



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9620/1
File Number: DWERVT628853
Duration of Permit: From 7 October 2022 to 7 October 2029

PERMIT HOLDER

Peet Funds Management Limited

LAND ON WHICH CLEARING IS TO BE DONE

Lot 3000 on Deposited Plan 44066, Burns Beach

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.46 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 7 October 2024

2. 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.

3. 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.

4. Directional clearing

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

5. Soil management – wind erosion

Within one month of the cessation of *clearing* activities authorised under this permit, the permit holder is required to commence revegetation activities in accordance with condition 6 of this permit within the area hatched red in Figure 2 of Schedule 1. If revegetation activities are not able to commence within one month of the cessation of *clearing*, the permit holder must:

- (a) place brushing material of local provenance within the areas cleared; or
- (b) in the absence of suitable brushing material, place biodegradable erosion matting within the areas cleared; and
- (c) ensure materials placed under condition 5(a) and 5(b) of this permit are maintained until revegetation activities required under condition 6 of this permit are able to be undertaken.

6. Revegetation

- (a) The permit holder must retain the vegetative material and topsoil removed by *clearing* authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared;
- (b) The permit holder must within 12 months of the commencement of *clearing* authorised under this permit, and no later than 7 October 2024, and at an *optimal time* implement and adhere to the ‘Environmental Management and Revegetation Plan’ dated June 2022 (by Emerge Associates), including but not limited to the following actions:
 - (i) laying the appropriate vegetative material and topsoil retained under condition 6(a);
 - (ii) deliberately *planting* tube stock and salvaged *native vegetation*; and
 - (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
 - (iv) ensuring the *revegetation* composition comprises vegetation resistant to wind erosion.
- (c) establish a minimum of two 5 x 5 metre *quadrat* monitoring sites;
- (d) water planted vegetation between December and April for the first two years post planting as required;
- (e) undertake *weed* control activities prior to planting, and annually thereafter for five years until the completion criteria as listed in Table 1 have been met;

- (f) fence the perimeter of the *revegetation* and *rehabilitation* areas using agricultural fencing and undertake monitoring of the fence annually and repair the fence as required, for the entire duration of this permit;
- (g) achieve the following completion criteria listed in Table 1 after the three-year monitoring period for areas *revegetated* and *rehabilitated* under condition 6 of this permit;

Table 1: completion criteria

Aspect	Completion targets	Completion criteria	Monitoring
1) Species richness	Species richness of 50 per cent of the species that have been planted.	Species richness and number of plants/m ² in the rehabilitation area is at least 50 per cent of the species that have been planted	The species and number of plants/m ² in the rehabilitation area will be counted annually for five years.
2) weeds	<10% weed cover, no declared pests or Weeds of National Significance (WoNS)	<10% weed cover, no declared pests or WoNS	Annually during spring for five years
3) Survival rate	If after planting a survival rate of at least 50 per cent is not achieved, infill planting must occur.	The rehabilitation area needs to ensure a survival rate of at least 50 per cent of the density planted is achieved after five years.	The number of surviving plants in the revegetation areas will be monitored annually for five years.
4) Species density/composition	A total native species stem density of 4 plant/1 m ² .	The rehabilitation area contains – 4 plants per 1m ²	Stem density to be assessed annually for five years
5) Floristic communities	Floristic communities reinstated	Vegetation identifiable as FCT 24	Statistical analysis of quadrat species data
6) Bare ground	Bare ground no greater than previously recorded within releve 1 (R1)	<5% bare ground	Measurement of cover in quadrats

- (h) undertake remedial actions for areas *revegetated* and *rehabilitated* where monitoring indicates that revegetation has not met the completion criteria, outlined in condition 6 (g), including:
 - (i) revegetate the area by deliberately *planting* native vegetation that will result in the minimum target in condition 6(g) and ensuring only *local provenance* seeds and propagating material are used;
 - (ii) undertake further *weed* control activities;
 - (iii) undertake further watering activities December and April; and
 - (iv) annual monitoring of each *revegetated* and *rehabilitated* site, until the *completion criteria*, outline in condition 6(g) are met.

7. 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	<ul style="list-style-type: none"> (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); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3; (g) actions undertaken in accordance with condition 4; and (h) actions undertaken in accordance with condition 5.
2.	In relation to the <i>revegetation</i> and <i>rehabilitation</i> of areas pursuant to condition 6 of this permit	<ul style="list-style-type: none"> (a) a description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken each year, once commenced, outlined in a report produced by an <i>environmental specialist</i>; (b) the location and size of the areas <i>revegetated</i> and <i>rehabilitated</i> (in hectares) recorded using a GPS unit set to GDA94/GDA 2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (c) the date that <i>revegetation</i> and <i>rehabilitation</i> works began; (d) the baseline data recorded for the area to be <i>revegetated/rehabilitated</i>, including species richness, species density, vegetation structure and weed cover (e) the species composition, structure, density of the areas <i>revegetated/rehabilitated</i>

No.	Relevant matter	Specifications
		<p>recorded annually;</p> <p>(f) a description of the extent of <i>weed</i> cover and vegetation condition, foraging value and survival rate of the areas <i>revegetated/rehabilitated</i>, recorded annually;</p> <p>(g) a species list identifying those species planted;</p> <p>(h) a copy of the <i>environmental specialist</i> report and activities undertaken during monitoring; and</p> <p>(i) other actions taken in accordance with condition 6 of this permit.</p>

8. Reporting

The permit holder must provide to the *CEO* the records required under condition 7 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table 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 <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years' work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
fill	means material used to increase the ground level, or to fill a depression

Term	Definition
local provenance	means native vegetation seeds and propagating material from natural sources within 25 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
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.
optimal time	Means the period between April and July
planting	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
remedial action/s	means for the purpose of this permit, any activity that is required to ensure successful re-establishment of understorey to its pre-clearing composition, structure and density, and may include a combination of soil treatments and revegetation.
revegetate/revegetated/revegetation	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting so that the species composition, structure and density is similar to pre-clearing vegetation types in that area
weeds	means any plant – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; 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

J. Burton

 Jessica Burton

A/MANAGER

NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

14 September 2022

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



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



Figure 2: Map of the boundary of the area within which revegetation under condition 5 and 6 of this Permit applies.



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9620/1
Permit type:	Area permit
Applicant name:	Peet Funds Management Limited
Application received:	21/02/2022
Application area:	0.46 hectares of native vegetation
Purpose of clearing:	Battering to facilitate road construction
Method of clearing:	Mechanical
Property:	Lot 3000 on Deposited Plan 44066
Location (LGA area/s):	City of Joondalup
Localities (suburb/s):	Burns Beach

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5).

