



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5319/3
Permit Holder:	Mario Michele Giacci and Almoon Nominees Pty Ltd
Duration of Permit:	From 7 February 2015 to 2 October 2034

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

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of sand extraction.

2. Land on which clearing is to be done

Lot 265 on Deposited Plan 232768, North Boyanup.

3. Clearing authorised

The permit holder must not clear more than 4.98 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 2 October 2027.

PART II – MANAGEMENT CONDITIONS

5. Clearing not authorised – fauna habitat trees avoidance

- Prior to undertaking any *clearing* authorised under this permit, the permit holder must demarcate the areas cross-hatched red in Figure 1 of Schedule 1.
- The permit holder must not undertake any *clearing* within the areas cross-hatched red in Figure 1 of Schedule 1.

6. 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.

7. Weed and dieback management

When undertaking any *clearing* authorised under this permit, or any *revegetation* required under *condition* 10 and 11, the permit holder must take the following measures to minimise the risk of spread of *weeds* and *dieback*:

- (a) Clean earth-moving machinery of soil and vegetation prior to entering and leaving the area cross-hatched yellow in Figure 1 of Schedule 1 and the areas cross-hatched green and purple in Figure 2 of Schedule 1;
- (b) Ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area cross hatched yellow in Figure 1 of Schedule 1 and the areas cross-hatched green and purple in Figure 2 of Schedule 1;
- (c) Restrict the movement of machines and other vehicles to the limits of the area cross-hatched yellow in Figure 1 of Schedule 1 and the areas cross-hatched green and purple in Figure 2 of Schedule 1.

8. Fauna management – western ringtail possum and south-western brush-tailed phascogale

- (a) In relation to all trees to be cleared within the area cross-hatched yellow in Figure 1 of Schedule 1, the permit holder must engage a *fauna specialist* to inspect these trees immediately prior to, and for the duration of *clearing* activities, for the presence of western ringtail possum(s) (*Pseudocheirus occidentalis*) and south-western brush-tailed phascogale(s) (*Phascogale tapoatafa wambenger*).
- (b) *Clearing* activities must cease in any area where fauna referred to under *condition* 8(a) are identified until either:
 - (i) the fauna individual(s) have moved on from that area to adjoining *suitable habitat*; or
 - (ii) the fauna individual(s) have been removed by a *western ringtail possum specialist* and relocated to an area of *suitable habitat* in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*.
- (c) Where fauna are identified under *condition* 8(a), the permit holder must, within two months of undertaking any *clearing* under this permit, provide the following records to the *CEO*:
 - (i) the number and species name of individuals identified;
 - (ii) the date each individual was identified;
 - (iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iv) the relevant qualifications of the *western ringtail possum specialist* undertaking removal and relocation;
 - (v) the number and species name of individuals removed and relocated;

- (vi) the date each individual was removed and relocated;
- (vii) the method of removal;
- (viii) the location where each individual was relocated to, recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
- (ix) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

9. Wind erosion management

The permit holder must ensure that extraction activities commence within three months of the authorised *clearing* being undertaken, to reduce the risk of soil erosion by minimising the exposure time of soils prior to construction.

10. Revegetation – existing

The permit holder must:

- (a) Establish a minimum of five 10 x 10 metre quadrats within the areas previously *revegetated* in the area cross-hatched purple in Figure 2 of Schedule 1.
- (b) Engage an *environmental specialist* to monitor quadrats specified in *condition* 10(a) annually, until the completion criteria outlined in Table 3 of Schedule 2 have been met and maintained for a minimum of three years.
- (c) If the monitoring required under *condition* 10(b) indicates that the completion criteria outlined in Table 3 of Schedule 2 have not been met, undertake remedial actions for *revegetation* including:
 - (i) deliberately *planting native vegetation* within the areas cross-hatched purple in Figure 2 of Schedule 1, that will result in the completion criteria specified in Table 3 of Schedule 2 being met, ensuring only *local provenance* seeds and propagating material are used;
 - (ii) additional *weed control* activities; and
 - (iii) continue the annual monitoring of the area cross-hatched purple in Figure 2 of Schedule 1 by an *environmental specialist* until the completion criteria outlined in Table 3 of Schedule 2 are met.
- (d) Where an *environmental specialist* has determined that the completion criteria outlined in Table 3 of Schedule 2 have been met, that report is to be provided to the *CEO*.
- (e) If the *CEO* does not agree with the determination made by an *environmental specialist* under *condition* 10(d), the *CEO* may require the permit holder to repeat the remedial actions required under *condition* 10(c) and repeat the actions required under *condition* 10(d).

11. Revegetation – new

- (a) Within six months of completing sand extraction, and no later than 2 October 2028, the permit holder must *revegetate* the area cross-hatched green in Figure 2 of Schedule 1.
- (b) In undertaking the *revegetation* required under *condition* 11(a), the permit holder must:
 - (i) undertake *site preparation works* and pre-revegetation weed control activities;

- (ii) undertake *direct seeding* and *planting of native vegetation* at an *optimal time*;
 - (iii) ensure only *local provenance* seeds and propagating material is used to *revegetate*;
 - (iv) undertake annual *weed* control activities and where necessary, watering, post *direct seeding* and *planting*, to achieve the minimum completion criteria specified in Table 3 of Schedule 2;
 - (v) establish and maintain a fence on the northern boundary of the area cross-hatched green in Figure 2 of Schedule 1 within three months of commencing *revegetation* of this area;
 - (vi) establish at least five 10 x 10 metre quadrats within the area cross-hatched green in Figure 2 of Schedule 1; and
 - (vii) engage an *environmental specialist* to monitor the quadrats specified in *condition 11(b)(vi)* annually, until the completion criteria outlined in Table 3 of Schedule 2 have been met and maintained for a minimum of three years.
- (c) If the monitoring required under *condition 11(b)(vii)* indicates that the completion criteria outlined in Table 3 of Schedule 2 have not been met, the permit holder must undertake remedial actions for *revegetation* including:
- (i) deliberately *planting native vegetation* within the areas cross-hatched green in Figure 2 of Schedule 1, that will result in the completion criteria specified in Table 3 of Schedule 2 being met, ensuring only *local provenance* seeds and propagating material are used;
 - (ii) additional *weed* control activities;
 - (iii) annual monitoring of the areas cross-hatched green in Figure 2 of Schedule 1, by an *environmental specialist* until the completion criteria outlined in Table 3 of Schedule 2, are met.
- (d) Where an *environmental specialist* has determined that the completion criteria outlined in Table 3 of Schedule 2 have been met, that report is to be provided to the *CEO* within three months of that determination being made.
- (e) If the *CEO* does not agree with the determinations made by an *environmental specialist* under *condition 11(b)*, the *CEO* may require the permit holder to repeat the remedial actions required under *condition 11(c)* and repeat the actions required under *condition 11(d)*.

