it is unlikely this will significantly impact any individual(s) in the area.

The habitat observed within the survey area for Main's assassin spider (*Zephyrarchaea mainae*) is marginal due to the inconsistent nature of the suspended leaf litter present (crucial microhabitat for this species), and the location of the habitat in the landscape (on the edge of the remnant vegetation and not within gullies and depressions, which the species prefers).

Figure 5: Photographs of fauna habitat present within the survey area.

Figure 6: Photographs of dreys within the survey area.

a) Drey 1 located in *Agonis flexuosa* tree within the survey area; b) Drey 2 located in *A. flexuosa* tree outside the survey and proposed clearing area (east of the survey area along Swarbrick Road); c) Drey 3 located in *A. flexuosa* located to the north of the proposed clearing area; d) Drey 4 in dead paperbark tree located to the north of the proposed clearing area. *NB location of dreys made it difficult to capture detailed images.*

a)

b)

c)

d)

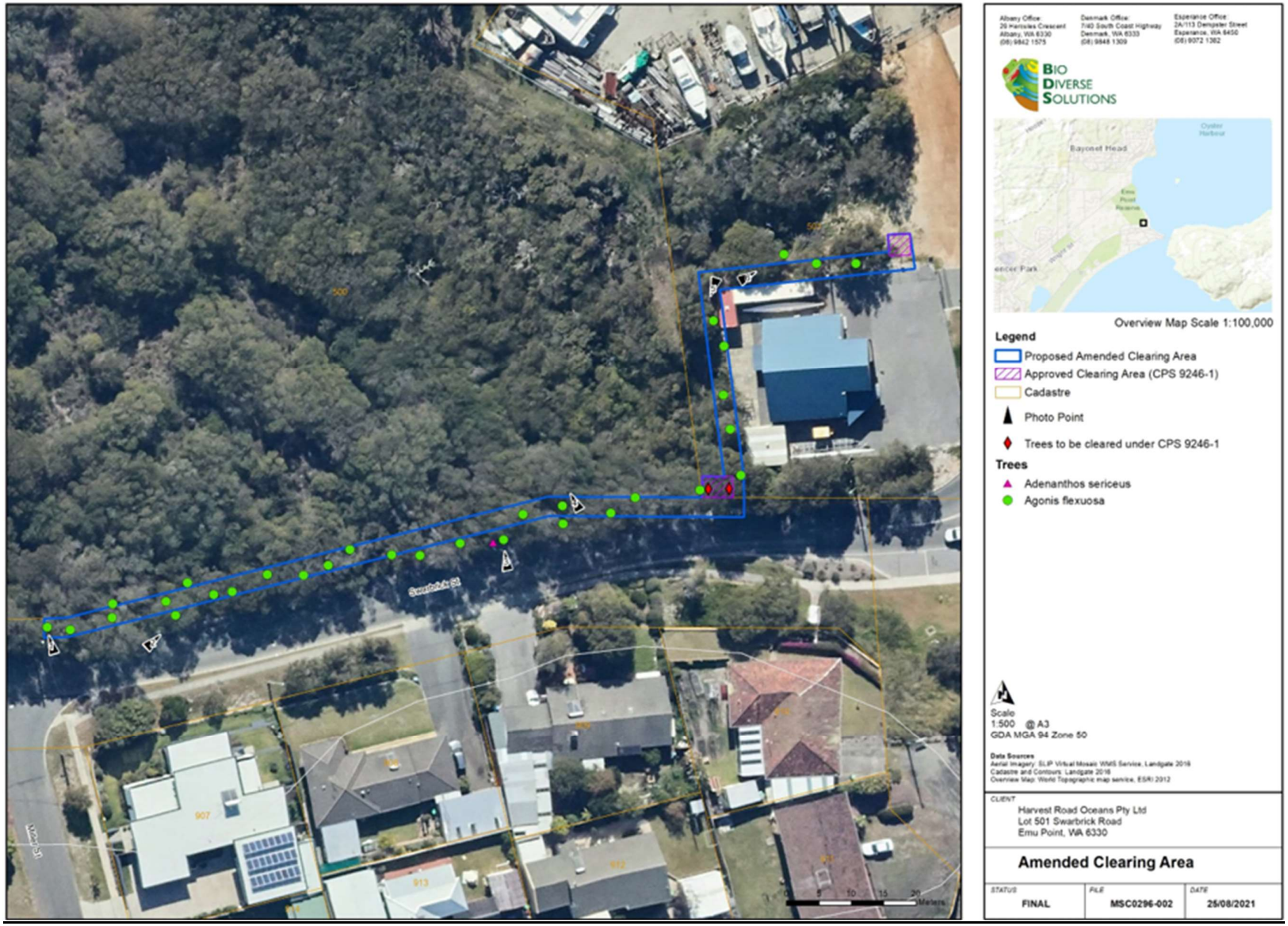
Figure 7: Photographs of evidence of *P. occidentalis* within the survey area and immediately adjacent vegetation.

