



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9918/1
File Number: DWERVT628853
Duration of Permit: From 12 July 2023 to 12 July 2030

PERMIT HOLDER

Peet Funds Management Limited on behalf of Peet and Co 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 1.63 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 12 July 2025.

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 12 July 2024, and at an *optimal time* implement and adhere to the ‘Environmental Management and Revegetation Plan’ dated May 2023 (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*;
 - (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area; and
 - (iv) ensuring the *revegetation* composition comprises vegetation resistant to wind erosion.
- (c) establish a minimum of five 10 x 10 metre quadrat monitoring sites;
- (d) water planted vegetation between November and March 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 southern perimeter of the *revegetation* and *rehabilitation* area 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 at least 4 plants/m ² .	The rehabilitation area contains at least 4 native plants per 1m ²	Stem density to be assessed annually for five years
5) Floristic communities	Floristic communities reinstated	Vegetation identifiable as Tuart woodland TEC and FCT 24 At least 1 hectare of Tuart woodland TEC is present after five years	Statistical analysis of quadrat species data Meet the key diagnostic characteristics of relevant ecological/floristic communities (except for the requirement on minimum diameter at breast height of the <i>established</i> Tuart trees)
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 between November and March; 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 2.

Table 2 : 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 2020 (GDA2020), 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 GDA 2020, expressing the geographical

No.	Relevant matter	Specifications
		<p>coordinates in Eastings and Northings or decimal degrees;</p> <p>(c) the date that <i>revegetation</i> and <i>rehabilitation</i> works began;</p> <p>(d) the baseline data recorded for the area to be <i>revegetated/rehabilitated</i>, including species richness, species density, vegetation structure and weed cover</p> <p>(e) the species composition, structure, density of the areas <i>revegetated/rehabilitated</i> 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

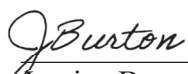
In this permit, the terms in Table 3 have the meanings defined.

Table 3: 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	means a person who holds a tertiary qualification in environmental

Term	Definition
specialist	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 (WA)</i>
established (tree)	means a living, healthy tree which is showing signs of growth
fill	means material used to increase the ground level, or to fill a depression
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 of time 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



Jessica Burton
A/MANAGER
NATIVE VEGETATION REGULATION

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

19 June 2023

SCHEDULE 1



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



Figure 2: Map of the boundary of the area to be revegetated.



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9918/1
Permit type:	Area permit
Applicant name:	Peet Funds Management Limited on behalf of Peet and Co Limited
Application received:	14 October 2022
Application area:	1.63 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 batters support the construction of roads within the development of final stages of Burns Beach Estate and for a required firebreak at the base of the batters (Emerge Associates, 2022a, 2023a). The batters will be stabilised and revegetated when they are no longer required for facilitating the road construction (Emerge Associates, 2022a).

The application area is located within a Bush Forever site and currently owned by the applicant. After the development of the Burns Beach Estate is completed, the application area and remaining portion of Lot 3000 on Deposited Plan 44066 will be transferred to the Western Australian Planning Commission (WAPC) and under the management of Department of Biodiversity, Conservation and Attractions (DBCA) in the long-term (Emerge Associates, 2022a).

1.3. Decision on application

Decision:	Granted
Decision date:	19 June 2023
Decision area:	1.63 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;
- potential land degradation in the form of wind erosion; and
- impacts fauna individuals if they present in the application area at the time of clearing.

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)
- *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 – *Flora and Vegetation 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:

- The proposed batters have been designed to minimize the clearing to the extent required to ensure the long-term viability of the batters.
- Where possible, further avoidance of vegetation will occur where practicable during clearing.
- 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.
- A rehabilitation of the batters post-stabilisation will be undertaken in accordance with the *Environmental Management and Revegetation Plan* (EMRP), to be approved by Department of Biodiversity, Conservation and Attractions.

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 Appendix D) identified that the impacts of the proposed clearing present a risk to biological values (biodiversity, fauna, ecological communities), conservation areas and land degradation. 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 (Fauna) - Clearing Principles (a) and (b)

Assessment

According to available databases, 35 conservation fauna species have been recorded within the local area. Seventeen of the fauna species locally recorded are associated with marine, estuarine or freshwater habitats that do not occur within the application area. 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. Based on these analysis factors, two bird species, two mammal species, one invertebrate species and one reptile species are considered to potentially occur in the application area. A brief fauna analysis is presented in Appendix C.3 and the appearance likelihood assessment of these species are presented below.

Birds

Black cockatoos (BC)

Based on known distribution and habitat preference of bird species recorded, the endangered species Carnaby's cockatoo (*Zanda latirostris*) is considered most likely to occur over the application area with the closest record occurring 0.76 kilometres away from the application area. The proposed clearing area also falls within broadly mapped potential Carnaby's black cockatoo distribution area.