PART III - RECORD KEEPING AND REPORTING

12. 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 2020 (GDA2020), expressing the

No.	Relevant matter	Specifications
		<p>geographical coordinates in Eastings and Northings;</p> <p>(c) the date that the area was cleared;</p> <p>(d) the size of the area cleared (in hectares);</p> <p>(e) actions undertaken to demarcate the avoidance areas in accordance with <i>condition 5</i>;</p> <p>(f) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with <i>condition 6</i>;</p> <p>(g) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with <i>condition 7</i>;</p> <p>(h) actions taken in accordance with the fauna management requirement of <i>condition 8</i>; and</p> <p>(i) actions undertaken in accordance with <i>condition 9</i>.</p>
2.	In relation to existing <i>revegetation</i> pursuant to <i>condition 10</i>	<p>(a) the boundaries of the area <i>revegetated</i> (recorded digitally as a shapefile);</p> <p>(b) a description of any remediation works undertaken pursuant to <i>condition 10(c)</i>, and why they were required to be undertaken;</p> <p>(c) the date that completion criteria were considered to be met; and</p> <p>(d) a copy of the environmental specialist's monitoring report and determination, pursuant to <i>condition 10(d)</i>.</p>
3.	In relation to new <i>revegetation</i> pursuant to <i>condition 11</i>	<p>(a) the date that <i>revegetation</i> works began;</p> <p>(b) the boundaries of the area <i>revegetated</i> (recorded digitally as a shapefile);</p> <p>(c) the size of the areas <i>revegetated</i> (in hectares);</p> <p>(d) a description of the <i>revegetation</i> activities undertaken, including:</p> <p>(i) details of <i>direct seeding</i> and <i>planting</i>, including the applied seed rate and number of <i>plantings</i></p> <p>(ii) weed control actions</p> <p>(iii) watering actions</p> <p>(e) a list of the <i>native vegetation</i> species <i>planted</i>;</p> <p>(f) at least two photographs of the areas <i>revegetated</i> recorded annually;</p> <p>(g) results of annual monitoring against the completion criteria;</p> <p>(h) a description of any remediation works undertaken in accordance with <i>condition 11(c)</i>, and why they were required to be undertaken;</p> <p>(i) the date that completion criteria were considered to be met; and</p> <p>(j) a copy of the environmental specialist's monitoring report and determination, pursuant to <i>condition 11(d)</i>.</p>

13. Reporting

- (a) The permit holder must provide to the *CEO* on or before 30 June of each year, a written report containing:

- (i) the records required to be kept under *condition* 12; and
 - (ii) records of activities done by the permit holder under this Permit between 1 January and 31 December of the preceding calendar year.
- (b) If no *clearing* authorised under this permit has been undertaken, a written report confirming that no *clearing* under this permit has been undertaken must be provided to the *CEO* on or before 30 June of each calendar year.
- (c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under *condition* 12, where these records have not already been provided under *condition* 13(a).

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department or his/her delegates 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.
Direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
Environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent and has 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 <i>CEO</i> as a suitable environmental specialist.
EP act	<i>Environmental Protection Act 1986</i> (WA).
Fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the <i>CEO</i> as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .
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 100 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 optimal time for undertaking <i>direct seeding</i> and planting for that region.
Planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
Revegetation / Revegetate / Revegetated	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, <i>direct seeding</i> and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
Site preparation works	means management of existing site topsoil and preparation of the finished soil surface for <i>revegetation</i> , and must include: <ul style="list-style-type: none"> • deep ripping of the sand extraction pit along contours and any other areas of compaction

Term	Definition
	<ul style="list-style-type: none"> • respreading site topsoil and chipped native vegetation within the <i>revegetation</i> areas where appropriate • shallow ripping post topsoil respread within the <i>revegetation</i> areas.
Suitable habitat (western ringtail possum and phascogale)	<p>means habitat known to support western ringtail possums (<i>Pseudocheirus occidentalis</i>) and / or south-western brush-tailed phascogales within the known current distribution of these species.</p> <p>For western ringtail possums this is typically characterised by abundant foliage, presence of suitable nesting structures such as tree hollows, as well as high canopy cover and continuity.</p> <p>For south-western brush-tailed phascogales this is typically characterised by dry sclerophyll forest and open woodlands that contain hollow-bearing trees.</p>
Weeds	<p>means any plant –</p> <p>(a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or</p> <p>(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or</p> <p>(c) not indigenous to the area concerned.</p>
Western ringtail possum specialist	<p>means a fauna specialist who holds a tertiary qualification specialising in environmental science or equivalent, has a minimum of two years of work experience in western ringtail possum (<i>Pseudocheirus occidentalis</i>) identification, surveys of western ringtail possums and capture and handling of western ringtail possums, and holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i>.</p>

END OF CONDITIONS



Ray Carvalho
A/MANAGER
NATIVE VEGETATION REGULATION

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

1 October 2024

Schedule 1

The boundary of the area authorised to be cleared, the required fauna habitat avoidance areas, and the areas required for *revegetation* are shown in the maps below (Figures 1 and 2).

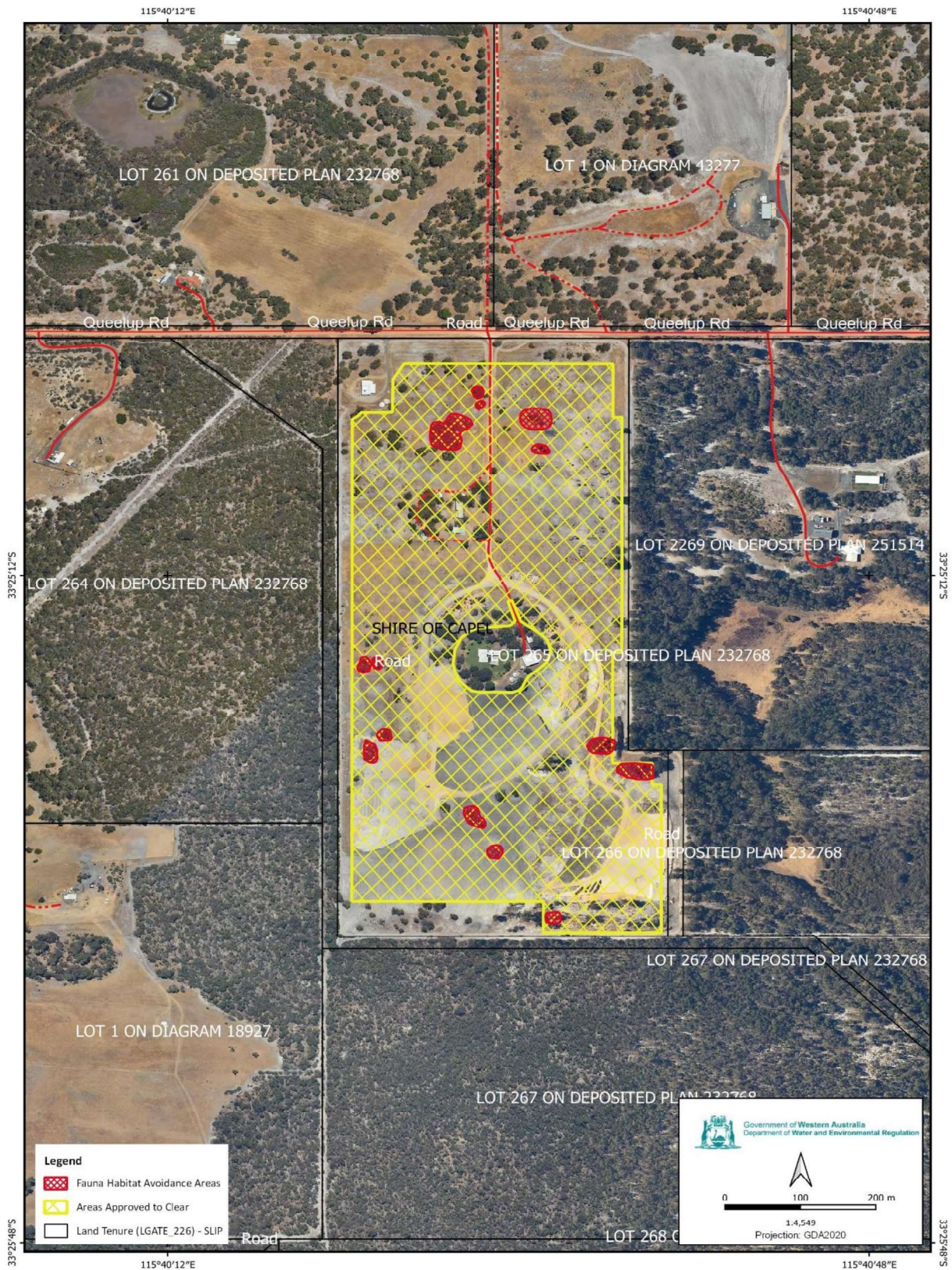


Figure 1: Map of the boundary of the area (cross-hatched yellow) within which *clearing* may occur and the areas (cross-hatched red) within which *clearing* must not occur.