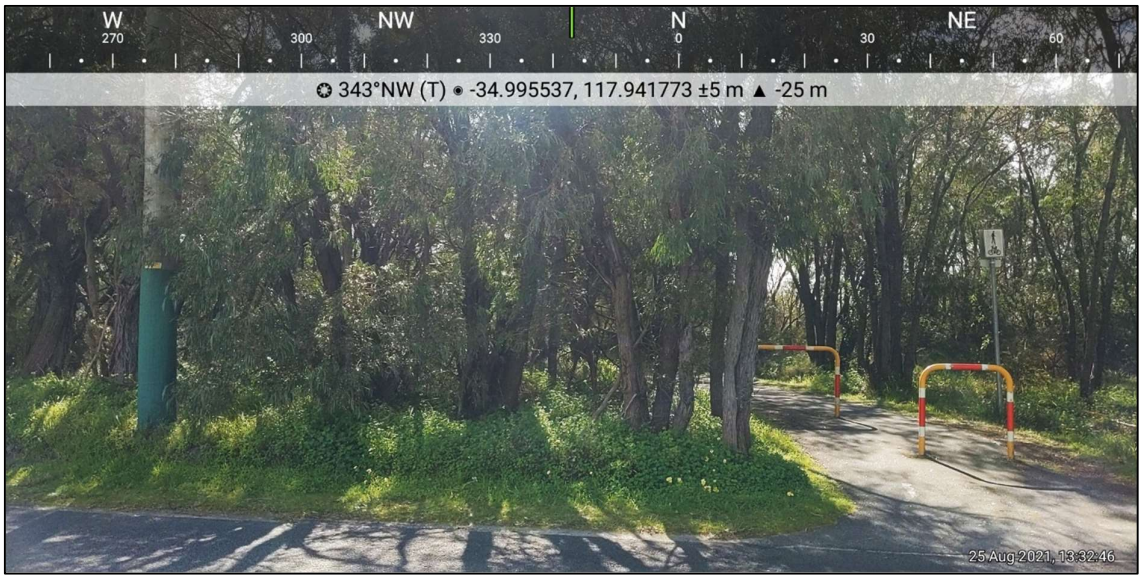
a) and b) scats of varying ages located near Drey 1; c) Western ringtail possum (*P. occidentalis*) individual located in *Agonis flexuosa* canopy to the north of the survey area (within the same tree as Drey 3).

Figure 8: Photographs of indicators of non-target Threatened and Priority fauna presence and fauna habitat within the survey area.

