GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10649/1

File Number: DWERVT15437

Duration of Permit: From 12 June 2025 to 12 June 2032

PERMIT HOLDER

Shire of Waroona

LAND ON WHICH CLEARING IS TO BE DONE

Lot 389 on Deposited Plan 190018 (Crown Reserve 4835), Waroona

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.5 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 12 June 2027.

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

(a) When undertaking any clearing authorised under this permit, or any *rehabilitation* required under condition 8, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area cross hatched yellow in Figure 1 of Schedule 1 and the area cross hatched red in Figure 2 of Schedule 1.

(ii) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area cross hatched yellow in Figure 1 of Schedule 1 and the area cross hatched red in Figure 2 of Schedule 1;

(iii) restrict the movement of machines and other vehicles to the limits of the areas cross hatched yellow in Figure 1 of Schedule 1 and the area cross hatched red in Figure 2 of Schedule 1;

(iv) only move soils in dry conditions; and

(v) where *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is to be removed from the area cross hatched yellow in Figure 1 of Schedule 1 and the area cross hatched red in Figure 2 of Schedule 1, ensure it is transferred to areas of comparable soil disease status.

(b) At least once in each 12-month period for the term of this Permit, the permit holder must remove or kill any *weed* growing within areas cross hatched yellow in Figure 1 of Schedule 1 and the area cross hatched red in Figure 2 of Schedule 1.

4. Weed management – Adjacent vegetation

At least once in each 12-month period between June to September, the permit holder must remove or kill any *weed*, growing within the area cross-hatched green in Figure 3 of Schedule 1.

5. Vegetation not authorised to clear

(a) Prior to undertaking any clearing authorised under this permit, the permit holder must identify, record, and photograph all *trees* and *Xanthorrhoea preissii* (grass tree) individuals within the area cross-hatched yellow in Figure 1 of Schedule 1.

(b) The permit holder must retain all *trees* and *Xanthorrhoea preissii* (grass tree) individuals identified in condition 5(a).

(c) On completion of clearing authorised under this permit, the permit holder must identify, record, and photograph all *trees* and *Xanthorrhoea preissii* (grass tree) individuals retained in accordance with condition 5(b).

6. Directional clearing

The permit holder must:

(a) conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation*; and

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

7. Vegetation management – Fencing

The permit holder must:

(a) prior to commencing clearing, construct a fence along the line shown on Figure 4 of Schedule 1;

(b) fence should allow for the movement of wildlife by being raised 15 centimetres from the ground; and

(c) within one month of installing the fence, notify the *CEO* in writing that the construction of the fence outlined in condition 7(a) has been completed.

8. Revegetation and Rehabilitation

(a) Within 24 months of the commencement of clearing authorised under this permit and no later than 12 June 2027, the permit holder must *revegetate* and *rehabilitate* 0.4 hectares of *native vegetation* within the area cross-hatched red in Figure 2 of Schedule 1.

(b) In undertaking the *revegetation* and *rehabilitation* required under condition 8(a) of this permit, the permit older must:

(i) undertake *direct seeding* and *planting* at an *optimal time*, using *species representative* of the *FCT3b TEC*;

(ii) ensure only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate*;

(iii) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the *revegetation* and *rehabilitation* area;

(iv) establish at least three 10 x 10 metre quadrat monitoring sites within the *revegetation* and *rehabilitation* area;

(v) undertake *weed* control activities annually until the Completion Criteria as per Table 3 of Schedule 2 has been met;

(vi) monitor quadrats specified in condition 8(b)(iv) annually until the Completion Criteria as per Table 3 of Schedule 2 have been met and maintained for a minimum of three years;

(vii) undertake remedial actions for the *revegetation* and *rehabilitation* area where monitoring required under condition 8(b)(vii) indicates the Completion Criteria, outlined in Table 3 of Schedule 2, has not been met, including:

i. deliberately *planting* and/or *direct seeding native vegetation* that will result in the minimum targets specified in Table 3 of Schedule 2 (Completion Criteria);

ii. undertake further *weed* control activities; and

iii. continue monitoring of the *revegetated* and *rehabilitated* area by an *environmental specialist*, until the Completion Criteria, outlined in Table 3 of Schedule 2 have been met.