The two remaining threatened species of BC including Baudin's cockatoo (*Zanda Calyptorhynchus* – endangered species) and Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso* - vulnerable species) have also been recorded in the local area (10-kilometre radius from the application area) with the closest records of 4.9 and 0.79 kilometres away from the area proposed to clear, respectively. However, noting the limited records in the local area (three records of Baudin and six records of forest red-tailed) and that the application does not lie within their mapped distribution areas, these two BC species are not considered to occur in the application area.

There are three key components of black cockatoo habitat: foraging habitat; roosting habitat; and breeding habitat. The quality of black cockatoo foraging habitat to support populations at breeding sites or night roosting sites varies depending upon how black cockatoos utilise the habitat in that particular location. Any tall trees, generally close to riparian environment, can be potential roosting habitat of black cockatoos (DSEWPC 2012). A tree suitable for a black cockatoo breeding is defined as a tree with a diameter of 50 centimetres or greater at a height of 1.5 metres above the ground. Carnaby's Cockatoo generally forages within six kilometres of a night roost site and, while nesting, within a 12 kilometres radius of their nest site (Commonwealth of Australia, 2012).

The application area comprises of Tuart (*Eucalyptus gomphocephala*) tree which can be used by the Carnaby's black cockatoo for night roosting and breeding in the Swan Coastal Plain (DSEWPC, 2012). However, Tuart trees within the application area have diameter at breast height of less than 50 centimetres and do not meet the minimum diagnostic feature of Carnaby's nesting tree (Emerge Associate, 2023). Therefore, the possibility of black cockatoos using the trees within the application area for nesting can be considered minimal. *Eucalyptus gomphocephala* and other flora species within the application area including *Acacia saligna* and *Xanthorrhoea preissii* are suitable foraging sources for Carnaby's BC. However, considering the extent of area proposed to clear, the existence of good-quality remnant native vegetation adjacent to the application area, and that the cleared area will be revegetated with similar native flora species, post clearing, the proposed clearing is considered unlikely to significantly impact foraging habitat for this species.

Peregrine falcon

The peregrine falcon (*Falco peregrinus* - other specially protected species) typically nests on rocky ledges in tall, vertical cliff faces and gorges, or in tall trees associated with drainage lines, and can hunt in a range of habitat types including timbered watercourses, riverine environments, wetlands, plains, open woodlands, and pylons and spires of buildings (Australian Museum, 2019). Given its woodland structure and distance to closest record (5.9 kilometres), the application area may provide suitable foraging habitat for the peregrine falcon. However, noting that the peregrine falcon is a highly mobile species with a large home range that does not rely on special niche habitats, the peregrine falcon is likely to be transient in the application area and it is unlikely that the application area represents significant habitat for the species. Further, noting the extent of native vegetation adjacent the application area, it is unlikely that the peregrine falcon would be reliant on the application area for foraging in the local area.

Mammals

Quenda

The quenda (*Isoodon fusciventer* – Priority 4 species) typically prefers dense understorey vegetation (DEC, 2012a) and has 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 (DEC, 2012). This species is known from 126 records within the local area occurring as close as 280 meters from the application area. Noting the proximity of the nearest record and the suitable habitat within the application area, quenda are likely to utilise the application area. However, noting the extent of clearing proposed

and the extensive vegetation area adjacent to the application area, the proposed clearing area is not likely to be significant for the continued survival of this species.

Western brush wallaby

The western brush wallaby (*Notamacropus Irma* – Priority 4 species) was once common, but its population declined significantly due to agricultural development. Their preferable habitat is associated with open, seasonally wet flats with low grasses and open scrubby thickets (DEC, 2012b). There are seven records of this species in the local area, with the closest record is mapped approximately 1.5 kilometres from the application area. However, given the extent of retained suitable native vegetation adjacent to the proposed clearing, the application area is unlikely to provide significant habitat for this species.

However, there is a chance that the proposed clearing may result in impacts to quenda and western brush wallaby individuals if they happen to be transiting across the application area during the time of the clearing.

Other species

Black-striped snake

The black-striped snake (*Neelaps calonotos* - Priority 3 species) is a small fossorial venomous snake, restricted to the sandy coastal strip near Perth, between Mandurah and Cataby, with isolated populations further north near Eneabba and Dongara. Habitat for this species includes Eucalyptus and/or Banksia woodlands and dunes and sand plains vegetated with heaths (Wilson and Swan, 2017). Black-striped snake is known from 11 records within the local area, with the nearest occurring approximately two 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. However, given the extent of remnant native vegetation adjacent the application area, the vegetation proposed to be cleared is not likely to be significant habitat of this species.

The graceful sunmoth

The graceful sunmoth (*Synemon gratiosa* – Priority 4 species) 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. 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 ten meters from the application area. Given vegetation within the application area consisting of the preferred habitat of the species, this species may occur in the proposed clearing area. However, noting 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 the continued survival of this species.

