GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10776/1

File Number: DWERVT16376

Duration of Permit: From 8 February 2026 to 8 February 2033

ADVICE NOTES

Allocation of offset site

The *revegetation* offset and conservation covenant referred to in condition 7 and 8 of this permit is to facilitate the *revegetation* of a total of 2.76 hectares of *native vegetation* and the placement of a conservation covenant that comprises significant foraging and future breeding habitat for *black cockatoo species* to be conserved in perpetuity.

PERMIT HOLDER

Mr Bradley Stewart Noakes and Mr Steven Murray Noakes

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1002 on Deposited Plan 419056, Forest Grove

AUTHORISED ACTIVITY

The permit holder must not clear more than 1.736 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 8 February 2028.

2. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

3. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known dieback or *weed*-affected soil, mulch, fill, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

4. Directional clearing

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

5. Fauna management – western ringtail possum(s) and south-western brush tailed phascogale(s)

(a) In relation to the area cross-hatched yellow in Figure 1 of Schedule 1, the permit holder must engage a *fauna specialist* to inspect that area immediately prior to, and for the duration of clearing activities, for the presence of western ringtail possum(s) (*Pseudocheirus occidentalis*) and south-western brush tailed phascogale(s) (*Phascogale tapoatafa wambenger*).

(b) Clearing activities must cease in any area where fauna referred to in condition 5(a) are identified until either:

(i) the western ringtail possum(s) individual has moved on from that area to adjoining *suitable habitat*; or

(ii) the western ringtail possum(s) individual has been removed by a *western ringtail possum specialist*.

(c) Any western ringtail possum(s) individual removed in accordance with condition 5(b)(ii) must be relocated by a *western ringtail possum specialist* to adjacent *suitable habitat*.

(d) Any south-western brush-tailed phascogale individual(s) removed in accordance with condition 5(b)(ii) must be relocated by a *fauna specialist* to adjacent *suitable habitat*:

(e) Where fauna is identified under condition 5(a), the permit holder must within 14 calendar days provide the following records to the *CEO*.

(i) the number of individuals identified;

(ii) the date each individual was identified;

(iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

(iv) the number of individuals removed and relocated;

(v) the relevant qualifications of the *western ringtail possum specialist* undertaking removal and relocation;

(vi) the date each individual was removed;

(vii) the method of removal;

(viii) the date each individual was relocated;

(ix) the location where each individual was relocated to, recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and

(x) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

6. Mitigation – Revegetation

(a) Within 18 months of the commencement of clearing authorised under this permit, and no later than 8 August 2029, the permit holder must undertake *revegetation* and *rehabilitation* of 1.41 hectares within the areas hatched red in Figure 2 of Schedule 1 through the planting of *native vegetation* providing suitable foraging habitat for Carnaby's cockatoo (*Zanda latirostris*), Baudin's cockatoo (*Zanda baudinii*) and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*).

(b) The revegetation required under condition 6(a) of this permit must be undertaken in accordance with the revegetation plan prepared by SW Hydrology (SW Hydrology, 2025), including but not limited to the following actions:

(i) ripping the ground on the contour to remove soil compaction prior to *planting*;

(ii) undertaking *weed* control activities prior to *planting*;

(iii) deliberately *planting* plants, at the *optimal time*, using species listed and at equal to or greater than the density specified in Table 1 of Schedule 2 (Planting species and density – Mitigation planting);

(iv) ensuring only *local provenance* propagating material is used to *revegetate* and *rehabilitate*;

(v) fencing the perimeter of the *revegetation* areas; and

(vi) establishing three 5 x 5 metre quadrat monitoring sites across the areas

hatched red in Figure 2 of Schedule 1.

(c) The permit holder must undertake *weed* control activities and watering of *plantings* in the area revegetated under condition 6(a) on an 'as needed' basis to maintain the minimum criteria specified in Table 2 of Schedule 2 (Completion criteria – Mitigation planting).

(d) The permit holder must engage an *environmental specialist* to monitor the quadrats specified in condition 6(b)(vi) annually until the completion criteria, outlined in Table 3 of Schedule 2, have been met and maintained for a minimum of two years.

(e) If the monitoring required under condition 6(d) indicates that the completion criteria outlined in Table 3 of Schedule 2 have not been met, undertake remedial actions for revegetation and rehabilitation 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 3 of Schedule 2 being met, ensuring only *local provenance* propagating material is used;

(ii) undertake additional *weed* control activities;

(iii) continue the annual monitoring of *revegetation* and *rehabilitation* areas in the area revegetated under condition 6(a) by an *environmental specialist* until the completion criteria outlined in Table 3 of Schedule 2, are met.

(f) Where an *environmental specialist* has determined that the completion criteria outlined in Table 3 of Schedule 2 have been met, that report is to be provided to the CEO.

(g) Where the *CEO* does not agree with the determination made by an *environmental specialist*, the *CEO* may require the permit holder to undertake remedial actions in accordance with the requirements under condition 6(e).

7. Offset – revegetation

(a) Within 18 months of the commencement of clearing authorised under this permit, and no later than 8 August 2029, the permit holder must undertake the *revegetation* and *rehabilitation* of 2.76 hectares within the areas hatched red in Figure 3 of Schedule 1 through the planting of *native vegetation* providing suitable foraging habitat for Carnaby's cockatoo (*Zanda latirostris*), Baudin's cockatoo (*Zanda baudinii*) and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*).

(b) The revegetation required under condition 7(a) of this permit must be undertaken in accordance with the revegetation plan prepared by SW Hydrology (SW Hydrology, 2025), including but not limited to the following actions:

(i) ripping the ground on the contour to remove soil compaction prior to *planting*;

(ii) undertaking *weed* control activities prior to *planting*;

(iii) deliberately *planting* plants, at the *optimal time*, using species listed and at

equal to or greater than the density specified in Table 3 of Schedule 2 (Planting species and density – Offset);

(iv) ensuring only *local provenance* species and propagating material are used;

(v) fencing the perimeter of the *revegetation* areas; and

(vi) establishing three 5 x 5 metre quadrat monitoring sites across the areas hatched red in Figure 3 of Schedule 1.

(c) The permit holder must undertake *weed* control activities and watering of *plantings* in the area revegetated under condition 7(a) on an 'as needed' basis to maintain the minimum criteria specified in Table 4 of Schedule 2 (Completion criteria – Offset).

(d) The permit holder must engage an *environmental specialist* to monitor the quadrats specified in condition 7(b)(vi) annually until the completion criteria, outlined in Table 4 of Schedule 2, have been met and maintained for a minimum of two years.

(e) If the monitoring required under condition 7(d) indicates that the completion criteria outlined in Table 4 of Schedule 2 have not been met, undertake remedial actions for revegetation and rehabilitation including:

(i) deliberately *planting native vegetation* within the areas cross-hatched red in Figure 3 of Schedule 1, that will result in the completion criteria specified in Table 4 of Schedule 2 being met, ensuring only *local provenance* propagating material is used;

(ii) undertake additional *weed* control activities;

(iii) continue the annual monitoring of *revegetation* and *rehabilitation* areas in the area revegetated under condition 7(a) by an *environmental specialist* until the completion criteria outlined in Table 3 of Schedule 2, are met.

(f) Where an *environmental specialist* has determined that the completion criteria outlined in Table 4 of Schedule 2 have been met, that report is to be provided to the CEO.

(g) Where the *CEO* does not agree with the determination made by an *environmental specialist*, the *CEO* may require the permit holder to undertake remedial actions in accordance with the requirements under condition 7(e).

8. Offset – Conservation covenant

Within 24 months of the commencement of clearing authorised under this permit, and no later than 8 August 2028, the permit holder must provide to the *CEO* a copy of a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* for the protection and management of vegetation in perpetuity over the areas cross-hatched red in Figure 3 of Schedule 1.

9. Wind erosion management

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

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) direction of the *clearing*; (f) actions taken to avoid, minimise, and reduce the impacts and extent of *clearing* in accordance with condition 2; (g) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3; (h) actions taken to manage and mitigate impacts to western ringtail possum(s) and south-western brush tailed phascogale(s) in accordance with condition 5; and (i) actions taken in accordance with condition 9.
2.	In relation *to revegetation* management pursuant to condition 6.	(a) a description of the *revegetation* activities undertaken, including actions to implement watering and *weed* control; (b) the size of the area *revegetated*; (c) the date/s on which the *revegetation* was undertaken; (d) the boundaries of the area *revegetated* (recorded digitally as a shapefile using a Global Positioning System (GPS) unit set

No.	Relevant matter	Specifications
		to GDA2020, expressing the geographical coordinates in Eastings and Northings); (e) a list of the *native vegetation* species planted; (f) a description of any remediation works undertaken pursuant to condition 6(e); (g) the date that completion criteria were considered to be met; and (h) a copy of the *environmental specialist's* monitoring report and determination, pursuant to condition 6(f).
3.	In relation to offset *revegetation* management pursuant to condition 7.	(a) a description of the *revegetation* activities undertaken, including actions to implement watering and *weed* control; (b) the size of the area *revegetated*; (c) the date/s on which the *revegetation* was undertaken; (d) the boundaries of the area *revegetated* (recorded digitally as a shapefile using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings); (e) a list of the *native vegetation* species planted; (f) a description of any remediation works undertaken pursuant to condition 7(e); (g) the date that completion criteria were considered to be met; and (h) a copy of the *environmental specialist's* monitoring report and determination, pursuant to condition 7(f).

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 calendar 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
black cockatoo species	means one or more of the following species: (a) *Zanda latirostris* (Carnaby's cockatoo); (b) *Zanda calyptorhynchus* (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.
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the *CEO* as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of *Phytophthora* species on native vegetation.
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.
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)
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres 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 to June.
planting	means the re-establishment of vegetation by creating favourable soil

Term	Definition
	conditions and planting seedlings of the desired species.
rehabilitate/ed/ing/ion	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.
revegetate/ed/ing/ion	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
suitable habitat (southwestern brush-tailed phascogale)	Means habitat for southwestern brush-tailed phascogale (*Phascogale tapoatafa*) characterised by dry sclerophyll forests and open woodlands that contain hollow bearing trees but a sparse ground cover
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.
western ringtail possum specialist	means a *fauna specialist* who holds a tertiary qualification specialising in environmental science or equivalent, has a minimum of two years of work experience in western ringtail possum (*Pseudocheirus occidentalis*) identification, surveys of western ringtail possums and capture and handling of western ringtail possums, and holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.

