GOVERNMENT OF WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10996/1
Permit Holder:	Urban Resources Pty Ltd
Duration of Permit:	3 November 2025 to 3 November 2033

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 521 on Deposited Plan 71834, Ravenswood

3. Clearing authorised

The permit holder must not clear more than 3.14 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 3 November 2030.

5. Staged clearing

The permit holder must ensure that extraction activities within areas cleared under this permit occur no more than three (3) months after undertaking *clearing*.

PART II – MANAGEMENT CONDITIONS

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, 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.

8. Fauna management – directional clearing

The permit holder must:

(a) conduct *clearing* authorised under this permit in one direction, towards adjacent *native vegetation*; and

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

9. Revegetation

(a) no later than 3 November 2026, the permit holder must *revegetate* the 2.89 hectare area cross-hatched red in Figure 2 of Schedule 1.

(b) In undertaking the *revegetation* required under *condition* 9(a), the permit holder must:

(i) undertake *site preparation works,* and pre-revegetation weed control activities;

(ii) undertake *direct seeding* and/or *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/or *planting*, to achieve the minimum completion criteria specified in Table 1 of Schedule 2;

(v) establish and maintain temporary fencing around the area *revegetated* under this permit within three months of commencing *revegetation* until such time that *planted* vegetation has established;

(vi) establish at least four 10 x 10 metre monitoring quadrats within the area *revegetated* under this permit;

(vii) engage an *environmental specialist* to monitor the quadrats specified in *condition* 9(b)(vi) annually, until the completion criteria outlined in Table 1 of Schedule 2 have been met and maintained for a minimum of three (3) years; and

(viii) ensure the *environmental specialist* engaged under *condition* 9(b)(vii) prepares an annual report which outlines the monitoring results of the area *revegetated* under this permit against the completion criteria set out in Table 1 of Schedule 2.

(c) If after three (3) years the monitoring required under *condition* 9(b)(vii) indicates that the completion criteria outlined in Table 1 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 red in Figure 2 of Schedule 1, that will result in the completion criteria specified in Table 1 of Schedule 2 being met, ensuring only *local provenance* seeds and propagating material are used; and

(ii) additional *weed* control activities where required.

(d) Where remedial actions are required under *condition* 9(c) the permit holder must repeat the activities required by condition 9(b)(vii), condition 9(b)(viii) and *condition* 9(c).

(e) Where an *environmental specialist* has determined that the completion criteria outlined in Table 1 of Schedule 2 have been met, that report is to be provided to the *CEO* within three months of that determination being made.

(f) If the *CEO* does not agree with the determinations made by an *environmental specialist* under *condition* 9(e), the *CEO* may require the permit holder to repeat the activities required under *condition* 9(c) and *condition* 9(d).

PART III - RECORD KEEPING AND REPORTING

10. 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* 6; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with *condition* 7; and (g) actions taken in accordance with *condition* 5 and *condition* 8.
2.	In relation to the *revegetation* of areas pursuant to *condition* 9	(a) a description of the *revegetation* activities undertaken, including; (i) details of the *direct seeding* and *planting*, including the applied seed rate and number of plantings;

No.	Relevant matter	Specifications
		(ii) *weed* control actions (iii) watering actions. (b) the date/s which *revegetation* works began; (c) the boundaries of the area *revegetated*, recorded digitally as a shapefile; (d) the size of the area *revegetated* in hectares; (e) a list of the *native vegetation* species *planted* or *direct seeded*; (f) at least two photographs of the area revegetated, recorded annually; (g) results of annual monitoring against the completion criteria; (h) a description of any remediation works undertaken in accordance with *condition* 9(c); (i) a copy of the environmental specialists monitoring report pursuant to *condition* 9(b)(viii); (j) a copy of the environmental specialists determination pursuant to *condition* 9(e); and (k) the date that completion criteria were considered to be met.

11. Reporting

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

(i) the records required to be kept under *condition* 10; 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 days prior to the expiry date of the permit, a written report of records required under *condition* 10, where these records have not already been provided under *condition* 11(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 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/s	a condition to which this clearing permit is subject under s.51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.

Term	Definition
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
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 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)
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 50 km and the same 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-July for taking *planting* and *direct seeding*.
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, *direct seeding* 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 example by ripping or tilling the soil surface and respreading site topsoil and chipped *native vegetation*.
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

Meenu Vitarana
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

10 October 2025

Schedule 1

The boundary of the area authorised to be cleared is shown in Figure 1. The boundary of the *revegetation* area, subject to *condition* 9, is shown in Figure 2.