It is noted that no conservation significant fauna species were recorded within the application area during the flora and vegetation assessment (Emerge Associates, 2022b)

Conclusion

The proposed clearing is not likely to contain significant habitat for conservation significant fauna species but may impact on individuals of fauna if they 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 (threatened ecological communities) - Clearing Principles (a) and (d)

Within the application area three ecological communities were identified, include one threatened ecological community (TEC) and two priority ecological communities (PEC) (Emerge Associates, 2022b):

- Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain (Tuart woodland) – TEC (approximately 0.43 hectares)
- SCP24 northern Spearwood shrublands and woodlands – PEC (approximate 1.42 hectares, partly overlaps with the identified Tuart woodland TEC).
- SCP29b Acacia shrublands on taller dunes, southern Swan Coastal Plain - PEC (approximate 0.06 hectares, mostly overlaps with the identified Tuart woodland TEC).

Ecological communities mapping (Emerge Associates, 2022b) is available in Appendix F.

The application area is not mapped within any Tuart woodland (GIS database) however, the flora and vegetation survey identified two individual patches of this TEC, each patch containing two individuals/small clumps of Tuart

trees, in the north-western portion of the application area with a total area of 0.43 hectares within the proposed clearing area (Figure 2) (Emerge Associates, 2022b). However, only two individual/ clumps of Tuart trees (one from each previously mentioned patch) are within the application area (Emerge Associates, 2023b) (Figure F.4., Appendix F). Given that the number of Tuart trees in these patches are limited, and the area of each patch is smaller than 0.5 hectare, the Tuart woodland patches identified in the application area do not fit the conservation advice criteria of this nationally protected threatened ecological community (TSSC, 2019). The applicant has committed to the revegetation of at least one hectare of Tuart woodland within the application area post clearing and construction of the batters (Emerge Associates, 2023c). Given this, the proposed clearing is not considered likely to significant impact the current extent of Tuart woodland TEC in the local context.

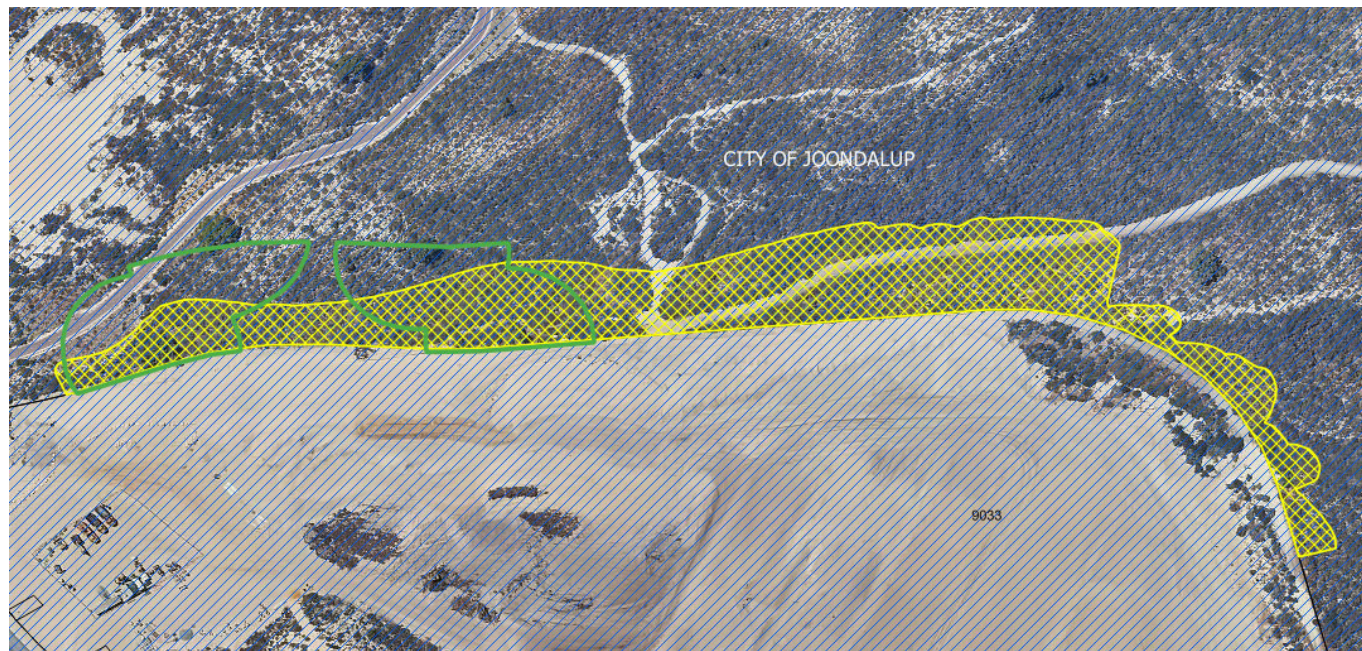


Figure 2. Two patches of Tuart woodland (green outline polygons) identified within the application area (Emerge Associates, 2022b)

According to available databases, there are 37 mapped occurrences of the SCP 24 Spearwood shrublands and woodlands PEC in total occurring over a range between Guilderton and Mandurah (230 km). In total, 395 hectares occurs within secure tenure (within DBCA managed tenure). For SCP 29b Acacia shrublands on taller dunes PEC, there are 41 hectares mapped within a large ranges along the coast from Seabird to Yalgorup National Park (170 km).