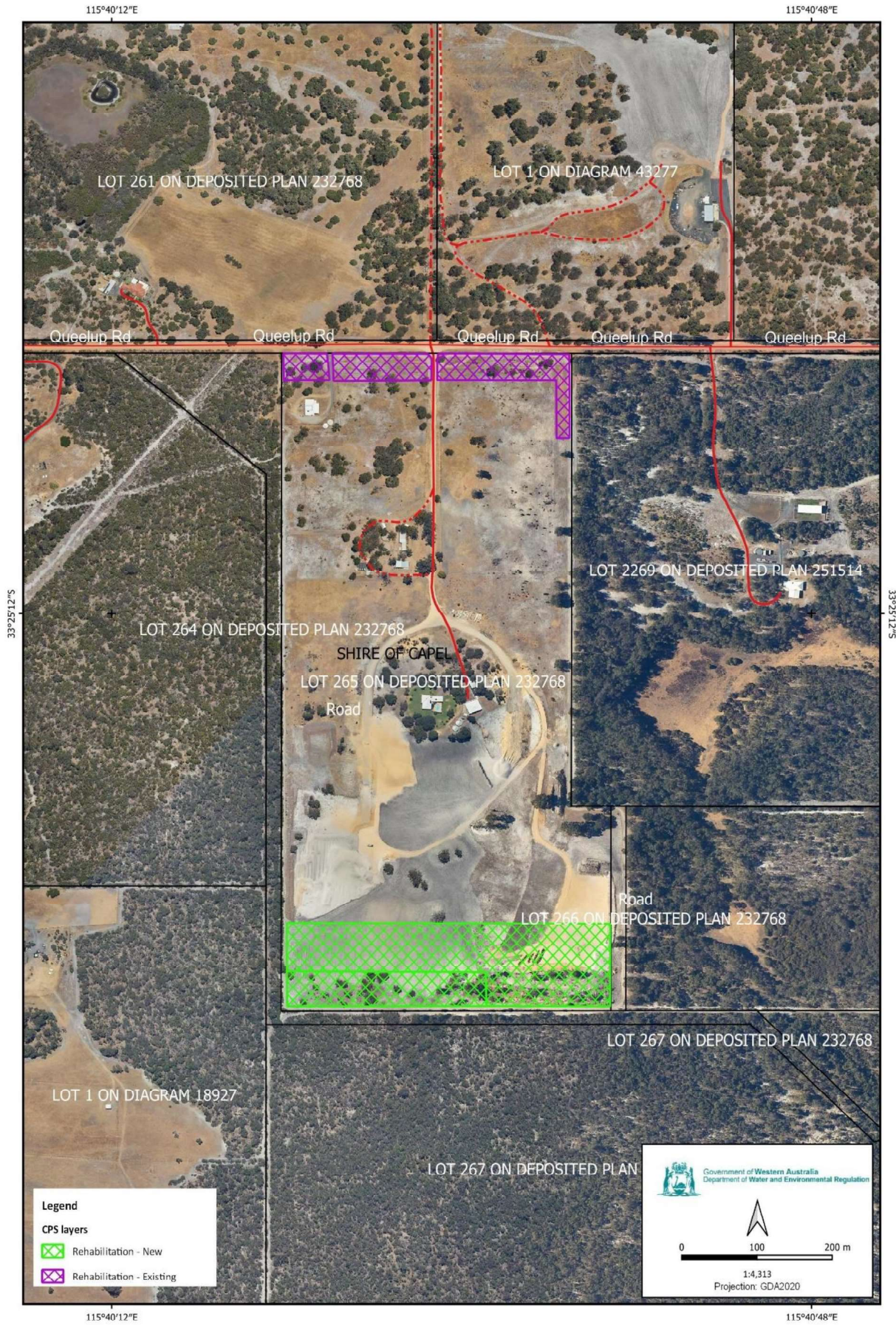


Figure 2: Map of the boundary of the areas (cross-hatched purple and green) within which revegetation must occur, in accordance with conditions 10 and 11, respectively.

Schedule 2

Table 3: Completion criteria for required *revegetation* within the areas cross-hatched purple and green in Figure 2 of Schedule 1, as referred to under *conditions* 10 and 11.

Characteristic	Completion criteria	Monitoring
Species richness	Species richness of ten or more species of <i>native vegetation</i> per 100m ² .	Annual monitoring in spring by an <i>environmental specialist</i> for a minimum of three years after the last year that plants were established. Monitoring must occur within: <ul style="list-style-type: none"> • a minimum five 10 x 10 metre quadrats in the area cross-hatched purple in Figure 2 of Schedule 1. • a minimum five 10 x 10 metre quadrats in the area cross-hatched green in Figure 2 of Schedule 1. Completion criteria must be met and maintained for three years.
Species density	Density of 2500 stems per hectare, including: <ul style="list-style-type: none"> • a minimum 600 stems of tree species comprising <i>Corymbia calophylla</i>, <i>Eucalyptus marginata</i> and / or <i>Agonis flexuosa</i>, with a minimum number of 150 stems of each of these tree species. 	
Vegetation cover	The <i>revegetation</i> areas must have no greater than 15% bare ground.	
Weeds	Weed cover of less than 15% of total species abundance on site. No Weeds of National Significance (WoNS) present. No Declared Weeds under the <i>Biosecurity and Agricultural Management Act 2007</i> present.	



Clearing Permit Decision Report

1 Application details and outcome

1.1. Amendment application details

Permit number:	CPS 5319/3
Permit type:	Purpose permit
Applicant name:	Mario Michele Giacci and Allmoon Nominees Pty Ltd
Amendment Application received:	20 May 2024
Application area:	4.98 hectares of native vegetation
Purpose of clearing:	Sand extraction
Method of clearing:	Mechanical
Property:	Lot 265 on Deposited Plan 232768
Location (LGA area/s):	Shire of Capel
Localities (suburb/s):	North Boyanup

1.2. Description of the amendment

This amendment application is to:

- increase the duration of the permit
- increase the time during which clearing can occur
- slightly revise the approved clearing boundary (no additional clearing of native vegetation proposed)
- revise the revegetation condition on the permit to account for the change in clearing boundary.

The applicant has advised that the 4.98 hectares of clearing authorised under the previously granted clearing permit, CPS 5319/1, has not been fully undertaken given delays in undertaking the sand extraction. To date, 2.98 hectares of clearing has occurred, and the applicant therefore wishes to increase the time during which clearing can occur to allow for the clearing of the remaining 2 hectares of native vegetation previously approved under CPS 5319/1.

The slight change to the approved clearing area boundary aligns with the recent (updated) development approval issued for the proposed sand extraction by the Joint Development Assessment Panel. The change in clearing boundary, from 32.15 hectares to 31.97 hectares, will not result in the clearing of additional native vegetation beyond the 4.98 hectares approved under CPS 5319/1.