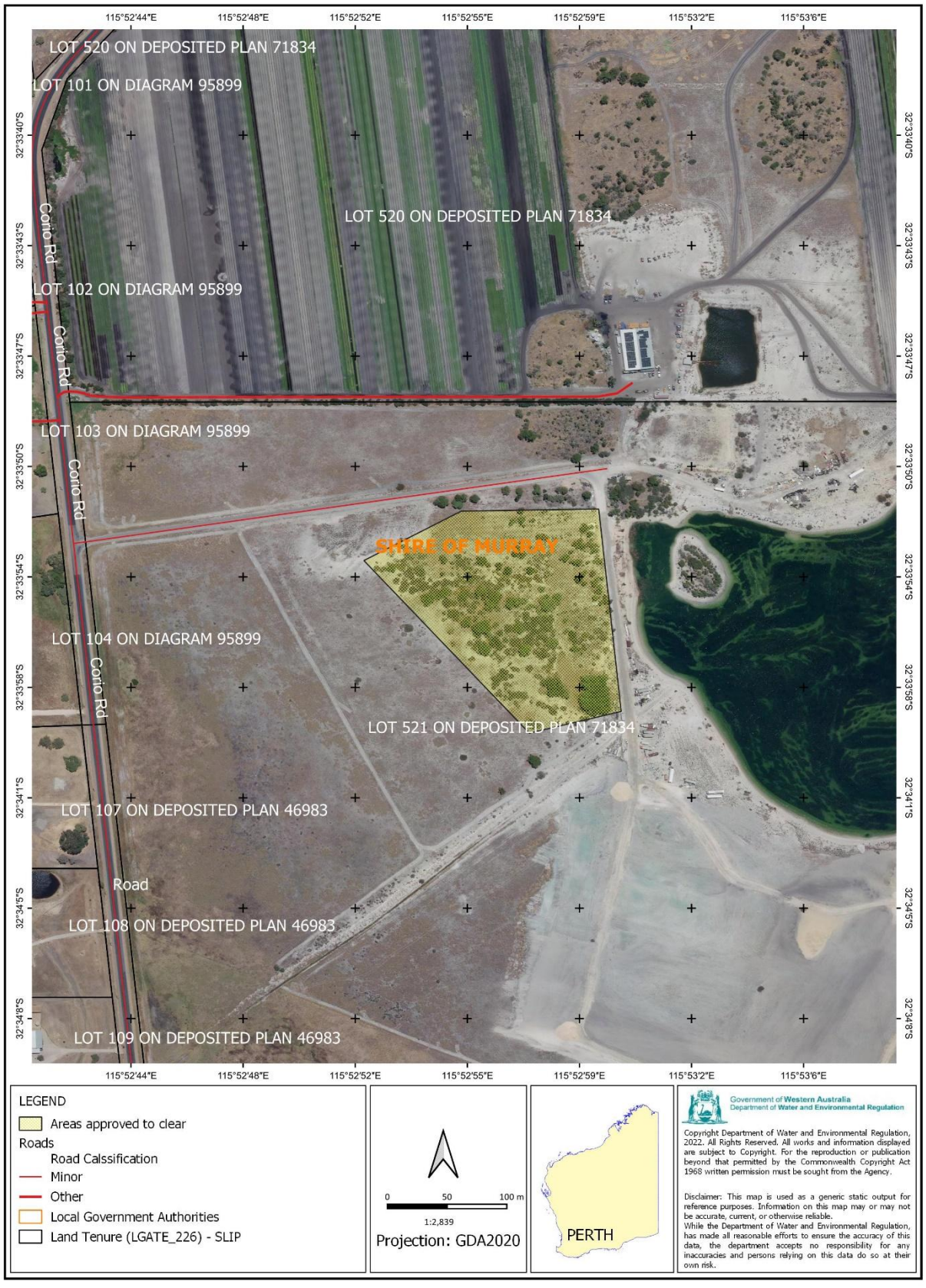

Figure 1: Map of the boundary of the area within which *clearing* may occur (cross-hatched yellow).

Figure 2: The area cross-hatched red indicates the *revegetation* area subject to *condition* 9.

Schedule 2

Table 1: Completion criteria for revegetation required by *condition* 9.

Characteristic	Completion criteria	Monitoring
Species richness	Minimum species richness of fifteen (15) species of *native vegetation* per 100m2.	Annual monitoring in spring by an *environmental specialist* for a minimum of three years after the last year that plants were established. Monitoring must occur within a minimum four (4) 10 x 10 metre quadrats in the area *revegetated* under this permit. Completion criteria must be met and maintained for three years.
Species density	Density of a minimum 1500 stems per hectare, including: • a minimum 450 stems per hectare of overstorey species comprising a mixture of *Banksia attenuata*, *Banksia menziesii*, *Banksia grandis, Corymbia calophylla* and *Eucalyptus marginata*.	
Weeds	• Weed cover of less than 20% of total species abundance on site. • No Weeds of National Significance present. • No Declared Weeds under the *Biosecurity and Agricultural Management Act 2007* present.	

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 10996/1
Permit type:	Purpose permit
Applicant name:	Urban Resources Pty Ltd
Application received:	18 March 2025
Application area:	3.14 hectares of native vegetation
Purpose of clearing:	Sand extraction
Method of clearing:	Mechanical
Property:	Lot 521 on Deposited Plan 71834, Ravenswood (Lot 521)
Location (LGA area/s):	City of Mandurah

1.2. Description of application

The applicant is proposing to clear a 3.14-hectare (ha) area (the application area) within Lot 521 on Deposited Plan 71834, Ravenswood, to expand an existing Corio Road sand mine. The proposed clearing represents stage 5 of an existing and operational sand mine on Lot 521.

The application area has been previously cleared and comprises scattered native and planted vegetation close to an existing artificial lake, within a property that has been subject to intensive historical agriculture.

The applicant holds a Development Approval and Extractive Industry Licence from the City of Mandurah for the proposed sand mine expansion.

The applicant has advised that the sand from the Corio Road sand mine is being used in the construction of subdivisions for housing, and specifically the 'Mundi' subdivision just east of the Mundijong townsite, which has ongoing house and land demands (Urban Resources, 2025a). The applicant notes that the need for sand is immediate as the demand for housing in this area is at a very high level due to its affordability, which is driven in part by the value of the sand which can be provided at a very competitive rate from the Corio Road sand mine (Urban Resources, 2025a).