Noting that the extent of PECs within the application area is small (approximate 0.14 per cent of the mapped occurrence areas for both PECs) and the cleared area will be rehabilitated, the impact of the proposed clearing on these PECs is not considered significant.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.43 hectares of Tuart woodland (containing two individual/small clumps of Tuart trees), 1.42 hectares of the PEC SCP24 and 0.06 hectares of the SCP29b PEC.

It is considered that the impacts of the proposed clearing on these ecological communities 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.

Conditions

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

- Revegetation of application area in accordance with DBCA approved revegetation plan.
- Avoidance and minimisation measures.
- Weed and dieback management.

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

Assessment

The application area occurs within Bush Forever site 322.

"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" (State Planning Policy 2.8 – Bushland policy for the Perth Metropolitan Region).

Advice was sought from the Department of Planning, Lands and Heritage (DPLH) on the proposed clearing regarding the Bush Forever site management. The advice received noted that *"Lot 3000 is subject to a land transfer agreement with the Western Australian Planning Commission and the landowner. The negotiated agreement allowed for the ceding the reserved land from private ownership on the basis that the proposed works (battering to facilitate road construction) would be permitted in the reserved lands"*. Furthermore, the advice noted that proposed clearing is consistent with State Planning Policy 2.8 (DPLH, 2023).

It is noted that the propose clearing has the potential to introduce weeds and/or spread weeds further into Lot 3000.

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
- revegetation requirements in accordance with a DBCA approved revegetation plan.

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

Assessment

The application area is mapped within two types of soil:

- Western part: Quindalup South deep sand flat.
- Eastern part: Quindalup South second dune.

The mapped soil type Quindalup South deep sand flat has low risk of all land degradation forms, except for the phosphorus export which is identified creating medium land degradation risk to this type of soil (DPIRD 2019) (Appendix C.4).

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, water erosion and salinity has been assessed to be low risk, while the phosphorus export risk is in medium level for this soil type (DPIRD 2019) (Appendix C.4).

The Environmental Management and Revegetation Plan (EMRP) has identified that dust and erosion have the possibility of occurring through construction and may occur until vegetation planted has matured (Emerge Associates, 2023c). The EMRP identifies remedial controls that reduce the risk of erosion, including:

- Stabilization of the site in the interim between the completion of landforms using appropriate options (brushing, coir mesh matting, mulch and topsoil, sand trap fencing).
- Revegetation in accordance with DBCA approved plan.

Conclusion:

For the reasons set out above and the mitigation measures provided by the applicant, it is considered that the potential impacts of the proposed clearing on land values 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 within one month 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 (WAPC) 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 'Tuart woodlands and forests of the Swan Coastal Plain' Threatened Ecological Community and the Priority Ecological Communities 'Northern Spearwood shrublands and woodlands' and 'Acacia shrublands on taller dunes' in 'very good' condition.
- consideration of additional revegetation to be carried out to mitigate loss of part of Bush Forever site 322 such as areas of degraded condition, should be considered.

Department of Planning Lands and Heritage (DPLH) noted the subject site is reserves 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. The proposed clearing is the outcome of an existing planning commitment and therefore can be considered consistent with State Planning Policy 2.8. DPLH supports the proponent intends to revegetate the whole battering area and recommended that the Environmental Management Plan and the Revegetation Plan should be submitted prior to granting a clearing permit for CPS 9918/1 to ensure the protection and management of the environmental assets of Bush Forever Site 322 (DPLH, 2023). The applicant has provided a final Environmental Management and Revegetation Plan, approved by DBCA, to support the clearing application.

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 requested the applicant to conduct a black cockatoo habitat tree assessment for the western part of the area proposed to be cleared where is identified as the occurrence of Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain by the flora and vegetation survey.

The applicant conducted a site visit on 14 March 2023 and confirmed that the Tuart trees (two trees) within the site do not meet the minimum diagnostic features of a black cockatoo nesting tree (i.e. diameter at breast height ≥50 centimetres) and no hollows were observed (Figure F.5 in Appendix F).

Appendix B. Details of public submissions

The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and two submissions were received. The summary of submitters' comments and DWER's relevant consideration are presented in the following table.

