GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10852/1

File Number: DWERVT17243

Duration of Permit: From 9 May 2026 to 9 May 2041

ADVICE NOTE:

In relation to condition 7 of this Permit, it is noted that the conservation of 7.66 hectares of Lot 751 on Deposited Plan 49008, Beelerup, will be attributed to the offset for this project. The nominated 7.66-hectare area contains foraging habitat for black cockatoo species and habitat for western ringtail possum, in addition to other environmental values.

PERMIT HOLDER

Smith Sands Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 751 on Deposited Plan 49008, Beelerup

AUTHORISED ACTIVITY

The permit holder must not clear more than 8.42 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 9 May 2031.

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:

(a) conduct *clearing* under this permit in one direction from northwest to southeast, towards adjacent *native vegetation* and away from existing cleared areas;

(b) allow reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity..

5. Wind erosion management

The permit holder must commence sand extraction no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

6. Revegetation and rehabilitation – application area

(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) Within twelve (12) months of completing each sand *extraction stage*, the permit holder must progressively *revegetate* areas within that *extraction stage* by implementing and adhering to the *Revegetation Plan,* including but not limited to the following actions for each *extraction stage*:

(i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;

(ii) ripping the ground on the contour to remove soil compaction;

(iii) ripping the pit floor and contour batters within the extraction site;

(iv) laying the vegetative material and topsoil retained under condition 6(a) on the cleared area(s);

(v) undertaking *direct seeding* and/or *planting* of *native vegetation* that will result in *black cockatoo species foraging habitat* and *suitable habitat* for western ringtail possum (*Pseudocheirus occidentalis*) at an *optimal time*;

(vi) ensuring only *local provenance* seeds and propagating material is used to *revegetate*;

(vii) undertaking 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;

(viii) establish at least three 10 x 10 metre quadrats within each relevant *extraction stage*; and

(ix) engage an *environmental specialist* to monitor the quadrat(s) specified in condition 6(b)(viii) annually, until the completion criteria outlined in Table 3 of Schedule 2 have been met and maintained for that *extraction stage* for a minimum of three years.

(c) If the monitoring required under condition 6(b)(ix) indicates that the completion criteria outlined in Table 3 of Schedule 2 have not been met for an *extraction stage*, the permit holder must undertake remedial actions for *revegetation* including:

(i) deliberately *planting native vegetation* within the area relevant to that *extraction stage* 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 within the area relevant to that *extraction stage*; and

(iii) annual monitoring of the area relevant to that *extraction stage* 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 for that *extraction stage*, 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 6(d), the *CEO* may require the permit holder to repeat the remedial actions required under condition 6(c) and repeat the actions required under condition 6(d).

7. Offset – Conservation Covenant

(a) Within 24 months of commencement of clearing and no later than 9 May 2028, the permit holder must:

(i) give a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945*, setting aside the area cross hatched red in Figure 2 of Schedule 1 for the protection and management of vegetation in perpetuity; and

(ii) provide to the *CEO* a copy of the executed conservation covenant.

(b) Within three (3) months of the conservation covenant being established under condition 7(a), the permit holder must construct a fence enclosing the area cross hatched red in Figure 2 of Schedule 1.

(c) The fence constructed in accordance with condition 7(b) must allow for the movement of wildlife by being raised 15 centimetres from the ground.

(d) The permit holder must notify the *CEO* upon completion of the fence constructed in accordance with conditions 7(b) and 7(c).

8. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to 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; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3; (g) actions taken in accordance with condition 4; (h) actions taken in accordance with condition 5; and (i) actions undertaken in accordance with condition 7.
2.	In relation to the *revegetation* and *rehabilitation* actions pursuant to condition 6 of this permit	(a) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or

No.	Relevant matter	Specifications
		decimal degrees; (b) a description of the *revegetation* and *rehabilitation* activities undertaken; (c) *weed* control measures undertaken; (d) the size of the areas *revegetated* and *rehabilitated* (in hectares); (e) the species composition, structure and density of *revegetation* and *rehabilitation* areas; (f) assessments of the *revegetation* and *rehabilitation* against criterion outlined in Table 3 of Schedule 2; and (g) any remedial actions undertaken in accordance with condition 6(c).

9. Reporting

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

(i) of records required under condition 8 of this permit; and

(ii) concerning 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 was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.

(c) Prior to 8 February 2041, the permit holder must provide to the *CEO* a written report of records required under condition 8 of this permit, where these records have not already been provided under condition 9(a) of this permit.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
black cockatoo foraging habitat	means native vegetation species that provide foraging habitat for *black cockatoo species* as specified in the *Referral guideline for 3 WA threatened black cockatoo species*
black cockatoo species	means one or more of the following species: (a) *Calyptorhynchus lateriosis* (Carnaby's cockatoo); (b) *Calyptorhynchus baudinii* (Baudin's cockatoo); and/or (c) *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* 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.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 2.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
extraction stage	means the areas mapped in Figure 3 and described in Table 2 of the *Revegetation Plan* as zones 1 and 2 of the proposed extraction works.
fill	means material used to increase the ground level, or to fill a depression.
foraging habitat (black cockatoo species)	means foraging species for the black cockatoos as in the *Referral guideline for 3 WA threatened black cockatoo species* (Department of Agriculture, Water and Environment, 2022).
local provenance	means *native vegetation* seeds and propagating material from natural sources within 50 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 from April to July for undertaking planting and

Term	Definition
	seeding.
planted/planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
Revegetation Plan	Means the document 'Extractive Industry (Sand) Revegetation Plan, Lot 751 Donnybrook-Boyup Brook Road, Beelerup WA, Version 1.3', prepared by DBCEC Earthmoving Contractors (February 2026).
suitable habitat (western ringtail possum)	means habitat known to support western ringtail possums (*Pseudocheirus occidentalis*) within the known current distribution of the species, typically characterised by abundant foliage, presence of suitable nesting structures such as tree hollows, as well as high canopy cover and continuity. Known habitat includes peppermint (*Agonis flexuosa*) dominated woodlands, jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) forests, riparian vegetation with a canopy of Bullich (*Eucalyptus megacarpa*) or flooded gum (*Eucalyptus rudis*), karri (*Eucalyptus diversicolor*) forests, sheoak (*Allocasuarina fraseriana*) dominated woodlands, and other stands of myrtaceous trees growing near swamps, watercourses or floodplains.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Mathew Gannaway
SENIOR MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