1.3. Decision on application

Decision:	Granted
Decision date:	10 October 2025
Decision area:	3.14 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and 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);
- the findings of biological surveys of the application area;
- the findings of a DWER site inspection;
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix B);
- the applicant's efforts to avoid, minimise and mitigate the environmental impacts of the proposed clearing in accordance with the WA Environmental Offsets Guidelines (2014) mitigation hierarchy;
- that the proposed clearing represents stage 5 of an existing sand mine and is subject to development approval and an extractive industry licence; and
- other relevant matters (see Section 3).

The assessment identified that the proposed clearing would result in the following environmental impacts:

- the loss of:
  - 0.95 hectares of primary foraging habitat for Carnaby's cockatoo
  - 0.69 hectares of primary foraging habitat for forest red-tailed black cockatoo and Baudins cockatoo
  - 3.14 hectares of native vegetation that is a significant remnant within an extensively cleared landscape
- the potential introduction and spread of weeds and dieback into nearby native vegetation
- the potential for wind erosion should soils be left bare post clearing
- a risk of injury to native fauna through clearing operations.

The Delegated Officer determined that the risk of wind erosion, weed and dieback spread, and fauna strike can be appropriately managed through conditions on the clearing permit. The Delegated Officer determined that the proposed impact to black cockatoo foraging habitat required mitigating through a revegetation action. The Delegated Officer determined that it was appropriate to consider a revegetation action as a mitigation measure in this instance given the extent of foraging habitat present within the application area, and site context (full assessment detailed under section 3.2.1).

The applicant has prepared a revegetation plan, which sets out a commitment to revegetate 2.89 hectares of native vegetation comprising black cockatoo foraging habitat within the same lot where clearing is proposed. The revegetation action will aim to substantially improve the quality of black cockatoo foraging habitat within the property and re-instate significant vegetation within a highly cleared landscape.

The revegetation action proposed is consistent with the WA Environmental Offsets Policy (2011) and WA Environmental Offsets Guidelines (2014) and adequately addresses the impact to black cockatoo foraging habitat and significant remnant vegetation in an extensively cleared area.

Considering the above, and the necessity for clearing, the Delegated Officer decided to grant a clearing permit subject to conditions requiring the applicant to:

- implement revegetation actions, as outlined above, subject to specific completion criteria;
- undertake avoid and minimise measures to reduce the impacts and extent of clearing;
- undertake hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake extraction activities within 3 months of clearing to minimise the risk of wind erosion; and
- undertake slow, one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