The application is to clear vegetation to the extent necessary to construct a batter for road construction. The construction is for the development of stages 16 and 17 Burns Beach Estate.

1.3. Decision on application

Decision:	Granted
Decision date:	14 September 2022
Decision area:	0.46 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit 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 21 days and two submissions were received. Consideration of matters raised in the public submissions is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix G.1), the findings of a flora and vegetation survey and additional information provided by the applicant (see Appendix A and F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values and
- potential land degradation in the form of wind erosion.

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 clearing is unlikely to lead to appreciable land degradation and unlikely to have long-term adverse impacts on the adjacent vegetation values and can be minimised and managed to unlikely lead to an unacceptable risk to 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 weeds
- staged clearing to minimise wind erosion
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- revegetate in accordance with a Department of Biodiversity, Conservation and Attractions approved Revegetation Plan

1.5. Site map



Figure 1 Map of the application area

The area crosshatched yellow indicates the area 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 polluter pays principle
- 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D 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)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- 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 the mitigation hierarchy has been applied to the proposed clearing which noted the following:

- Where avoidance is not possible, mitigation measures will be undertaken to minimise the duration, intensity and/or extent of impacts to native vegetation (including direct, indirect, and cumulative impacts).
- Prior to the commencement of revegetation works within the application area, minimisation of clearing impacts will occur through the installation of jute matting and windbreak fencing (as required) to prevent erosion of soil impacting the adjacent vegetation.
- Weed and dieback management will be controlled through the clearing process, including ensuring that all vehicles are washed down prior to entering the application area.
- A pre-clearing fauna inspection will occur within the application area, to ensure that no fauna values are impacted during the proposed clearing works.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to significant remnant vegetation and conservation areas. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora, fauna, and ecological communities) - Clearing Principles (a), (b), (c)

Assessment

Flora

According to available databases, 23 conservation significant flora species have been recorded within the local area comprising three threatened species, three Priority 1 (P1) species, six Priority 2 (P2) species, ten Priority 3 (P3) species and one Priority 4 (P4) species. A preliminary assessment identified that noting the preferred habitat types, including soil and vegetation types mapped over the application area, the vegetation within the application area may comprise suitable habitat for *Conostylis pauciflora* subsp. *euryrhipis* (Priority 4), *Leucopogon maritimus* (Priority 1) and *Stylidium maritimum* (Priority 3).

A reconnaissance flora and vegetation assessment was conducted over the application area by Emerge (Emerge, 2021). The study area encompassed a total of 5.13 hectares, extending beyond the application area (extracts within Appendix F).

The survey recorded 68 taxa from the study area, of which 51 (or 75 percent) were native species, and 17 were weed species which mainly occurred within existing tracks and disturbed areas. The taxa represented 33 different plant families with dominant families being Fabaceae and Poaceae. No declared weeds listed under the Biosecurity and Agriculture Management Act 2007, or weeds of national significance were recorded within the application or study areas (Emerge, 2021). No threatened flora listed under the BC Act or EPBC Act were recorded during the survey (Emerge, 2021).

The timing of the survey was not suitable for the identification of three species of *Conostylis* which were considered possible to occur within the application area. This matter was addressed by the applicant with an additional survey effort (discussed in Appendix A). The additional effort did not yield any findings of Priority of Threatened flora species.

Fauna

According to available databases, 38 conservation fauna species have been recorded within the local area.

Eight of the fauna locally recorded are associated with marine, estuarine or freshwater habitats that do not occur within the application area (Appendix C.3). Due to the proximity of the Indian Ocean, many marine species were identified in database records, and these have not been considered further. In addition, seabirds, shorebirds, and migratory wading species have been recorded within the local area but none are likely to utilise the application area itself. In determining the likelihood of conservation significant fauna occurring within the application area, consideration was given to the results of the preferred habitat types, proximity of records to the application area, and the type and condition of the vegetation within the application area. A summary of fauna recorded within the local area and with the potential to occur within the application area is presented in Appendix C.

The quenda typically prefers a dense understorey vegetation (DEC 2012) and have a wide coastal distribution from Guilderton to east of Esperance with a patchy distribution within the jarrah and karri forests and the Swan Coastal Plain. It is understood that individuals have overlapping home ranges between 1-2 hectares. This species is known from 131 records within the local area occurring as close as 570 meters from the application area. Noting the proximity of the nearest record and the suitable habitat within the application area, quenda is likely to utilise the application area. Noting the extent of clearing proposed, the vegetation within the application area is not likely to be significant for the continued survival of this species.

The black-striped snake is a small-bodied, terrestrial burrowing snake that lives in Banksia woodlands and sandy areas of the Perth region (Western Australian Museum 2017). Black-striped snake is known from three records within the local area, with the nearest occurring approximately six kilometres from the application area. Noting the proximity of the nearest record, this species is likely to utilise the application area while moving through the landscape. Noting the extent of the clearing proposed and the proximity to adjacent vegetation that provides similar habitat values, the vegetation proposed to be cleared is not likely to be significant for the continued survival of this species.

The graceful sunmoth; is most common in sedgeland, heathlands, woodlands and occasionally within open parts of forest where their 'foodplants' (various grasses, sedges and mat-rushes) are found (DEC, 2011). The species typically prefers Banksia woodland habitat that comprises *Lomandra hermaphrodita* or coastal heath comprising *Lomandra maritima* (DEC, 2011). The graceful sunmoth is known from 94 records within the local area, with the nearest occurring approximately 70 meters from the application area. Vegetation within the application area is absent of the preferred habitat for this species, however suitable habitat was identified within the greater survey area. Noting

the extent of clearing proposed, the number and distribution of records, and that the vegetation within the application area is contiguous with adjacent remnant vegetation that provides similar habitat values, the vegetation within the application is not likely to comprise significant habitat for this species or be important for the continued survival of this species.

The spiny katydid is known from only four records and there is little to no information available on the species. Two of the four records have been within the local area and within similar vegetation types as the application area and the greater survey area. Considering quantity and quality of vegetation remaining within the adjacent property, the proposed clearing area is not likely to provide significant habitat for the species.

The Swan Coastal Plain shield-backed trapdoor spider has been recorded within the local area but is known to have habitat preferences of heavy clay soils in areas of open *Eucalyptus loxophleba*, *E. salmonophloia* and *E. capillosa* woodland, where *Acacia acuminata* forms a sparse understorey as breeding habitat and preference of ground litter surrounding those burrows for feeding habitat (Avon Catchment Council, 2007). Given the application area is within sandy soils, it is not likely to provide suitable habitat for the species.