1.3. Decision on application

Decision:	Granted
Decision date:	1 October 2024
Decision area:	4.98 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit amendment application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for:

- the site characteristics (see Appendix A)
- relevant datasets (see Appendix D)
- black cockatoo and western ringtail possum assessments undertaken by Astron Environmental Services (2012) and MBS Environmental (2024)
- a site inspection undertaken by the former Department of Environment and Conservation (DEC, 2012)
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix B)
- the extent of clearing (2.98 hectares of the 4.98 hectares previously approved) and revegetation undertaken to date
- that the amendment does not propose to undertake additional clearing beyond that previously approved
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3)
- that the application area has been identified as a 'Significant Geological Supply' location according to State Planning Policy 2.4, which identifies the highest priority extraction areas for basic raw materials

The assessment has not changed significantly since the assessment for CPS 5319/1, except in the case of clearing principle (b) (see section 3.2.1). Regarding principle (b), the Delegated Officer considers that the proposed clearing will result in (with consideration of the remaining 2 hectares of vegetation proposed to be cleared):

- the loss of up to 2 hectares of significant foraging habitat for black cockatoos
- the loss of up to 0.29 hectares of significant habitat for western ringtail possums.

After considering the applicant's avoidance and minimisation measures (see Section 3.1), the Delegated Officer determined that the above impacts constitute a significant residual impact. The impact to these species habitat was not identified as a significant residual impact during the assessment of CPS 5319/1.

Having considered the above significant residual impact, the applicant's implementation of the mitigation hierarchy, that the proposed amendment would not result in additional clearing to that originally approved, and consistency of the project with the planning framework (see section 3.3), the Delegated Officer determined that, on balance, it was appropriate to grant the amended clearing permit subject to appropriate revegetation actions.

The applicant has agreed to revegetate 4 hectares of previously cleared areas in the southern portion of Lot 265, with flora species that provide habitat for black cockatoos and western ringtail possums. The Delegated Officer considers that this is sufficient to address the significant residual impact in this instance (see further details in Section 4). DWER considers that the revegetation aligns with the WA Environmental Offsets Policy (2011) and WA Environmental Offsets Guideline (2014).

The Delegated Officer also considered that several of the conditions of the original permit required contemporising to align with current practice.

Subject to the below management conditions, which are included on the amended clearing permit, the Delegated Officer determined that the proposed amendment is not likely to lead to an unacceptable risk to environmental values:

- avoid, minimise and reduce the impacts and extent of clearing
- avoidance of several trees with a diameter at breast height of greater than 500 millimetres, including all trees with suitably sized nesting hollows for black cockatoos (none showed evidence of use) (see fauna habitat avoidance areas as shown on Figure 1)
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- undertake a pre-clearance search of all trees proposed for clearing for western ringtail possums and south-western brush-tailed phascogales and where found, cease clearing until the individual has moved on independently, or been removed and relocated (if required)

- continue to revegetate 2 hectares with native vegetation in the northern portion, and south-western portion of Lot 265, to account for the clearing undertaken to date, noting that the original approval required revegetation at a 1:1 ratio to re-instate native vegetation (see Figure 2)
- undertake additional revegetation of 4 hectares with native vegetation in the southern portion of Lot 265, that provides suitable habitat for black cockatoos and western ringtail possums, to address the impact to these species habitat.

1.5. Site map

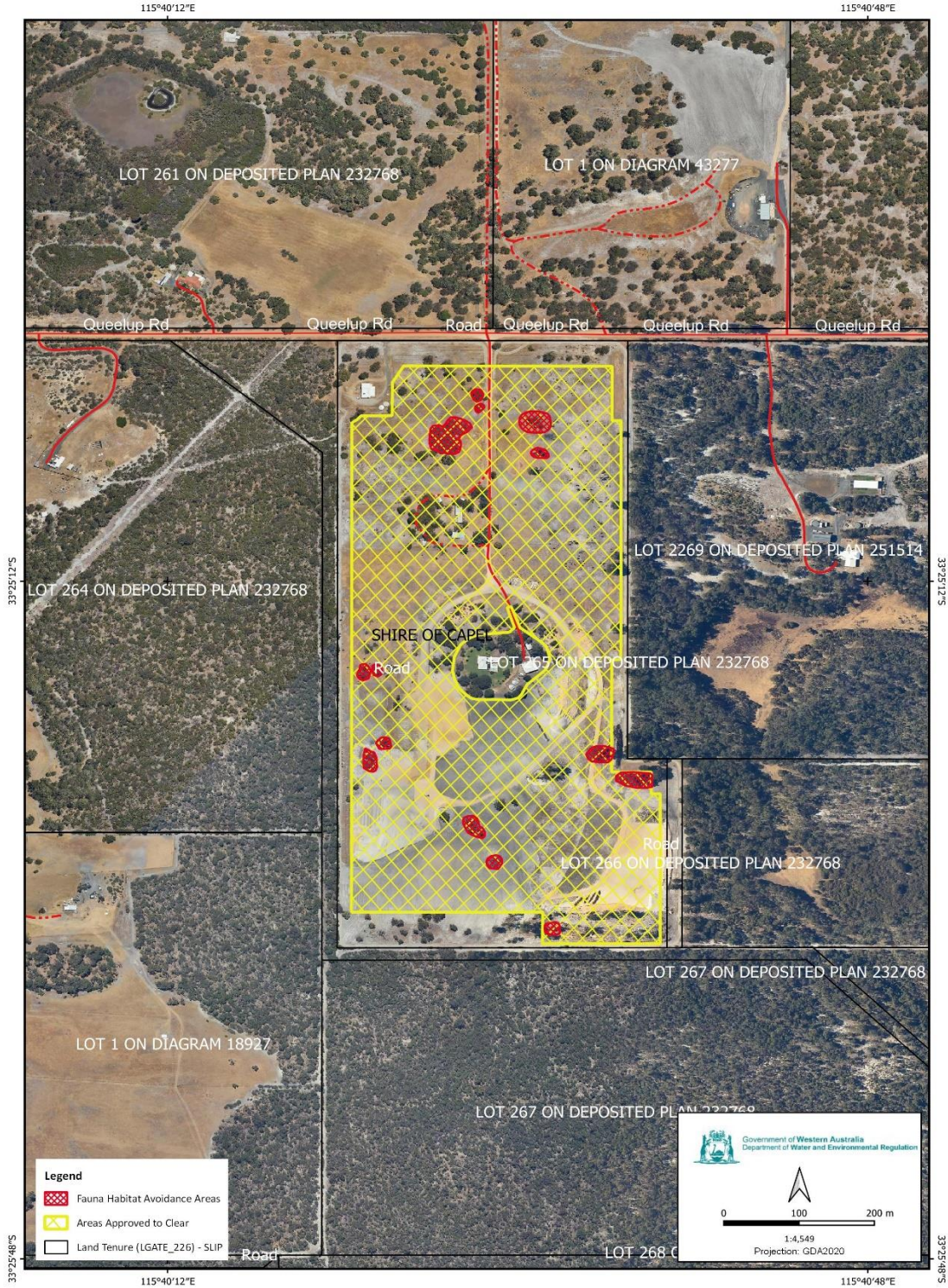


Figure 1. Map of the application area.

The area cross-hatched yellow indicates the area authorised to be cleared under the amended clearing permit. The areas cross-hatched red indicates fauna habitat areas required for avoidance.