1.5. Application area site map

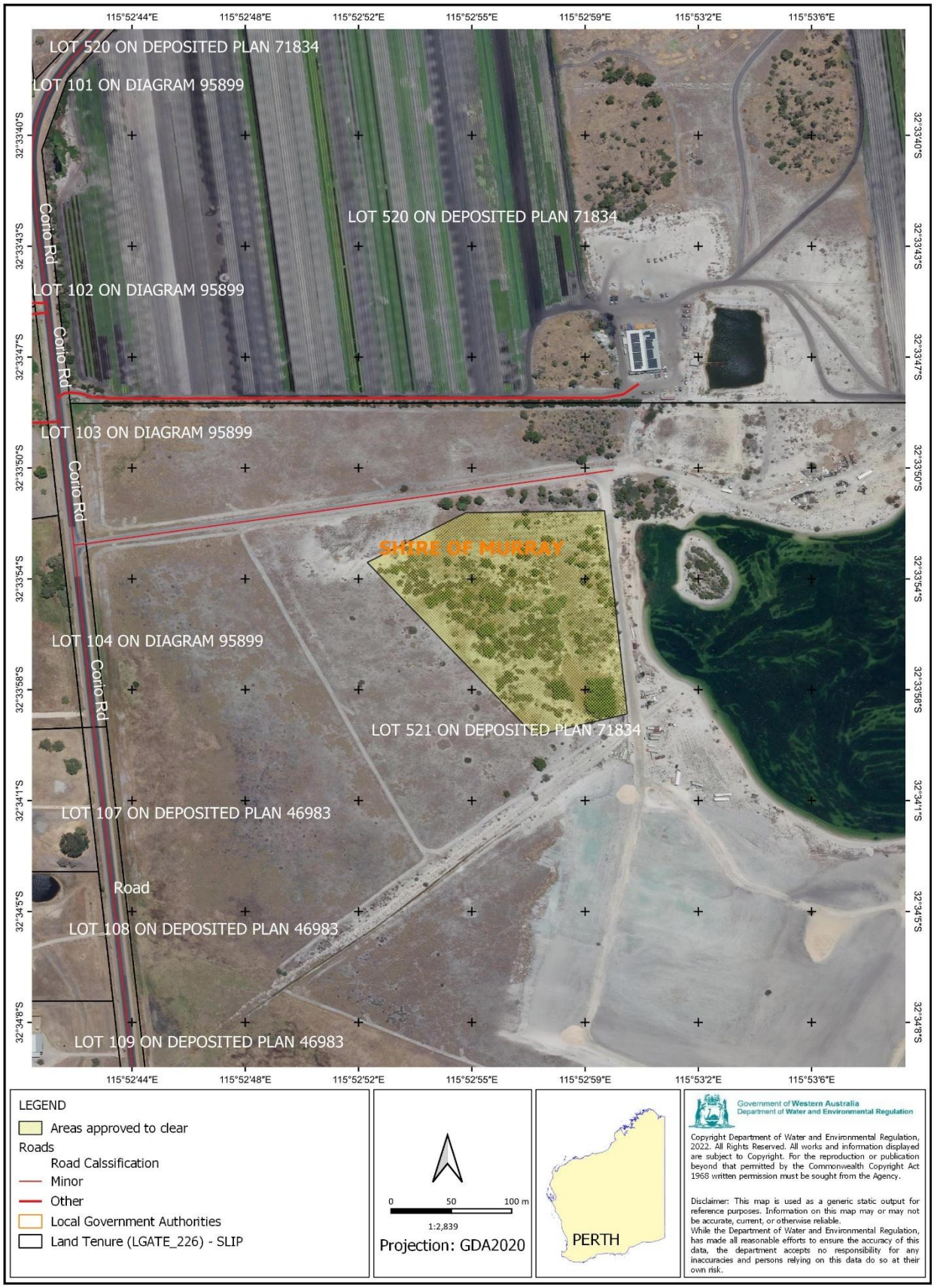

Figure 1 - Map of the application area

The area cross-hatched yellow indicates the area authorised to clear 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*.

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

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

Other legislation of relevance for this assessment include:

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

Relevant policies considered during the assessment include:

- *WA 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)
- *WA 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, minimisation and mitigation measures

The applicant has advised that the stages of the sand mining operation have been purposefully selected based on vegetation condition and quality. The applicant notes that most of the sand mining operation does not require the clearing of native vegetation and the proposed stage 5 mining area, subject to this application, includes highly degraded native vegetation that has been previously cleared (Urban Resources, 2025b).

The applicant has also revised the application area during assessment, from 3.9 hectares to 3.14 hectares, to exclude a band of *banksia* trees along the northern boundary of the original application area, to lessen the impact to black cockatoo foraging habitat, and better align with the development approval.

The applicant has also developed a revegetation plan that provides a commitment to revegetating 2.89 hectares of native vegetation within the same lot as the proposed clearing. The revegetation aims to substantially improve the quality of black cockatoo foraging habitat and vegetation growing in an extensively cleared area (Urban Resources, 2025c).

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

In assessing the application, the Delegated Officer had regard for the site characteristics (see Appendix A), vegetation assessment findings, A DWER site inspection, 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 B) identified that the impacts of the proposed clearing present a risk to conservation listed fauna and significant remnant vegetation growing in an extensively cleared landscape. 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.

3.2.2. Biological values – Conservation listed fauna - Principle (b)

Assessment

Background

A vegetation assessment was undertaken over the application area on 30 October 2024 (PGV Environmental (PGV), 2024). The vegetation assessment involved PGV traversing the application area during the day and recording all plant species, vegetation types and vegetation condition (PGV, 2024).

The Vegetation Assessment identified five vegetation types within the application area (see Appendix A for full descriptions) (PGV, 2024):

- *Adenanthos cygnorum* tall open scrub
- *Banksia prionotes* low open woodland over weeds
- *Eucalyptus marginata* (jarrah) woodland over *Adenanthos cygnorum* tall shrubland
- A stand of *Pinus radiata* (pine trees)
- jarrah revegetation in poor quality, with many dead and dying trees.

DWER's site inspection concurred with the PGV vegetation assessment findings (DWER, 2025).

DWER's assessment identified that the below fauna species in Table 1 have the potential to occur within the application area. This is based on the proximity to known records, recorded vegetation types (Emerge, 2024; DWER, 2025), and site characteristics.

Table 1. Native fauna species that may occur within the application area.

Name	Conservation status
Baudin's cockatoo (*Zanda baudinii*)	Endangered; BC Act & EPBC Act
Carnaby's cockatoo (*Zanda latirostris*)	Endangered; BC Act & EPBC Act
forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*)	Vulnerable; BC Act & EPBC Act
quenda (*Isoodon fusciventer*)	Priority 4; DBCA listed
Swan Coastal Plain shield-backed trapdoor spider (*Idiosoma sigillatum*)	Priority 3; DBCA listed

No conservation listed fauna were observed within the application area during DWER's site inspection, although potential quenda diggings were observed in several locations (DWER, 2025).

The Swan Coastal Plain shield-backed trapdoor spider was initially considered as unlikely to occur within the application area given the degraded to completely degraded (Keighery, 1994) condition (PGV, 2024; DWER, 2025) of the vegetation in the application area. However, DWER's site inspection identified a spider burrow within the application area. Photographs of the burrow were provided by DWER to the WA Museum for advice. The WA Museum advised that the burrow identified is from a wolf spider (Family Lycosidae) and not of concern, given their commonality and large distribution. Noting this, the proposed clearing is not likely to impact on the Swan Coastal Plain shield-backed trapdoor spider, and this species has not been considered further below.

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

Foraging habitat

DWER's site inspection identified:

- 0.95 hectares of foraging habitat for Carnaby's cockatoo, consisting of (PGV, 2024; DWER, 2025) –
  - 0.4 hectares comprising the jarrah woodland area as identified in the vegetation assessment
  - 0.19 hectares comprising the *Banksia prionotes* woodland area as identified in the vegetation assessment
  - 0.14 hectares comprising the north-western patch of *Adenanthos cygnorum* woodland identified in the vegetation assessment, given this patch included scattered low density *banksia* trees, as identified in DWER's site inspection (note this differed slightly from the PGV assessment findings)
  - 0.22 hectares comprising the living jarrah trees and *Banksia* trees in the jarrah revegetation area, as identified in DWER's site inspection.