The woolybush bee is known from 27 records, five of which are within the local area. The species has been recorded as far south as Albany and within coastal and inland environments. The application area may provide habitat for the species as the preferences of this species are not well recorded. However, considering quantity and quality of vegetation remaining within the adjacent property, the proposed clearing is not likely to provide significant habitat for the species.

Conclusion

The proposed clearing is not likely to contain significant habitat for conservation significant flora or fauna species but may impact on individuals of fauna if present at the time of clearing

Conditions

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

- Slow directional clearing to allow fauna to move ahead of clearing

3.2.2. Biological values (ecological communities) - Clearing Principles (a) and (d),

According to available databases, six ecological communities have been mapped as occurring within the local area:

- *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a as originally described in Gibson et al. (1994))
- Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region
- *Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands, Swan Coastal Plain (floristic community type 30a as originally described in Gibson et al. (1994))
- *Melaleuca huegelii* - *Melaleuca systema* shrublands on limestone ridges (floristic community type 26a as originally described in Gibson et al. (1994))
- Northern Spearwood shrublands and woodlands
- Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain

The survey provided identified five vegetation types within the greater survey area:

- ArSgXp, which is described as occasional *Eucalyptus gomphocephala* over closed shrubland *Acacia rostellifera*, *Spyridium globulosum*, *Xanthorrhoea preissii* and *Alyogyne huegelii* over low open shrubland *Phyllanthus calycinus* over herbland **Trachyandra divaricata*, **Crassula glomerata* and *Clematis linearifolia* over open grassland *Austrostipa* spp. and **Lagurus ovatus*
- EgMsLm which is described as: open woodland *Eucalyptus gomphocephala* over shrubland *Melaleuca systema*, *Olearia axillaris*, *Acacia lasiocarpa* and *Hibbertia* spp. over herbland *Lomandra maritima*, *Desmocladius flexuosus* and *Opercularia vaginata* over scattered grasses *Poa* ?porphyroclados.
- Ar, which is described as; Established revegetation comprising a tall shrubland with *Acacia rostellifera*, *Acacia saligna*, *Spyridium globulosum* and *Banksia sessilis*
- Revegetation, which is described as: Recent revegetation over jute matting comprising a low open shrubland/sedgeland with *Acacia rostellifera*, *Olearia axillaris*, *Scaevola crassifolia* and *Lepidosperma gladiatum*
- Bare ground, which is described as; areas of bare ground such as tracks

Within the survey area the following communities (TEC and PEC) were identified:

- tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain TEC and PEC
- SCP24 northern Spearwood shrublands and woodlands PEC
- SCP29b acacia shrublands on taller dunes, southern Swan Coastal Plain PEC

The application area was identified within the flora survey report as containing the vegetation type ArSgXp, and parts of this vegetation type were considered consistent with the vegetation communities listed above. It is noted that while the survey identified vegetation types associated with Threatened Ecological Communities, the survey also notes that the application area itself is not considered part of the Tuart TEC but is representative of Northern Spearwood shrublands and woodlands PEC (P3).

Northern Spearwood shrublands and woodlands ('floristic community type 24') is described as heaths with scattered *Eucalyptus gomphocephala* occurring on deeper soils north from Woodman Point. Most sites occur on the Cottesloe unit of the Spearwood system. The heathlands in this group typically include *Dryandra sessilis*, *Calothamnus quadrifidus*, and *Schoenus grandifloras* (Department of Biodiversity Conservation and Attractions, 2021) and is a Priority 3 community.

Priority 3 communities are poorly known ecological communities described as follows:

- (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or;
- (ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years), or;
- (iii) communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, inappropriate fire regimes, clearing, hydrological change etc.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them (DBCA, 2021).

According to available databases, there are 37 mapped occurrences of this community comprising 1009 hectares in total of which 395 hectares is within secure tenure (within DBCA managed tenure).

Given this and considering the proposed clearing is for 0.46 hectares which is approximately 0.05 per cent of the mapped occurrence of the 'Northern Spearwood shrublands and woodlands' community, the proposed clearing is not considered significant.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.46 hectares of which is representative of the PEC Northern Spearwood shrublands and woodlands.

For the reasons set out above, it is considered that the impacts of the proposed clearing on the Priority Ecological Community can be managed by taking steps to minimise the risk of the introduction and spread of weeds to the adjacent vegetation and by rehabilitating the batters on completion to resemble the pre-clearing vegetation types.

Conditions

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

- Revegetation in accordance with DBCA approved plan
- Avoidance and minimisation
- Weed and dieback conditions

3.2.3. Biological values (conservation areas) - Clearing Principles (h)

Assessment

The application area is within Bush Forever site 322 (Burns Beach Bushland). Noting the aim of the Bush Forever policy is to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. This will secure long-term protection of biodiversity and associated environmental values.

The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, while also seeking to integrate and balance wider environmental, social, and economic considerations. In general terms, the policy does not prevent development where it is consistent with the measures in this policy and other planning and environmental considerations (Department of Planning, Lands and Heritage, 2021).

Advice was sought from the Department of Planning, Lands and Heritage (DPLH) on the proposed clearing. The advice received noted that the subject Lot 3000 is subject to a land transfer agreement with the Western Australian Planning Commission and the landowner. Furthermore, the advice noted that proposed clearing is consistent with State Planning Policy 2.8.

The proposed clearing has the potential to introduce weeds and dieback and/or spread weeds and dieback further into Bush Forever site 322.

Conclusion

Based on the above assessment, the proposed clearing may result in the introduction and/or spread of weed species into adjacent vegetation however it is considered that the impacts of the proposed clearing can be managed by weed control measures as part of conditions of a permit to clear and in alignment with an approved revegetation plan.

Conditions

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

- weed and dieback management conditions
- revegetation requirements in accordance with a DBCA approved revegetation plan

3.2.4. Biological values (land values) - Clearing Principles (g)

Assessment

The mapped soil type Quindalup South second dune phase has a moderate risk of land degradation in the form of wind erosion. The subsurface acidification, waterlogging, flooding, and salinity has been assessed to be low risk (DPIRD 2019; Appendix C.1). Water erosion risk ranges from low to high, and phosphorus export risk from moderate to high (DPIRD 2019). There is a moderate to high risk of wind erosion in all the mapped soil units. The Environmental Management and Revegetation Plan (Emerge, 2022) has identified that dust and erosion have the possibility of occurring through construction and may occur until vegetation planted has matured. The EMRP identifies remedial controls that reduce the risk of erosion.