END OF CONDITIONS

Caitlin Conway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

16 January 2026

SCHEDULE 1

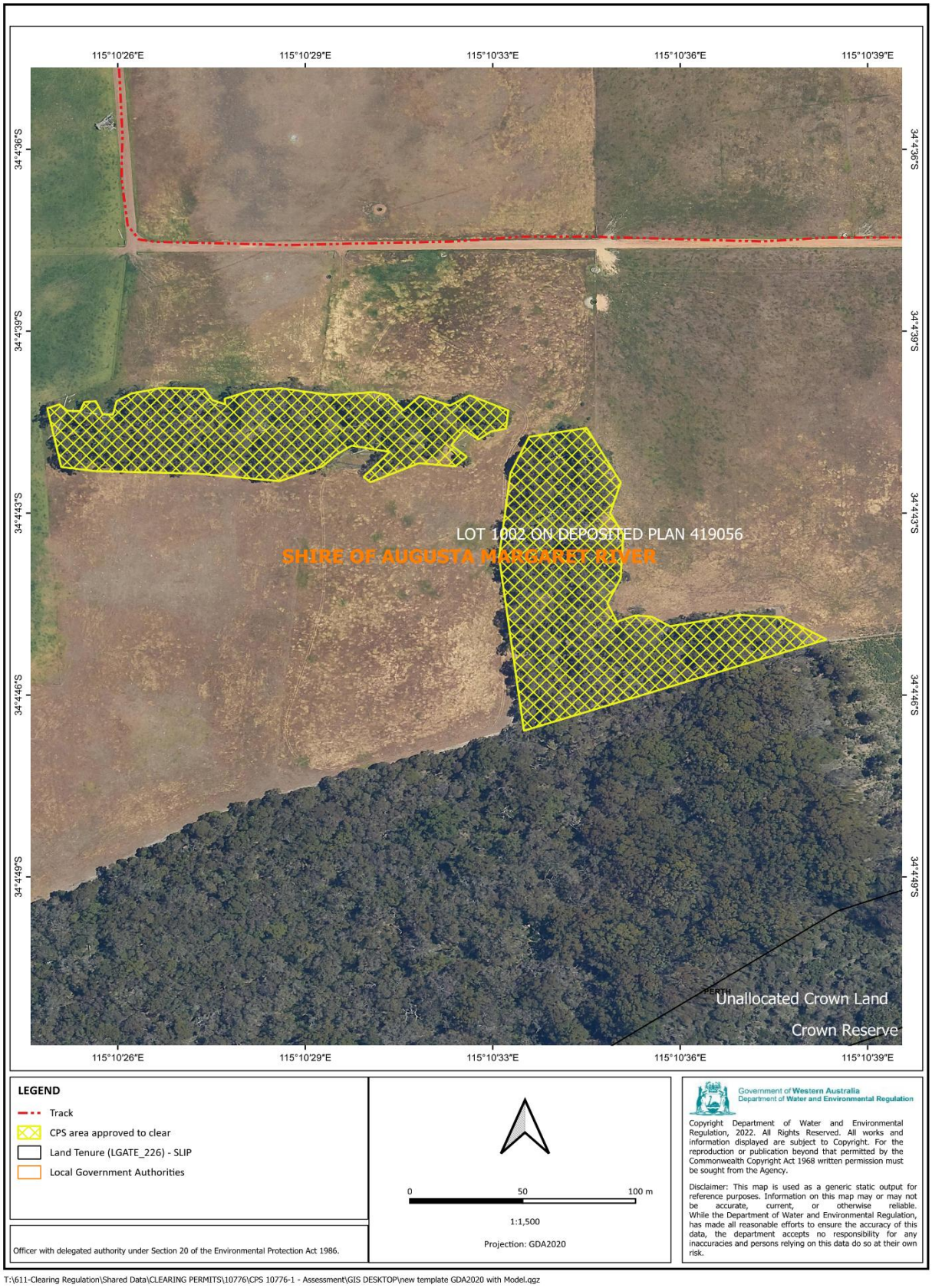


Figure 1: Map of the boundary of the area within which clearing may occur.

Figure 2: Map of the boundary of the area within which conditions apply.

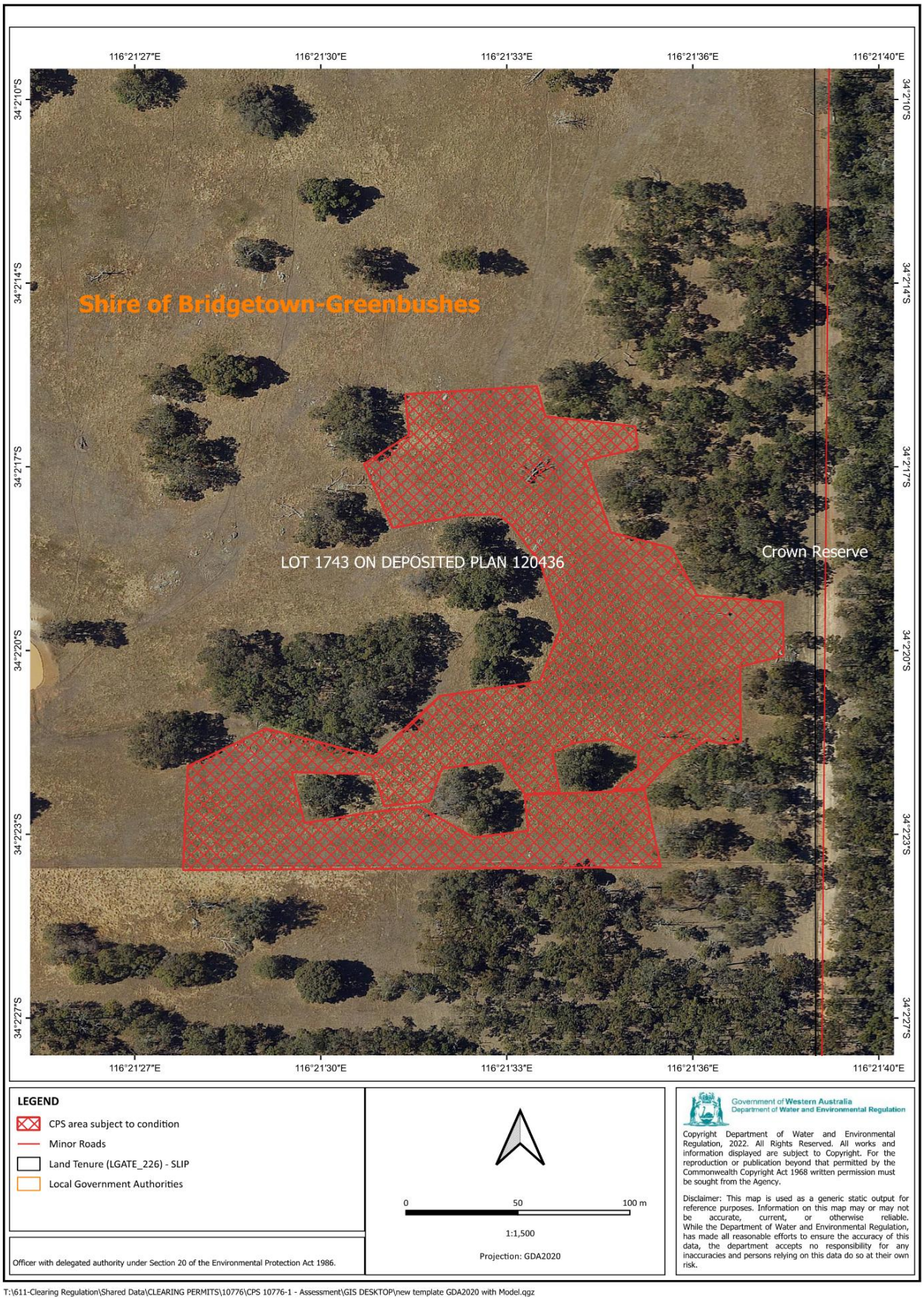


Figure 3: Map of the boundary of the area within which conditions apply.

SCHEDULE 2

Table 1: Completion criteria for the revegetation within the areas cross-hatched red in Figure 2 of Schedule 1 (mitigation).

Criterion	Completion Criteria	Monitoring
Fencing	Fence is sufficient to prevent stock and people access of the revegetation site.	Annually until completion criteria have been met and maintained for two years
Species density	Density of live plants of each of the species listed in Table 2 of Schedule 2 should be at least at the density specified this table.	Annually until completion criteria have been met and maintained for two years
Vegetation cover	<20% bare ground assessed as vegetation cover in the areas required for revegetation and rehabilitation under condition 6(a).	Annually until completion criteria have been met and maintained for two years
Weed cover	No declared weeds within the areas required for revegetation and rehabilitation under condition 6(a). Weed cover of less than 10% of total species abundance on site in the areas required for revegetation and rehabilitation under condition 6(a)	Annually until completion criteria have been met and maintained for two years

Table 2: Planting species and density for the revegetation within the areas cross-hatched red in Figure 2 of Schedule 1 (mitigation).

Species	Common name	Density
Banksia sessilis	parrot bush	1/5m^2
Hakea trufurcata	two-leaved hakea	1/5m^2
Corymbia calophylla	marri	1/40m^2
Eucalyptus marginata	jarrah	1/40m^2

Table 3: Completion criteria for the revegetation within the areas cross-hatched red in Figure 3 of Schedule 1 (offset).

Criterion	Completion Criteria	Monitoring
Fencing	Fence is sufficient to prevent stock and people access of the revegetation site.	Annually until completion criteria have been met and maintained for two years
Species density	Density of live plants each of the species listed in Table 4 of Schedule 2 should be at least at the density specified this table.	Annually until completion criteria have been met and maintained for two years
Vegetation cover	<20% bare ground assessed as vegetation cover in the areas required for revegetation and rehabilitation under condition 7(a).	Annually until completion criteria have been met and maintained for two years
Weed cover	No declared weeds within the areas required for revegetation and rehabilitation under condition 7(a). Weed cover of less than 10% of total species abundance on site in the areas required for revegetation and rehabilitation under condition 7(a).	Annually until completion criteria have been met and maintained for two years

Table 4: Planting species and density for the revegetation within the areas cross-hatched red in Figure 2 of Schedule 1 (mitigation).