- 0.62 hectares of foraging habitat for forest red-tailed black cockatoo and Baudin's cockatoo comprising the jarrah woodland and jarrah trees in the revegetation area.

While the vegetation assessment noted that the *Banksia prionotes* recorded in the application area is highly likely to have been planted, this cannot be absolutely confirmed and DWER is therefore taking a precautionary approach in considering it as native within the application area. Similarly, the circumstances behind the jarrah trees within the revegetation area are unknown and these trees are also being precautionarily considered as native.

No evidence of foraging by black cockatoos was observed during DWER's site inspection or during the vegetation assessment (PGV, 2024; DWER, 2025).

The Commonwealth referral guideline for black cockatoos (DAWE, 2022), specifies that habitat critical for their recovery includes foraging habitat (including remnant patches of vegetation), night roosting habitat and nesting trees for breeding. The importance of foraging habitat for Carnaby's cockatoo increases when it occurs within foraging distance of nesting sites (about 12 kilometres) as it supports breeding effort (EPA, 2019). Food resources within the range of roost sites (6 kilometres) are also important to sustain populations of black cockatoos (EPA, 2019).

There are no known black cockatoo nesting sites within 12 kilometres of the application area (closest 13 kilometres away). There are no known roosts within 6 kilometres of the application area (closest 8 kilometres away). While there are no known roosts or breeding trees within 6 and 12 kilometres form the application area respectively, there may be unmapped roost and nest habitat within those distances.

The Delegated Officer determined that the proposed clearing of 0.95 hectares of foraging habitat for Carnaby's cockatoo and 0.69 hectares of foraging habitat for Baudin's cockatoo and forest red-tailed black cockatoo constitutes a significant residual impact. This determination considered the:

- presence of preferred foraging habitat for black cockatoos within the application area
- cumulative loss of black cockatoo foraging habitat across these species range, particularly in the central and southern Swan Coastal Plain.

Noting the extent of the proposed impact to black cockatoo foraging habitat, and the applicant's adherence to the mitigation hierarchy (avoid, minimise), the Delegated Officer determined that it was appropriate to consider a revegetation action to address this impact.

The applicant has prepared a revegetation plan which provides a commitment to revegetating 2.89 hectares of native vegetation that provides a preferred foraging resource for black cockatoos (see Figure 2). The proposed revegetation area is in a completely degraded condition, and is largely cleared, except for a small stand of jarrah trees (Urban Resources, 2025c). The proposed revegetation will substantially improve the quality / reinstate foraging habitat within the revegetation area. The adequacy of the revegetation action was assessed through the WA Environmental Offsets Metric and having consideration of the Environmental Offsets Policy (2011) and Environmental Offsets Guidelines (2014). The assessment identified that the proposed revegetation is adequate to address the impact to black cockatoo foraging habitat.

The Delegated Officer considered that the revegetation proposed would result in a good environmental outcome for black cockatoos. The requirement to action the commitments within the revegetation plan will be conditioned on the clearing permit.

<u>Roosting and breeding habitat</u>

Breeding habitat' for black cockatoos includes trees that either have a suitable nest hollow or are of a suitable DBH to develop a nest hollow (500 millimetres (mm) for most tree species) (DAWE, 2022). Black cockatoos commonly night roost in tall eucalypts near food and water resources.

The application area does not include any potential breeding trees and is unlikely to provide roost habitat. This is noting the small size of the jarrah trees observed within the application area (DWER, 2025; PGV, 2024).

Quenda

The application area is within the known distribution of quenda. According to available databases, the closest record is 4.3 kilometres from the application area. There are 47 quenda records in the local area.

Quenda inhabit areas of dense vegetation cover, often in wet environments (DEC, 2012). Quenda forage amongst leaf litter for invertebrates, fungi and plant material.

During DWER's site inspection quenda diggings were searched for, and some possible diggings were identified. Additional evidence such a scats or sightings were not observed (DWER, 2025)

Given that the application area contains minimal native understorey vegetation, a lack of dense vegetation cover and limited connectivity with other remnants in the local area that would provide higher quality quenda habitat, the proposed clearing is not likely to impact on significant habitat for this species.

However, this species may transiently use the site, and any such individuals may be impacted through fauna strike. Fauna management measures that require slow, one directional, progressive clearing would assist to minimise this risk. The Delegated Officer also had regard for the applicant's revegetation commitments, which would have the effect of reinstating suitable habitat for quenda.

Fauna linkage values

The application area is not part of a formally mapped ecological linkage, it may however provide value as a stepping stone for fauna within a highly fragmented landscape. This value is somewhat limited for terrestrial fauna given the lack of connectivity with other remnants in the local area. However, it may support the movement of black cockatoos and other avian fauna through the landscape by providing a foraging resource. The impact to black cockatoo foraging habitat has been assessed above, and the applicant has committed to revegetating a separate area within the same lot which would reinstate higher quality fauna habitat.

The proposed clearing will increase the risk of weeds and dieback spreading into nearby native vegetation. Adherence to specific weed and dieback hygiene protocols would assist to manage this risk.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.95 ha of foraging habitat for Carnaby's cockatoo and 0.69 hectares of foraging habitat for Baudin's cockatoo and forest red-tailed black cockatoo. This impact requires addressing through a revegetation action and the applicant has prepared a revegetation plan that commits to revegetating a 2.89 hectare area with preferred foraging habitat for black cockatoos.