15 APRIL 2026

SCHEDULE 1

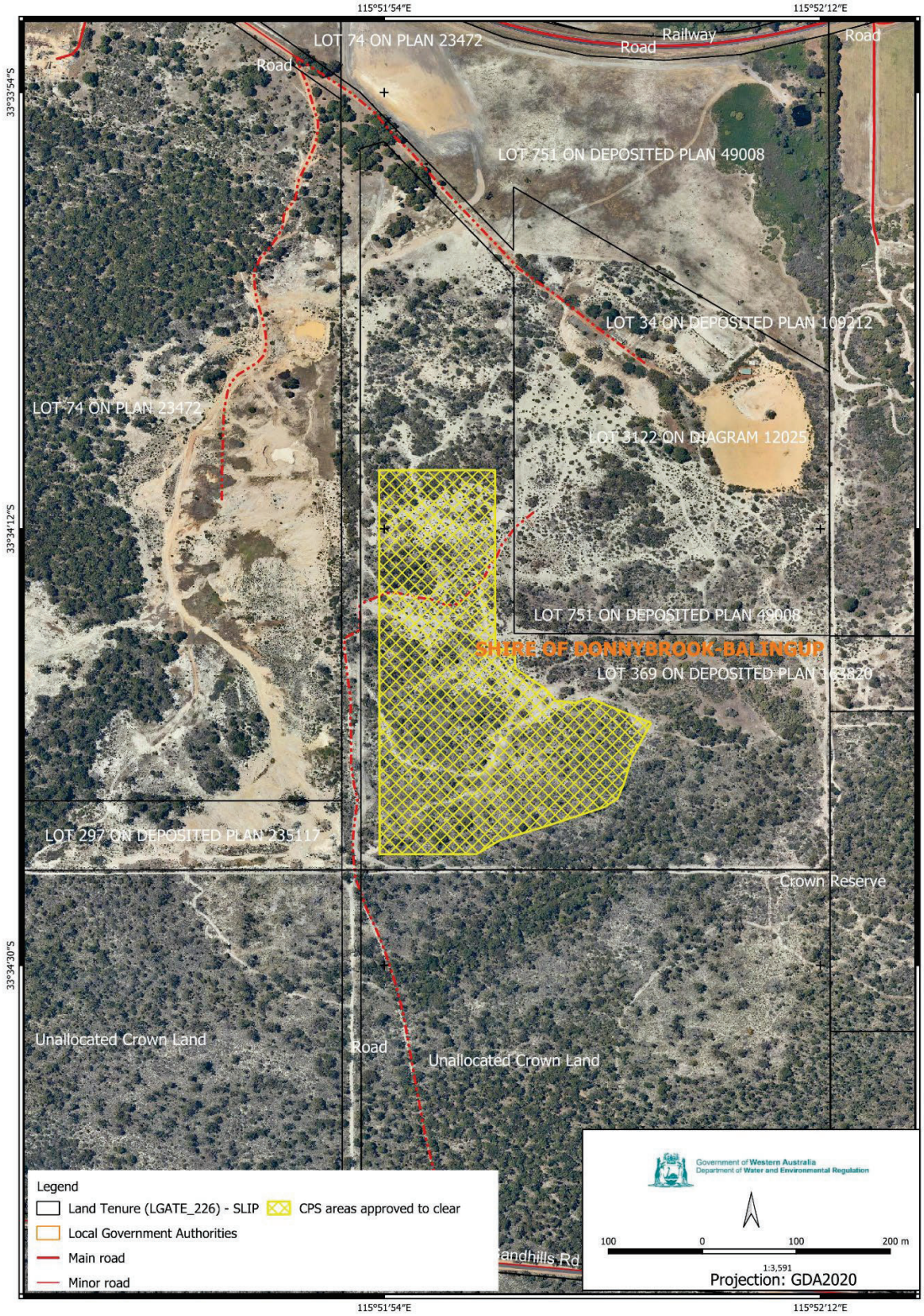


Figure 1: Map of the boundary of the area within which clearing may occur

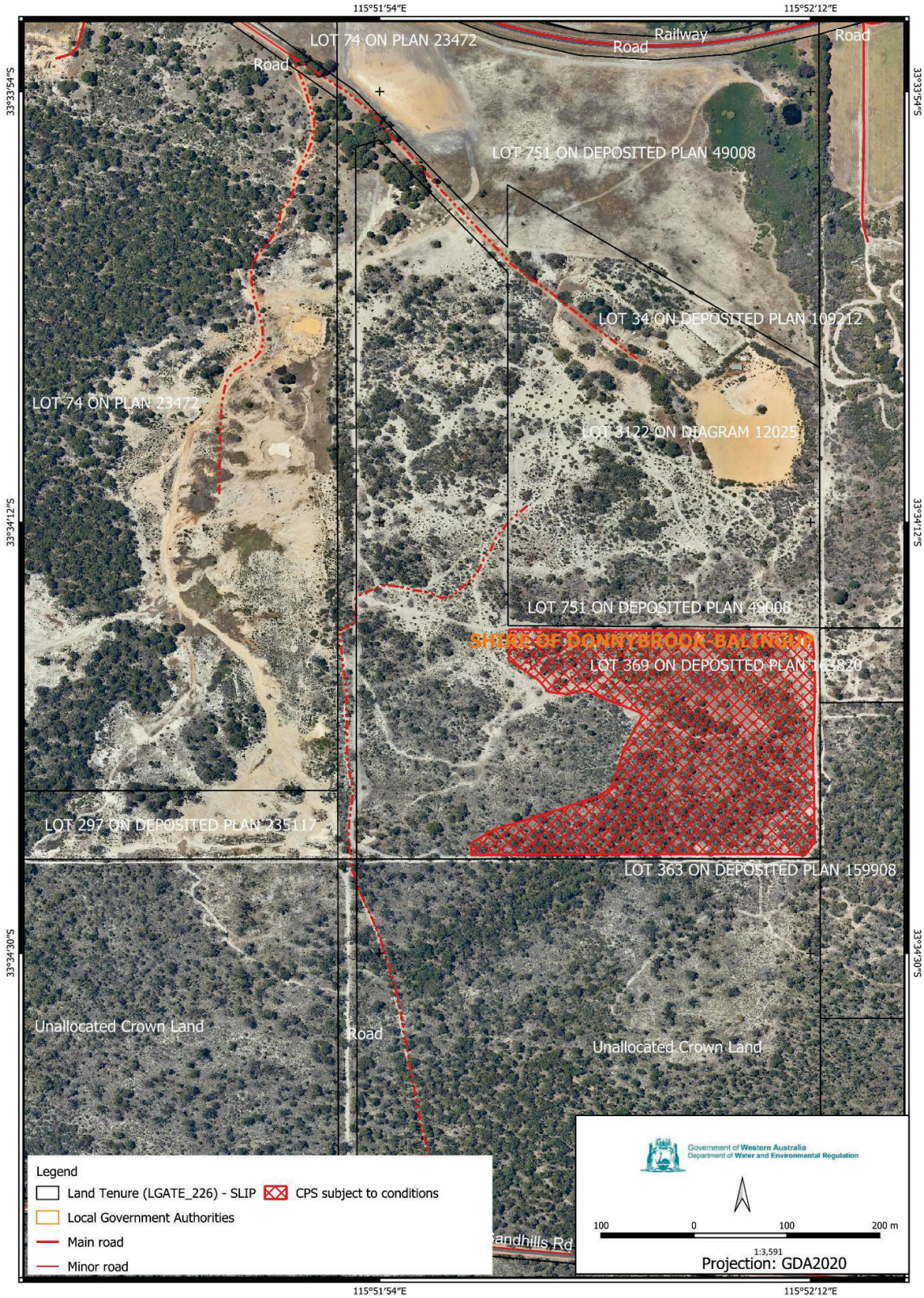


Figure 2: Map of the boundary of the area to which condition 7 applies.

SCHEDULE 2

Table 3: *Revegetation* and *rehabilitation* completion criteria for condition 6.

Measure	Completion Targets	Monitoring
Black cockatoo foraging habitat	Vegetation that provides *foraging habitat* suitable for *black cockatoo species* has a minimum cover of 60 per cent.	Assessed within the monitoring quadrats annually in spring by an *environmental specialist* until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
Western ringtail possum habitat	Vegetation providing *suitable habitat for western ringtail possum* has a minimum cover of 60 per cent.	Assessed within the monitoring quadrats annually in spring by an *environmental specialist* until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
Percentage of weed cover	*Weed* coverage within the *revegetation/ rehabilitation* area to have no more than 15 percent weed coverage	Assessed within the monitoring quadrats annually in spring by an *environmental specialist* until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
Declared weeds	No Declared Weeds under the *Biosecurity and Agricultural Management Act 2007* present.	Monitor the *revegetation/rehabilitation* area for Declared weeds by monitoring quadrats annually in spring for a minimum of three years after the last year plants were established

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10852/1
Permit type:	Area permit
Applicant name:	Smith Sands Pty Ltd
Application received:	22 November 2024
Application area:	8.42 hectares of native vegetation (revised)
Purpose of clearing:	Extractive industry
Method of clearing:	Mechanical clearing
Property:	Lot 751 on Deposited Plan 49008
Location (LGA area/s):	Donnybrook-Balingup
Localities (suburb/s):	Beelerup

1.2. Description of clearing activities

The application is to clear native vegetation to establish a new sand extraction operation .

The application area comprises an area of 8.42 hectares (see Figure 1, Section 1.5). This area was revised during the assessment process from the original application area of 3.55 hectares as follows:

- Area increased to 12.7 hectares to include all native vegetation within the extractive industry footprint
- Area reduced to 9.04 hectares, to includes stages 1 and 2 only of the entire planned extractive industry, as the original area included stages 1 to 4.
- Area further reduced to 8.42 hectares, to allow for conservation of some vegetation originally within the application area under a conservation covenant.

1.3. Decision on application

Decision:	Granted
Decision date:	15 April 2026
Decision area:	9.04 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 original application area for 21 days and one submission (Submission, 2025) was received during the submission period. The application was re-advertised for 7 days on 23 October 2025 after increasing the application area to 12.7 hectares, and no submissions were received. Consideration of the matters raised in the public submission is detailed in Appendix B.

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

- the site characteristics (see Appendix C);
- relevant datasets (see Appendix I.1);
- the findings of a flora and fauna surveys (Daniel Marsh Botanical Consulting (2013), MBS Consulting (2025), Harewood (2013) and Harewood (2025))
- a site inspection (DWER, 2025);
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix D); and
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3.3).

The Delegated Officer also took into consideration that the application area is an area designated as a Significant Geological Supply area (for sand) in *State Planning Policy 2.4, Basic Raw Materials.* These are areas identified as having state significance due to the size of the resource, relative scarcity, demand, and location near growth areas and transport routes.