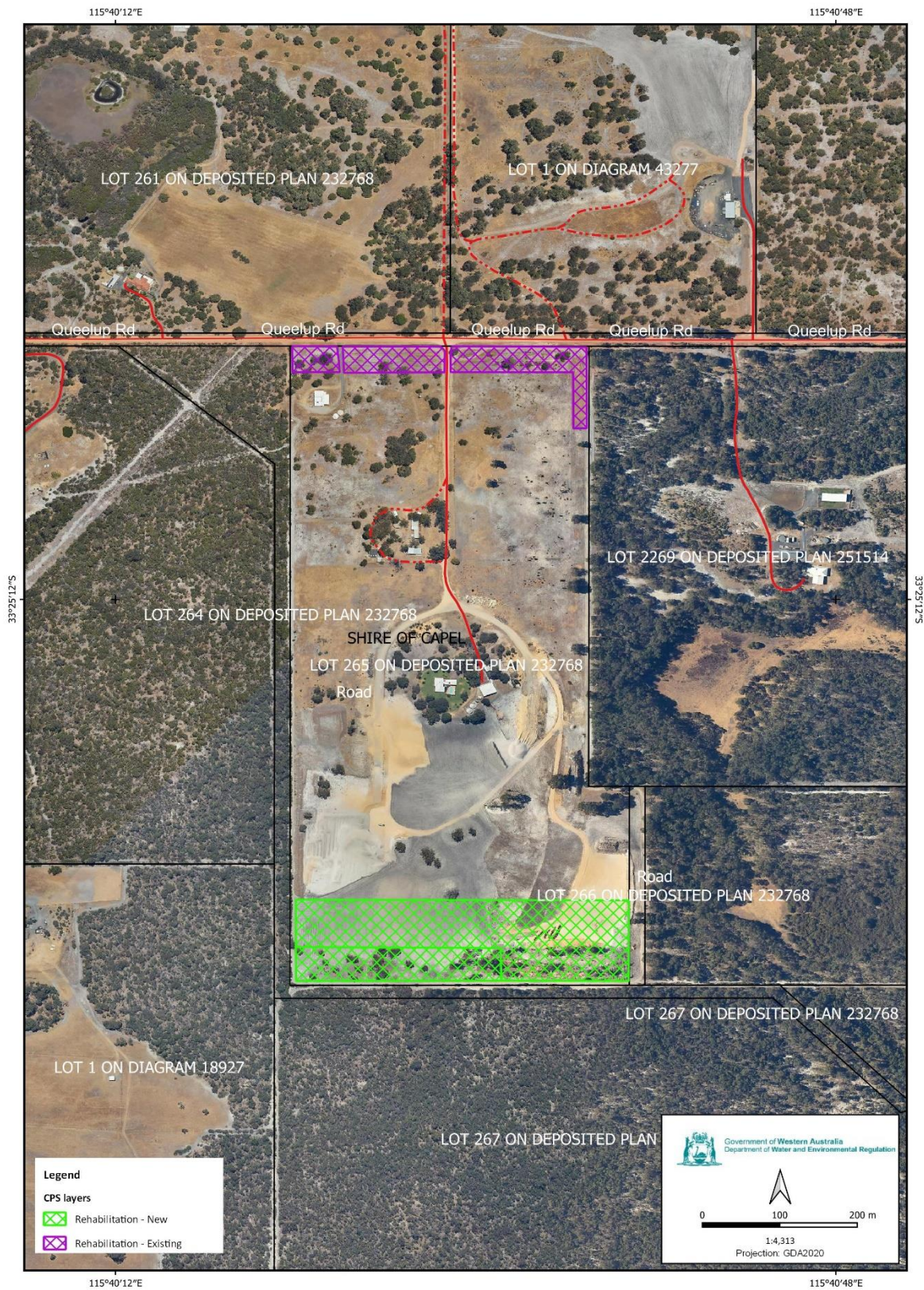


Figure 2. Map of the revegetation areas.

The areas cross-hatched purple and green indicate the areas required to be revegetated under the amended 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)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- Western Australian Environmental Offsets Metric
- 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, minimisation and mitigation measures

Avoidance and minimisation

The applicant has demonstrated avoidance and minimisation measures associated with the proposed clearing, including (MBS, 2024):

- the avoidance of trees containing suitably sized hollows for black cockatoo nesting
- the avoidance of lower lying areas of native vegetation within Lot 265
- reducing the extent of impact to trees with a suitable diameter at breast height (DBH) of greater than 500 millimetres, with a commitment to retain 15 of these trees (including 9 jarrah trees and 6 marri trees)
- reducing the extent of impact to *Agonis flexuosa*, with a commitment to retain 3 of these trees.

Mitigation

The applicant has committed to undertaking the required revegetation for areas previously cleared under clearing permit CPS 5319/1 (2.98 hectares) at a 1:1 ratio, as initially required under that permit. To date, the applicant has commenced revegetation of 1.61 hectares within the area cross-hatched purple in Figure 2 and has provided DWER with annual reports relating to the revegetation actions undertaken, in accordance with CPS 5319/1 reporting conditions. The applicant will undertake a further 1.37 hectares of revegetation within the southwestern portion of the area hatched green in Figure 2, to account for the clearing undertaken to date.

The applicant has also agreed to revegetate an additional 4 hectare area with native vegetation that provides suitable habitat for black cockatoos and western ringtail possum, to address the loss of suitable habitat for these species associated with the remaining clearing required (see Section 3.2.1). This revegetation area is shown as the area cross-hatched green in Figure 2 (except the southwest portion of this area which relates to the 1.37 hectare revegetation area described above). Therefore, the total size of the area cross-hatched green in Figure 2 that is required for revegetation is 5.37 hectares. The revegetation requirements are detailed further under section 4.

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

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix A) reveals that the assessment against the clearing principles has not changed significantly from the Clearing Permit Decision Report CPS 5319/1, with the exception of the assessment against Clearing Principle (b). Therefore, a detailed assessment against this Clearing Principle is provided below. The below assessment against Principle (b) relates only to the vegetation that remains within the application area, being 2 hectares, noting that 2.98 hectares of native vegetation (out of 4.98 hectares authorised to clear under clearing permit CPS 5319/1) has been cleared to date.

The Delegated Officer considered that the extent to which the impacts of the proposed clearing present a risk to conservation, or land and water resource values, remains largely unchanged from the original assessment and can be found in the Clearing Permit Decision Report CPS 5319/1 (DER, 2012).

3.2.1 Biological values (fauna) – Clearing Principle (b)

The application area has been subject to the following fauna assessments and site inspections:

- Astron Environmental Services (Astron, 2012) - *Black Cockatoo and Western Ringtail Possum Assessment*
- DEC (2012) – Site inspection
- MBS Environmental (MBS, 2024) - *Black Cockatoo and Western Ringtail Possum Habitat Assessment*

The aim of both fauna assessments was to identify the presence of suitable nesting trees for black cockatoos and any evidence of use by western ringtail possums (hollows, dreys, scats). The DEC site inspection was undertaken to identify vegetation condition, composition and broad fauna habitat values. The follow up MBS fauna assessment was considered necessary to support the amendment application, noting the time since the Astron assessment, and noting that 2.98 hectares of the 4.98 hectares of native vegetation within the application area has been cleared since the Astron assessment (in accordance with clearing permit CPS 5319/1).

The above supporting information identified that the current application area comprises largely scattered *Eucalyptus marginata* (jarrah), *Corymbia calophylla* (marri), and *Agonis flexuosa* trees over a completely degraded midstorey and understorey, including occasional *Banksia* sp., *Nuytsia floribunda*, *Xanthorrhoea preisi*, and *Macrozamia riddlei*, over pasture grasses (Astron, 2012; DEC, 2012; MBS, 2024).