The Delegated Officer determined that it was appropriate to consider a revegetation action to address the above impact, noting the applicant's adherence to the mitigation hierarchy, extent of impact and site context.

The proposed clearing will also increase the risk of fauna strike to native fauna using the application area at the time of clearing.

Conditions

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

- undertake nearby revegetation of a 2.89 hectare area to provide primary foraging habitat for black cockatoos, which will provide a greater density of foraging habitat than the application area
- undertake avoid and minimise measures to reduce the impacts and extent of clearing
- undertake hygiene steps to minimise the risk of the introduction and spread of weeds and dieback; and
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

Figure 2 - Map of the revegetation area

The area cross-hatched red indicates the area subject to revegetation.

3.2.3. *Significant remnant vegetation in a highly cleared area - Principle (e)*

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30% of that present prior to 1750, below which species loss appears to accelerate exponentially at an ecosystem level.

The application area is within the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) Bioregion (SCP Bioregion). The SCP Bioregion retains 38.6 per cent of its pre-European vegetation extent.

The vegetation within the application area is mapped as Bassendean Complex – Central and South which retains 26.87 per cent of its pre-European vegetation (Government of Western Australia, 2019). This vegetation complex is described as woodland of jarrah, *Allocasuarina fraseriana* and *Banksia* species to low woodland of *Melaleuca* species, and sedgelands on the moister sites. The jarrah woodland vegetation type mapped across 0.4 hectares of the application area is partially representative of this vegetation complex.

The native vegetation within the local area (20-kilometre radius surrounding the application area) has been extensively cleared and retains 16.06 per cent of its original extent.

Noting the above native vegetation extents, the clearing of native vegetation within the application area is inconsistent with the national objectives.

The application area is a significant remnant as it includes primary foraging habitat for black cockatoos. Therefore, the proposed clearing will result in the loss of significant native vegetation within an area that has been extensively cleared.

The applicant has committed to revegetating 2.89 hectares of native vegetation that provides a preferred foraging resource for black cockatoos (see Figure 2) in accordance with a revegetation plan. The revegetation plan includes a commitment to plant species that are representative of the Bassendean Complex – Central and South vegetation complex, including jarrah, *Banksia attenuata*, *Banksia menziesii*, *Banksia grandis*, and *Adenanthos cygnorum* amongst a host of other local provenance native understorey species.

The proposed revegetation area is in a completely degraded condition, and is largely cleared, except for a small stand of jarrah trees (Urban Resources, 2025c). The proposed revegetation will substantially improve the quality of vegetation within this area and reinstate vegetation more akin to the Bassendean Complex – Central and South.

The adequacy of the revegetation action in addressing the above impact was assessed through the WA Environmental Offsets Metric. Regard was also given to the Environmental Offsets Policy (2011) and Environmental Offsets Guidelines (2014). The assessment identified that the proposed revegetation action is adequate to address the loss of significant remnant vegetation in an extensively cleared landscape.

Conclusion

The proposed clearing will result in the loss of significant native vegetation within an area that has been extensively cleared. The applicant has proposed a revegetation action to address this impact, which has been deemed by the Delegated Officer to be adequate. The Delegated Officer determined that it was appropriate to consider a revegetation action proposed by the applicant to address the above impact, noting the applicant's adherence to the mitigation hierarchy, extent of impact and site context.

Conditions

To address the above impact, the applicant will be required to undertake revegetation of a 2.89 hectare area located in the same lot as the proposed clearing, to reinstate higher quality native vegetation, that includes species representative of the Bassendean Complex – Central and South. The revegetation action will be subject to specific completion criteria which must be met by the applicant.

3.2 Relevant planning instruments and other matters

The Shire of Murray was invited to provide comment on the proposed clearing and advised that (Shire of Murray, 2025):

- most of the application area is covered by a development approval (DA) (P124/2022) and extractive industry licence
- the development approval is valid until 28 June 2027.

- the approved Stage 5 extraction area boundary varies slightly from the proposed clearing permit boundary.

The applicant has addressed the slight discrepancy between the clearing permit application area and DA footprint through revising the application area to align with the DA footprint.

The Development Approval is subject to conditions relating to managing the environmental impacts of the end land use. These conditions include:

- rehabilitation actions post extraction
- no extraction within 0.5 metres of the highest known groundwater level
- no modification to groundwater levels, groundwater monitoring to be undertaken with monitoring reports to be submitted on a quarterly basis
- rehabilitation of each stage before progressing to the subsequent stage
- works must be subject to a site-specific noise and dust management plan
- preparation and implementation of a landscaping plan which includes screening vegetation and vegetation that will have the effect of ensuring the lake foreshore is representative of a wetland environment
- no dust nuisance outside of the property boundaries.