The assessment identified that the proposed clearing will result in:

- the loss of 5.61 hectares of high quality foraging habitat for black cockatoo species;
- the loss of 5.61 hectares of low quality habitat for western ringtail possums;
- the removal of 32 *Acacia semitrullata* (Priority 4) plants; and
- potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the impacts of the proposed clearing to *Acacia semitrullata* plants; and potential land degradation is unlikely lead to an unacceptable risk to environmental values, subject to conditions on the permit. The Delegated Officer determined the impacts of the proposed clearing to habitat for black cockatoo foraging habitat and western ringtail possum habitat could be counterbalanced through revegetation actions conditioned on the permit and an offset. The Delegated Officer considered that the applicant has suitably demonstrated avoidance and minimisation measures (see Section 3.1).

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 and dieback
- undertake slow directional clearing to allow fauna individuals to move into adjacent vegetation ahead of the clearing activity;
- undertake sand extraction within three (3) months of the clearing to prevent wind erosion;
- revegetate the application area post sand extraction; and
- place a conservation covenant over a 7.66 hectare area within Lot 761 as an offset.

1.5. Site map

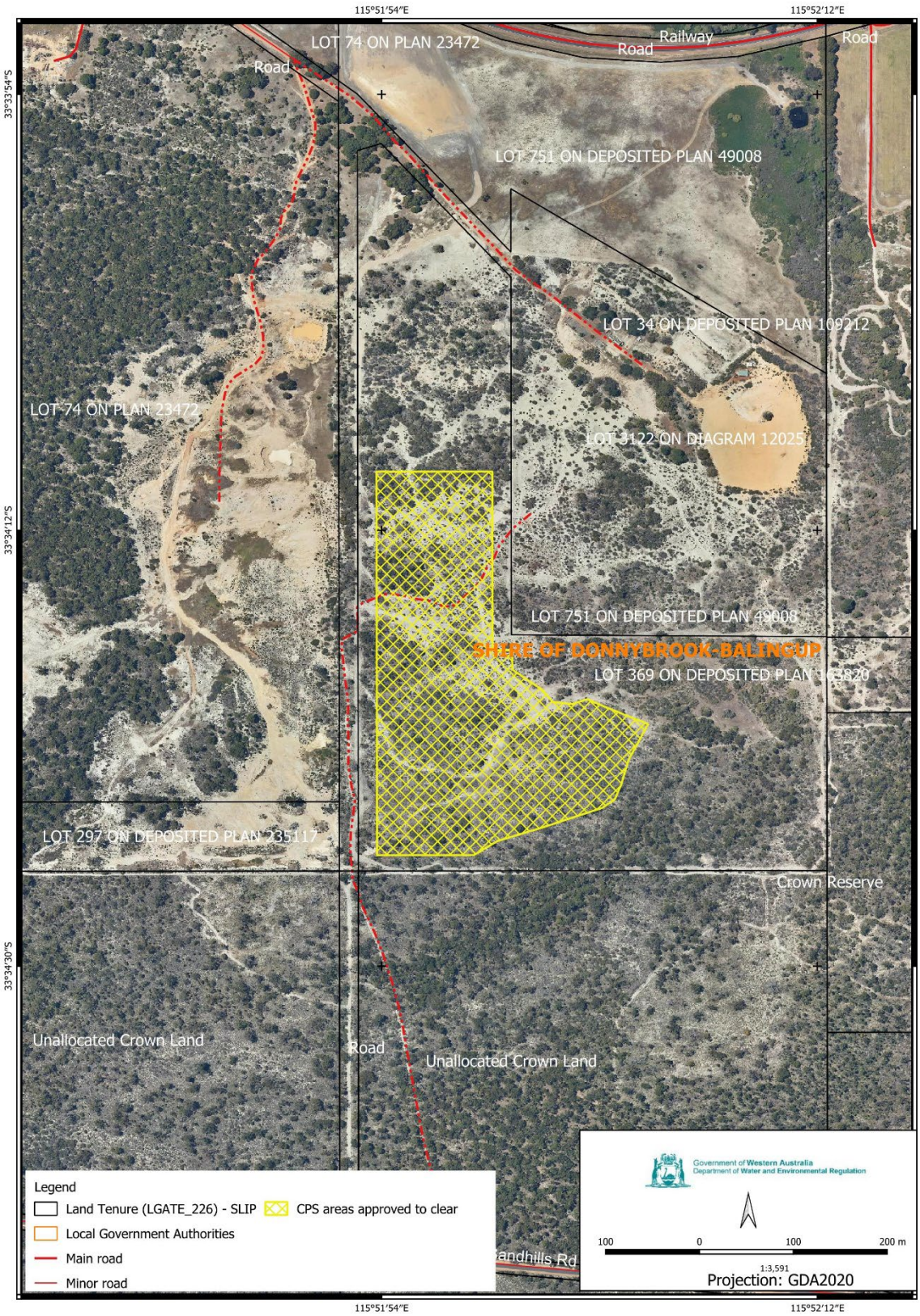


Figure 1. Map of the application area. The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

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)

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)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

In the original application (Smith Sands, 2024), the applicant provided the following information to demonstrate consideration of avoidance and mitigation measures:

- Extractive industry operations are proposed within the degraded vegetation, saving the more dense and healthy vegetation;
- All cells will be rehabilitated back to pasture paddocks before the next extractive industry cell is opened; and
- A tyre wash basin will be at the exit of the pit to alleviate weed spread.

The applicant also provided a weed and dieback management plan (Smith Sands, 2025), required as part of the Development Approval issued by the Shire of Donnybrook Balingup, that contained the following mitigation measures relevant to the proposed clearing:

- Pre-construction
    - Engage an independent third party to conduct a Flora and Vegetation Survey of the site to ascertain the presence of weeds and dieback.
    - Staff that has undergone their Green Card Training will educate all personnel on how the Weed and Dieback Management Plan (WDMP) can be utilised to alleviate the potential spread of weeds and Dieback. The measures outlined in the WDMP, to minimise the spread of weeds and dieback, will be included in the site induction that all personnel entering the site need to undertake. Personnel shall also familiarize themselves with the Best Practice Guidelines for Management of Phytophthora Dieback in the Basic Raw Materials Industries.
    - All construction equipment and trucks shall be washed down before being taken to site to ensure that all machinery shall be free of weed and dieback contamination. The Plant & Vehicle cleaning procedure is to be followed for all plant, equipment and vehicles entering and exiting the work site. All vehicles, plant and equipment entering and exiting site MUST abide by the Plant and Vehicle cleaning procedure.
    - Prior to clearing, all areas to be cleared will be flagged and inspected by the operator and areas infested with dieback will be identified and marked.
- Site Entry and Exit
    - All trucks and machinery arriving on site are free from soil and debris. Machinery that arrives to site heavily muddy will be turned away to be cleaned offsite.

- Truck trays washed out prior to coming to site. Trucks with heavily muddy trays will be turned away to be cleaned offsite.
- Maintain one Entry and Exit location for the duration of the project by erecting appropriate barricading, fencing and signage. Clean on Entry (COE) signage will be displayed at the entry/exit point. Lockable gates at the site entry/exit point will be maintained to control unauthorised access.
- A clean down area is to be established at the entry and exit point off Sandhills Road inside the lot and outside 20m buffer zone. The clean-down area will consist of a cattle grid/shake grid with a catchment trough below with limestone placed in the trough and at either end to the cattle grid. The cattle grid/shake grid will shake off the loose clumps of dirt into the trough below, or vehicles can park on the cattle grid/shake grid to be cleaned and loose dirt to be knocked off. Since phytophthora prefers acidic, waterlogged soils, the limestone is alkaline and free draining which are not ideal conditions for dieback to thrive. The abundance of calcium carbonate in limestone can also suppress the growth of phytophthora. The contaminated material will be cleaned out and disposed of in the areas already infested with dieback once dry.
- Trucks and machines to stay on haul roads. Trucks and machinery that do not stay on the designated haul routes will be stopped immediately. The path will be assessed and the wheels and under carriage will be inspected to assess if any potential risk and spread of material. The machine will be sent to the nearest COE point to clean down and sign-off Machine and Vehicle Checklist prior to resuming load/hauling activities.
- Unsealed haul roads to be constructed out of sterile/uninfected material.
- Haul roads shall be kept well maintained even during high rainfall events.
- Heavy machinery to undertake appropriate hygiene measures before traversing into another area.
- Fencing and signage to deter unauthorised entry to the work area.
- During wet weather conditions, machinery and vehicle access will be restricted to reduce the risk of transferring infested materials throughout the site and off site.
- Fencing and a locked gate at the northern border of the work area to limit entry.