Species	Common name	Density
Banksia sessilis	parrot bush	1/5m^2
Hakea trufurcata	two-leaved hakea	1/5m^2
Corymbia calophylla	marri	1/40m^2
Eucalyptus marginata	jarrah	1/40m^2

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 10776/1
Permit type:	Area permit
Applicant name:	Mr Bradley Stewart Noakes and Mr Steven Murray Noakes
Application received:	25 September 2024
Application area:	1.736 hectares of native vegetation
Purpose of clearing:	installation of a centre pivot irrigation pasture
Method of clearing:	Mechanical clearing
Property:	Lot 1002 on Deposited Plan 419056
Location (LGA area/s):	Shire of Augusta-Margaret River
Localities (suburb/s):	Forest Grove

1.2. Description of clearing activities

The application is to clear 1.736 hectares of native vegetation for the purpose of installing a centre pivot irrigation system to provide feed for dairy cattle on the property.

The native vegetation under application is distributed across two areas within the property as shown in Figure 1, Section 1.5.

1.3. Decision on application

Decision:	Granted
Decision date:	16 January 2026
Decision area:	3.8 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 advertised the application for 21 days and no submissions were received.

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

- avoidance and minimisation actions implemented by the applicant;
- site characteristics and analysis of flora, fauna and ecological communities recorded/mapped within the local area (a 10 kilometres radius buffer from the application area) (See Appendix B);
- the 10 Clearing Principles set out in Schedule 5 of the EP Act (see Appendix C);
- a detailed assessment of the clearing impacts on environmental values (see Section 3.2);
- available datasets at the time of the assessment (see Appendix G);
- other matters considered relevant to the assessment (see Section 3.3). This included:

    - Development approval granted by the Shire of Augusta-Margaret River;
    - The application area is zoned as priority agriculture under the current Augusta Margaret River Local Planning Scheme No 1.
- the additional information obtained during the assessment, including the findings of:
    - a black cockatoo habitat assessment (Harewood.G, 2024);
    - photographs provided by the applicant (Noakes. B.S and Noakes. S.M, 2021b);
    - a proposal for rehabilitation planting and an offset proposal submitted by the applicant;
    - additional information submitted regarding the proposed works.
- land degradation assessment report prepared by the Department of Primary Industries and Rural Development (DPIRD) (Commissioner of Soil and Land Conservation (CSLC), 2024);
- advice received from the Shire of August-Margaret river (Shire of August-Margaret river, 2024);
- advice received from the Department's water source protection branch under the *Rights in Water and Irrigation Act 1914* (RIWI Act) (DWER, 2024);

In addition to the above, the Delegated Officer also took into consideration the following when making the decision to grant the clearing permit application:

- The purpose of the clearing is consistent with the planning framework, and
- Nesessity of the installation of the pivot irrigation within the application area:
    - the primary purpose of installing the pivot is to ensure adequate feed for dairy cows and achieve optimal milk production targets; and
    - the proposal includes the installation of two new centre pivots to enhance water efficiency and reduce labour costs associated with moving hard hose irrigators. By maximising year-round pasture production on-farm, the applicant aims to reduce reliance on purchasing supplementary feed from external sources, thereby lowering production costs and decreasing carbon emissions associated with feed transport (Southwest Hydrology, 2024).

After consideration of the above information, as well as the avoidance, minimisation and mitigation actions taken by the applicant, the Delegated Officer determined that the clearing would result in the following significant residual impacts:

- The removal of approximately 1.7 hectares of significant foraging habitat for the Endangered Carnaby's cockatoo *(Zanda latirostris*), Endangered Baudin's cockatoo (*Zanda baudinii*) and Vulnerable Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), listed under the *Biodiversity Conservation Act 2016* (BC Act) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), which occurs within the application area.

The applicant has proposed the revegetation of 1.41 hectares within the application area property from a completely degraded (Keighery, 1994) condition to a good condition (Keighery, 1994). The department has determined that this would partially mitigate the impacts of clearing Carnaby's black cockatoo, Baudin's black cockatoo and Forest red-tailed black cockatoo foraging habitat. A significant residual impact would still remain.

To address the above significant residual impacts and applying the WA environmental offsets metric (the offsets metric) along with the environmental offsets metric guideline, and consistent with the *WA Environmental Offsets Policy* (2011) (the Offsets Policy) and Western Australia's *Environmental Offsets Guidelines* (2014) (the Offsets Guidelines), the Delegated Officer determined that revegetation and conservation of a 2.76 hectare area within Lot 1743, Deposited Plan 120436 from a completely degraded (Keighery, 1994) condition to a good condition (Keighery, 1994) would address 100 per cent of the significant residual impacts of the proposed clearing to the above black cockatoo species (refer to Section 4 for further details).

In addition to the above, The Delegated Officer also determined that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation;
- potential for western ringtail possum(s) and south-western brush tailed phascogale(s) to occur within the application area at the time of clearing; and
- cause potential land degradation in the form of wind erosion.

The Delegated Officer determined that the above impacts of the proposed clearing can be mitigated such that long-term adverse impacts on the environment are unlikely subject to management, mitigation and offset measures being conditioned on the clearing permit. 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;

- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- enagage a fauna specialist to inspect the proposed clearing area immediately prior to, and for the duration of clearing activities for the presence of western ringtail possum(s) and south-western brush tailed phascogale(s)
- revegetate 1.41 hectares on the property from a completely degraded (Keighery, 1994) condition to a good condition (Keighery, 1994) with vegetation providing suitable forgaing and future roosting habitat for black cockatoo species; and
- revegetate 2.76 hectares within Lot 1743, Deposited Plan 120436 from a completely degraded (Keighery, 1994) condition to a good condition (Keighery, 1994) with vegetation providing suitable forgaing and future roosting habitat for black cockatoo species, and ensure this vegetation is conserved through a conservation covenant.

1.5. Site map

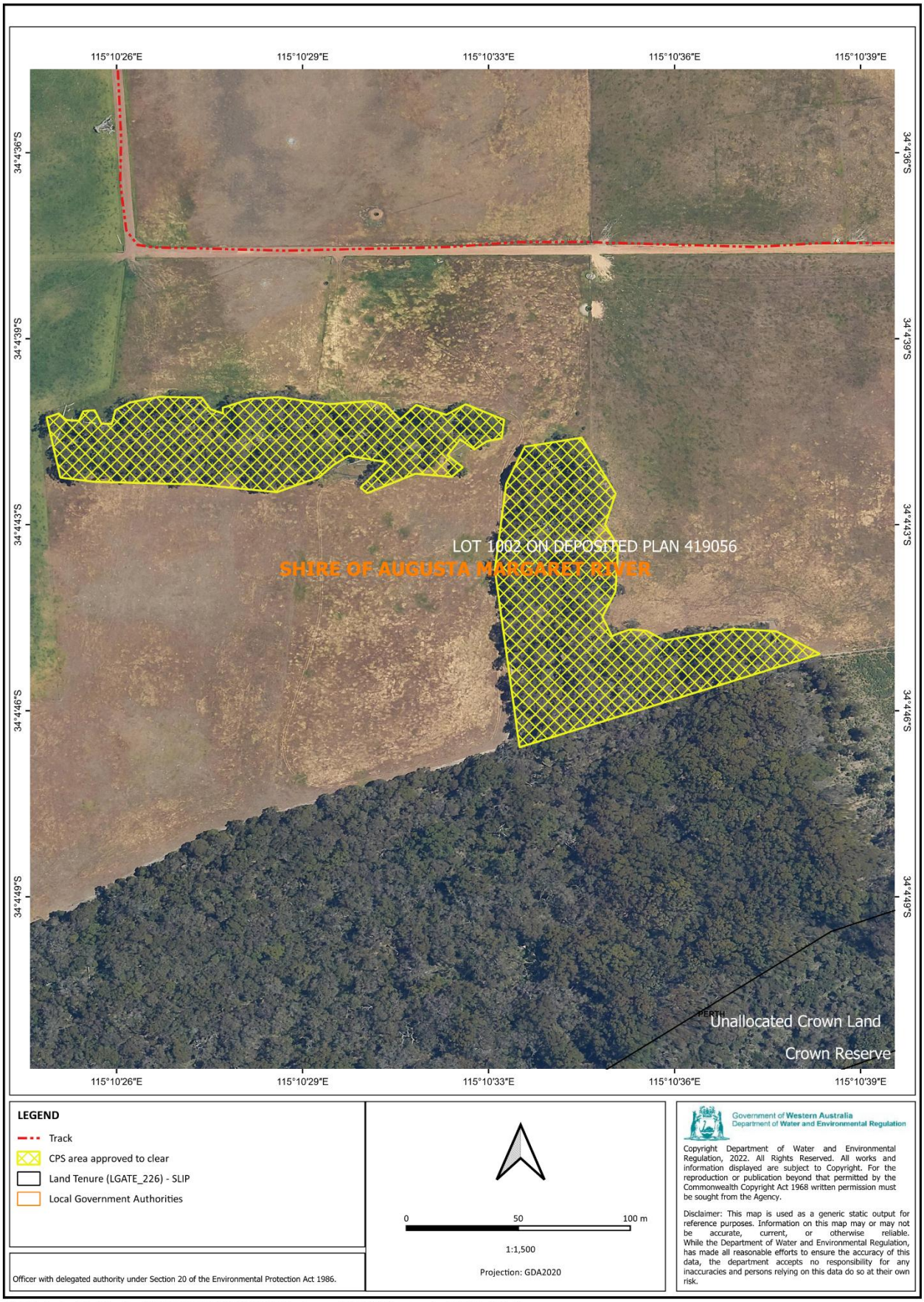


Figure 1. Map of the application area

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

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

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Aboriginal Heritage Act 1972*

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 – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has advised that the centre pivot location was placed to minimise the proposed clearing area and that alternative sites on the properties owned by the applicant would result in a larger area of native vegetation clearing (Noakes and Noakes, 2024b).

As a mitigation measure, the applicant proposed to rehabilitate 1.41 hectares on Lot 1002, Deposited Plan 419056, through revegetation with jarrah and marri trees, and also with sedges, reeds, and shrubs (Noakes and Noakes, 2025). This rehabilitation planting will occur on the same property as the proposed clearing area as shown by the Figure 1 below.

Figure 2: Area proposed for revegetation planting (cross-hatched red), with application area cross-hatched blue.

The applicant proposes to implement the following measures as part of on-site rehabilitation planting (Noakes and Noakes, 2025):

- Four to six weeks prior to planting, the revegetation area will be treated with herbicide to eliminate existing weeds.
- The area will then be ploughed to break up the soil and create furrows, which will assist with planting.
- The revegetation area will be fenced to prevent livestock access and reduce grazing of seedlings by kangaroos.
- Planting will occur in June, aligning with optimal seasonal conditions.
- Canopy material from the clearing area will be mulched and spread around the seedlings to help retain soil moisture and minimise weed regrowth.
- *Eucalyptus marginata* (Jarrah) and *Corymbia calophylla* (Marri) seedlings will be purchased in 25-litre grow bags to improve survival rates.
- All plantings will be protected with tree guards to enhance establishment and reduce browsing damage.