The application area does not intersect any mapped Aboriginal Heritage Sites, however, is close (around 85 metres away) to a lodged site known as Gibbs Sandpit, Pinjarra (ACH-00003305). It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

A.1 Site characteristics

Characteristic	Details
Local context	The application area is in the Swan Coastal Plain Bioregion and Perth Subregion, in an agriculture dominated area of the Shire of Murray. The local area (10-km radius surrounding the application area) has been subject to extensive historical clearing for agriculture and retains about 16.1% native vegetation cover.
Ecological linkage	The application area does not form part of any formally mapped ecological linkages.
Conservation areas	The closest DBCA managed conservation area is an Un-named Nature Reserve 5.9 km southwest. Fiegert Road Nature Reserve is 6.6 km west of the application area.
Vegetation description	The vegetation assessment indicates that the vegetation within the application area consists of (PGV, 2024): • **Ac** - *Adenanthos cygnorum* (woolly bush) tall open scrub over *Adenanthos meisneri, Laxmannia squarrosa* and *Lyginia barbata* (0.32ha of the application area) • **Bp** – *Banksia prionotes* low open woodland over weeds. A stand of *Banksia prionotes* trees to 4m high occurs in the centre of the site. The trees appear natural but are highly likely to have been planted as *B. prionotes* does not occur naturally on the Swan Coastal Plain south of the Swan River. Some native shrubs occur in the understorey including *Bossiaea eriocarpa, Lyginia barbata, Dampiera linearis* and several ephemeral species including *Levenhookia stipitata, Drosera glanduligera, Poranthera microphylla* and *Stylidium piliferum* (0.19ha of the application area) • **Em** - *Eucalyptus marginata* (jarrah) woodland over *Adenanthos cygnorum* Tall Shrubland. The trees are nearly all coppiced from the base. Woolly Bush occurs up to 2m in the understorey. The ground cover is mostly weeds, particularly perennial veltdgrass (*Ehrharta calycina*) (0.4 ha of the application area) • **Pines** - a small stand of healthy *Pinus radiata* trees occurs at the southeastern end of the site (0.08 ha of the application area) • **Revegetation** – largely planted jarrah (in 2002) in poor quality (1.46 ha of the application area) • **Cleared** – largely cleared areas dominated by weeds with occasional scattered native shrubs (0.68 ha). The mapped vegetation types recorded during the vegetation assessment are publicly available, shown in Figure 1 here - Index of /permit/10996. DWER's site inspection largely concurred with the PGV vegetation assessment findings, except for noting scattered *banksia* trees throughout the north-western patch of the Ac vegetation type (DWER, 2025). The Em vegetation type area is partially consistent with the broad scale mapped vegetation type noting the presence of jarrah as the dominant overstorey species (Heddle et al., 1980): • **Bassendean Complex-Central and South** - Vegetation ranges from woodland of Eucalyptus marginata (Jarrah) - Allocasuarina fraseriana (Sheoak) - Banksia species to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of Eucalyptus marginata (Jarrah) to Eucalyptus todtiana (Pricklybark) in the vicinity of Perth.

Characteristic	Details
Vegetation condition	The vegetation assessment recorded the vegetation under application as being in a degraded and completely degraded (Keighery, 1994) condition (PGV, 2024). The degraded areas occurred in the northern Ac, a portion of the Em and the Bp vegetation types. The mapped vegetation condition types are shown in figure 1 of the publicly available vegetation assessment here - Index of /permit/10996. A description of each vegetation condition type is provided in Appendix C.
Climate and landform	The application area and surrounds experience a warm Mediterranean climate, characterised by hot, dry summers and cool to mild wet winters. The average annual rainfall recorded at the closest weather station to the application area is 717.4 mm. The application area lies on a relatively flat landform with the elevation of the site largely 15mAHD.
Soil description, groundwater salinity and erosion risk	The soils within the application area are mapped as the Bassendean B2 Phase, described as flat to very gently undulating sandplain, with well to moderately well drained deep bleached grey sands, with a pale yellow B horizon or a weak iron-organic hardpan at 1 to 2 m. These soils have a high wind erosion, water repellence, phosphorous export and subsurface acidification risk, as depicted below: • 30-50% of map unit has a high to extreme wind erosion risk • >70% of map unit has a high water repellence risk • >70% of map unit has a high subsurface acidification risk or is presently acid • >70% of map unit has a high to extreme phosphorus export risk. Groundwater salinity is mapped as 500-1000 milligrams per litres total dissolved solids, which is considered marginal.
Waterbodies / watercourses	There are no watercourses or wetlands mapped within the application area. The closest wetland is a multiple use wetland (floodplain) (UFI 13307), adjacent to the western portion of the application. The portion of the wetland mapped adjacent to the application area is devoid of vegetation. The closest natural watercourse is a minor non-perennial watercourse of the North Dandalup River which occurs 1km east. The application area is around 20 metres from a large artificial lake.
Conservation listed flora	There are 33 conservation listed flora taxa known from the local area. No threatened or priority flora have been previously recorded within or nearby the application area. The closest recorded conservation listed flora to the application area is *Morelotia australiensis* located 2.96 kilometres away. The vegetation assessment did not identify any conservation listed flora in the application area or broader survey area (PGV, 2024). The understorey is dominated by weeds with low density, scattered native understorey, and it is unlikely that conservation listed flora occur.
Ecological communities	The closest mapped threatened or priority ecological community to the application area is the Banksia Woodlands of the Swan Coastal Plain ecological community (Banksia Woodlands Community) (Endangered; EPBC Act, Priority 3; BC Act), 40 m north. Based on the condition of this patch observed during DWER's site inspection (degraded), it is unlikely that this patch is representative of the Banksia Woodlands Community. Another patch of the Banksia Woodlands Community is mapped 290 metres south east within the same property. The vegetation assessment did not identify threatened or priority ecological communities within the application area (PGV, 2024).

Characteristic	Details
Conservation listed fauna	There are 30 conservation listed fauna species known from the local area. The closest record to the application area is the blue-billed duck, recorded adjacent to a wetland 1.8km north. Those fauna species most likely to occur within the application area are listed below under Section A.3 and have been assessed under section 3.2.1.