During the assessment of this application, noting that the department identified that the clearing would impact foraging habitat for black cockatoo species and habitat for western ringtail possums (refer to Section 3.2.1 for further details), the applicant agreed to revegetate the application area with plant species that provide foraging habitat for black cockatoo species and habitat for western ringtail possum. The above revegetation will be conducted in accordance with a revegetation plan (Smith Sands, 2026).

In accordance with DWER (2021), the above revegetation measures were input into the DWER WA environmental offsets calculator to determine the quantum of mitigation afforded by these measures. This is discussed further in Section 3.2.1 and a summary of these calculations is available in Appendix F.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to foraging habitat for black cockatoo species and habitat for western ringtail possum was necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

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 (fauna and flora) and land resources. 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 Principle (b)

Assessment

According to available databases, the application area may provide suitable habitat for the following conservation significant fauna species recorded within the local area:

- *Zanda baudinii* - Baudin's cockatoo (Endangered)
- *Zanda latirostris* - Carnaby's cockatoo (Endangered)

- *Calyptorhynchus banksii naso* - Forest red-tailed black cockatoo (Vulnerable)
- *Pseudocheirus occidentalis* - Western ringtail possum, ngwayir (Critically Endangered)
- *Dasyurus geoffroiil* - Chuditch, western quoll (Vulnerable)
- *Isoodon fusciventer* (quenda) (Priority 4)
- *Phascogale tapoatafa wambenger* - South-western brush-tailed phascogale, wambenger (Conservation dependent)

Black cockatoos

The application area is located within the mapped distribution of Carnaby's cockatoo, forest red-tailed black cockatoos (FRT) and Baudin's black cockatoo (hereafter collectively referred to as black cockatoos). Habitat requirements for black cockatoos can be considered in terms of breeding, roosting and foraging habitat. Black cockatoos are known to nest in hollows of live and dead trees, including marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) (Commonwealth of Australia, 2022). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is 300 - 500 millimetres depending on the tree species (DAWE, 2022). While Harewood (2025) recorded 73 trees with diameter of 30 cm or above within the application area, none of these trees contained suitable hollows for black cockatoos breeding. As such, and noting the extent of other native vegetation in the local area, the proposed clearing is unlikely to significantly impact breeding habitat for black cockatoo species.

Black cockatoos generally roost in large eucalyptus or marri trees (DAWE, 2022). The application area has the potential to provide suitable roosting sites due to the presence of suitable trees and its proximity to foraging habitat and permanent water sources. However, noting no roosting was observed by Harewood (2025), and the extent of vegetation within the local area which is also likely to provide roosting habitat, the removal of potential roosting habitat within the application area is not considered likely to have a significant impact on roosting habitat for black cockatoos.

Baudins black cockatoo primarily consumes seeds of jarrah, marri and proteaceous species, Carnaby's cockatoo primarily consume seeds flowers and nectar of proteaceous plant species and marri, and FRT primarily consume seeds of jarrah and marri (DAWE, 2022). Noting that both vegetation types recorded within the application area by Daniel Marsh Botanical Consulting (2013) contain primary foraging species for all three black cockatoo species, 5.61 hectares of vegetation within the application area (i.e. the entirety of the application area excluding areas of regrowth and cleared areas), is considered to comprise foraging habitat for black cockatoo species. Fauna surveys (Harewood 2013 and 2025) indicate vegetation within the application area has recently been foraged upon by Baudin's cockatoo and FRT, and possibly also Carnaby's cockatoo.

The loss of this foraging habitat is considered to have a significant impact on all three black cockatoo species, noting:

- evidence of foraging has been recorded for at least FRT and Baudins;
- two black cockatoo roost sites within local area (closest 4.8 km away); and
- water sources are available within 1 kilometre of the application area.

The impacts of clearing of 5.61 hectares of good quality foraging habitat for black cockatoos (with a quantum of impact of 3.93) will be mitigated by 84% (quantum of 3.3) by the applicant's proposed revegetation, which will be conditioned on the permit (refer to Appendix F for justification of calculation of rehabilitation credit).

Noting the above, a significant residual impact to black cockatoo foraging habitat was considered to remain. This has been counterbalanced through an offset conditioned on the permit (refer to Section 4 for further details).

Western ringtail possum

The application area is within the Swan Coastal Plain Management Zone for western ringtail possum (WRP) (DPAW, 2017). Populations on the Swan Coastal Plain management zone are associated with stands of myrtaceous trees (usually peppermint trees (*Agonis flexuosa*)) growing near swamps, water courses or floodplains. However, WRP are also found in in jarrah or marri dominated forests (DPAW, 2017). Habitat critical to survival for WRP in this management zone comprises long unburnt mature remnant peppermint woodlands with high canopy continuity and high nutrient foliage with minimal periods of summer moisture stress, and habitat connecting patches of remnants (DPAW, 2017).

Harewood (2013 and 2025) did not record WRP within the application area. Harewood (2013) advised that vegetation within the study area appears to be mostly unsuitable or at best marginal for this species to utilise primarily due to a lack of midstorey vegetation or where present a lack of midstorey canopy connectivity which the species favours. However, WRP are known to frequent the general area and given the presence of some suitable habitat in and adjoining the site, mainly in the extreme southeastern area it may frequent the area on occasions (Harewood, 2013).

Although the vegetation present within the application area is of low quality for WRP, noting that the application area provides habitat that connects patches of remnant critical habitat for WRP within the Swan Coastal Plain

Management Zone, the loss of 5.61 hectares of vegetation within the application area that provides habitat for WRP (i.e. entirety of the application area excluding regrowth and cleared areas which would be unlikely to be used by WRP) may have a significant impact on this species.

The impacts of clearing of 5.61 hectares of WRP habitat (with a quantum of impact of 1.68) will be mitigated by 65% (quantum of 1.1) by the applicant's proposed revegetation, which will be conditioned on the permit (refer to Appendix F for justification of calculation of rehabilitation credit).

Noting the above, a significant residual impact to WRP habitat was considered to remain. This has been counterbalanced through an offset conditioned on the permit (refer to Section 4 for further details).

Other fauna species

Vegetation within the application area may provide habitat for the chuditch, quenda and southwestern brush-tailed phascogale, noting the habitat requirements and distributions of these species:

- **Chuditch** use a range of habitats including forest, mallee shrublands, woodland and desert, with the most dense populations found in riparian jarrah forest. Most chuditch are now found in varying densities throughout the jarrah forest and south coast of Western Australia (DEC, 2012a).
- **Quenda** inhabit dense scrubby, often swampy, vegetation with dense cover and adjacent forest and woodland (DPAW, 2018).
- **Southwestern brush-tailed phascogale** inhabit dry sclerophyll forests and open woodlands that contain hollow bearing trees but a sparse groundcover. In the south-west, this species is typically found in jarrah forest (DEC, 2012b).

Although the application area may provide suitable habitat for chuditch, quenda and south-western brush-tailed phascogale, the proposed clearing is considered unlikely to result in significant impacts to these species, noting:

- the extent of native vegetation, much of which is likely to be of better quality within the local area;
- the broad distribution and range of habitats utilised by these species;
- the lack of denning habitat suitable for chuditch;
- the largely degraded condition of the vegetation;
- lack of riparian vegetation preferred by quenda and chuditch; and
- the lack of evidence of use of these species (Harewood 2013 and 2025).

The following conditions on the permit will also reduce and mitigate impacts to these fauna species:

- directional clearing will mitigate impacts to individuals;
- offset requiring placement of a conservation covenant over 7.66 hectares of vegetation to the east of the application area will conserve habitat for these species in the future; and
- revegetation conditions (described in Section 3.1).

Conclusion

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

- 5.61 hectares of high quality foraging habitat for black cockatoo species; and
- 5.61 hectares of low quality habitat for WRP.

The applicant's proposed revegetation actions will partially mitigate these impacts, with significant residual impacts counterbalanced through an offset conditioned on the permit (refer to Section 4 for further details).

The applicant may have notification responsibilities under the EPBC Act for impacts to black cockatoos, WRP and their habitats, as set out in the EPBC Act *Referral guideline for 3 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) and the EPBC Act *Significant impact guidelines for the vulnerable western ringtail possum* (Pseudocheirus occidentalis) *in the southern Swan Coastal Plain, Western Australia.* The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

Conditions

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

- slow directional clearing to allow fauna individuals to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals;
- revegetation of the application area to reinstate future habitat for fauna (Refer to Section 3.1); and
- conservation covenant offset to conserve future habitat for fauna (refer to Section 4).

3.2.2. Biological values (flora) - Clearing Principle (a)

Assessment

Based on information from previous records, the soil and vegetation types mapped within the application area and flora surveys, the application area was considered to provide habitat for only one conservation significant flora species, *Acacia semitrullata* (Priority 4).