A revegetation calculation using the WA Offset Metric ('calculator') was undertaken, which determined that revegetation of 1.41 hectares would provide a generate a 'rehabilitation credit' quantum value of 0.46, leaving a significant residual impact quantum value of 0.90.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to black cockatoo foraging habitat were necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy 2011* and *Environmental Offsets Guidelines 2014*, 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 B) 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 C) identified that the impacts of the proposed clearing present a risk to biological values (fauna habitat) and land and water 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 Principles (b)

Assessment

From a review of the site characteristics and fauna records present within the local area, the following fauna species were considered likely to occur within the application area:

- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) – Vulnerable
- Phascogale tapoatafa wambenger (brush-tailed phascogale) – Conservation Dependent
- *Pseudocheirus occidentalis* (western ringtail possum) – Critically Endangered
- *Zanda baudinii* (Baudin's cockatoo) – Endangered
- *Zanda latirostris* (Carnaby's cockatoo) – Endangered

The degraded (Keighery, 1994) condition of the native vegetation, and in particular the lack of an understorey, and the absence of a perennial permanent watercourse excludes the likelihood of terrestrial ground dwelling fauna of conservation significance recorded within the local area occurring within the application area. The vegetation to the immediate south of the application area within the Forest Grove Nature Reserve is likely to be preferred by ground dwelling fauna.

Black cockatoos

The application area is mapped within the known distribution zones of the Baudin's cockatoo, Carnaby's cockatoo and forest red-tailed black cockatoo, collectively referred to as 'black cockatoos'. Black cockatoo habitat can be considered in terms of breeding, roosting and foraging habitat (DAWE, 2022). Baudin's cockatoo is more commonly associated with the forests of the Jarrah Forest bioregion, with Carnaby's cockatoo more commonly associated with the Swan Coastal Plain (DAWE, 2022). Black cockatoo habitat can be considered in terms of breeding, roosting and foraging habitat.

A black cockatoo habitat assessment (Harewood, 2024) was undertaken on the 11 October 2023, 10 November 2023 and the 06 January 2024. The black cockatoo assessment included an assessment of all habitat trees within the survey area that appeared to have a diameter at breast height (DBH) equal to or greater than 50 centimetres.

Breeding habitat

Black cockatoos are known to nest in hollows of live and dead trees, including marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), karri (*Eucalyptus diversicolor*), wandoo (*Eucalyptus wandoo*), tuart, flooded gum (*Eucalyptus rudis*), and other Eucalyptus spp. (Commonwealth of Australia, 2012). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable DBH to develop a nest hollow, where suitable DBH for nest hollows is 500 millimetres for most tree species (Commonwealth of Australia, 2012; DAWE, 2022).

Based on the fauna assessment (Harewood, 2024), 99 habitat trees were recorded from the application area. 90 of these trees did not have any hollows. Nine trees were identified as containing hollows, however these were considered unsuitable for nesting by black cockatoos due to unsuitable size, orientation or height above ground level. As such, no habitat trees containing suitable hollows for black cockatoos were identified within the application area. Based on this, the proposed clearing is unlikely to impact trees providing current breeding opportunities for black cockatoo species.

Roosting habitat

Night-roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and a water source (DAWE, 2022). Based on the photographs and the findings from the black cockatoo habitat assessment (Harewood, 2024), it is likely that few of the marri trees located within the application area are of a suitable height to provide for a roosting habitat. None of these trees, however, are known to be confirmed roost sites. The closest confirmed roost site is located approximately 1.71 kilometres from the application area. No evidence of roosting within the application area was observed during the black cockatoo habitat assessment (Harewood.G, 2024a). Based on the abundant vegetation located within the local area close to watercourses and within foraging distance to black cockatoo food sources that would also provide suitable roosting habitat, the proposed clearing is not likely to significantly impact on the availability of roost sites for the black cockatoos.

Foraging habitat

Foraging habitat for Carnaby's, Baudin's and forest red-tailed black cockatoo varies (Commonwealth of Australia, 2012). Forest red-tailed black cockatoo forages within jarrah and marri woodlands and forest, and edges of karri forests including wandoo, within the range of the subspecies. The species largely feeds on seeds of marri and jarrah, as well as other *Eucalyptus* species and *Allocasuarina* cones (Johnstone et al, 2013). Baudin's cockatoos prefer foraging within eucalypt woodlands and forest, and proteaceous woodland and heath. Their diet consists mainly of seeds from marri, but Baudin's also feed on various *Banksia* species, *Hakea* species, jarrah, and occasionally insects and insect larvae (DAWE, 2022). During the breeding season (October to late January/early February), Baudin's has a preference for marri seeds (Commonwealth of Australia, 2012). Carnaby's cockatoo feeds on the seeds, nuts and flowers of a large variety of plants including proteaceous species (*Banksia, Hakea* and *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, marri and a range of introduced species (Valentine and Stock, 2008).

According to the black cockatoo habitat assessment, the application area contains 89 *Corymbia calophylla* (marri), nine *Eucalyptus marginata* (jarrah) and one *Eucalyptus diversicolor* (karri) trees (Harewood.G, 2024a). Marri and jarrah are known to provide primary food source for all three black cockatoo species (Johnstone and Kirkby, 2010). Evidence of foraging by the Carnaby's cockatoos were found in the form of chewed marri nuts within the application area (Harewood, 2024). Based on this, the application area is significant foraging habitat for black cockatoos.

Food resources within the range of breeding sites and roost sites are important to sustain black cockatoo populations. Foraging resources are therefore, viewed in the context of known breeding and night roosting sites. It is considered that foraging habitat within 6 to 12 kilometres of an application area are a significant food source (DAWE, 2022). According to the available databases, seven known black cockatoo roosting sites and no breeding sites are mapped within the 12 kilometres of the application area. The closest mapped breeding site (natural, confirmed) is located 15.9 kilometres from the application area. The foraging habitat becomes more significant given the roosts sites and watercourses that are mapped surrounding the application area.

The department notes that the extent of vegetation remaining within the local area is approximately 54 per cent with abundant vegetation secured under the DBCA legislated land likely containing suitable foraging habitat for the black cockatoos. However, given the rapidly declining foraging resources for the black cockatoos, it is important that removal of all significant foraging habitat for black cockatoos is offset.

Impacts of the clearing to black cockatoo foraging habitat will be partially mitigated through the revegetation of 1.41 hectares on Lot 1002, Deposited Plan 419056 with jarrah and marri trees, which are preferred foraging plants for all three black cockatoo species (refer to Section 3.1 for further details). The remaining significant residual impacts to black cockatoo foraging habitat will be offset through the revegetation and conservation of 2.76 hectares on Lot 1743, Deposited Plan 120436 with marri and jarrah trees (refer to section 4 for further details). These measures have been conditioned on the permit.

Western Ringtail Possum (WRP)
The application area is located outside the three key management zones for WRP identified by DPaW (2014) based upon core areas of the known current distribution of the species. WRP is an arboreal folivore, associated with long unburnt mature remnant peppermint woodlands along the Swan Coastal Plain management zone from Mandurah to Augusta, characterised by high canopy cover and connectivity (DPAW, 2017). WRP resting sites include constructed dreys and tree hollows, with dreys constructed in the canopy when hollows are not available (Jones et al, 1994).

The application area contains marri and jarrah trees with high canopy connectivity, and is connected to the nature reserve to the south of the application area. As such, WRP may come into the application area. However, the adjacent vegetation in the nature reserve is likely to provide preferred habitat for the WRP compared to the application area, noting the lack of midstorey vegetation present within the application area.

Based on the above assessment, the department concluded that while the application area is unlikely to constitute critical habitat for the WRP, dispersing individuals may utilise the area. Furthermore, some identified habitat trees contain hollows that could potentially be used by WRP. Consequently, it was deemed essential to have a fauna specialist present during clearing activities and to conduct a thorough inspection of the application area for any WRP prior to the commencement of clearing.

Brush-tailed phascogale
The south-western brush tailed phascogale (*Phascogale tapoatafa wambenger*) is a small arboreal dasyurid with a home range between 20 to 70 hectares. In south west Western Australia, it is often observed in dry sclerophyll forests and open woodlands that contain hollow bearing trees. Habitat clearing, fragmentation, and alteration by logging and mining are the greatest threats to this species (DEC, 2012). With the reduced availability of trees with hollows, a subsequent increase in susceptibility to predation by foxes and cats is seen for this species.

The application area may contain suitable habitat including the nine hollow bearing trees. However, noting the extent of remnant vegetation within the local area, including areas of better quality vegetation within the conservation estate, it has been assessed that proposed clearing is unlikely to impact on the maintenance and conservation status of this species. Given the likelihood of this species dispersing through the application area and the potential for it to utilise hollows in trees proposed for clearing, it was deemed essential for a fauna specialist to inspect the area prior to the commencement of clearing.

Conclusion
Based on the above assessment, the application area is likely to provide significant habitat for black cockatoos. For the reasons set out above, it is considered that, event following the applicant's proposed onsite revegetation, the impacts of the proposed clearing to foraging habitat for black cockatoos constitutes a significant residual impact. In accordance with the Environmental Offsets Policy (2011) and Environmental Offsets Guidelines (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

It was also determined that there is a potential for western ringtail possums and brush-tailed phascogales to inhabit hollow-bearing trees within the application area. Therefore, it was considered essential for a fauna specialist to inspect the area prior to clearing.

Condition
To address the above impacts, the following conditions will be placed on the clearing permit:

- avoid and minimise clearing, to minimise the direct impacts to native vegetation.
- slow, progressive, one directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing.
- engage a fauna specialist to inspect the clearing area immediately prior to, and for the duration of clearing activities, for the presence of south-western brush-tailed phascogale and western ringtail possums.
- mitigation – revegetation of 1.41 hectares with jarrah, marri and other species that provide foraging habitat for black cockatoos.

- offset – revegetation and conservation of 2.76 hectares with jarrah and marri species.

3.2.2. Land and water resources - Clearing Principles (g)

Assessment
The application area is mapped within the soil landscape unit Treeton hillslopes Phase (214ThTRh), described as slopes with gradients generally ranging from 2-15% and gravelly duplex (Forest Grove) and pale grey mottled (Munglte) soils (DPIRD, 2019).