Summary of comments	Consideration of comment
The proposed clearing within the Bushforever site is at variance to Principle (h) and possibly Principle (d).	These issues have been considered and discussed in Sections 3.2.2 and 3.2.3.
The applicant has not provided any engineering reasons why it is necessary or essential for the batters to be constructed outside the boundaries of the development area. The applicant is seeking a clearing permit to maximize the area for development at the expense of the adjacent bushland.	The proposed clearing is the outcome of an existing planning commitment, subject to a land transfer agreement with Western Australian Planning Commission and the landowner which cedes the land from private ownership. This has been discussed in the Section Planning and other matters.
The proposed clearing has the potential to introduce weeds into adjacent vegetation. Of particular concern is <i>Verbesina encelioides</i> (Golden Crownbeard) which was not recorded within the flora survey but has been observed (by the submitter) in and adjacent to the application area.	This issue was communicated with the applicant. The applicant confirmed that if this weed species presents in the application area, management of the species will be addressed through the weed control methodology specified in the EMRP. The applicant noted that this species is not listed as a declared pest pursuant to the Biosecurity and Agriculture Management Act 2007 or as a weed of national significance, so there are no specific management actions associated with the presence of this species. Consideration of the impact of weeds is discussed in Section 3.2.2 and 3.2.3.
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.	A specific note of "proportion of <i>Acacia</i> spp. to be limited to avoid an over dominance or monoculture outcome" has been made in the finalized EMRP (Emerge Associates, 2023c).
<p>Conditions on a permit should include:</p> <ul style="list-style-type: none"> • A restoration programme to be submitted to and approved by the Land Manager (DBCA) 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, • 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 management agency 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. 	<p>A revegetation plan has been completed by the applicant and submitted to Department of Biodiversity Conservation and Attractions.</p> <p>These recommendations are considered in the permit conditions.</p>

Summary of comments	Consideration of comment
Native Title rights have now been granted to the Whadjuk Noongar over all Crown and privately owned land in South West WA, including the land the subject to this clearing permit. The applicant needs to seek permission and subsequent approval for the proposal to proceed.	The application area is mapped as freehold land, therefore, the Native Title is extinguished on this application area.

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the intensive land use zone of Western Australia. It is surrounded by remnant vegetation to the west, north and east, and bare areas and remnant vegetation to the south. The proposed clearing area is part of a 386-hectare area of vegetation.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 30 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 (the whole area) • Perth Regional Ecological Linkages (the eastern part of the area)
Conservation areas	The application area is within Bush Forever site 322
Vegetation description	<p>The vegetation survey (Emerge Associates, 2022b) indicates the vegetation within the proposed clearing area consists of four types:</p> <ul style="list-style-type: none"> • 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 spp.</i> and <i>Lagurus ovatus</i> (Majority area of 1.41 hectares) • Open woodland <i>Eucalyptus gomphocephala</i> over shrubland <i>Melaleuca systema</i>, <i>Olearia axillaris</i>, <i>Acacia lasiocarpa</i> and <i>Hibbertia spp.</i> over herbland <i>Lomandra maritima</i>, <i>Desmocladius flexuosus</i> and <i>Opercularia vaginata</i> over scattered grasses <i>Poa porphyroclados</i> (0.07 hectares) • Recent revegetation over jute matting comprising a low open shrubland/sedgeland with <i>Acacia rostellifera</i>, <i>Olearia axillaris</i>, <i>Scaevola crassifolia</i> and <i>Lepidosperma gladiatum</i> (0.02 hectares). • Non-native vegetation or Bare ground, which is described as areas of bare ground such as tracks. <p>The vegetation type mapping is available in Appendix F.</p> <p>The major surveyed vegetation type is somewhat consistent with the mapped vegetation type:</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>