Noting the findings of the abovementioned supporting information, the site characteristics (Appendix A), and the habitat preferences of the conservation significant fauna species recorded in the local area (10-kilometre radius), the application area is considered to contain suitable habitat for the following conservation listed fauna species:

- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) (Vulnerable – BC Act and EPBC Act)
- *Zanda baudinii* (Baudin's cockatoo) (Endangered – BC Act and EPBC Act)
- *Zanda latirostris* (Carnaby's cockatoo) (Endangered – BC Act and EPBC Act)
- *Phascogale tapoatafa wambenger* (south-western brush-tailed phascogale) (Conservation Dependant – BC Act)
- *Isodon fusciventer* (quenda) (Priority 4 listed – Department of Biodiversity, Conservation and Attractions)

Black cockatoos (forest red-tailed black cockatoo, Baudin's cockatoo and Carnaby's cockatoo)

Black cockatoos are known to nest in hollows of live and dead trees, including marri, jarrah, karri (*Eucalyptus diversicolor*), wandoo (*Eucalyptus wandoo*), tuart (*Eucalyptus gomphocephala*), flooded gum (*Eucalyptus rudis*), and other *Eucalyptus* spp. (DAWE, 2022). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable DBH to develop a nest hollow, where the required DBH to develop a nest hollow is 500 millimetres for most tree species (DAWE, 2022).

The Astron assessment identified several trees with suitably sized hollows for nesting by black cockatoos, however no evidence of nesting black cockatoos was identified (Astron, 2012).

This MBS assessment, undertaken to confirm the current extent of potential nesting habitat within the application area, identified (MBS, 2024):

- 27 trees with a DBH of greater than 500 millimetres, comprising 19 jarrah, 6 marri and 2 tuart trees
- 4 trees with hollows, including one jarrah tree with a hollow deemed suitable for nesting black cockatoos, and one jarrah tree with two hollows that, based on their size, could provide suitable nesting habitat in the near future - no sign of nesting was observed in the hollows of either tree.

Based on the MBS assessment findings, the applicant has committed to avoiding:

- the two jarrah trees with hollows comprising current and potential (in the near future) suitable nesting habitat
- an additional 7 jarrah and 6 marri trees with a DBH of 500 millimetres or greater.

The Noting the above, the proposed clearing is not expected to result in significant impacts to current breeding habitat.

Black cockatoos forage on a range of plant species, predominantly the seeds and flowers of marri, jarrah and proteaceous species (e.g., *Banksia* spp., *Hakea* spp. and *Grevillea* spp.) (DAWE, 2022). The vegetation proposed for clearing includes primary foraging habitat for all three species of black cockatoo in the form of jarrah, marri, and *Banksia* sp. The Astron assessment identified foraging evidence on site in the form of chewed marri nuts (most likely Carnaby's cockatoo) (Astron, 2012).

The importance of foraging habitat for black cockatoos increases when it occurs within foraging distance of nesting sites (around 12 km) as it supports breeding effort (EPA 2019). Food resources within the range of roost sites are also important to sustain populations of black cockatoos (EPA 2019). There is one potential and one confirmed nesting sites for Carnaby's cockatoo within 12 km of the application area, and several known black cockatoo roost sites within 6 km of the application area. This indicates the foraging habitat present within the application area may support breeding effort and roosting birds.

Noting the presence of primary foraging habitat for black cockatoos within the application area, the proximity to known black cockatoo roost sites and breeding sites, previous evidence of foraging within the application area, and the cumulative loss of black cockatoo foraging habitat on the Swan Coastal Plain, the foraging habitat proposed for clearing is considered significant. Therefore, the proposed clearing constitutes a significant residual impact to black cockatoo foraging habitat.

Detailed foraging habitat mapping of the remaining vegetation proposed for clearing was not undertaken to support the amendment application. Therefore, DWER has undertaken a precautionary approach to quantifying the impact to black cockatoo foraging habitat in this instance, which is based on the findings of the two previous fauna assessments and DEC site inspection. DWER has therefore considered the impact to the entirety of the remaining 2 hectares of native vegetation proposed for clearing, to be a significant residual impact.

Western ringtail possum (WRP)

The current distribution of the WRP is patchy and largely restricted to the moister south-western corner of Western Australia, especially near coastal areas of *Agonis flexuosa* (peppermint) woodland and peppermint/tuart associations from the Australind/Eaton area to the Waychinicup National Park. The application area is within the known distribution of the WRP.

According to the WRP recovery plan (Parks and Wildlife, 2017), habitat critical to survival for WRP is not well understood and is therefore based on the habitat variables observed where WRP are most commonly recorded. Vegetation communities critical to the species include (Parks and Wildlife, 2017); peppermint woodlands, jarrah and marri forests and woodlands, coastal heath, myrtaceous heaths and shrublands, Bullich (*Eucalyptus megacarpa*) dominated riparian zones, and karri forest.

The Astron assessment and MBS assessment did not identify any evidence of WRP within the application area (Astron, 2012; MBS, 2024). However, the former DEC site inspection identified a WRP scat under a stand of peppermint trees within the centre portion of the application area (DEC, 2012)

The application area includes suitable habitat for WRP in the form of peppermint, jarrah, marri and tuart trees which provide potential refuge and foraging habitat. Specifically, the application area includes some mature peppermint trees that provide opportunities for drey construction, larger jarrah and marri trees with small hollows that may provide nesting and refuge opportunities, as well as larger jarrah, marri and two larger tuart trees which provide foraging opportunities. While the application area does not provide a contiguous woodland habitat, or substantial canopy connectivity for WRP, noting the presence of preferred refuge and foraging habitat in the form of peppermint and larger jarrah, marri and tuart trees, it is considered that these trees provide significant habitat for WRP.

Noting that the applicant has committed to retaining 3 peppermint trees, and 6 marri and 7 jarrah trees with a DBH of 500 millimetres or greater, the significant residual impact to WRP habitat is 0.29 hectares (equivalent to 29 trees;

comprising 17 peppermint trees, 10 jarrah trees and 2 tuart trees). There is also a risk of fauna strike to WRP should any individuals be using the application area at the time of clearing.

Quenda and south-western brush-tailed phascogale

The vegetation within the application area is not likely to provide significant habitat for quenda and south-western brush-tailed phascogale, given the scattered occurrence of the vegetation on site and lack of vegetative cover to provide protection from predation for these species. However, these species have the potential to transiently visit the application area when moving between patches of remnant vegetation in the landscape. Therefore, the proposed clearing represents a risk of fauna strike to these species. Fauna management measures will assist in mitigating this risk.

Ecological linkages

The vegetation within the application area may provide a stepping stone for fauna moving between larger remnants within the local area. However, ecological linkage values will not be severed by the proposed clearing. This is also noting that the proposed revegetation of the southern portion of Lot 265, will re-instate linkage values between remnant vegetation immediately east and west of the application area.

There is a risk that the proposed clearing will increase the spread of weeds and dieback into bordering native vegetation in adjacent properties. Weed and dieback management measures will assist in mitigating this risk.

Conclusion

Based on the above assessment, the proposed clearing will result in:

- the loss of up to 2 hectares of significant foraging habitat for black cockatoos
- the loss of up to 0.29 hectares of significant habitat for WRP
- a risk of fauna strike to any fauna using the application area at the time of clearing, particularly, WRP, south-western brush-tailed phascogale and quenda.

The above impacts to WRP and black cockatoo habitat are considered a significant residual impact. The revegetation of 4 hectares of a completely degraded area within the southern portion of the application area (see the area cross-hatched green in Figure 2), with preferred foraging habitat for black cockatoos and habitat for WRP, will ensure that no significant residual impact remains for WRP and black cockatoo habitat.