A targeted flora survey for *Acacia. semitrullata* (MBS, 2025) identified 19 locations of *A. semitrullata*, consisting of a total of 32 plants, within the application area. An additional 14 locations of *A. semitrullata*, consisting of a total of 28 plants, were recorded outside the application area (MBS, 2025). Impacts to this species is considered unlikely to be significant, noting the following:

- There are 90 records of this species on Florabase, with 12 records within the local area (Western Australian Herbarium, 1998-). As such many other populations will remain of this species post clearing.
- The populations of this species within the application area do not represent a range extension for this species.
- Three locations of this species recorded by MBS (2025) will remain in an area placed under conservation covenant.
- The applicant has committed to planting individuals of this species in the revegetation of the application area (Smith Sands, 2026).

Conclusion

Based on the above assessment, while the proposed clearing will remove 32 *Acacia semitrullata* plants. This is not considered likely to have significant impacts on this species.

Conditions

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

- revegetation of the application area to reinstate future habitat for this species (Refer to Section 3.1).

3.2.3. Land resources - Clearing Principle (g)

Assessment

Soils within the application area are highly susceptible to wind erosion and moderately susceptible to phosphorus export. A condition on the permit requiring the applicant to undertake sand extraction activities within three months of the clearing will help mitigate impacts from wind erosion. Revegetation of the application area post extraction will also mitigate impacts of the clearing from wind erosion and phosphorus export. Noting the distance to the nearest receiving waterbodies, impacts from phosphorus export are not expected to be significant.

Conclusion

Based on the above assessment, the proposed clearing has the potential to result in wind erosion and increased phosphorus export, however these are likely to be managed through permit conditions.

Conditions

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

- applicant is required to undertake sand extraction within three months of the clearing to prevent wind erosion; and
- revegetation of the application area to prevent wind erosion and phosphorus export post sand extraction (Refer to Section 3.1).

3.3. Relevant planning instruments and other matters

The proposed sand extraction required a development approval for extractive industry from the Shire of Donnybrook-Balingup. This was issued on the 26 February 2025 and subject to conditions, including preparation of a Dust Management Plan, Weed and Dieback Management Plan, Stormwater Management Plan and Pit Closure and Rehabilitation Management Plan (Shire of Donnybrook-Balingup, 2025).

There are no Aboriginal sites of significance mapped within the application area.

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1, including the revegetation actions conditioned on the permit:

- 16% of the impact of clearing 5.61 hectares of high quality black cockatoo foraging habitat (quantum of 0.63)
- 35% of the impact of clearing 5.61 hectares of low quality habitat for WRP (quantum of 0.58).

The applicant proposed an environmental offset consisting of a conservation covenant over an area of vegetation to the east of the application area. This area has been surveyed as being in largely Good to Very Good condition (MBS, 2025) and contains vegetation types similar to the application area that provide foraging habitat for black cockatoos habitat for WRP.

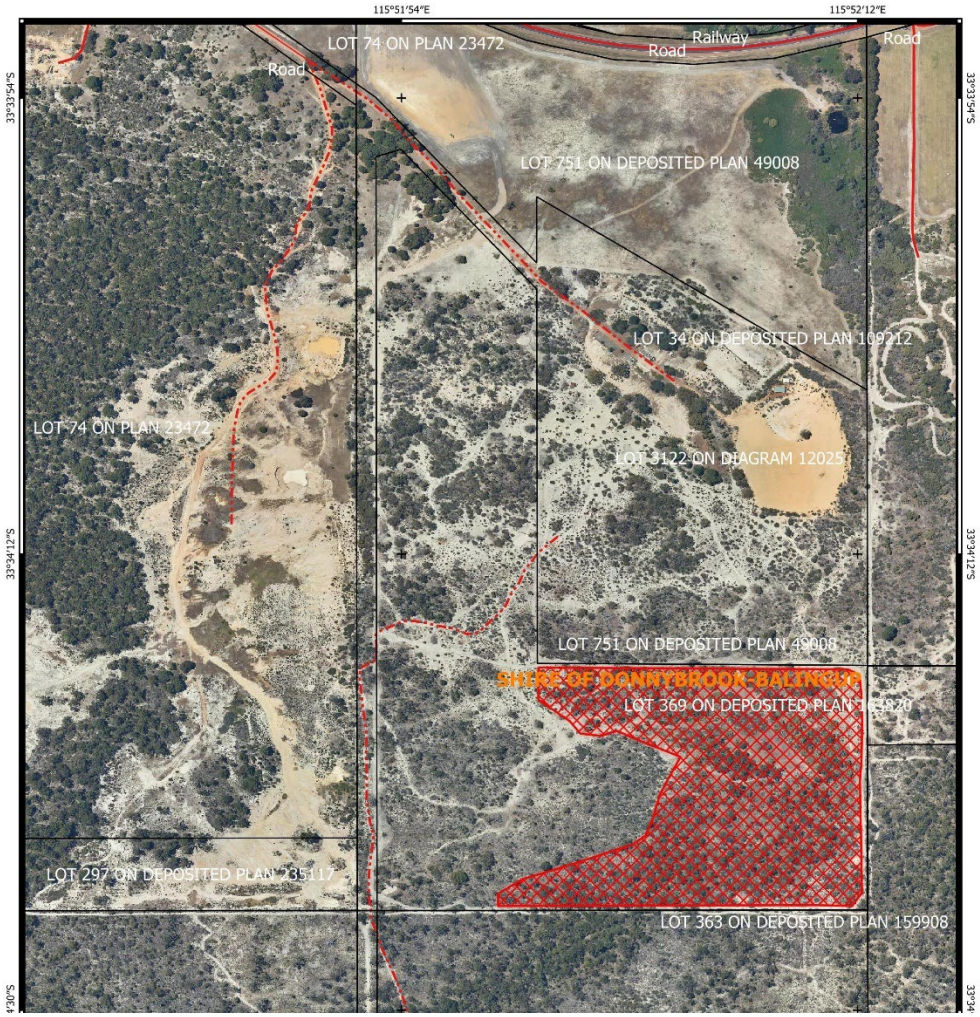


Figure 2. A conservation covenant will be placed over the area cross-hatched red as an offset to impacts to black cockatoos and WRP.

The Delegated Officer considers that this more than adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in Appendix F.

Noting that the offset more than adequately counterbalances the significant residual impacts, the quantum of this offset is in excess and can be used as a strategic offset to offset impacts from the clearing required for stages 3 and 4 of the sand extraction operations. This excess offset quantum is as follows:

- Offset quantum value of 0.28 to counterbalance impacts to black cockatoo foraging habitat; and
- Offset quantum value of 0.58 to counterbalance impacts to habitat for WRP.

End

Appendix A. Additional information provided by applicant

The following information was provided by the applicant following acceptance of this application for assessment by the department.

Summary of comments	Consideration of comment
Weed and dieback management plan (Smith Sands, 2025)	Considered in Section 3.1
Fauna habitat survey (Harewood, 2025)	Considered in Section 3.2.1
Targeted flora and vegetation condition survey (MBS, 2025)	Considered in Section 3.2.2
Revegetation plan (Smith Sands, 2026)	Considered in Section 3.1
Development approval issued by the Shire of Donnybrook Balingup (Shire of Donnybrook Balingup, 2025)	Considered in Section 3.3

Appendix B. Details of public submissions

One public submission was received in regards to this application (Submission, 2025). A summary of the issues raised in this submission is outlined below.

Summary of comments	Consideration of comment
Assessment of fauna habitat value must be done before clearing, not during or after the event. This has not been indicated on the application.	The department assessed impacts to fauna habitat when assessing this clearing permit application (i.e. prior to clearing). The department requested a fauna survey from the applicant to inform this assessment. The applicant provided the fauna habitat survey (Harewood, 2025).
There is sufficient native vegetation to suggest this could be a suitable habitat for fauna; the photo's gave evidence of mature trees which could be good bird habitats.	Impacts to fauna habitat considered in Section 3.2.1, informed by a fauna habitat survey (Harewood, 2025).
There is no clear commitment to effective revegetation.	The applicant has committed to the revegetation outlined in Section 3.1, and this revegetation has been conditioned on the permit.
Adjacent land has been extensively cleared. Further clearing will significantly fragment remaining habitat. Remaining bushland needs to remain intact. The cumulative loss of native vegetation will impact the stability of fauna at a local and regional scale .	Cumulative impacts from the clearing have been considered in Appendix D. The applicant has committed to revegetating the application area post extraction with native species that provide fauna habitat, which will mitigate any fragmentation resulting from the clearing.
All native vegetation has intrinsic bird habitat value.	Impacts to fauna habitat considered in Section 3.2.1. Fauna management conditions will limit impacts to bird individuals. The applicant has committed to revegetating the application area post extraction, which will reinstate habitat for birds.
The application includes only photos. There is no habitat and biodiversity impact assessment. This is required to enable BirdLife WA to effectively assess the impact on birds.	Applicants are not required to submit habitat and biodiversity impact assessments prior to acceptance of clearing permit applications. If not provided, this information may be requested by the department during assessment of a clearing permit application if needed to inform its assessment (as it was for this application).