Characteristic	Details
Vegetation condition	<p>The vegetation survey (Emerge Associates, 2022b) indicates the majority of vegetation within the proposed clearing area is in very good condition (Keighery, 1994), described as:</p> <p>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.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix E. The mapping is available in Appendix F.</p>
Climate and landform	<p>Climate: Mean maximum temperature is 24.8 degrees Celsius. Mean minimum temperature is 12.9 degrees Celsius.</p> <p>Rainfall: Mean annual rainfall is 735.6 millimetres.</p> <p>The application area lays within two types of landforms: (1) Undulating landscapes with deep calcareous sands overlying limestone; and (2) A complex pattern of dunes with moderate relief (DPIRD, 2019).</p>
Soil description	<p>The soil within the application area is mapped as two types: (1) 211Qu_Qp: Quindalup South deep sand flat which is described as Dark grey-brown sand to about 50 cm and then pale brown sand; and (2): 211Qu_Q2: Quindalup South second dune which is described as: Calcareous sands with organic staining to about 20 cm, passing into pale brown sand; some cementation below 1 m.</p>
Land degradation risk	<p>The two mapped soil types have low to moderate risks of all other forms of land degradation, except for the soil type of Quindalup South second dune Phase having high risk of wind erosion (see Appendix C.4 for details).</p>
Waterbodies	<p>The desktop assessment and aerial imagery indicated that no wetlands or waterbodies transecting the area proposed to be cleared. The closest water to the application is the ocean which is approximately 300 metres on the west.</p>
Hydrogeography	<p>The application area is within the Perth Groundwater area proclaimed under the <i>R/VI Act 1914</i>.</p> <p>Groundwater salinity within the application area is mapped as from 500 to 1000 milligrams per litre total dissolved solids.</p>
Flora	<p>There are records of 24 conservation significant flora within the local area (excluding the ocean), including three threatened species. None of these is recorded within the application area. The most frequent recorded species is <i>Jacksonia sericea</i> (P4). The closest recorded threatened species is <i>Eucalyptus foecunda subsp. foecunda</i>, located approximately 1.38 kilometres from the application area.</p>
Ecological communities	<p>Six conservation significant ecological communities have been recorded within the local area, including:</p> <ul style="list-style-type: none"> • Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain (TEC) • Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (PEC) • <i>Banksia attenuata</i> woodlands over species rich dense shrublands (TEC) • Northern Spearwood shrublands and woodlands (PEC) • <i>Melaleuca huegelii</i> - <i>Melaleuca systema</i> shrublands on limestone ridges (TEC) • <i>Callitris preissii</i> (or <i>Melaleuca lanceolata</i>) forests and woodlands, Swan Coastal Plain (TEC) <p>The most frequent occurring is Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region which has been recorded 201 times within the local area.</p> <p>The conservation significant ecological community with highest area is Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain, with the area of 1459 hectares.</p> <p>The closest mapped conservation significant ecological community is the Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain (approximately 1.5 kilometres away).</p>

Characteristic	Details
	<p>The flora survey (Emerge Associate, 2022) identified three conservation significant ecological communities within the application area, including:</p> <ul style="list-style-type: none"> • Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain (TEC) • Northern Spearwood shrublands and woodlands (PEC) • Acacia shrubland on taller dunes, southern Swan Coastal Plain (PEC)
Fauna	<p>According to available databases, 36 conservation significant fauna species have been recorded within the local area (excluding the ocean), including 16 threatened fauna species, 10 priority fauna species, and 10 specially protected fauna species.</p> <p>The most frequently recorded species is Carnaby's Cockatoo, followed by the Quenda. The species recorded at the closest distance of the application area is the Graceful Sunmoth.</p> <p>There are 18 black cockatoo roosting sites identified in the local area with the closest one recorded approximately 2.6 kilometres from the application area.</p>

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	27,444.68	8,918.11	32.5	3,636.44	13.2
Vegetation complex					
Quindalup complex *	55,573.87	33,011.64	60.5	5,994.64	11.0
Local area (calculation - delete if not required)					
10 km radius	17,492.59	5,295.71	31.1	-	-

*Government of Western Australia (2019)

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>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo)	VU	Y	Y	0.79	6	
<i>Zanda Calyptorhynchus</i> (Baudin's cockatoo)	EN	Y	Y	4.90	3	
<i>Zanda latirostris</i> (Carnaby's cockatoo)	EN	Y	Y	0.76	534	
<i>Falco peregrinus</i> (Peregrine falcon)	OS	Y	Y	5.95	8	
<i>Isoodon fusciventer</i> (Quenda)	P4	Y	Y	0.28	126	
<i>Neelaps calonotos</i> (Black-striped snake)	P3	Y	Y	2.02	11	
<i>Notamacropus Irma</i> (western brush wallaby)	P4	Y	Y	1.45	7	
<i>Synemon gratiosa</i> (Graceful sunmoth)	P4	Y	Y	0.01	94	

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, 35 conservation significant fauna species have been recorded within the local area comprising 15 threatened species, ten specially protected species and ten priority species. Of these, 27 fauna are associated with marine, estuarine or freshwater or coastal habitats that do not occur within or utilize the application area, and have been excluded from table.