Conditions

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

- avoid, minimise and reduce the impacts and extent of clearing
- avoidance of several trees with a diameter at breast height of greater than 500 millimetres, including all trees with suitably sized nesting hollows for black cockatoos
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- undertake a pre-clearance search of all trees proposed for clearing for western ringtail possums and south-western brush-tailed phascogale and where found, cease clearing until the individual has moved on independently, or been removed and relocated (if required)
- continue to revegetate 2 hectares with native vegetation in the northern portion, and south-western portion of Lot 265, to account for the clearing undertaken to date, noting that the original approval required revegetation at a 1:1 ratio to re-instate native vegetation (see Figure 2)
- undertake additional revegetation of 4 hectares with native vegetation in the southern portion of Lot 265, that provides suitable habitat for black cockatoos and western ringtail possums, to address the impact to these species habitat.

3.3. Relevant planning instruments and other matters

The applicant has obtained renewed development approval for the proposed sand extraction from the Joint Development Assessment Panel (JDAP). The development approval includes conditions relating to rehabilitation requirements, weed and dieback management, no storage of hydrocarbons on site, staged extraction, maximum stockpile volumes and soil stabilisation (Development Assessment Panels, 2023).

The Shire of Capel was invited to provide comment on the proposed amendment to the clearing permit and advised that the proposed clearing is consistent with the JDAP planning approval dated 9 May 2023, which is valid until 9 May 2031 (Shire of Capel, 2024).

In considering the necessity of proposed clearing for the amendment, the Delegated Officer considered that the application area is located with a State Planning Policy 2.4 area identified as a 'Significant Geological Supplies' area for sand. These areas have been allocated the highest priority extraction sites to ensure the long-term sustainability of the basic raw materials (BRM) industry. The Policy outlines that these areas should be used as the initial sources for BRM materials, as they have been selected based on environmental values, resource conflicts or for planning reasons.

The application area is within the Bunbury Groundwater area proclaimed under the Rights in Water and Irrigation (RIWI) Act 1914. The applicant has previously advised that sand extraction below the water level is not proposed, and that the take of groundwater is not required for the sand extraction operations. The development approval requires that a minimum 2-metre separation distance to the groundwater shall be maintained for the life of the extractive industry.

There are no Aboriginal Sites of Significance mapped within the local 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.

4. Revegetation actions

The original clearing permit for this project (clearing permit CPS 5319/1), authorised the clearing of 4.98 hectares of native vegetation. As a condition of the permit, the applicant was required to revegetate 4.98 hectares (1:1 ratio to that being cleared) of completely degraded land within Lot 265, largely in the form of linear strips along the northern, southern and eastern boundary of the property, which was consistent with the requirements of the development approval at that time.

Since the grant of CPS 5319/1, the applicant has undertaken 2.98 hectares of clearing (out of the 4.98 hectares authorised), and 1.61 hectares of revegetation (within the area cross-hatched purple in Figure 2). The applicant has provided annual reporting for the 1.61 hectares of revegetation undertaken to date in accordance with CPS 5319/1.

The Delegated Officer considered it appropriate in this instance to require the applicant to continue to revegetate an area equivalent to the area cleared to date. Therefore, it is considered that an additional 1.37 hectares of revegetation is required to account for the 2.98 hectares of native vegetation cleared to date. DWER considers that this revegetation should occur within the southwestern portion of Lot 265, which together with the additional revegetation actions described below, would provide a consolidated area of remnant vegetation that links adjacent vegetation immediately east and west. The 1.37 hectares of revegetation required represents the southwest portion of the area cross-hatched green in Figure 2.

DWER has assessed the environmental values of the remaining 2 hectares of native vegetation proposed to clear (previously authorised but not undertaken to date), in accordance with current practice. The assessment has identified that the 2 hectares of native vegetation proposed for clearing provides significant foraging habitat for black cockatoos and includes 0.29 hectares of significant habitat for WRP. After consideration of the applicant's avoidance and minimise measures, the Delegated Officer considers that the loss of this habitat represents a significant residual impact that must be addressed, through either onsite revegetation actions, or an environmental offset.

To address the above significant residual impacts, the applicant has agreed to revegetate 4 hectares of largely cleared land (some of which forms part of the sand extraction area) within the southern portion of Lot 265 (see area cross-hatched green in Figure 2), with native vegetation that provides suitable foraging habitat for black cockatoos and suitable habitat for WRP. As described above, it is considered that this revegetation area is appropriate as it is strategically located between remnant vegetation east and west and once revegetated will provide a consolidated patch of native vegetation that provides WRP and black cockatoo habitat.

An assessment of the required revegetation was undertaken using the WA Environmental Offsets Metric and having consideration for the Environmental Offsets Policy (2011) and the Environmental Offsets Guidelines (2014). The calculation identified that the revegetation of 4 hectares of largely cleared land within the southern portion of Lot 265, with native vegetation that provides suitable foraging habitat for black cockatoos and suitable habitat for WRP, is adequate to ensure that no significant residual impacts remain. This revegetation requirement is conditioned on the clearing permit, and is subject to specific completion criteria.

It is noted that the above revegetation areas do not completely align with the revegetation areas referred to in the JDAP development approval for the sand extraction. Specifically, the development approval requires the revegetation of the eastern boundary of the property, to maintain a vegetative buffer to neighbouring properties. Given that the location of this revegetation area does not represent a strategic location from an environmental outcome perspective (specifically regarding re-instating WRP and black cockatoo habitat), DWER has deviated from the development approval requirement and instead required revegetation of the southern portion of Lot 265.

End

Appendix A. Site characteristics

A.1 Site characteristics

Characteristic	Details
Local context	<p>The application area is within the intensive land use zone of Western Australia, within the northern portion of the Shire of Capel and around 8 kilometres southeast of the Bunbury city centre.</p> <p>The application area is within the southern portion of the Swan Coastal Plain and occurs within a broader landscape that has been highly disturbed for rural land uses. However, it is bordered immediately to the east and west by remnant vegetation.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the application area) retains around 26.7 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area does not form part of any formally mapped ecological linkages. A southwest regional ecological linkage is mapped around 600 metres south of the application area.
Conservation areas	The nearest DBCA managed conservation area is the North Boyanup Nature Reserve located approximately 1.7 kilometres east of the application area.
Vegetation description	<p>A previous fauna assessment (Astron, 2012), a site inspection (DEC, 2012), and a recent fauna assessment (MBS, 2024) indicates that the application area has been previously extensively cleared to provide pasture for stock, with the remaining vegetation largely comprising scattered <i>Eucalyptus marginata</i> (jarrah), <i>Corymbia calophylla</i> (marri), and <i>Agonis flexuosa</i> trees over a completely degraded midstorey and understorey, including occasional <i>Banksia</i> sp., <i>Nuytsia floribunda</i>, <i>Xanthorrhoea preisi</i>, and <i>Macrozamia ridlei</i>, over pasture grasses (Astron, 2012; DEC, 2012; MBS, 2024).</p> <p>This is partly consistent with the overstorey species described for Hedde vegetation complexes mapped over the application area (Hedde et al, 1980):</p> <ul style="list-style-type: none"> • Bassendean Complex Central and South – woodland of <i>Eucalyptus marginata</i>, <i>Allocasuarina fraseriana</i>, <i>Banksia</i> species to low woodland of <i>Melaleuca</i> species, and sedgelands on the moister sites. This area includes the transition of <i>Eucalyptus marginata</i> to <i>Eucalyptus todtiana</i> in the vicinity of Perth. • Southern River Complex - open woodland of <i>Corymbia calophylla</i>, <i>Eucalyptus marginata</i> and <i>Banksia</i> species with fringing woodland of <i>Eucalyptus rudis</i>, <i>Melaleuca raphiophylla</i> (Swamp Paperbark) along creek beds.
Vegetation condition	<p>Based on the previous fauna assessment (Astron, 2012), a DEC site inspection (DEC, 2012), and a recent fauna assessment (MBS, 2024), the application area is considered to be in a degraded to completely degraded (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C..</p>
Climate	The climate experienced in the area is a Mediterranean climate, with dry, hot summers and cool, wet winters.
Soil and landform description	The soil and landform of the application area are largely mapped as Bassendean B1b and B1 phases, described as very low relief dunes of undulating sandplain with deep bleached grey sands.
Land degradation risk	The abovementioned soil types within the application area are mapped as having a low risk of erosion resulting from water erosion and flooding; a medium risk of erosion resulting from salinity and waterlogging; and a high risk of erosion resulting from wind erosion and phosphorus export (DPIRD, 2022).
Waterbodies	According to available datasets, no wetlands or waterbodies transect the application area. The closest mapped wetland to the application area is a multiple use wetland around 85 metres east within the neighbouring property.