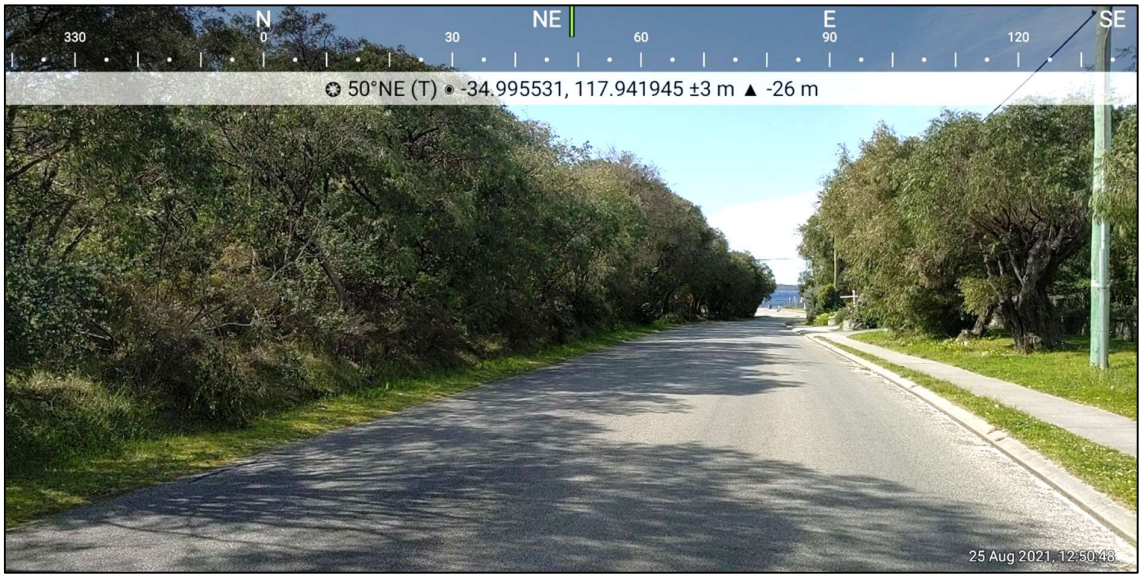
a) and b) *Isoodon fusciventer* runnels c) *I. fusciventer* digging; d) to f) marginal suitable *Zephyrarchaea mainae* habitat.

Appendix E. Photographs of Amended Clearing Area





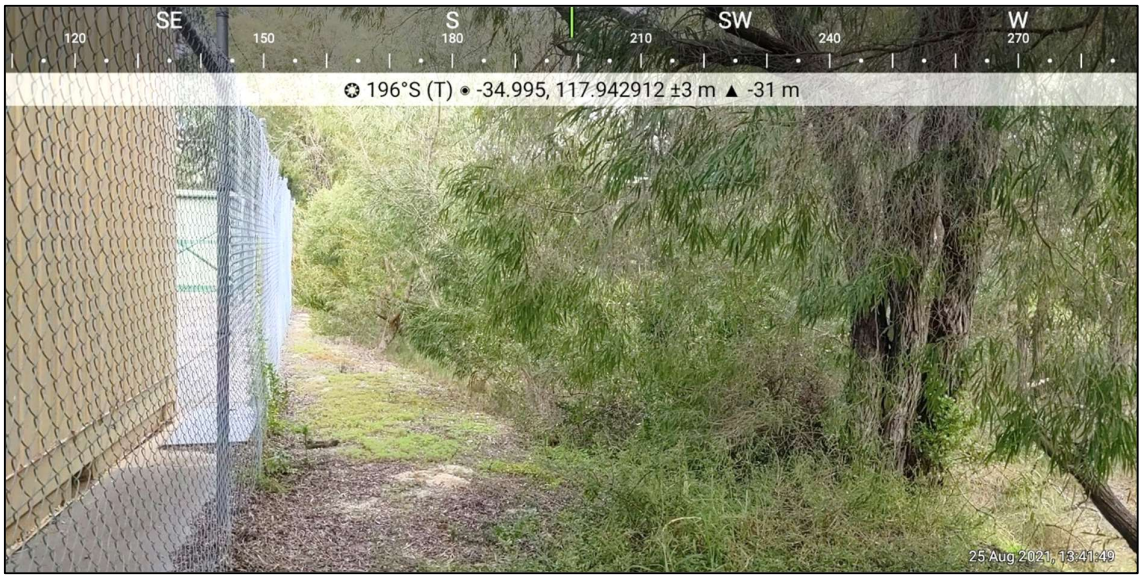
Photograph 1 - Amended Clearing Area Map