C.4. Land degradation risk table

Risk categories	Quindalup South deep sand flat	Quindalup South second dune Phase
Wind erosion	L2: 3-10% of map unit has a high to extreme wind erosion risk	H1: 50-70% of map unit has a high to extreme wind erosion risk
Water erosion	L2: 3-10% of map unit has a high to extreme water erosion risk	
Salinity	L1: <3% of map unit has a moderate to high salinity risk or is presently saline	
Subsurface Acidification	L1: <3% of map unit has a high subsurface acidification risk or is presently acid	
Flood risk	L1: <3% of the map unit has a moderate to high flood risk	
Water logging	L1: <3% of map unit has a moderate to very high waterlogging risk	
Phosphorus export risk	M1: 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></p> <p>The vegetation under assessment represents two priority ecological communities (northern Spearwood shrublands and woodlands; and Acacia shrublands on taller dunes, southern Swan Coastal Plain) (Emerge Associates, 2022b).</p>	At variance	<p>Yes</p> <p>Refer to Section 3.2.1 and 3.2.2, above.</p>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>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> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>No threatened flora has been recorded in the application area from the desktop assessment. There are three threatened species recorded in the local area (10-kilometre radius) but in different types of soil and vegetation of the application area. Furthermore, the flora survey (Emerge Associate, 2022) confirmed that no threatened or priority flora species were recorded in application area. Therefore, 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	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is not mapped within any threatened ecological community (TEC). However, the flora survey (Emerge Associate, 2022) identified the TEC of Tuart woodlands and forests in Swan Coastal Plain occurring within the western corner of the application area. After considering the results of the flora survey and the conservation advice for this TEC, it is considered for the Tuart woodland within the application area to not fit the TEC’s minimal patch size criteria.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The extent of the mapped vegetation type (60.5%) and the native vegetation in the local area (31.1%) is consistent with the national objectives and targets for biodiversity conservation in Australia. The eastern portion of area proposed to be cleared is within a mapped ecological linkage however the proposed clearing is not considered to break this linkage in consideration of the adjacent land uses.</p>	Not likely to be at variance	No
<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></p> <p>The application area is within a Bush Forever site (322). Noting this, the proposed clearing may have an impact on the environmental values of the adjacent vegetation and conservation areas.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<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></p> <p>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></p> <p>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, the final land use and proposed revegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.4, 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></p> <p>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 underground 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></p> <p>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.</p> <p>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.