Conclusion:

For the reasons set out above, and the avoidance and mitigation measures provided by the applicant (Section 3.1), it is considered that the potential impacts of the proposed clearing on land and water resources can be managed by the implementation of wind erosion management strategies.

Conditions:

To address the above impacts, a wind erosion management condition, for construction works to begin with two months of clearing will mitigate impacts of the proposed clearing on adjacent vegetation will be imposed on the clearing permit. In addition, further erosion management measures have been included within the permit to clear to manage risk.

3.3. Relevant planning instruments and other matters

The City of Joondalup advised that local government approvals are not required, and that the Western Australian Planning Commission granted approval for development in Lot 3000 on Deposited Plan 44066 and noted the following conditions and comments:

- A clearing permit is required to clear native vegetation in Bush Forever site 322 which is an environmentally sensitive area.
- An Environmental Management Plan is required to be prepared and approved prior to the commencement of construction works for the proposed clearing and road batter construction to the specifications of the Department of Biodiversity, Conservation and Attractions (DBCA) and to the satisfaction of the WAPC.
- A Revegetation Plan is required to be prepared, approved, and implemented for the revegetation of the road batters with appropriate native species prior to the commencement of construction works to the specifications of the DBCA in consultation with the City and to the satisfaction of the WAPC.

- Detailed engineering drawings are required to be prepared, approved, and implemented prior to the commencement of construction works in consultation with the City and to the satisfaction of the WAPC.
- Road battering within Bush Forever site 322 shall be stabilized upon completion to the specifications of the DBCA in consultation with the City and to the satisfaction of the WAPC.
- Vegetation clearing/earthworks with Bush Forever site 322 shall be minimised to the extent specified by the approved plans and fencing shall be installed to contain vehicle and machine access to the minimum required to undertake the approved earthworks to the specifications of the DBCA in consultation with the City and to the satisfaction of the WAPC.
- The application area contains the Priority Ecological Community 'Northern Spearwood shrublands and woodlands in 'very good' condition.
- consideration of additional revegetation to be carried out to mitigate loss of part of Bushforever site 322 such as areas of degraded condition.
- Further flora survey effort is required within the spring season to identify species that may have been missed in the December survey.
- No fauna surveys have been undertaken

Department of Planning Lands and Heritage (DPLH) noted the subject site is reserved as Parks and Recreation in the Metropolitan Region Scheme. DPLH noted that Lot 3000 is subject to a land transfer agreement with Western Australian Planning Commission and the landowner which cedes the land from private ownership to Western Australian Planning Commission in the future to be managed by DBCA. It is noted by DPLH noted that the proposed clearing is the outcome of an existing planning commitment and therefore can be considered consistent with State Planning Policy 2.8. DPLH also noted a vegetation management plan was a condition of subdivision approval for the road reserve abutting the Bush Forever site 322 which includes Tamala Conservation Park and a re-vegetation plan should be submitted prior to granting a clearing permit for CPS 9620/1 to ensure the protection of Bush Forever Site 322. A revegetation plan has been received from the applicant and endorsed by DBCA.

No Aboriginal sites of significance have been mapped within the application area. 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. Additional information provided by applicant

DWER wrote to the applicant requesting additional survey effort for three species of *Conostylis* which could not be confirmed within the original survey effort:

- *Conostylis bracteata* (P3)
- *Conostylis pauciflora* subsp. *euryrhipis* (P4)
- *Conostylis pauciflora* subsp. *pauciflora* (P4).

The applicant conducted an additional targeted survey on 8 April 2022 (prior to the Department's request) for the species listed above and noted no occurrences of threatened or priority flora species were recorded within the application area. Four *Conostylis aculeata* subsp. *aculeata* plants were recorded within the application area but no other *Conostylis* species were recorded during the survey.

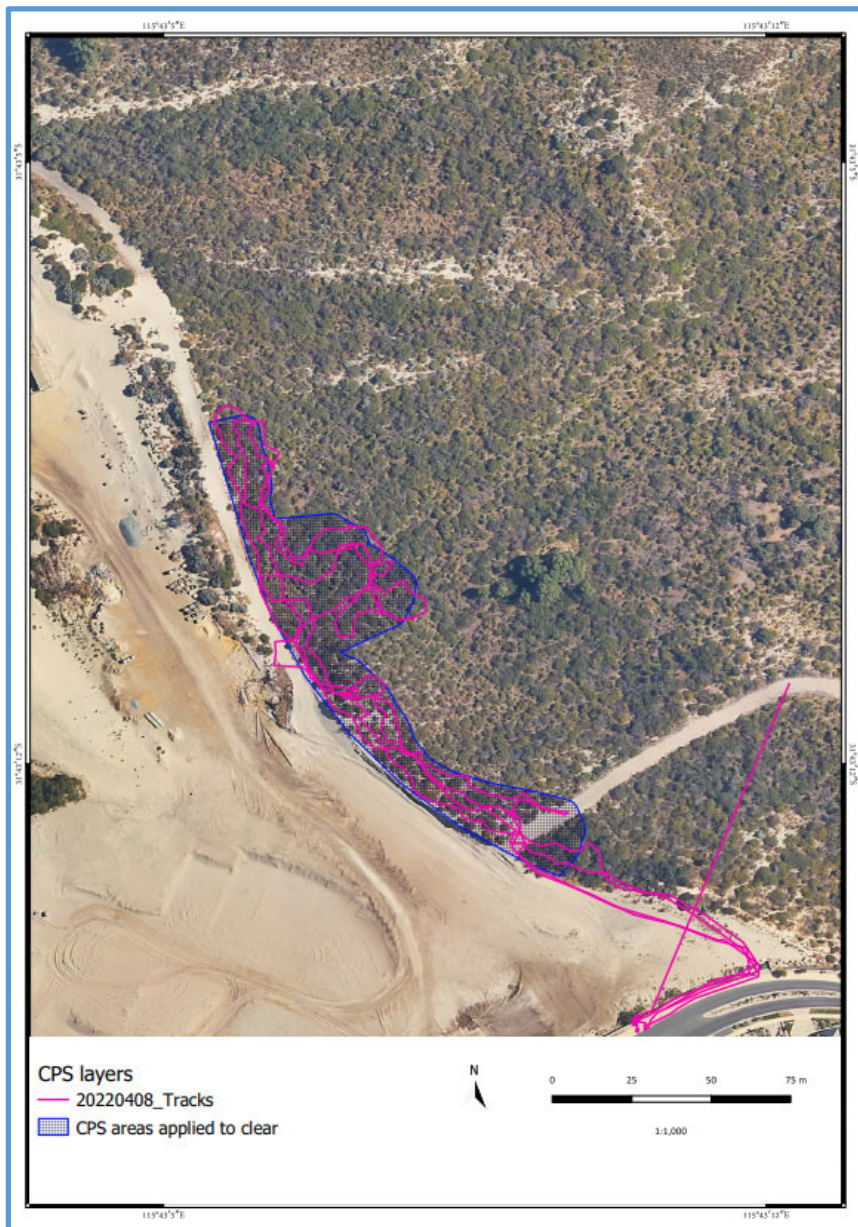


Figure 2: Areas in pink show the tracks taken in the additional effort for the flora species listed above