Given the purpose of the clearing is for installing a centre pivot for irrigation, the department sought advice from DPIRD. CSLC advised that (CSLC, 2024):

- The likelihood of wind erosion is unlikely to increase with the proposed clearing of the native vegetation- provided ground cover is maintained.
- Based on the soil type within the application area, planned operations and the permeant pasture cover, the proposed clearing is not likely to increase the risk of water erosion.
- Salinity was not observed on the property or in the surroundings. The risk of salinity causing land degradation is low.
- Based on the nature of the proposed clearing, it is not likely that the removal of native vegetation will contribute to flooding.
- nil to moderate risk of waterlogging and therefore the risk of waterlogging causing land degradation is low.
- moderate risk of eutrophication and therefore the risk of eutrophication causing land degradation is low.

The CSLC report has summarised that the overall clearing area is relatively small. Re-establishment and maintenance of ground cover after clearing will greatly reduce the risk of wind erosion. No evidence of erosion was observed on the property. Based on the above findings, it was determined that the land degradation is unlikely to increase with the clearing of native vegetation on this site - provided that good management is continued to protect the surface against wind erosion.

Conclusion
The proposed clearing may result in wind erosion if ground cover is not maintained (CSLC, 2024). Wind erosion management measures have been conditioned on the permit to mitigate these impacts. The clearing is not otherwise expected to result in significant land degradation.

Condition
To address the above impacts, the following conditions will be placed on the clearing permit:

- commence the works associated with pivot installation within three months of clearing native vegetation within the application area.

3.3. Relevant planning instruments and other matters

A clearing permit application (CPS 9395/1) was originally submitted to the Department on 18 August 2021 as a combined application for dam construction and the installation of a centre pivot for irrigation. This application was later withdrawn on 28 June 2024 to allow the proposed works to be separated into two distinct clearing permit applications. Consequently, the supporting information provided with CPS 9395/1 has also been used to inform the assessment of this current clearing permit application.

Development Approval
The Shire of Augusta-Margaret River (the Shire) has issued the Development Approval for the clearing on 23 January 2025. However, the works itself do not require any planning approvals to undertake the work (Shire of Augusta-Margaret River, 2025).
The application area is zoned as priority agriculture under the current Augusta Margaret River Local Planning Scheme No 1. The Shire advised that local government approvals are required for the works proposed (Shire of Augusta-Margaret River, 2021).

Approvals under the RIWI Act
DWER (2024) advised that the applicant has informed the department of a current water shortfall of 185 Mega litres, and the proposed dam development is intended to meet the water requirements for the planned centre pivot on Lot 1002. It was considered that water availability for the proposed pivot is contingent upon the granting of a licence to take surface water and a permit for dam construction, both of which depend on authorisation to clear riparian

vegetation associated with the watercourse. Therefore, the department recommend that the clearing applications for the pivot site and the dam site be assessed concurrently (DWER, 2024).

The proposed clearing is mapped within the Lower Blackwood River Surface Water Area that requires a surface water licence under the RIWI Act.

DWER (20204) has accepted the proposed dam designs and has proposed to approve a licence and permit provided that a Clearing Permit and Development Approval are obtained. Noting this, the Delegated Officer was satisfied that the outstanding water licences were not a significant barrier to granting the clearing permit in this instance.

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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, including the proposed revegetation on the application area property, summarised in Section 3.1:

- Loss of native vegetation that provides suitable high quality foraging habitat for all three species of black cockatoos.

In determining the appropriateness of an offset, the Delegated Officer took into consideration the applicant's implementation of the mitigation hierarchy and that a development approval for clearing has also been issued by the Shire of Augusta- Margaret River. The Delegated Officer determined that it was appropriate to grant the clearing permit in relation to the significant residual impacts, on the basis that a suitable environmental offset was implemented to counterbalance the impacts.

Offset

To offset the significant residual impact of the clearing black cockatoo foraging habitat, the applicant has proposed to revegetate 2.76 hectares with marri and jarrah species that are known to be high quality foraging habitat for black cockatoo species within Lot 1743, Deposited Plan 120436, within the Shire of Bridgetown-Greenbushes. The proposed offset:

- located approximately 109 kilometres to the east from the application area, within the same IBRA bioregion (Jarrah Forest) as the application area.
- There are three roosting sites and no breeding records of black cockatoos within 20 kilometres of the proposed offset site
- mapped within a likely breeding area for all three Black cockatoo species.
- Mapped within the modelled distribution zone of all three black cockatoo species.
- The proposed offset area is immediately adjacent/connected to the Kingston National Park that is vested under the conservation commission of WA.
- There are water sources available in the surroundings.

The applicant proposes to undertake the following measures within the proposed revegetation area.

- Four to six weeks prior to planting, the revegetation area will be sprayed with herbicide to eliminate existing weeds.
- area will then be ploughed to break up the soil and create furrows to assist with planting.
- The revegetation area will be fenced to prevent stock access and limit grazing of seedlings by Kangaroos.
- Planting will occur during June.
- canopy material from the clearing area will be mulched and spread around the seedlings to retain soil moisture and minimise weed re-growth.
- Jarrah/Marri will be purchased with 25L grow bags to improve survival rate.
- All plantings will have tree-guards.

Based on the information received through the offset proposal, an offset calculation using the WA offset metric 'calculator' was undertaken by the department. The calculation has identified that, after applying a 'rehabilitation credit' for revegetation of a 1.41 hectare area within the application area property, the revegetation of 2.76 hectares from a completely degraded condition (Keighery, 194) to a good condition (Keighery, 1994), with jarrah and marri species and placing this area under a *Soil and Lands Conservation Act 1945* Conservation Covenant to protect the

vegetation in perpetuity will counterbalance the significant residual impact of clearing black cockatoo foraging habitat by 100 per cent.

Conclusion
The applicant is required to revegetate an area of 1.41 hectares on site at Lot 1002, Deposited Plan 419056 as a rehabilitation planting action. This is further discussed under section 3.1.

In addition to the rehabilitation planting, the applicant is required to revegetate an area of 2.76 hectares at Lot 1743 on Deposited Plan 120436 with marri and jarrah species. The applicant has agreed to place the 2.76 hectares of revegetated area at Lot 1743 under a Conservation Covenant under section 30B of the *Soil and Land Conservation Act 1945.*

The Delegated Officer considers the proposed offset is consistent with the WA Environmental Offsets Policy (2011) and the WA Environmental Offsets Guidelines (2014), and that it adequately counterbalances the significant residual impacts to native vegetation that is representative of foraging habitat for black cockatoo species. The justification for the values used in the offset calculation is provided in Appendix D.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
Black cockatoo habitat assessment (Harewood. G, 2024)	The applicant commissioned the Zoologist, Greg Harewood to undertake a daytime site reconnaissance survey and a black cockatoo habitat assessment. The survey was conducted over three days (11 October 2023, 10 November 2023 and the 6 January 2024).
Photographs provided by the applicant (Noakes. B.S and Noakes. S.M, 2021b)	The applicant has provided photographs of the application area as part of the clearing permit application.

Appendix B. Site characteristics

B.1. 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 the department at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

Characteristic	Details
Local context	The area proposed to be cleared is 1.736-hectare isolated patch of native vegetation in the extensive land use zone of Western Australia. Aerial imagery and spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 52.6 per cent of the original native vegetation cover.
Ecological linkage	A South West Regional Ecological Linkage is located approximately 50 metres east from the application area within Lot 2760 and 640 m south of the application area within Lot 1002.
Conservation areas	Chapman Brook National Park is located approximately 280 metres to the south of the application area.
Vegetation description	Photographs supplied by the applicant (Noakes. B.S and Noakes. S.M, 2021) and black cockatoo habitat assessment (Harewood.G. 2024) indicate the vegetation within the proposed clearing area consists of woodland dominated by marri (*Corymbia calophylla*) with occasional jarrah (*Eucalyptus marginata*) and karri (*E. diversicolor*) over grassland. Representative photos and the full survey descriptions and maps are available in Appendix F. The broadscale mapped vegetation types within the application area are is consistent with the mapped vegetation types: • Blackwood Plateau and Plain (ID: 266) described as Woodland of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* with some *Allocasuarina fraseriana* on mild slopes in the perhumid zone. The mapped vegetation types retain approximately 46.7 per cent of the original extent, respectively (Government of Western Australia, 2019).
Vegetation condition	Photographs provided by the applicant (Noakes B.S. and Noakes S.M., 2021) and the Department of Primary Industries and Regional Development (DPIRD) assessment (CSLC, 2024) indicate that vegetation within the proposed clearing area is predominantly in a degraded condition (Keighery, 1994), except for approximately one hectare of vegetation considered to be in good condition (Keighery, 1994) due to being fenced.

Characteristic	Details
	However, the presence of aggressive weeds has been noted within this fenced area (CSLC, 2021). The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos and the full survey descriptions and mapping are available in Appendix F.
Climate and landform	The property is situated near the 1125-millimetre rainfall isohyet (CSLC, 2024). The application area is located within the Treeton Hillslope Phase soils landscaping mapping. The western clearing area has a high point of 56 AHD at the eastern boundary, declining to 45 AHD at the western boundary. The eastern clearing area has a high point of 55 AHD at the most northern point and a low point of 35 AHD on the eastern boundary. Forest Grove is located within a Mediterranean climate. The nearest weather station is Witchcliffe which records a mean maximum temperature of 21.4 degrees Celsius and mean rainfall of 1013.3 mm
Soil description	The soil within the application area is described as duplex sandy gravels, Loamy gravels, Grey deep sandy duplex soils, Pale sandy earths and Semi-wet soils (CSLC, 2024)
Land degradation risk	The land degradation table B.3. below outlines the land degradation risk levels for the Treeton hillslopes Phase.
Waterbodies	The desktop assessment and aerial imagery indicates that no watercourses or wetlands transect the application area.
Hydrogeography	The application area falls within the Donnybrook hydrological zone of Western Australia and the Hardy Estuary Blackwood River hydrographic catchment. The application area is located within the Lower Blackwood River Surface Water Area and the Blackwood Groundwater Area proclaimed under the RiWI Act (DWER-037).
Flora	There are records of two threatened and 20 priority flora species within the local area, the closest of which to the application area is *Actinotus repens* (Priority 3) located approximately 2 kilometres southwest of the application area.
Ecological communities	The application area does not intersect any mapped Priority or Threatened Ecological Communities. A TEC Aquatic Root Mat Community Number 3 of Caves of the Leeuwin Naturaliste Ridge (Kudjal Yolgah and Budjur Mar Caves) has been mapped approximately 9.3 kilometres southwest of the application area.
Fauna	The desktop assessment identified 40 conservation significant fauna species within the local area, which include 15 mammals, 19 birds, two amphibians, two fish and two invertebrates within the local area. The closest species recorded to the application area is *Calyptorhynchus latirostris* (Carnaby's cockatoo), approximately 320 metres northwest of the application area. There is one breeding record (for white tailed black cockatoos, 15 km north west) and approximately 24 roosting records for black cockatoo species recorded within a 20 kilometre radius of the application area. The closest roosting record has been recorded approximately 1.71 km north of the application area.