Appendix C. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix D.

C.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of a large remnant of native vegetation in the intensive land use zone of Western Australia. It is surrounded by remnant native vegetation, however much of the vegetation to the north, west and east has been impacted by previous clearing and disturbance. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 42.28 per cent of the original native vegetation cover.
Ecological linkage	The proposed clearing is mapped in proximity to four axis lines associated within the South West Regional Ecological Linkages dataset, the nearest being approximately 0.61 km to the north of the application area. Revegetation of the application area with native species post extraction will mitigate long term impacts to ecological linkages.
Conservation areas	The proposed clearing is not mapped within a conservation area. There are two conservation areas located within one kilometre of the proposed clearing, namely: • an Agreement to Reserve under the *Soil and Land Conservation Act 1945* – 0.24 km east of the application area; and • an un-named Nature Reserve managed by DBCA – 0.60 km south of the application area.
Vegetation description	A flora and vegetation survey conducted in the application area (Daniel Marsh Botanical Consulting, 2013) identified two vegetation communities within the survey area including: • Open woodland of *Eucalyptus marginata* over a low open woodland of *Nuytsia floribunda*, *Xylomelum occidentale* and sometimes *Banksia* spp. over *Xanthorrhoea preissii*, *Dasypogon bromeliifolius* and *Patersonia* spp. • Low open woodland of *Nuytsia floribunda* and/or *Eucalyptus marginata* over a tall shrubland of *Kunzea glabrescens* over various weed species and the occasional native shrub. A site inspection (DWER, 2025) corroborated the above vegetation description. Representative photos of the vegetation observed in the site inspection are available in Appendix G. This is broadly consistent with the mapped vegetation type: • Kirup Complex, which is described as open forest to woodland of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla-Banksia attenuata-Xylomelum occidentale* on sandy slopes in the humid zone (Mattiske and Havel, 1998). The mapped vegetation type retains approximately 58.89 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	A targeted flora and vegetation survey conducted in the application area (MBS, 2025) indicated the vegetation within the proposed clearing area is in Completely Degraded to Good (Keighery, 1994) condition, with some areas also classified separately as 'regrowth' or 'cleared', as described below: ○ Very Good - 0.25 ha ○ Good – 3.67 ha ○ Degraded – 1.57 ha

Characteristic	Details
	○ Completely degraded – 0.12 ha ○ Regrowth – 1.99 ha ○ Cleared – 0.82 ha The full Keighery (1994) condition rating scale is provided in Appendix E. A site inspection (DWER, 2025) corroborated the above vegetation condition. DWER (2025) noted that areas of vegetation described as 'regrowth' consisted mainly of *Kunzea glabrescens* shrubland over weeds. Representative photos of the vegetation observed in the site inspection are available in Appendix G.
Climate and landform	The proposed clearing is located in the South West Region of Western Australia which is characterised by a temperate climate with warm summers and cold winters. The nearest major town to the proposed clearing is Donnybrook which has an average maximum temperature of 23.2 degrees Celsius and mean annual rainfall of 968.5 mm. Landform of the application area is described as sandy gentle slopes. The elevations range from 95 mAHD to 120 mAHD, with majority of the application area sloping gently to the east-northeast (MBS, 2013).
Soil description	The soil is mapped as the Kirup sandy slopes phase which is described as, Relief 20 m, slopes 2-15%. Soils are deep sands and sandy earths.
Land degradation risk	The mapped soil type has a high to extreme risk of land degradation from wind erosion and subsurface acidification, a moderate risk of phosphorous export and a low risk of salinity.
Waterbodies	The desktop assessment and aerial imagery indicated that no wetlands or watercourses transect the area proposed to be cleared. The nearest waterbody is the Preston River which is located approximately 0.59 km to the north from the proposed clearing. Daniel Marsh Botanical Consulting (2013) and a site inspection (DWER, 2025) of the application area did not identify any riparian vegetation within the application area.
Hydrogeography	The proposed clearing area is not located within any proclaimed surface water or groundwater area under the RIWI Act, nor is it located within a Public Drinking Water Source Area. The mapped soils are not at high risk of water erosion, waterlogging or flooding.
Flora	According to available databases, there are 38 records across 12 species of conservation significant flora in the local area (10-kilometre radius) composed of 10 priority species and two threatened species. Only one of these species, *Acacia semitrullata* (P4), is present within the same mapped soil and vegetation type as the application area. Daniel Marsh Botanical Consulting (2013) identified three locations of *Acacia semitrullata* (Priority 4) within the application area. A targeted flora survey for *A. semitrullata* (MBS, 2025) identified 19 locations of *A. semitrullata*, consisting of a total of 32 plants, within the application area. No other flora species of conservation significance were recorded in either of the above surveys, however it is noted that MBS (2025) targeted *A. semitrullata* only.
Ecological communities	The proposed clearing is not mapped within a priority or threatened ecological community (PEC/TEC) and there are no mapped PECs or TECs in the local area (10-kilometre radius). The nearest ecological community is the 'Whicher Scarp C2' Priority 1 Ecological Community (DBCA) and Endangered TEC (EPBC Act) located over 14 km from the proposed clearing area. Daniel Marsh Botanical Consulting (2013) did not record the presence of any conservation significant ecological communities within the application area. A site inspection of the application area (DWER, 2025) did not identify any conservation significant ecological communities.

Characteristic	Details

Fauna	According to available databases, there are 289 records across 17 species of conservation significant fauna species in the local area (10-kilometre radius), none of which are recorded within one kilometre of the proposed clearing area. The nearest record is the rakali (*Hydromys chrysogaster*) (P4) located 1.30 km from the proposed clearing area. Habitat for this species is not present within the application area.
	
	The application area is within the mapped range for all three species of black cockatoos. There are records of two roost sites within a 10 km radius of the application area, the closest of which (5 km from the application area) has been observed to be in use by both forest red-tailed black cockatoo (FRT) and white tailed black cockatoos. No known black cockatoo breeding sites have been recorded within a 10 km radius of the application area.
	
	Fauna surveys of the application area undertaken in 2013 and 2025 (Harewood, 2013 and 2025) identified evidence of three listed threatened black cockatoo species as follows:
	• 2013:
	  ○ Carnaby's or Baudin's black cockatoo – foraging evidence
	  ○ FRT –foraging evidence and heard calling.
	• 2025:
	  ○ FRT and Baudin's black cockatoo - foraging evidence on marri
	  ○ Foraging evidence on jarrah and banksia (unknown black cockatoo species, but possibly Carnaby's cockatoo)
	
	Harewood (2025) recorded 73 trees with diameter of 30 cm or above (i.e. currently suitable or potentially suitable in the future to provide breeding habitat for black cockatoos) within the application area. Some of these trees contained hollows, but none of these hollows were suitable for black cockatoo breeding. No evidence of black cockatoo night roosting was found by Harewood (2013 and 2025).
	
	Harewood (2013 and 2025) found no evidence of WRPs despite undertaking targeted day and night time searches for this species.
	
	Harewood (2013 and 2025) did not record evidence of any other conservation significant fauna within the application area.