Appendix B. Details of public submissions

Summary of comments	Consideration of comment
The proposed clearing is contrary to EPA Bulletin 880 (January 1998). The proposed clearing is outside of the maximum development footprint.	A Development Approval under the Metropolitan Region Scheme was provided by the Western Australian Planning Commission in March 2022 (reference 34-50131-6).
The proposed clearing within the Bushforever site is at variance to Principle (h). The development envelope within Lot 3000 has already exhumed greater than 50 per cent.	Considered within Section 3.2.2 and within Planning and other matters
The use of the access road demonstrates no impediment of this being the future road without additional clearing and the battering could be done within the development envelope.	Avoidance and minimisation within Section 3.1 above.
The proposed clearing has the potential to introduce weeds into adjacent vegetation. Of particular concern is <i>Verbena encelioides</i> (Golden Crownbeard) which was not recorded within the flora survey but has been observed approximately 10 meters from the application area.	Weed and dieback conditions on the permit. Consideration of the impact of weeds under Principle (h) in Section 3.2.2
Rehabilitation of CPS 7219/1 has resulted in monoculture of <i>Acacia rostellifera</i> which has a short lifespan and should not be used in rehabilitation.	Where applicable, consideration is given to excluding the species from revegetation activities.
Conditions on a permit should include: <ul style="list-style-type: none"> • A revegetation plan to be submitted and approved prior to clearing commencing • Spray-on mulch to be applied to prevent wind erosion • Coir matting to be installed to prevent erosion and suppress weeds • No <i>Acacia rostellifera</i> to be planted or seeded • Maintenance of revegetated area to continue until 80 per cent coverage is achieved and no new weed species • Revegetation to commence within 12 months • Monitoring of revegetation to continue until lot 3000 is transferred to prevent weed spread • A solid barrier of limestone blocks or other material no less than 300 mm above ground level to be constructed to prevent spread of exotics into Bushforever site 322. 	A revegetation plan has been completed by the applicant and submitted to Department of Biodiversity Conservation and Attractions.
The proposed clearing is contrary to SSP 2.8. This policy is to conserve biodiversity within the Perth metro area. The clearing would result in permanent changes to the landform and hydrology which could further degrade Bushforever site 322.	Advice has been sought by Department of Planning Lands and Heritage and is detailed under Section Relevant planning instruments and other matters
Flora survey inadequately timed. The survey has not considered TECs.	A request for information was sent to applicant to address the matter of flora. TECs are discussed within Section 3.2.1 above.
The revegetation methods within the survey does not mention retention of topsoil post disturbance.	Addressed through conditions of a permit to clear to use the topsoil (respread)

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of a 289-hectare area of native vegetation bound by the coast to the west and a major road to the east in the intensive land use zone of Western Australia. Residential developments are located to the north and south of this parcel.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 29 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>The application area is within two mapped ecological linkages:</p> <ul style="list-style-type: none"> • Bush Forever associated with Conceptual Linkage • Perth Regional Ecological Linkages
Conservation areas	<p>The application area is within Bushforever site 322.</p>
Vegetation description	<p>The vegetation survey (Emerge, 2022) indicates the vegetation within the proposed clearing area consists of Occasional <i>Eucalyptus gomphocephala</i> over closed shrubland <i>Acacia rostellifera</i>, <i>Spyridium globulosum</i>, <i>Xanthorrhoea preissii</i> and <i>Alyogyne huegelii</i> over low open shrubland <i>Phyllanthus calycinus</i> over herbland <i>*Trachyandra divaricata</i>, <i>*Crassula glomerata</i> and <i>Clematis linearifolia</i> over open grassland <i>Austrostipa</i> spp. and <i>*Lagurus ovatus</i>.</p> <p>The full survey descriptions and maps are available in Appendix F.</p> <p>This is somewhat consistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> • Quindalup Complex, which is described as Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>Melaleuca lanceolata</i> (Rottnest Teatree) - <i>Callitris preissii</i> (Rottnest Island Pine), the closed scrub of <i>Acacia rostellifera</i> (Summer-scented Wattle) and the low closed (Peppermint) forest of Geographe Bay. <p>The mapped vegetation type retains approximately 60 per cent of the original extent (Government of Western Australia, 2019)</p>
Vegetation condition	<p>The vegetation survey (Emerge, 2022) indicates the vegetation within the proposed clearing area is in very good to degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> • Very good: Vegetation structure altered, with obvious signs of disturbance. • Degraded: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management <p>The full Keighery (1994) condition rating scale is provided in Appendix E. The full survey descriptions and mapping are available in Appendix F.</p>
Climate and landform	<p>The application area is within a dune system and is located approximately 600 meters from the coastal waterline. The annual average rainfall is approximately 736.8 millimetres per year.</p>
Soil description	<p>The soil within the application area is mapped as Quindalup South second dune Phase which is described as: The second phase. A complex pattern of dunes with moderate relief. Calcareous sands have organic staining to about 20 cm, passing into pale brown sand: some cementation below 1 m.</p>

Characteristic	Details
Land degradation risk	The mapped soil type has a high risk of wind erosion but a low risk of all other forms of land degradation.
Waterbodies	The desktop assessment and aerial imagery indicated that the application area is not located on/within any watercourses or wetlands. The closest water to the application area is the ocean approximately 640 meters away.
Hydrogeography	The application area is within the Perth Groundwater area proclaimed under the <i>RIWI Act 1914</i> .
Flora	Available databases show there are 10 conservation significant flora species recorded within the local area. The most frequent recorded species is <i>Jacksonia sericea</i> (P4) which has been recorded within similar habitat to the application area.
Ecological communities	Six conservation significant ecological communities have been recorded within the local area. The most frequent occurring is Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region which has been recorded 209 times within the local area. The closest conservation significant ecological community is the Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain.
Fauna	According to available databases, 38 conservation significant fauna species have been recorded within the local area. The most frequently recorded species is Carnaby's Cockatoo and the closest record to the application area is the Graceful Sunmoth.