Characteristic	Details
Hydrogeography	The application area is within the Bunbury Groundwater Area proclaimed under the <i>R/W/ Act 1914</i> . Groundwater salinity within the application area is mapped between 1000-3000 milligrams per litre total dissolved solids.
Flora	According to available datasets there are records of 8 threatened and 30 priority flora species in the local area. None of these species have been recorded within the application area, and the application area is unlikely to provide suitable habitat for any of these species.
Ecological communities	The application area includes a mapped occurrence of the Banksia Woodlands of the Swan Coastal Plain ecological community (EPBC Act-listed TEC/ BC Act-listed Priority Ecological Community (PEC-Priority 3). The area where this TEC/PEC is mapped is devoid of native vegetation and the vegetation proposed for clearing is not considered representative of this community.
Fauna	According to available datasets a total of 33 threatened or priority fauna species have been recorded within the local area (10-kilometre radius). Those considered likely to occur within the application area are listed below under Appendix B.3.

A.2 Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Hedde vegetation complex Bassendean Complex - Central and South **	87,476.26	23,508.66	26.87	4,377.36	5
Hedde vegetation complex - Southern River **	58,781	10,832	18.42	940.35	1.6
Local area (calculation - delete if not required)					
10km radius	25,231	6,741	26.7	-	-

*Government of Western Australia (2019b)

**Government of Western Australia (2019a)

A.3 Fauna analysis table

The below fauna are considered to have the potential to occur within the application area, based on relevant datasets, biological surveys, site inspection information and the site characteristics.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]
Forest red-tail black cockatoo (<i>Calyptorhynchus banksia naso</i>)	VU	Y	Y
Carnaby's black cockatoo (<i>Zanda latirostris</i>)	EN	Y	Y
Baudin's cockatoo (<i>Zanda baudinii</i>)	EN	Y	Y
Western ringtail possum (<i>Pseudocheirus occidentalis</i>)	CR	Y	Y
South-western brush-tailed phascogale (<i>Phascogale tapoatafa wambenger</i>)	CD	Y	Y
Quenda (<i>Isoodon obesulus fusciventer</i>)	P4	Y	Y

Appendix B. 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> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The vegetation proposed for clearing is in a degraded to completely degraded (Keighery, 1994) condition and comprises scattered native vegetation over pasture. While the vegetation provides habitat value for conservation listed fauna (see section 3.2.1) it does not represent any known conservation listed ecological communities, is unlikely to include conservation listed flora, and is not likely to comprise a high level of biodiversity.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	No
<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 vegetation proposed for clearing provides significant habitat for western ringtail possums and black cockatoos. The clearing permit includes conditions that require revegetation actions to address the impact to these species' habitat, along with measures to reduce the risk of fauna strike during clearing.</p>	<p>At variance</p> <p>(differs from CPS 5319/1)</p>	Yes (see section 3.2.1)
<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>The vegetation proposed for clearing is in a degraded to completely degraded (Keighery, 1994) condition and is unlikely to contain any threatened flora listed under the <i>Biodiversity Conservation Act 2016</i> or <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	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>While a portion of the previously cleared application area (currently devoid of native vegetation) is mapped as an occurrence of the Banksia Woodlands of the Swan Coastal Plain federally listed threatened ecological community, the vegetation proposed for clearing is not considered representative of this community, based on a lack of dominance of <i>Banksia</i> species on site and that the vegetation condition does not meet the conditions thresholds or patch sizes set for this community. The application area is not considered to be representative of any other known threatened ecological communities.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	No
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 national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750, below which species loss appears to accelerate exponentially at an ecosystem level</p>	<p>May be at variance</p> <p>(as per CPS 5319/1)</p>	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>(Commonwealth of Australia 2001). The Environmental Protection Authority (EPA) recognises the Bunbury Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008). The application area is located within the mapped extent of the Greater Bunbury Region Scheme constrained area.</p> <p>The application area is located within the Swan Coastal Plain bioregion which retains around 38.6 per cent of its pre-European vegetation extent. The application area is within the mapped Bassendean Complex – Central and South, and Southern River vegetation complexes which retain around 26.9 and 18.4 per cent of their pre-European extent, respectively. The local area retains around 26.7 per cent native vegetation cover. Noting the vegetation proposed for clearing provides significant habitat for conservation listed fauna, it is considered a significant remnant.</p> <p>The local area is highly cleared, however given the application area occurs within a constrained area whereby the vegetation extents outlined above are all greater than the 10 percent threshold, an offset or revegetation action is not required to specifically address the impact to significant vegetation within an extensively cleared area. However, DWER considers that the required revegetation to address impacts to black cockatoo and western ringtail possum habitat will have the effect of re-instating significant native vegetation in an extensively cleared area, including re-instating linkage values between remnant vegetation within neighbouring properties.</p>		
<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>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	<p>No</p>
<p>Environmental value: land and water resources</p>		
<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 watercourses or wetlands have been recorded within the application area, the proposed clearing is unlikely to impact on riparian vegetation.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	<p>No</p>
<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 within the application area are highly susceptible to wind erosion. While the proposed clearing of scattered native vegetation within a largely historically cleared area is not likely to result in appreciable land degradation, as a condition of the clearing permit, the applicant will be required to undertake extraction activities within 3 months of clearing to reduce the exposure time of bare soils. Any erosion risks that exist as part of the end land use have been considered within the JDAP development approval for the extractive industry.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	<p>No</p>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (i):</u> “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.”</p> <p><u>Assessment:</u></p> <p>Given no watercourses or wetlands are recorded within the application area and the existence of a firebreak and vegetative buffer between the application area and the closest wetland around 85 metres east, the proposed clearing of scattered vegetation is unlikely to impact on the quality of surface water. The applicant has also committed to avoiding clearing (and extraction) within slightly lower lying areas that exist towards the eastern boundary of Lot 265, which are the areas closest to the mapped wetland 85 metres east (marked as avoidance areas within Figure 2).</p> <p>The proposed clearing of scattered native vegetation in a degraded to completely degraded (Keighery, 1994) condition across the broader 31.97-hectare footprint area is not likely to impact on the quality of groundwater.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	No
<p><u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment:</u></p> <p>Given the application area is largely mapped as highly permeable soils, the proposed clearing of scattered vegetation across the broader 31.97-hectare footprint area is not likely to increase the incidence or intensity of flooding.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 5319/1)</p>	No

Appendix C. Vegetation condition rating scale

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

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

Condition	Description
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 D. Sources of information

D.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- IBRA Vegetation Statistics
- Imagery
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- 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

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

D.2. References

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