Condition	Description
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

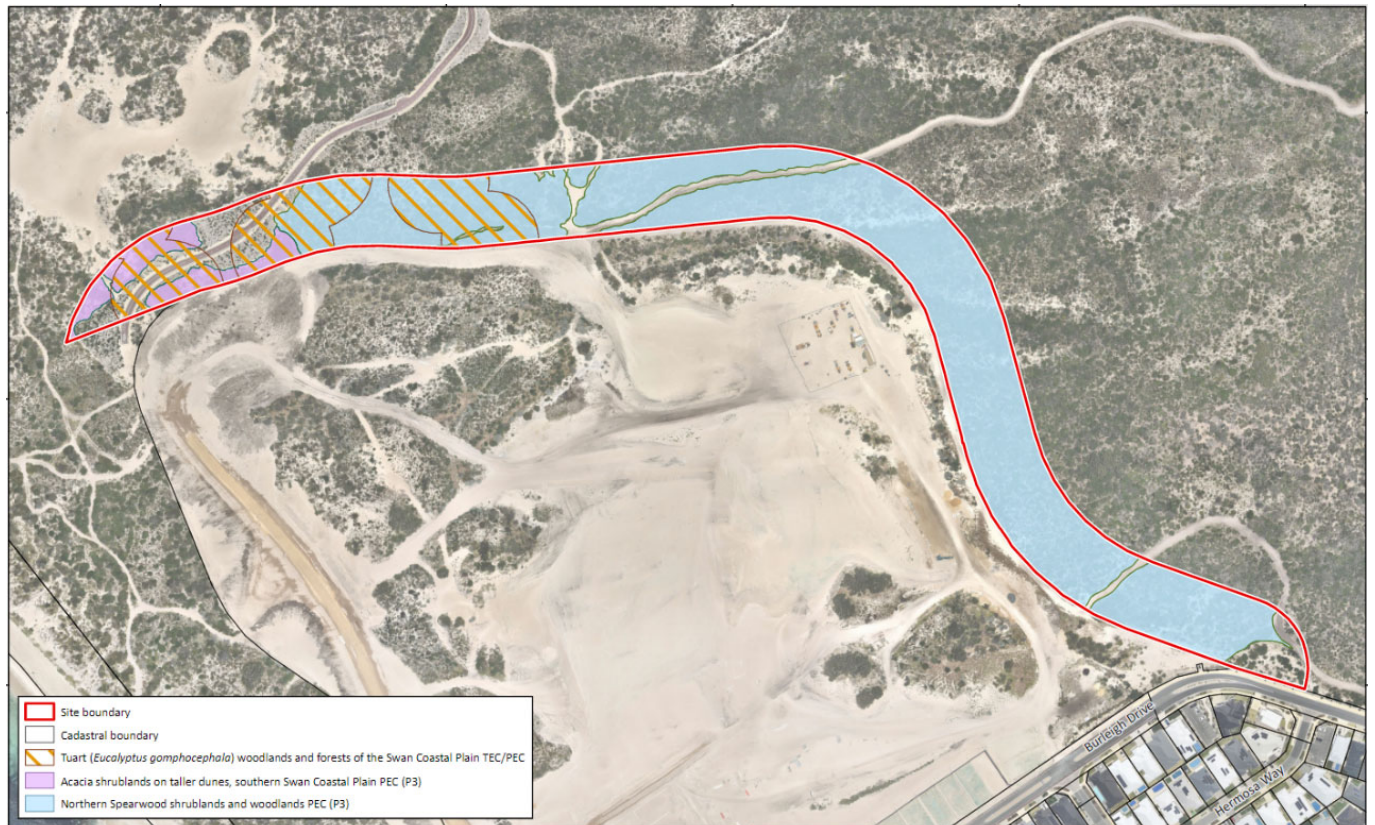


Figure F.1. Mapping of ecological communities in the survey area (Emerge Associates, 2022b).



Figure F.2. Mapping of vegetation type in the survey area (Emerge Associates, 2022b).



Figure F.3. Mapping of vegetation type in the survey area (Emerge Associates, 2022b).



Figure F.4. Two individual/ clumps of Tuart trees within the application area (Emerge Associates, 2023b).



Figure F.5. The tuart trees within the application area have diameter at breast height < 50 centimetres (Emerge Associates, 2023b)

Appendix G. Sources of information

G.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- DBCA – Lands of Interest (DBCA-012)
- 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)
- 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)

G.2. References

- Australian Museum (2019) *Perengrine falcon (Falco peregrinus)*. The Australian Museum, New South Wales. Available from: <https://australian.museum/learn/animals/birds/peregrine-falcon/> (accessed August 2022).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Commonwealth of Australia (2022) *Referral guidelines for three WA threatened black cockatoo species. Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii) and the Forest Red-tailed Black-cockatoo (Calyptorhynchus banksii naso)*. Available from <https://www.dcceew.gov.au/sites/default/files/documents/referral-guideline-3-wa-threatened-black-cockatoo-species-2022.pdf>
- Department of Environment and Conservation (2011) Information sheet 41/2011 Graceful Sun-moth (*Synemon gratiosa*) <https://www.dpaw.wa.gov.au/images/documents/about/science/pubs/infosheets/sdis041.pdf>
- Department of Environment and Conservation (DEC) (2012a) Fauna profiles: Quenda. Available from: https://www.dpaw.wa.gov.au/images/documents/conservation-management/pestsdiseases/quenda_2012.pdf
- Department of Environment and Conservation (DEC) (2012b) Fauna profiles: Western Brush Wallaby *Macropus irma* (Jourdan, 1837). Available from: <https://library.dbca.wa.gov.au/static/FullTextFiles/925291.pdf>
- 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 Planning Lands and Heritage (2023) *Comments for clearing permit application CPS 9918/1*, received 13 January 2023. (DWER Ref: DWERDT711108)
- 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 15 January 2023).
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (2012) *EPBC Act*

referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) Calyptorhynchus latirostris, Baudin's cockatoo (vulnerable) Calyptorhynchus baudinii, Forest red-tailed black cockatoo (vulnerable) Calyptorhynchus banksii naso. Department of Sustainability, Environment, Water, Population and Communities (now the Department of Agriculture, Water and Environment), Canberra.

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

Emerge Associates (2022a). *Application for a native vegetation clearing permit CPS 9918/1*, received 14 October 2022 (DWER Ref: DWERDT671943).

Emerge Associates (2022b) *Reconnaissance Flora and Vegetation Assessment for Part Lot 3000 on Deposited Plan 44066. Prepared for Peet Limited*. IBSA number: IBSA-2022-0069.

Emerge Associates (2023a) *Responding to the 1st request for further information CPS 9918/1*, received 08 February 2023 (DWER Ref: DWERDT724756).

Emerge Associates (2023b) *Responding to the 2nd request for further information CPS 9918/1*, received 28 March 2023 (DWER Ref: DWERDT756430).

Emerge Associates (2023c) *Final version of the Environmental Management and Revegetation Plan, CPA 9918/1 Clearing Footprint*, received 04 May 2023 (DWER Ref: DWERDT773915).

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.

Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth,
<https://catalogue.data.wa.gov.au/dataset/dbca>

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

Submission (2023a) *Public submission in relation to clearing permit application CPS 9918/1*, received 20 January 2023 (DWER Ref: DWERDT714273).

Submission (2023b) *Public submission in relation to clearing permit application CPS 9918/1*, received 20 January 2023 (DWER Ref: DWERDT714479).

Threatened Species Scientific Committee (TSSC) (2019). Approved Conservation Advice (incorporating listing advice) for the Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain ecological community. Available from:
<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/153-conservation-advice.pdf>

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed March 2023)

Wilson, S. and Swan, G. (2017). *A Complete Guide to Reptiles of Australia - 5th Edition*. Sydney, NSW. New Holland Publisher