C.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*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	17.98
Vegetation complex					
Quindalup Complex **	54,573.87	33,011.64	60.49	5,994.64	10.98
Local area					
10km radius			29.00	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Austrosaga spinifer</i> (spiny katydid (Swan Coastal Plain))	P2	Y	Y	5	4	N
<i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo)	VU	N	N	0.64	3360	N/A
<i>Calyptorhynchus baudinii</i> (Baudin's cockatoo)	EN	N	N	4.8	4076	N/A
<i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo)	EN	N	N	0.7	20924	N/A
<i>Falco peregrinus</i> (Peregrine falcon)	OS	N	N	5.8	1786	N/A
<i>Hylaeus globuliferus</i> (woolybush bee)	P3	Y	Y	7.8	27	N
<i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)	P3	Y	Y	2.6	275	N
<i>Isoodon fusciventer</i> (southwestern brown bandicoot)	P4	Y	Y	2.5	9503	N
<i>Neelaps calonotos</i> (Black-striped snake)	P3	Y	Y	2.2	227	N
<i>Notamacropus Irma</i> (western brush wallaby)	P4	Y	Y	1.2	5412	N
<i>Synemon gratiosa</i> (Graceful sunmoth)	P4	Y	Y	0.07	841	N

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Note: The application area occurs within close proximity to the ocean. According to available databases, 38 conservation significant fauna species have been recorded within the local area comprising one Critically endangered, five endangered, 11 vulnerable, one conservation dependent, eight migratory species two Priority 2, three Priority 3 and six Priority 4. Of these, 27 fauna are associated with marine, estuarine or freshwater or coastal habitats that do not occur within the application area, and have been excluded from table.

C.4. Land degradation risk table

Risk categories	Quindalup South second dune Phase
Wind erosion	50-70% of map unit has a high to extreme wind erosion risk
Water erosion	3-10% of map unit has a high to extreme water erosion risk
Salinity	<3% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	<3% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	<3% of the map unit has a moderate to high flood risk
Water logging	<3% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	10-30% of map unit has a high to extreme phosphorus export risk

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u> The area proposed to be cleared does not contain locally or regionally significant flora, fauna, habitats, assemblages of plants.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> "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."</p> <p><u>Assessment:</u> The area proposed to be cleared is small in width and has an access road running along its edge. Noting the amount of remnant vegetation adjacent to the application area in similar condition, it is considered the application area is not a significant habitat for fauna species.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u> The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (d):</u> "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."</p> <p><u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</p> <p><u>Assessment:</u> The extent of the mapped vegetation type and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
be cleared is within a mapped ecological linkage but not considered to break this linkage in consideration of the adjacent land uses.		
<p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The application area is within a Bushforever site (322). Noting this, the proposed clearing may have an impact on the environmental values of the adjacent vegetation and conservation areas.</p>	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> Given no water courses or wetlands are recorded as intersecting or adjacent to the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	Not at variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soils are highly susceptible to wind erosion but have low risk of all other forms of land degradation. Noting the extent of the proposed clearing and the final land use and proposed revegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u> Given no water courses, wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	Not likely to be at variance	No

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

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.

Appendix F. Biological survey information excerpts

Vegetation type	Area (ha)
Occasional <i>Eucalyptus gomphocephala</i> over closed shrubland <i>Acacia rostellifera</i> , <i>Spyridium globulosum</i> , <i>Xanthorrhoea preissii</i> and <i>Alyogyne huegelii</i> over low open shrubland <i>Phyllanthus calycinus</i> over herbland <i>*Trachyandra divaricata</i> , <i>*Crassula glomerata</i> and <i>Clematis linearifolia</i> over open grassland <i>Austrostipa</i> spp. and <i>*Lagurus ovatus</i>	0.4451
Areas of bare ground such as tracks	0.0117
Total	0.4568