B.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*					
Jarrah Forest (JAH)	4,506,660	2,399,838	53.3	1,673,614	69.74
SWF vegetation complex:					
SWF ID: 266	27,420	12,798	46.7	7,641	27.87
Local area					
10km radius	32,283	16,994	52.6	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.2. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix G.1), and biological survey information (Harewood, G, 2024), impacts to the following conservation significant fauna required further consideration.

Species scientific name	Species common name	Conservation status	Number of known records (total)	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
Zanda latirostris	Carnaby's cockatoo	EN	28	0.47	Y
Zanda Calyptorhynchus	Baudin's cockatoo	EN	51	0.47	Y
Calyptorhynchus banksii naso	forest red-tailed black cockatoo	VU	10	3.05	Y
Calyptorhynchus sp.	White-tailed black cockatoo	EN	50	3.11	Y
Phascogale tapoatafa wambenger	western ringtail possum	CR	127	0.99	Y
Pseudocheirus occidentalis	brush-tailed phascogale (SW)	CD	26	4.15	Y

EN: Endangered; VU: vulnerable; CR: Critically Endangered; CD: Conservation dependent

B.3. Land degradation risk table

Risk categories	*Treeton hillslopes Phase* (214ThTRh)
Wind erosion	50-70% of map unit has a high to extreme wind erosion risk
Water erosion	<3% of map unit has a high to extreme water erosion risk
Salinity	<3% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	>70% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	<3% of map unit has a moderate to high salinity risk or is presently saline

Water logging	10-30% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	3-10% of map unit has a high to extreme phosphorus export risk

Appendix C. 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 predominantly parkland cleared, disjunct, and in a Degraded condition (Keighery, 1994) with approximately one hectare in good condition (Keighery, 1994). The vegetation of the application area does not align with any Threatened Ecological Communities (TEC) or Priority Ecological Communities. It is noted that the application area is subject to continuous grazing by livestock and high percentage of weed is identified throughout the entire application area. It is highly unlikely with these conditions, flora of conservation significance identified within the local area would occur within the application area.	May 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 contain significant foraging and potential roosting habitat for the three vagile black cockatoo species of conservation significance.	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: Two species of threatened flora are recorded from the local area. However, the application area is predominantly parkland cleared, disjunct and in a degraded condition. The application area is unlikely to include, or be necessary for the continued existence of, 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: No TECs endorsed by the Western Australian Minister for Environment have been mapped within 10 kilometres of the application area, and vegetation over the application area does not align with any known TECs.	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."* Assessment: The national objectives and targets for biodiversity conservation in Australia has a target to prevent the clearance of ecological communities with an extent	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
below 30 per cent of that present prior to the year 1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001). The vegetation remaining within the local area and the vegetation complexes mapped within the application area are above 30 percent threshold. Based on the above, the vegetation proposed for clearing is not within an area that has been extensively cleared.		
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: Based on the available databases, the Chapman Brook National Park is located approximately 240 metres to the south of the application area. Chapman Brook National Park is protected under the CALM Act and is vested under the conservation commission of Western Australia. Given the condition of the vegetation proposed for clearing, and the distance from the proposed clearing to the national park, it is unlikely that significant impacts would occur to the Chapman Brook national park from the proposed clearing. A weed and dieback management condition is imposed on the permit to manage the spread of weed and dieback into the adjacent vegetation.	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 of the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. The vegetation present within the application area is not consistent with riparian vegetation.	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: Noting the condition and the extent of the vegetation proposed to be cleared, the proposed clearing of trees with no understorey is unlikely to have an appreciable impact on land degradation. CSLC advised that proposed clearing is not expected to contribute to appreciable land degradation (CSLC, 2022) with good management practices in place.	May be at variance	Yes *Refer to Section 3.2.2, 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 significant wetlands, watercourses or Public Drinking Water Sources Areas 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:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The commissioner of soil and land conservation advised that proposed clearing is not expected to contribute to flooding on the proposed areas to clear because of the nature of the proposed clearings (CSLC, 2024).		

Appendix D. 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 E. Offset calculator value justification

Revegetation offset – Black cockatoo species

Calculation	Score (Area)	Rationale
Conservation significance		
Description	Native vegetation that is representative of significant black cockatoo foraging habitat	Application area contains 1.70 hectares of significant foraging habitat for Carnaby's cockatoo, forest red-tailed black cockatoo and Baudin's cockatoo.
Type of environmental value	Species (Fauna)	
Conservation significance of environmental value	Rare/threatened species – endangered	Carnaby's cockatoo, Baudin's cockatoo are listed as endangered under the BC Act and EPBC Act, so have used the highest conservation ranking.

Calculation	Score (Area)	Rationale
Landscape-level value impacted	yes/no	Yes
Significant impact		
Description	Native vegetation that is representative of significant black cockatoo foraging habitat	High quality foraging habitat was identified within the application area.
Significant impact (hectares) / Type of feature	1.70	Based on the available information, the proposed clearing area includes 1.70 hectares that represents high value foraging habitat for black cockatoos.
Quality (scale) / Number	8	clearing of marri and jarrah trees, known to be a primary foraging habitat for black cockatoos. 24 roosting records for black cockatoo species recorded within a 20 kilometre radius of the application area. The closest roosting record has been recorded approximately 1.71 km north of the application area. Watercourses are present close by to the application area. Evidence of foraging by the Carnaby's cockatoos were found in the form of chewed marri nuts within the application area. The closest mapped breeding site (natural, confirmed) is located 15.9 kilometres from the application area.
Rehabilitation credit		
Description	Revegetation	Revegetation around a dam site on the same property with species that provides black cockatoo foraging habitat.
Proposed rehabilitation (area in hectares)	1.41	1.41 hectares is proposed to be revegetated with suitable black cockatoo habitat such as marri and jarrah.
Current quality of rehabilitation site	0	Condition of revegetation site in a completely degraded (Keighery, 1994) condition with minimal value for black cockatoos present.
Future quality without rehabilitation	0	Condition not likely to change without intervention.
Future quality with rehabilitation	5	It is expected for vegetation to improve to good condition (Keighery, 1994) and provide good quality foraging habitat in 17 years.
Time until ecological benefit (years)	17	15 years minimum to achieve foraging resource, plus 2 years for revegetation to commence.
Confidence in rehabilitation results (%)	80	There is a moderate level of confidence that the rehabilitation planting will achieve the desired outcome.
Offset		
Description	Revegetation and conservation covenant.	Revegetation of 2.76 hectares of existing cleared areas with black cockatoo foraging habitat. This revegetation area will be conserved in perpetuity under a conservation covenant.
Proposed offset (area in hectares)	2.76	2.76 hectares is proposed to be revegetated with suitable black cockatoo habitat.
Current quality of offset site / Start number (of type of feature)	0	Condition of revegetation site in a completely degraded (Keighery, 1994) condition with minimal value for black cockatoos.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	0	Condition not likely to change without intervention.

Calculation	Score (Area)	Rationale
Future quality WITH offset (scale) / Future number WITH offset	5	revegetation using black cockatoo foraging species at a minimum density of 600 stems per ha would improve the quality of the site and provide foraging habitat for the black cockatoo species
Time until ecological benefit (years)	17	15 years minimum to achieve foraging resource, plus 2 years for revegetation to commence.
Confidence in offset result (%)	80	There is a moderate level of confidence that the offset will achieve the predicted result given revegetation and rehabilitation will be undertaken in accordance with a Project Revegetation Plan prepared.
Duration of offset implementation (maximum 20 years)	20	The offset site will be conserved in perpetuity under a conservation covenant. Therefore, the maximum of 20 years is applied.
Time until offset site secured (years)	3	Three years after commencement of revegetation.
Risk of future loss WITHOUT offset (%)	15%	The offset area is freehold land. Zoned rural 1 - extensive farming
Risk of future loss WITH offset (%)	5%	The future conservation (in perpetuity) of the offset site under a conservation covenant would result in increased security and substantially reduce the risk of loss.
Percentage of mitigation and offset that counterbalances impacts (%)	100%	Obtained through the input of variables explained above.

Appendix F. Biological survey information (Harewood.G, 2024) and photographs of the vegetation (Noakes B.S and Noakes S.M, 2021)

Woodland dominated by marri (*Corymbia calophylla*) (with occasional jarrah (*Eucalyptus marginata*) and karri (*E. diversicolor*) over grassland. The southern section of this area has been fenced from livestock and contains a shrubland/low shrubland.

Area = ~1.7 ha (~46%)

Figure 3: The vegetation mapped within the application area.

Total Number of Habitat Trees (DBH > 50cm)	Number of Habitat Trees with No Hollows Observed	Number of Habitat Trees with Possible Hollows considered Unsuitable for Black Cockatoos	Number of Habitat Trees with Possible Hollows considered Potentially suitable for Black Cockatoos	Tree Species		
				Marri	Jarrah	Karri
99	90	9	0	89	9	1

Figure 4: summary of the potential habitat trees within the application area.

Foraging Evidence Description	Example Image
Marri fruit – foraging activity attributed to Carnaby's cockatoo.	

Figure 5: Foraging evidence identified within he application area.