C.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), and biological survey information (Daniel Marsh Botanical Consulting, 2013 and MBS, 2025), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Same mapped vegetation type? [Y/N]	Same mapped soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area	Number of records on Florabase	Are surveys adequate to identify? [Y, N, N/A]
Acacia semitrullata	4	Y	Y	Y	0.6	12	90	Y

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

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]
Calyptorhynchus banksii naso - Forest red-tailed black cockatoo	VU	Y	Y	4.76	10	Y

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]
Dasyurus geoffroiil - Chuditch, western quoll	VU	Y	Y	1.91	5	Y
Isoodon fusciventer (quenda)	P4	Y	Y	5.44	7	Y
Phascogale tapoatafa wambenger - South-western brush-tailed phascogale, wambenger	CD	Y	Y	2.22	23	Y
Pseudocheirus occidentalis - Western ringtail possum, ngwayir	CR	Y	Y	2.55	198	Y
Zanda baudinii - Baudin's cockatoo	EN	Y	Y	3.33	21	Y
Zanda latirostris - Carnaby's cockatoo	EN	Y	Y	2.59	21	Y

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

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains priority flora species and habitat for conservation significant fauna species. However, it is unlikely to contain conservation significant ecological communities or vegetation with a high level of biodiversity.	At variance	Yes *Refer to Sections 3.2.1 and 3.2.2, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared contains foraging habitat for conservation significant black cockatoos and also contains low quality habitat for western ringtail possum.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared does not contain Threatened flora species (Daniel Marsh Botanical Consulting, 2013 and MBS, 2025).	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared does not contain species indicative of a threatened ecological community (Daniel Marsh Botanical Consulting, 2013 and MBS, 2025).	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The proposed clearing is not considered likely to impact the South West Regional Ecological Linkages in proximity to the application area.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, the application area is not growing in, or in association with, an environment associated with a watercourse or wetland.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to wind erosion. Noting the extent of the application area and purpose for clearing, the proposed clearing may have an appreciable impact on land degradation, although these impacts are likely to be able to be managed through conditions on the permit.	At variance	Yes *Refer to Section 3.2.3, above.*
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no water courses, wetlands or sensitive groundwater resources are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.	Not likely to be at variance	No

Appendix E. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix F. Offset calculator value justification

Rehabilitation credit and offset for impacts to black cockatoo foraging habitat

Environmental values to be offset		
Calculation	**Score (area)**	**Rationale**
Conservation significance		
Description	Black cockatoo habitat (Carnaby's, Baudin's and Forest red-tailed)	
Type of Environmental Value	Species (flora/fauna)	
Conservation significance of environmental value	Rare/threatened species - endangered	
Landscape-level value impacted	Yes/no	
Significant impact		
Description	Clearing of 5.61 hectares of vegetation that contains high quality foraging habitat for all three black cockatoo species	
Significant impact (hectares)/Type of feature	5.61	All vegetation within the application area excluding areas mapped as cleared and regrowth (as regrowth areas are mainly *Kunzea glabrescens*). Vegetation types include: - W1 - open woodland of *Eucalyptus marginata* over a low open woodland of *Nuytsia floribunda, Xylomelum occidentale*

		or *Banksia* spp. over *Xanthorrhoea preissii, Dasypogon bromeliifolius* and *Patersonia* spp. And -W2 - low open woodland of *Nuytsia floribunda* and/or *Eucalyptus marginata* over a tall shrubland of *Kunzea glabrescens* over various weed species and the occasional native shrub
Quality (scale)/Number	7.00	Factors influencing this quality score: -both vegetation types contains species that provide foraging habitat for all three species of BC, although density of foraging species in areas mapped as W2 (southern portion of application area) is low -vegetation quality condition ranges from CD to VG (majority is Degraded or Good) -evdiecne of foraging for FRT and Baudins (unable to tell if evidence of Carnabys or not) -2 roost sites within local area (closest 4.8 km away) -no known breeeding sites within 10km -in Jarrah Forest bioregion with approv 42% veg remaining in local area
Rehabilitation credit		
Description	0	
Proposed rehabilitation (area in hectares)	8.42	
Current quality of rehabilitation site /Start number (of type of feature)	0	will be bare after sand extraction (i.e. no topsoil)
Future quality WITHOUT rehabilitation (scale)/Future number WITHOUT rehabilitation	0	after sand extraction, will have limited capacity to regenerate without management actions
Future quality WITH rehabilitation (scale)/Future number WITH rehabilitation	6.00	expect that good condition foraging habitat will be achievable, noting they will re-lay topsoil and are planting a range of foraging species
Time until ecological benefit (years)	17.00	15 years for trees to produce foraging habitat plus 2 years for sand extraction and revegetation to occur post clearing
Confidence in rehabilitation result	0.8	reasonably high level of confidence this foraging habitat will be established with appropriate completion criteria applied
Offset		
Description	Conservation covenant over 7.66 hectare area of vegetation within Lot 761	
Proposed rehabilitation (area in hectares)	7.66	area of conservation covenant
Current quality of offset site /Start number (of type of feature)	8.00	Factors influencing this quality score: -contains species that provide foraging habitat for all three species of BC, and of an older age than majority of application area (because no recent clearing has occurred within this portion, whereas it has in some of application area) -vegetation quality condition ranges from CD to VG (majority is Degraded or Good) -evidence of foraging for FRT and Baudins (unable to tell if evidence of Carnaby's or not) -2 roost sites within local area (closest 4.8 km away) -no known breeding sites within 10km -in Jarrah Forest bioregion with approximately 42% veg remaining in local area
Future quality WITHOUT offset (scale)/Future number WITHOUT offset	8.00	without management, unlikely to change
Future quality WITH offset (scale)/Future number WITH rehabilitation	8.00	condition will not change as only action is conservation covenant
Time until ecological benefit (years)	1.00	1 year to establish conservation covenant
Confidence of rehabilitation result	0.9	high level of confidence

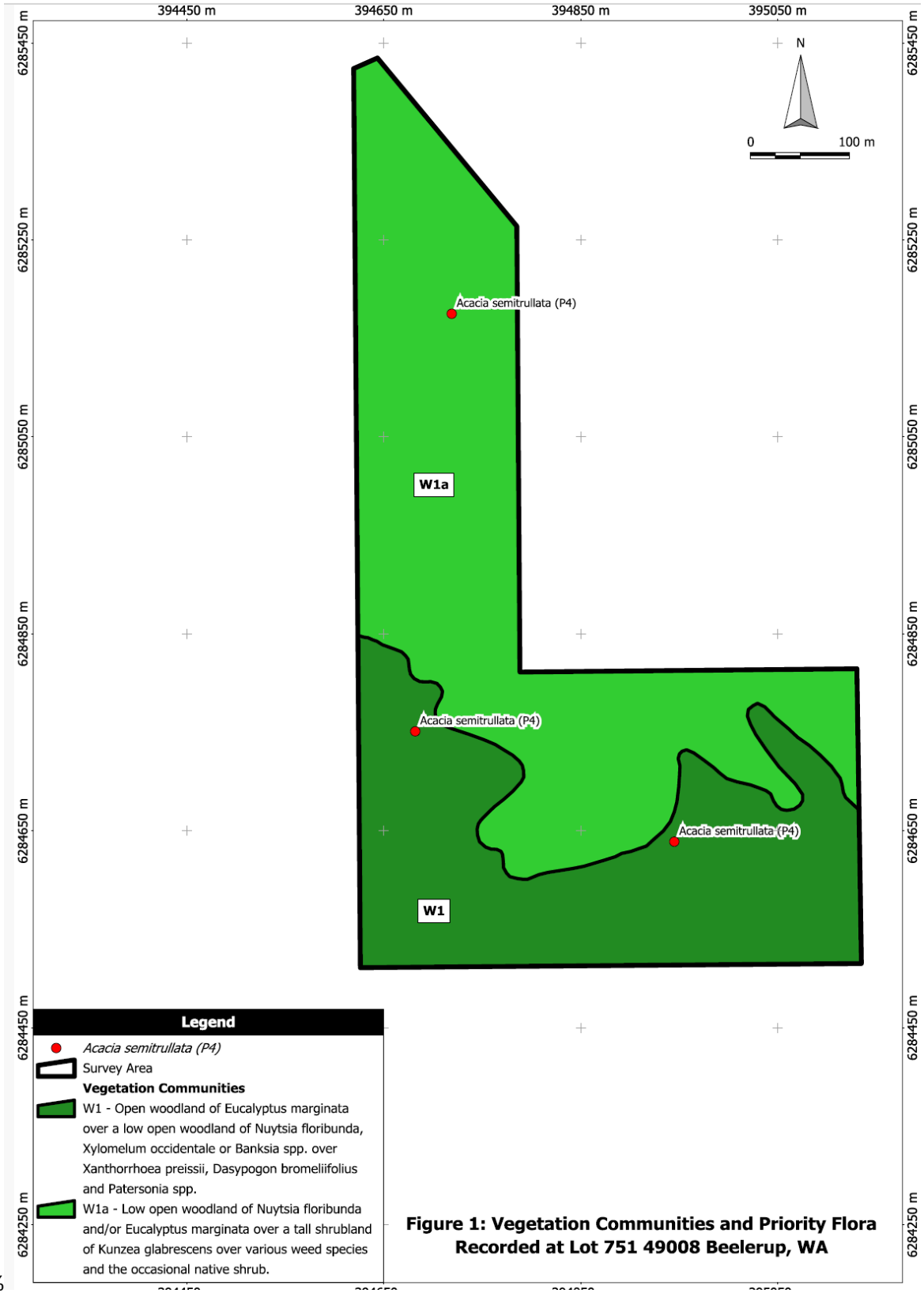
Duration of offset implementation (maximum 20 years)	20.00	maximum
Time until offset site secured (years)	1.00	1 year to establish conservation covenant
Risk of future loss WITHOUT offset (%)	20.0%	SPP 2.4 SGS area, relatively high risk of loss
Risk of future loss WITH offset (%)	5.0%	low risk of loss under conservation covenant