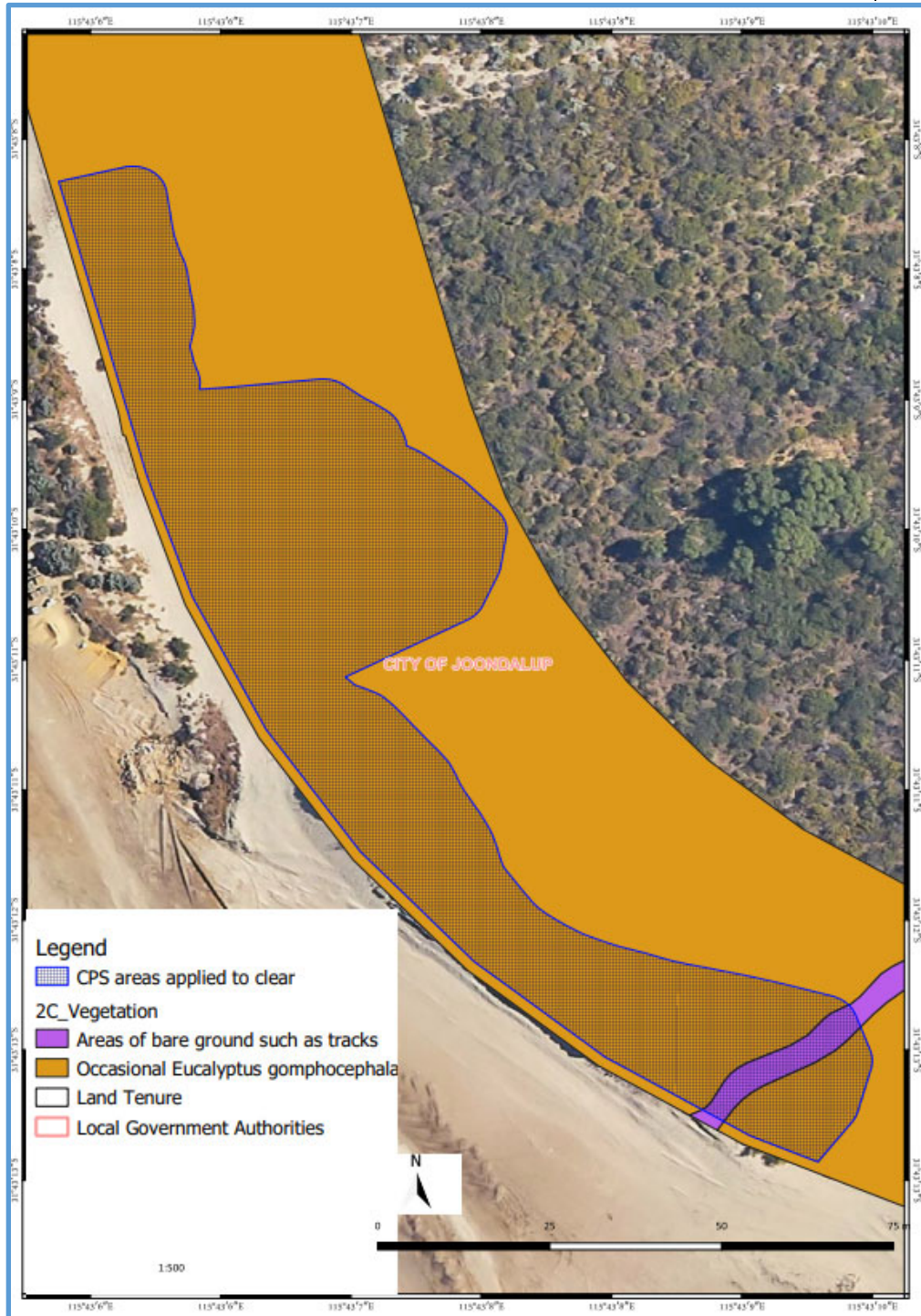


Figure 3: The application area and the mapped data of vegetation types from Emerge(2022)



Figure 4: Representative vegetation in good condition (Emerge, 2022)



Figure 5: Representative vegetation in degraded condition (Emerge, 2022)

Vegetation condition	Area (ha)
Completely degraded	0.0117
Very good	0.4451
Total	0.4568

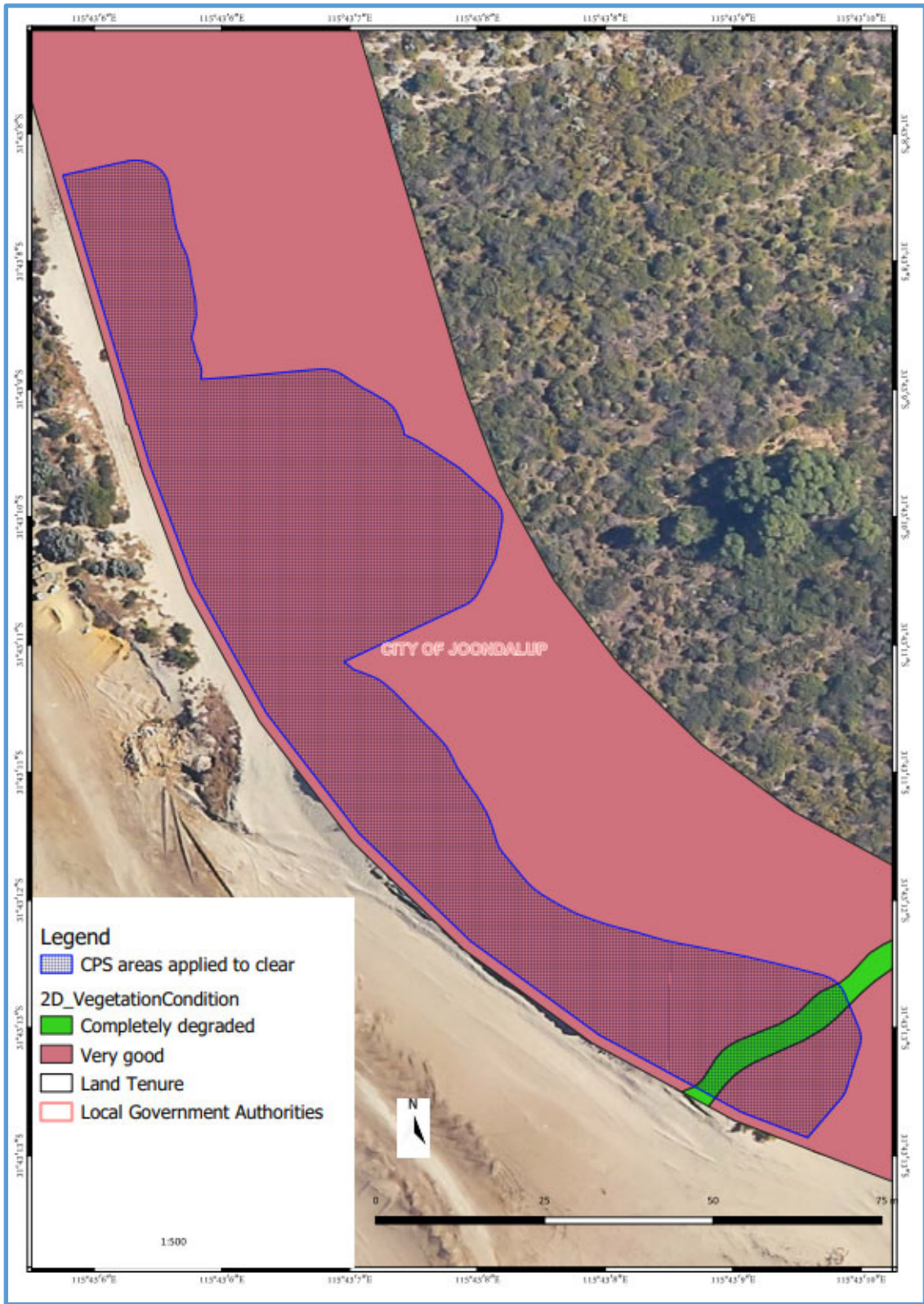


Figure 6: The application area and the mapped data of vegetation condition from Emerge(2022)

Response to requested information

The request for further information identifies two separate items to be addressed, summarised as follows:

- Undertake a targeted flora survey within the application area to confirm the presence/absence of three priority *Conostylis* species.
- Provide a copy of the revegetation plan for the application area.

These items are addressed separately below.

Undertake a targeted flora survey

DWER's preliminary assessment identified that the presence/absence of three priority *Conostylis* species could not be confirmed through the original survey undertaken in December 2021, which is out of flowering season. The three species that presence/absence could not be confirmed for are:

- *Conostylis bracteata* (P3)
- *Conostylis pauciflora* subsp. *euryrhipis* (P4)
- *Conostylis pauciflora* subsp. *pauciflora* (P4).

A targeted survey for these three priority flora species was undertaken within the application area to confirm the presence/absence of these species, as detailed below.

Field survey

Two botanists¹ from Emerge visited the application area on 8 April 2022 to conduct the targeted flora survey.

During the survey, the application area was traversed on foot and the vegetation searched for threatened and priority flora species, with particular focus on searching for the *Conostylis* species listed above. Tracklogs were recorded for both botanists using a hand-held 'global positioning system' (GPS), which have been attached for review by DWER.