Photograph 2 - Amended Clearing Area Map

Photograph 3 - Amended Clearing Area Map

Photograph 4 - Amended Clearing Area Map



Photograph 5 - Amended Clearing Area Map

Photograph 6 - Amended Clearing Area Map

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

F.2. References

Biodiverse Solutions (2022). *Targeted Western Ringtail Possum Survey. 9 February 2022. Biodiverse Solutions: Albany* (DWER Ref: DWERDT571754)

City of Albany (2021a). *Letter to Harvest Road Oceans Pty Ltd. Re: Permit to clear native vegetation for power connection on reserve 42964 along northern and western fence line of Lease PRO296 Emu Point*. Albany (Ref: DWERDT431351)

City of Albany (2021b). *Letter to Harvest Road Oceans Pty Ltd. Re: Permit to clear native vegetation for power connection on reserve 42964 along northern and western fence line of Lease PRO296 Emu Point*. Albany (Ref: DWERDT570655)

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Parks and Wildlife (DPAW) (2017). *Western Ringtail Possum (Pseudocheirus oocidentalis) Recovery Plan.* Perth.

Department of Parks and Wildlife (DPaW) (2014) Western Ringtail Possum *(Pseudocheirus occidentalis)* Recovery Plan. Wildlife Management Program No. 58. Western Australia Department of Parks and Wildlife, now the Department of Biodiversity, Conservation and Attractions.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 30 June 2020).

Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (2013). *Approved Conservation Advice for the Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula*. Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/105-conservation-advice.pdf.

Department of Sustainability, Environment, Water, Population and Communities (2013). *Conservation Advice for Subtropical and Temperate Coastal Saltmarsh*. Canberra: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/118-conservation-advice.pdf. In effect under the EPBC Act from 10-Aug-2013.

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF

Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf.

Environmental Protection Authority (EPA) (2016). *Technical Guidance – Terrestrial Fauna Surveys.* Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf.

Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Harvest Road Oceans Pty Ltd (2021). *Clearing permit application CPS 9246: form and supporting documents.* Received 23 March 2021. Perth (Ref DWERDT431351)

Harvest Road Oceans Pty Ltd (2021). *Clearing permit amendment application CPS 9246/1: form and supporting documents.* Received 14 October 2021. Perth (Ref DWERVT7701~3)

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Jones, B.A., How, R.A. and Kitchener, D.J. (1994). A Field Study of *Pseudocheirus occidentalis* (Marsupialia :Petauridae). II. Population Studies. Wildlife Research 21; 189-201.

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.

Sandiford, E.M. and S. Barrett (2010). *Albany Regional Vegetation Survey. Extent, Type and Status.* Department of Environment and Conservation, Western Australia.

Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and output*s Resource Management Technical Report No. 280. Department of Agriculture.

Shah, B. (2006) *Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia*. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Threatened Species Scientific Committee (2018). *Conservation Advice Pseudocheirus occidentalis (Western ringtail possum)*. Canberra: Department of the Environment and Energy. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/25911-conservation-advice-11052018.pdf. In effect under the EPBC Act from 11-May-2018.

Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.

van Dyck, S., and Strahan, R. (2008). 'The Mammals of Australia.' 3rd edition. Reed New Holland: Sydney. ISBN-13: 978-1877069253.

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed in June 2021)

Wilkins, P., Gilfillan, S., Watson, J. and Sanders, A. (ed). (2006). *The Western Australian South Coast Macro Corridor Network – a bioregional strategy for nature conservation*. Department of Conservation and Land Management (CALM) and South Coast Regional Initiative Planning Team (SCRIPT), Albany, Western Australia.