Rehabilitation credit and offset for impacts to western ringtail possum habitat

Environmental values to be offset		
Calculation	**Score (area)**	**Rationale**
Conservation significance		
Description	Western ringtail possum	
Type of Environmental Value	Species (flora/fauna)	
Conservation significance of environmental value	Rare/threatened species – critically endangered	
Landscape-level value impacted	Yes/no	
Significant impact		
Description	Clearing of 5.61 hectares of vegetation that contains low quality habitat for WRP	
Significant impact (hectares)/Type of feature	5.61	All vegetation within the application area excluding areas mapped as cleared and regrowth (as regrowth areas are mainly *Kunzea glabrescens).* Vegetation types include: - W1 - open woodland of *Eucalyptus marginata* over a low open woodland of *Nuytsia floribunda, Xylomelum occidentale* or *Banksia* spp. over *Xanthorrhoea preissii, Dasypogon bromeliifolius* and *Patersonia* spp. And -W2 - low open woodland of *Nuytsia floribunda* and/or *Eucalyptus marginata* over a tall shrubland of *Kunzea glabrescens* over various weed species and the occasional native shrub
Quality (scale)/Number	3.00	Factors influencing this quality score: -records of WRP in local area, but none in the patch of vegetation encompassing application area -no evidence of WRP found in the fauna survey -fauna survey considered habitat marginal, but could possibly be used by transient individuals -canopy cover is somewhat patchy -vegetation does not contain peppermint and has a fairly low density of other foraging species used by WRP (e.g. eucalypts)
Rehabilitation credit		
Description	0	
Proposed rehabilitation (area in hectares)	8.42	
Current quality of rehabilitation site /Start number (of type of feature)	0	will be bare after sand extraction (i.e. no topsoil)
Future quality WITHOUT rehabilitation (scale)/Future number WITHOUT rehabilitation	0	after sand extraction, will have limited capacity to regenerate without management actions
Future quality WITH rehabilitation (scale)/Future number WITH rehabilitation	5.00	expect that moderate to good condition will be achievable
Time until ecological benefit (years)	17.00	15 years for trees to produce habitat for WRP plus 2 years for sand extraction and revegetation to occur post clearing
Confidence in rehabilitation result	0.8	reasonably high level of confidence this habitat will be established with appropriate completion criteria applied
Offset		

Description	Conservation covenant over 7.66 hectare area of vegetation within Lot 761	
Proposed rehabilitation (area in hectares)	7.66	area of conservation covenant
Current quality of offset site /Start number (of type of feature)	5.00	Factors influencing this quality score: -records of WRP in local area, but none in the patch of vegetation -no evidence of WRP found in the fauna survey -fauna survey considered habitat marginal, but could possibly be used by transient individuals -however, canopy cover is less patchy than in application area, and vegetation is in average Good to Very Good condition -vegetation contains a higher density of foraging species used by WRP (e.g. eucalypts)
Future quality WITHOUT offset (scale)/Future number WITHOUT offset	5.00	without management, unlikely to change
Future quality WITH offset (scale)/Future number WITH rehabilitation	6.00	if area was to be fenced, this would prevent access to the site, and condition may be improved slightly as vegetation could regrow over historically cleared areas
Time until ecological benefit (years)	1.00	1 year to establish conservation covenant
Confidence of rehabilitation result	0.9	high level of confidence
Duration of offset implementation (maximum 20 years)	20.00	maximum
Time until offset site secured (years)	1.00	1 year to establish conservation covenant
Risk of future loss WITHOUT offset (%)	20.0%	SPP 2.4 SGS area, relatively high risk of loss
Risk of future loss WITH offset (%)	5.0%	low risk of loss under conservation covenant

Appendix G. Biological survey information excerpts and photographs of the vegetation



20.0%

Figure G-1. Vegetation types mapped within the application area (Daniel Marsh Botanical Consulting, 2013).

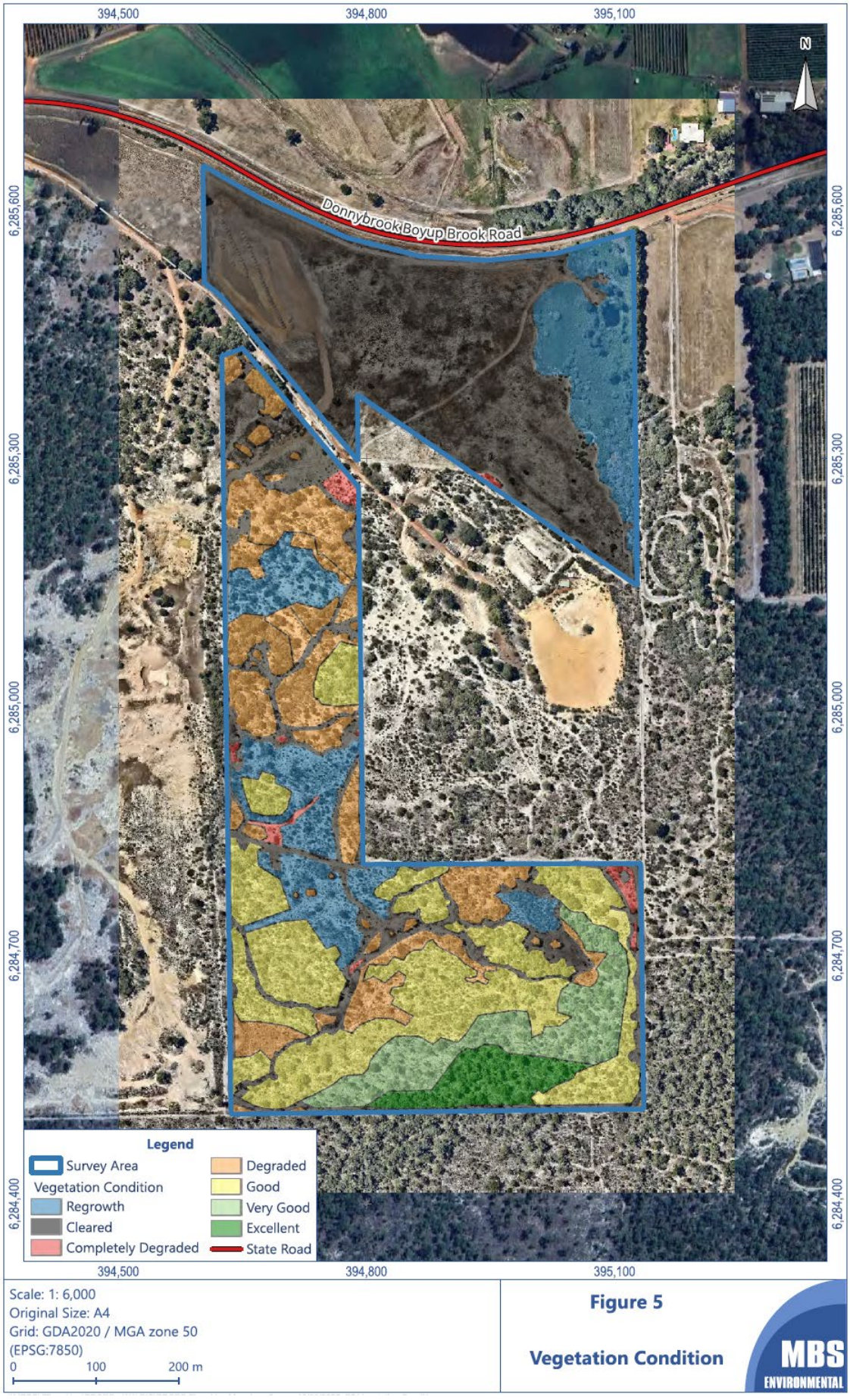


Figure G-2. Vegetation condition mapped within the application area (MBS, 2025).

Figure G.4. Degraded vegetation in the application area (DWER, 2025)

Figure G.4. Large jarrah trees (DWER, 2025)

Figure G.5. Scattered scrubs of vegetation in application area (DWER, 2025)

Figure G.6. Dead tree. Vegetation in good condition (DWER, 2025)

Figure G.7. Canopy of large jarrah tree (DWER, 2025)

Figure G.8. Vegetation in the southwest of the application area (DWER, 2025)

Figure G.9. Vegetation in southeastern portion of the application area. (DWER, 2025)

Figure G.10. Vegetation in southeastern portion of the application area. Very good condition (DWER, 2025)

Appendix H. Sources of information

H.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines

- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

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