Results

No occurrences of threatened or priority flora species were recorded within the application area.

Four *Conostylis aculeata* subsp. *aculeata* plants were recorded within the application area. *C. aculeata* subsp. *aculeata* is a common species that is not listed as threatened or priority. No other *Conostylis* species were recorded during the survey.

Discussion

Threatened or priority flora species are not considered likely to occur as the application area was surveyed comprehensively.

It is noted that the targeted flora survey was conducted outside of the main flowering period for the three priority flora species. However, given that the three priority *Conostylis* species are perennials, and no unidentified *Conostylis* species that may represent the priority species were recorded, the survey timing is considered appropriate.

As a result, the absence of *Conostylis bracteata*, *Conostylis pauciflora* subsp. *euryrhipis* and *Conostylis pauciflora* subsp. *pauciflora* within the application area can be confirmed.

¹ The botanists who conducted the survey meets DWER's definition of a 'person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience in identification and surveys of flora native to the bioregion being inspected or surveyed', with the botanists undertaking the survey having 20- and two-years' experience respectively.

Figure 8: Summary of additional effort for flora survey Emerge(2022b)



Clearing Permit Decision Report

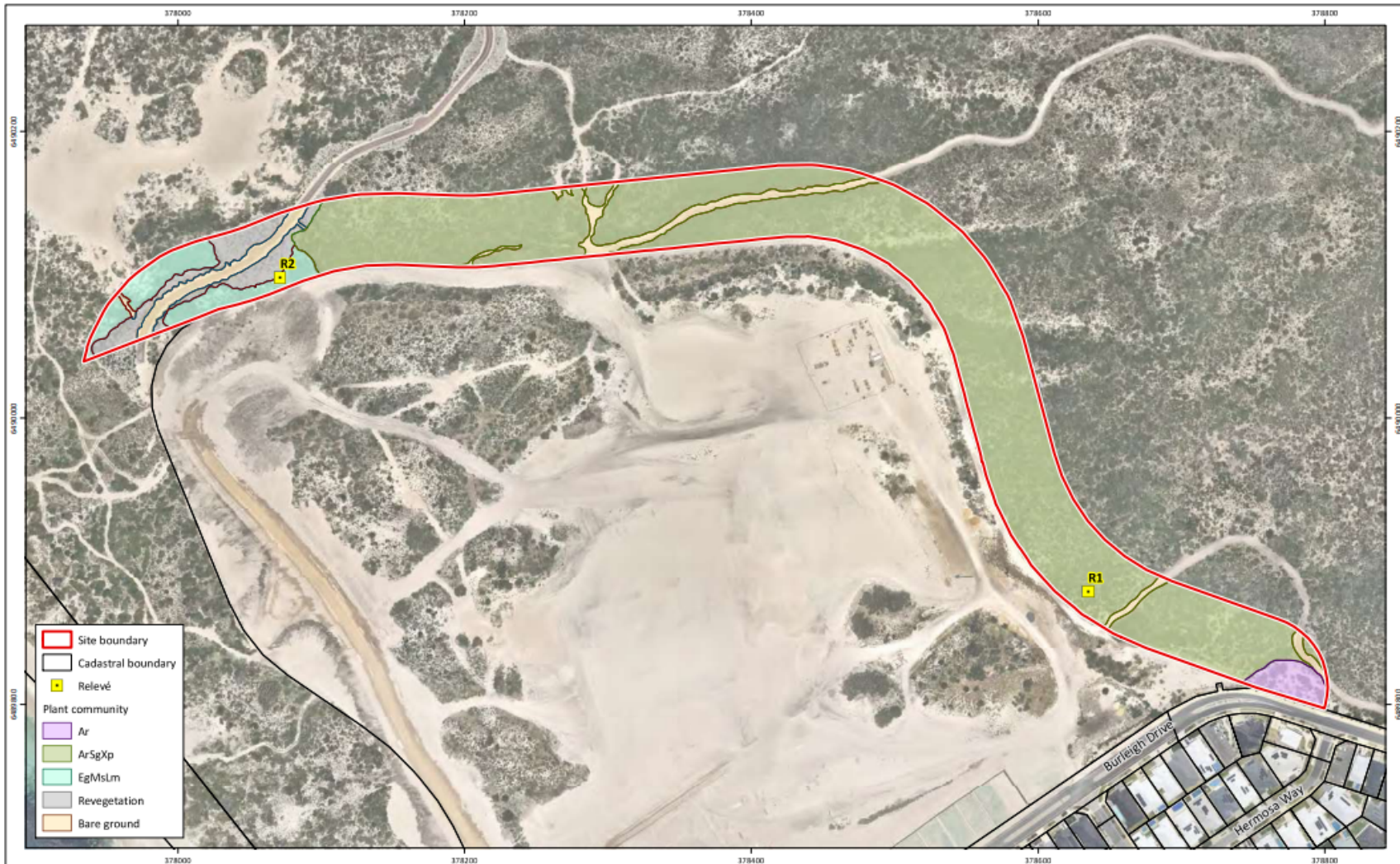


Figure 2: Plant Communities

Project: Flora and Vegetation Assessment
Part Lot 3000 on Deposited Plan 44066, Burns Beach
Client: Peet Limited

Plan Number:
EP15-020(17)-F51
Drawn: GAR
Date: 13/01/2022
Checked: RAW
Approved: TAA
Date: 04/02/2022



0 50 100
Metres
Scale: 1:3,500@A4
GDA 1994 MGA Zone 50





Clearing Permit Decision Report

Appendix G. Sources of information

G.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
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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)

G.2. References

- Avon Catchment Council (2007) Shield - backed Trapdoor Spider (*Idiosoma nigrum*) Conservation Plan No. ##. Avon Catchment Council, Western Australia
- City of Joondalup (2022) *Advice for clearing permit application CPS 9620/1*, received 6 April 2022 (DWER Ref: DWERDT587737).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Department of Biodiversity Conservation and Attractions (2021) Priority Ecological Communities for Western Australia version 32 species and communities Program. Available from: <https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/Priority%20Ecological%20Communities%20list.pdf>
- Department of Environment and Conservation (2011) Information sheet 41/2011 Graceful Sun-moth (*Synemon gratiose*) <https://www.dpaw.wa.gov.au/images/documents/about/science/pubs/infosheets/sdis041.pdf>
- Department of Environment and Conservation (DEC) (2012) Fauna profiles: Quenda. Available from: https://www.dpaw.wa.gov.au/images/documents/conservation-management/pestsdiseases/quenda_2012.pdf
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