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	1,501,222	578,913	38.6	222,917	14.9
Vegetation Complex**					
Bassendean Complex-Central and South	87,476	23,509	26.87	4,377	5.0
Local area					
10km radius	31,512	5,062	16.06	-	-

*Government of Western Australia (2019) **Government of Western Australia (2019a)

A.3 Fauna analysis

With consideration of the fauna habitat within the application area, relevant datasets, and biological survey information, impacts to the following conservation listed fauna required consideration.

Species name	Conservation status	Suitable habitat? [Y/N]	Did surveys identify within the application area? [Y, N, N/A]
Baudin's cockatoo (*Zanda baudinii*)	EN; BC Act & EPBC Act	Y – primary foraging	N
Carnaby's cockatoo (*Zanda latirostris*)	EN; BC Act & EPBC Act	Y – primary foraging	N
forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*)	VU; BC Act & EPBC Act	Y – primary foraging	N
quenda (*Isoodon fusciventer*)	Priority 4	Y	N
Swan Coastal Plain shield-backed trapdoor spider (*Idiosoma sigillatum*)	Priority 3	Y	N

CR: critically endangered, EN: endangered, VU: vulnerable, CD: conservation dependant, OS: other specially protected

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The application area is in a degraded and completely degraded (Keighery, 1994) condition (PGV, 2024; DWER, 2025). The vegetation assessment of the application area recorded low density and species richness of native understorey species, given a dominance of well-established annual weeds, and did not identify any conservation listed flora species (PGV, 2024). The vegetation is not considered representative of any known conservation listed ecological communities. While the application area includes primary foraging habitat for black cockatoos, given the lack of species richness, diversity, vegetation condition and absence of conservation listed flora or ecological communities, the application area is not likely to comprise a high level of biodiversity.	Not likely to be at variance	No
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 application area includes primary foraging habitat for Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black cockatoo. The assessment against this principle is detailed under section 3.2.1.	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: There are no threatened flora mapped within the application area. The PGV vegetation assessment did not identify any conservation listed flora (PGV, 2024). The degraded to completely degraded application area, which is dominated by weeds and contains minimal native understorey vegetation, is not likely to contain threatened flora.	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: There are no threatened ecological communities (TEC's) mapped within the application area. The PGV vegetation assessment did not identify any TEC's (PGV, 2024). The degraded to completely degraded application area, which is dominated by weeds and contains minimal native understorey vegetation, is unlikely to represent any known TEC's.	Not likely to be at variance	No
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."*	At variance	Yes

Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment: The vegetation within the application area is a significant remnant within an extensively cleared landscape. The assessment against this principle is detailed under section 3.2.2.		Refer to Section 3.2.2, above.
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: The proposed clearing is unlikely to impact on any known conservation areas noting the closest conservation area is 5.9 km away. The application area does not provide linkage values between 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: While the application area is adjacent to a multiple use wetland, however this section of the highly modified wetland is completely devoid of native vegetation. There are no natural watercourses mapped within or adjacent to the application area. The vegetation assessment and DWER's site inspection (PGV, 2024; DWER, 2025) did not identify any riparian vegetation within the application area, and the proposed clearing is not likely to impact on the native sedges that are growing along the foreshore of the large artificial lake which is around 20 metres east of the application area. Noting the above, the proposed clearing is not likely to impact on vegetation growing within or in association 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 soils within the application area comprise well drained deep bleached grey sands which are highly susceptible to wind erosion, phosphorous export and subsurface acidification. Noting the nature of proposed clearing, extent of vegetation within the application area, and applicants' intention to undertake staged clearing and return areas to pasture post extraction, the proposed clearing is not likely to result in appreciable land degradation through phosphorus export or acidification. The proposed clearing may however result in wind erosion should the soils on site be left exposed for any considerable period. To minimise this risk, the applicant is required to undertake extraction activities within 3 months of clearing, as a condition of the clearing permit. The management of dust and erosion during construction has been considered in the Shire of Murray's development approval for the project (see Section 3.3). Noting the above, the Delegated Officer considers that the risk of wind erosion will be appropriately managed such that there is a low risk of land degradation.	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: The application area is on relatively flat topography and does not intersect any natural surface water sources. The nearest natural watercourse is 1km east, separated from the application area by substantial agricultural development. The proposed clearing is therefore unlikely to impact on the quality of surface water to any natural water sources. There is an artificial lake 20m east of the application area. Noting the extent and nature of clearing proposed, and separation that has been maintained to this lake, the proposed clearing is not likely to deteriorate the water quality of this lake. This is also noting the dust management requirements that are condition on the Development Approval for the project. Groundwater salinity of the application area is mapped at between 500 and 1000 milligrams per litre total dissolved solids (marginal), and noting the extent of clearing proposed and that revegetation of 2.89 hectares comprising local provenance is proposed to occur on the same lot, the proposed clearing is not likely to result in a perceptible rise in the watertable leading to increased groundwater salinity.	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: Noting the presence of highly permeable sandy soils, relatively flat topography, and extent of native vegetation within the application area, the proposed clearing is not likely to cause or exacerbate flooding.	Not likely to be at variance	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.

Condition	Description
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 D. Sources of information

D.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)
- Cadastre (LGATE-218)
- 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)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- 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 Mapping – Best Available
- Soil Landscape Mapping – Systems
- Swan Coastal Plain Wetlands (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)

D.2. References

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