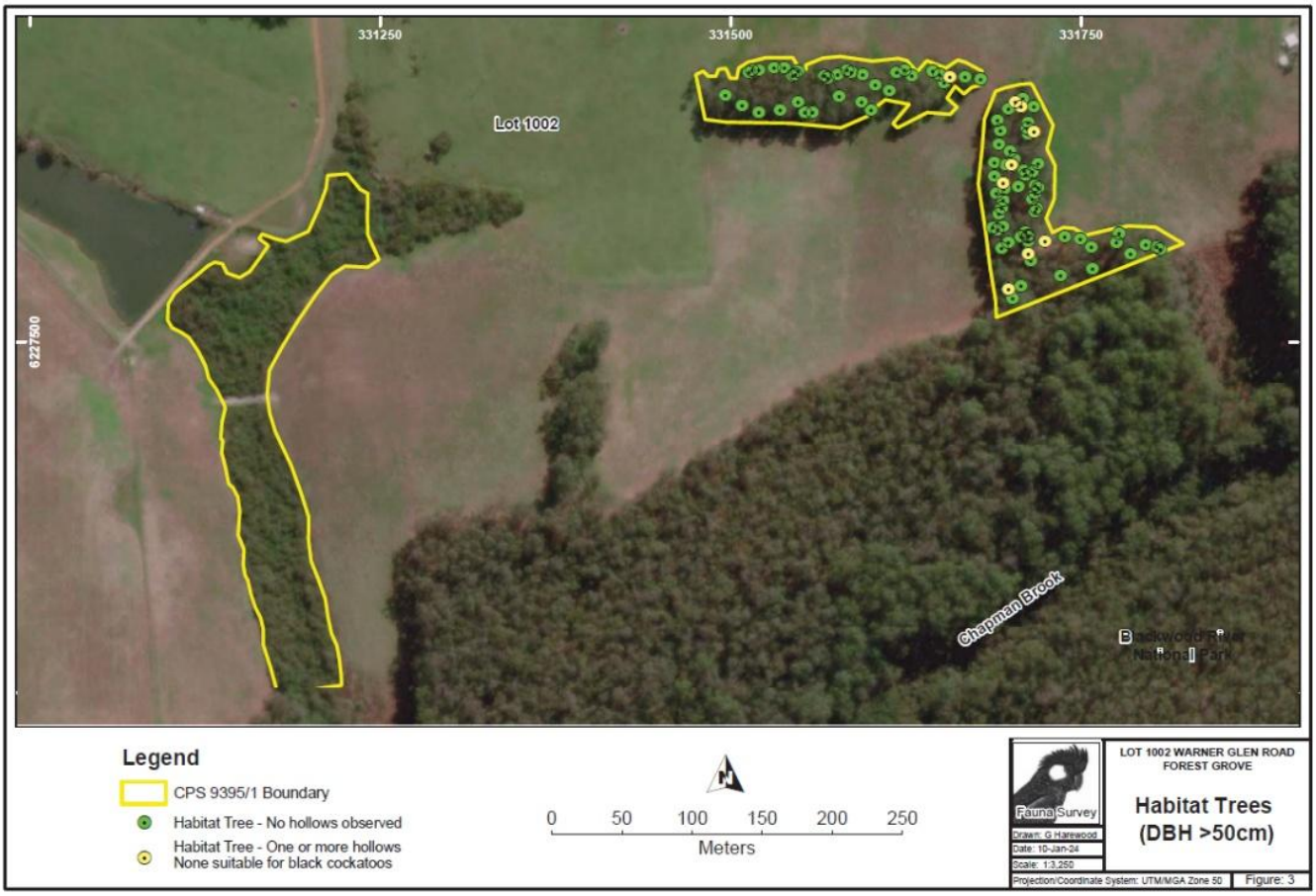


Figure 6: A map representing the habitat trees within the application area.

Habitat Trees (DBH >50cm)
Datum - GDA94
Entrance Size Ranges - Small = >5cm, Medium = 5 to 10cm, Large = >10cm

Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow
wpt001	50H	331698	6227666	Jarrah	10-15	>50	0				
wpt002	50H	331703	6227671	Dead Marri	15-20	>50	2+	Small & Medium	No Signs	No Signs	No
wpt003	50H	331708	6227673	Marri	15-20	>50	0				
wpt004	50H	331707	6227668	Marri	20+	>50	2+	Small & Medium	No Signs	No Signs	No
wpt005	50H	331716	6227668	Marri	15-20	>50	0				
wpt006	50H	331712	6227656	Marri	15-20	>50	0				
wpt007	50H	331711	6227652	Dead Marri	10-15	>50	0				
wpt008	50H	331716	6227650	Marri	20+	>50	1	Medium	No Signs	No Signs	No
wpt009	50H	331712	6227648	Marri	20+	>50	0				
wpt010	50H	331719	6227627	Marri	20+	>50	0				
wpt011	50H	331715	6227621	Marri	20+	>50	0				
wpt012	50H	331709	6227622	Marri	15-20	>50	0				
wpt013	50H	331710	6227619	Marri	15-20	>50	0				
wpt014	50H	331705	6227611	Marri	15-20	>50	0				
wpt015	50H	331717	6227612	Marri	15-20	>50	0				
wpt016	50H	331719	6227610	Marri	15-20	>50	0				
wpt017	50H	331717	6227606	Marri	20+	>50	0				
wpt018	50H	331690	6227658	Marri	15-20	>50	0				
wpt019	50H	331692	6227651	Marri	15-20	>50	0				
wpt020	50H	331691	6227641	Jarrah	15-20	>50	0				
wpt021	50H	331699	6227636	Dead Marri	15-20	>50	0				
wpt022	50H	331702	6227630	Marri	15-20	>50	0				
wpt023	50H	331701	6227626	Dead Jarrah	15-20	>50	0				
wpt024	50H	331700	6227626	Dead Jarrah	5-10	>50	1	Medium	No Signs	No Signs	No
wpt025	50H	331696	6227626	Marri	15-20	>50	0				
wpt026	50H	331688	6227628	Marri	15-20	>50	0				

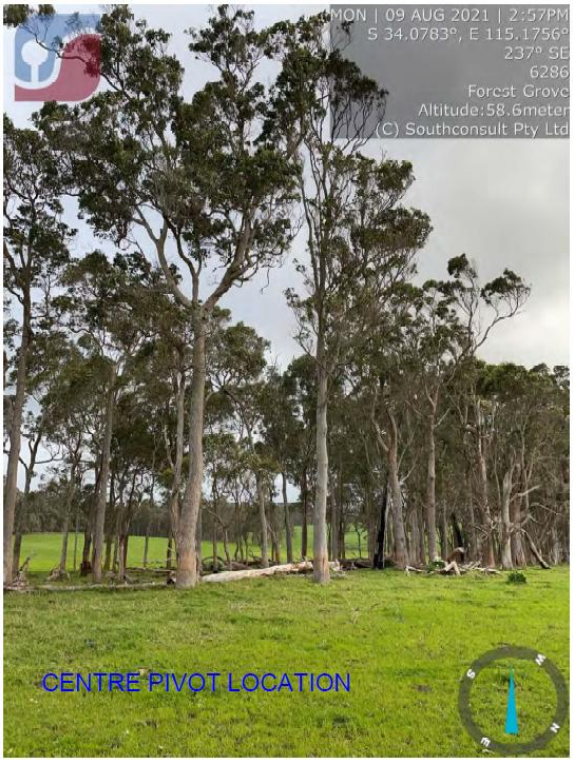
Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow
wpt027	50H	331688	6227618	Marri	15-20	>50	0				
wpt028	50H	331694	6227613	Jarrah	15-20	>50	2+	Small & Medium	No Signs	No Signs	No
wpt029	50H	331695	6227609	Marri	15-20	>50	0				
wpt030	50H	331689	6227606	Marri	15-20	>50	0				
wpt031	50H	331694	6227601	Marri	15-20	>50	0				
wpt032	50H	331693	6227595	Marri	15-20	>50	0				
wpt033	50H	331691	6227591	Marri	15-20	>50	0				
wpt034	50H	331690	6227580	Marri	15-20	>50	0				
wpt035	50H	331687	6227581	Marri	15-20	>50	0				
wpt036	50H	331694	6227582	Marri	15-20	>50	0				
wpt037	50H	331698	6227571	Marri	15-20	>50	0				
wpt038	50H	331693	6227567	Jarrah	10-15	>50	0				
wpt039	50H	331698	6227538	Jarrah	20+	>50	2+	Small & Medium	No Signs	No Signs	No
wpt040	50H	331701	6227531	Marri	15-20	>50	0				
wpt041	50H	331707	6227540	Marri	15-20	>50	0				
wpt042	50H	331735	6227547	Marri	15-20	>50	0				
wpt043	50H	331758	6227552	Marri	15-20	>50	0				
wpt044	50H	331806	6227566	Marri	20+	>50	0				
wpt045	50H	331804	6227568	Marri	20+	>50	0				
wpt046	50H	331796	6227569	Marri	20+	>50	0				
wpt047	50H	331785	6227563	Marri	20+	>50	0				
wpt048	50H	331775	6227571	Karri	20+	>50	0				
wpt049	50H	331777	6227577	Marri	15-20	>50	0				
wpt050	50H	331757	6227568	Marri	15-20	>50	0				
wpt051	50H	331749	6227573	Dead Marri	15-20	>50	0				
wpt052	50H	331738	6227575	Marri	20+	>50	0				
wpt053	50H	331724	6227572	Marri	15-20	>50	1	Small	No Signs	No Signs	No
wpt054	50H	331712	6227563	Marri	20+	>50	2+	Small & Medium	No Signs	No Signs	No
wpt055	50H	331714	6227558	Marri	15-20	>50	0				

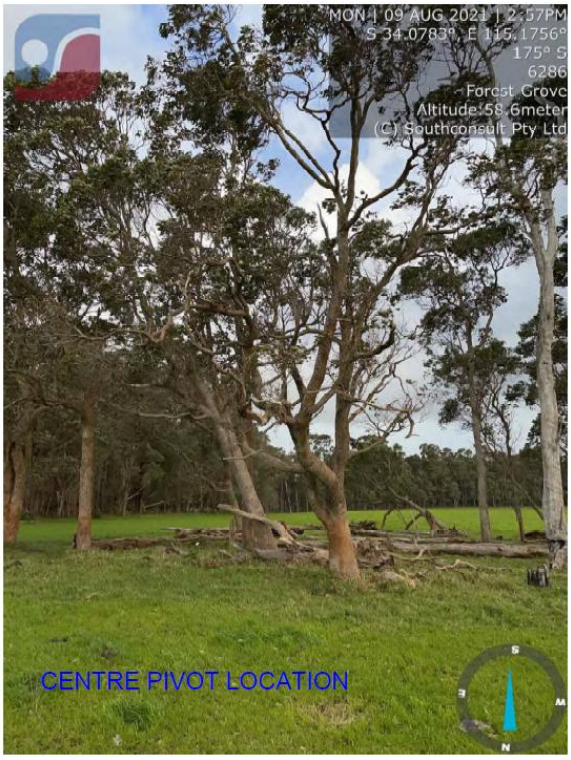
Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow
wpt056	50H	331707	6227575	Marri	15-20	>50	0				
wpt057	50H	331712	6227572	Marri	15-20	>50	0				
wpt058	50H	331712	6227576	Dead Marri	15-20	>50	0				
wpt059	50H	331712	6227575	Jarrah	15-20	>50	0				
wpt060	50H	331710	6227578	Marri	15-20	>50	0				
wpt061	50H	331717	6227593	Marri	15-20	>50	0				
wpt062	50H	331718	6227595	Marri	15-20	>50	0				
wpt063	50H	331715	6227602	Marri	15-20	>50	0				
wpt064	50H	331678	6227687	Marri	15-20	>50	0				
wpt065	50H	331667	6227689	Marri	15-20	>50	0				
wpt066	50H	331656	6227689	Dead Marri	15-20	>50	2+	Small	No Signs	No Signs	No
wpt067	50H	331652	6227685	Marri	15-20	>50	0				
wpt068	50H	331649	6227691	Marri	15-20	>50	0				
wpt069	50H	331644	6227693	Marri	15-20	>50	0				
wpt070	50H	331629	6227690	Marri	15-20	>50	0				
wpt071	50H	331624	6227694	Marri	15-20	>50	0				
wpt072	50H	331618	6227692	Marri	15-20	>50	0				
wpt073	50H	331613	6227679	Marri	15-20	>50	0				
wpt074	50H	331603	6227683	Marri	15-20	>50	0				
wpt075	50H	331594	6227691	Marri	15-20	>50	0				
wpt076	50H	331586	6227692	Dead Marri	15-20	>50	0				
wpt077	50H	331583	6227694	Marri	15-20	>50	0				
wpt078	50H	331576	6227691	Marri	15-20	>50	0				
wpt079	50H	331569	6227688	Marri	20+	>50	0				
wpt080	50H	331567	6227690	Marri	20+	>50	0				
wpt081	50H	331566	6227690	Marri	15-20	>50	0				
wpt082	50H	331548	6227693	Marri	15-20	>50	0				
wpt083	50H	331546	6227691	Marri	15-20	>50	0				
wpt084	50H	331544	6227690	Marri	15-20	>50	0				

Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow
wpt085	50H	331538	6227695	Marri	15-20	>50	0				
wpt086	50H	331531	6227695	Marri	20+	>50	0				
wpt087	50H	331520	6227694	Marri	20+	>50	0				
wpt088	50H	331515	6227694	Marri	15-20	>50	0				
wpt089	50H	331513	6227692	Marri	15-20	>50	0				
wpt090	50H	331496	6227676	Marri	15-20	>50	0				
wpt091	50H	331508	6227669	Marri	15-20	>50	0				
wpt092	50H	331520	6227664	Marri	15-20	>50	0				
wpt093	50H	331535	6227665	Marri	15-20	>50	0				
wpt094	50H	331548	6227671	Jarrah	15-20	>50	0				
wpt095	50H	331553	6227664	Marri	15-20	>50	0				
wpt096	50H	331558	6227664	Marri	15-20	>50	0				
wpt097	50H	331577	6227675	Marri	15-20	>50	0				
wpt098	50H	331593	6227671	Marri	15-20	>50	0				
wpt099	50H	331600	6227665	Marri	15-20	>50	0				

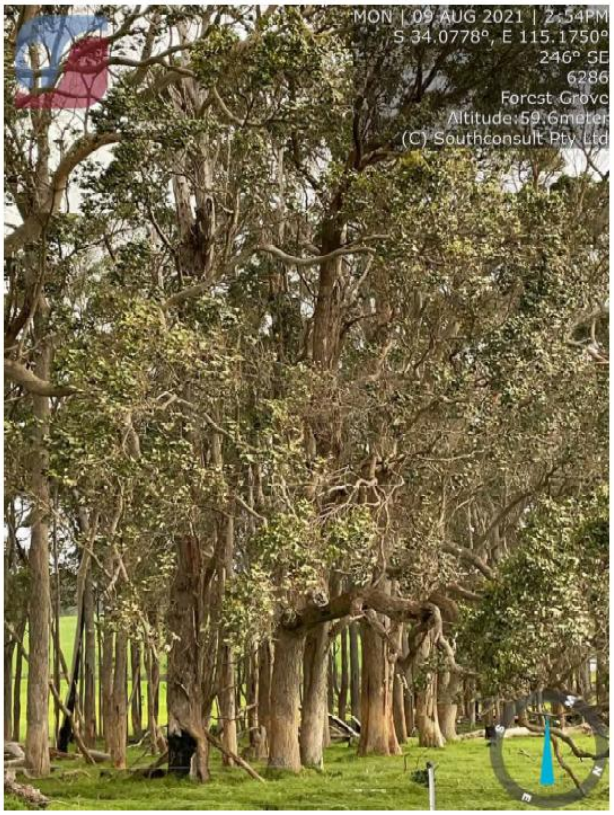
Figure 7: Attributes related to all habitat trees identified within the application area.

Photographs of the application area.

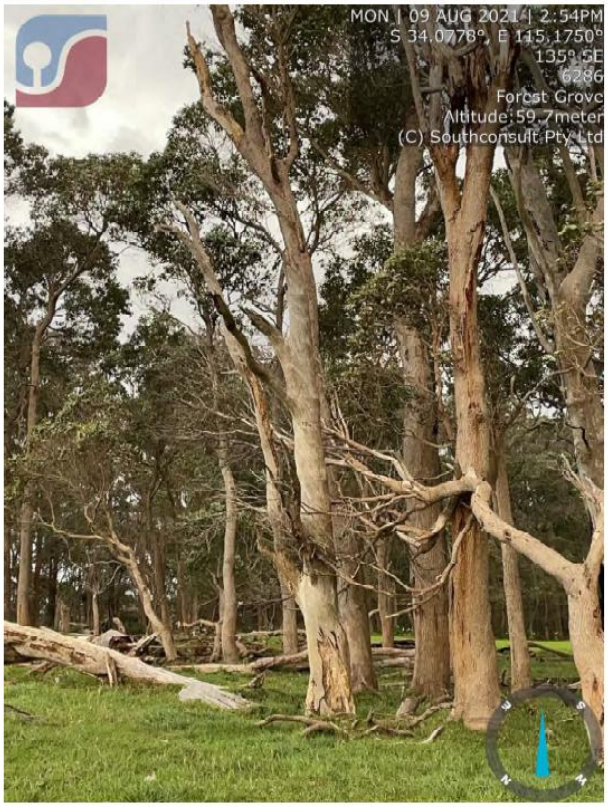




CENTRE PIVOT LOCATION



CENTRE PIVOT LOCATION




MON | 09 AUG 2021 | 2:55PM
S 34.0783°, E 115.1756°
144° SE
6286
Forest Grove
Altitude:56.4meter
(C) Southconsult Pty Ltd
CENTRE PIVOT LOCATION


MON | 09 AUG 2021 | 2:55PM
S 34.0781°, E 115.1757°
152° SE
6286
Forest Grove
Altitude:58.8meter
(C) Southconsult Pty Ltd
CENTRE PIVOT LOCATION

Appendix G. Sources of information

G.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

G.2. References

Commissioner of Soil and Land Conservation (CSLC) (2021). *Land Degradation Advice and Assessment Report for clearing permit application CPS 9395/1*, received 11 October 2021, Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT514488)

Commissioner of Soil and Land Conservation (CSLC) (2024). *Land Degradation Advice and Assessment Report for clearing permit application CPS 9395/1*, received 09 December 2024, Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT1047633)

Commonwealth of Australia (2001). *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Commonwealth of Australia. (2012). Department of Sustainability, Environment, Water, Population and Communities. EPBC Act referral guidelines for three threatened black cockatoo species.

Department of Agriculture, Water and the Environment (DAWE) (2022). *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's cockatoo, Baudin's cockatoo and the Forest Red-tailed Black-cockatoo,* Department of Agriculture, Water and the Environment, Canberra, February

Department of Environment and Conservation (DEC). (2012). Brush-tailed Phascogale. *Phascogale tapoatafa* (Meyer, 1793). Retrieved from https://library.dbca.wa.gov.au/static/FullTextFiles/071549.pdf

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Parks and Wildlife (DPaW) (2017). *Western Ringtail Possum* (Pseudocheirus occidentalis) *Recovery Plan*. Government of Western Australia. Bentley. Retrieved from: https://www.dcceew.gov.au/sites/default/files/documents/recovery-plan-western-ringtail-possum.pdf

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 25 August 2024).

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2023) *Rights in Water and Irrigation Act 1914 advice for clearing permit application CPS 10776/1*, received 19 September 2024 (DWER Ref: DWERDT1039357).

Environmental Protection Authority (EPA) (2016). *Technical Guidance – Terrestrial Fauna Surveys.* Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf.

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

Government of Western Australia. (2019). *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Harewood, G (2024). *Supporting information for CPS 10776/1, Black cockatoo habitat assessment Lot 1002 Forest Grove,* received 15 January 2024 (DWER Ref: DWERDT1026506)

Jones, B.A., How, R.A. and Kitchener, D.J. (1994). A Field Study of *Pseudocheirus occidentalis* (Marsupialia :Petauridae). II. Population Studies. Wildlife Research 21; 189-201.

Johnstone, R.E., Kirkby, T., and Sarti, K. (2013). The breeding biology of the Forest Red-tailed Black Cockatoo Calyptorhynchus banksii naso Gould in south-western Australia. I. Characteristics of nest trees and nest hollows. Pacific Conservation Biology; Clayton Vol. 19, Iss. 2, (Winter 2013): 121-142.

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

Mattiske, E.M. and Havel, J.J. (1998). *Vegetation Complexes of the South-west Forest Region of Western Australia.* Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Noakes. B.S. and Noakes. S.M. (2021). Supporting information for clearing permit application CPS 9395/1, received 30 August 2021 (DWER Ref: A2040117).

Noakes. B.S. and Noakes. S.M. (2024a). *Clearing permit application* CPS 10776/1, received 25 September 2024 (DWER Ref: DWERDT1011358 6).

Noakes. B.S. and Noakes. S.M. (2024b). Supporting information for clearing permit application CPS 10776/1, received 28 January 2025 (DWER Ref: DWERDT1066653).

Noakes. B.S. and Noakes. S.M. (2025). Supporting information for clearing permit application 10776/1, revegetation planting and offset proposal, received 5 November 2025 (DWER Ref: DWERDT1224545)

Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009). *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.

Schoknecht, N., Tille, P. and Purdie, B. (2004). *Soil-landscape mapping in South-Western Australia – Overview of Methodology and output*s Resource Management Technical Report No. 280. Department of Agriculture.

Shire of Augusta-Margaret River (2021). *Advice for clearing permit application CPS 10779/1*, received 17 September 2021 (DWER Ref: DWERDT1034013).

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Southwest Hydrology (2024). *Proposed dam development, Lot 1002 Warner Glen Rd, Forest Grove*, received 28 January 2025 (DWER ref: DWERDT1066653).

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 25 June 2024)