(viii) where an *environmental specialist* has determined that the Completion Criteria, outlined in Table 3 of Schedule 2 has been met, that report is to be provided to the *CEO* within three months of the determination being made by the *environmental specialist*; and

(ix) where the *CEO* does not agree with the determination made under condition 8(b)(ix), the *CEO* may require the permit holder to undertake remedial actions in accordance with the requirements under condition 8(viii) and repeat the actions under condition 8(b)(ix).

9. 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) direction of the clearing; (e) the size of the area cleared (in hectares); (f) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; and (g) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3.
2.	In relation to fence pursuant to condition 7	(a) location of the fence, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (b) the date fence was erected; and (c) actions taken to manage the condition of the fence

No.	Relevant matter	Specifications
3.	In relation to vegetation management pursuant to condition 5	(a) The location of all *trees* and *Xanthorrhoea preissii* (grass tree) individuals identified and retained, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (d) Photographs of all *trees* and *Xanthorrhoea preissii* (grass tree) individuals identified, taken prior to clearing; and (e) Photographs of all *trees* and *Xanthorrhoea preissii* (grass tree) individuals identified, taken after clearing.
4.	In relation to the *revegetation* and *rehabilitation* pursuant to condition 8.	(a) a description of the *revegetation* and *rehabilitation* activities undertaken, including planted species composition and density, and actions taken to implement watering and *weed* control; (b) the size of the area *revegetated* and *rehabilitated*; (c) the date/s on which the *revegetation* and *rehabilitation* was undertaken; (d) the boundaries of the area *revegetated* and *rehabilitated*, recorded digitally as a shapefile; (e) a description of any remediation works undertaken, in accordance with condition 8(b)(viii), and the reasons why they were required to be undertaken; (f) at least two photographs of the areas *revegetated* and *rehabilitated* recorded annually; (g) results of annual monitoring against the completion criteria; (h) the date completion criteria were considered to have been met; and (i) a copy of the monitoring report and determination in accordance with condition 8(b)(ix).

10. 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 under condition 9 of this permit; 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 carried out, must be provided to the *CEO* on or before 31 December 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 this permit, a written report of records required under condition 9, where these records have not already been provided under condition 10(a).

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist.
FCT3b Threatened Ecological Community (TEC)	Means the state listed *Corymbia calophylla-Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain Threatened Ecological Community (TEC). This TEC is dominated by both *Corymbia calophylla* (marri) and *Eucalyptus marginata* (jarrah) with additional common taxa comprising low shrubs, sedges, grasses and herbs.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of *Phytophthora* species on native vegetation.
direct seeding	means a method of re-establishing vegetation through establishment of a seed bed and the introduction of seeds of the desired plant species.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
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	optimal time means the period from May to July for undertaking planting.
local provenance	means native vegetation seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
rehabilitate, rehabilitated and rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that 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/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct

Term	Definition
	seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area
Species representative of FCT3b TEC	most occurrence FCT3b community is dominated by both *Corymbia calophylla* (marri) *and Eucalyptus marginata* (jarrah) with additional common taxa comprising low shrubs, sedges, grasses and herbs. These include *Bossiaea eriocarpa* (common brown pea*), Conostylis juncea, Hibbertia hypericoides* (yellow buttercups*), Morelotia octandra, Chamaescilla corymbosa* (blue squill), *Desmocladus fasciculatus, Banksia dallanneyi* (couch honeypot), *Mesomelaena tetragona* (semaphore sedge), *Babingtonia camphorosmae* (camphor myrtle), *Lepidosperma squamatum, Neurachne alopecuroidea* (foxtail mulga grass*), Philotheca spicata* (pepper and salt), *Burchardia congesta* (milkmaids), *Caesia micrantha* (pale grass-lily), *Kingia australis* (kingia), *Drosera erythrorhiza* (red ink sundew), *Lomandra hermaphrodita and Caladenia flava* (cowslip orchid)
tree/s	means a perennial plant having a permanent, woody, self-supporting main stem or trunk, usually growing to a considerable height, and usually developing branches at some distance from the ground
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

C Robertson
19.05.2025
3.06PM

Caron Robertson
A/MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

19 May 2025

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure **1**).

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

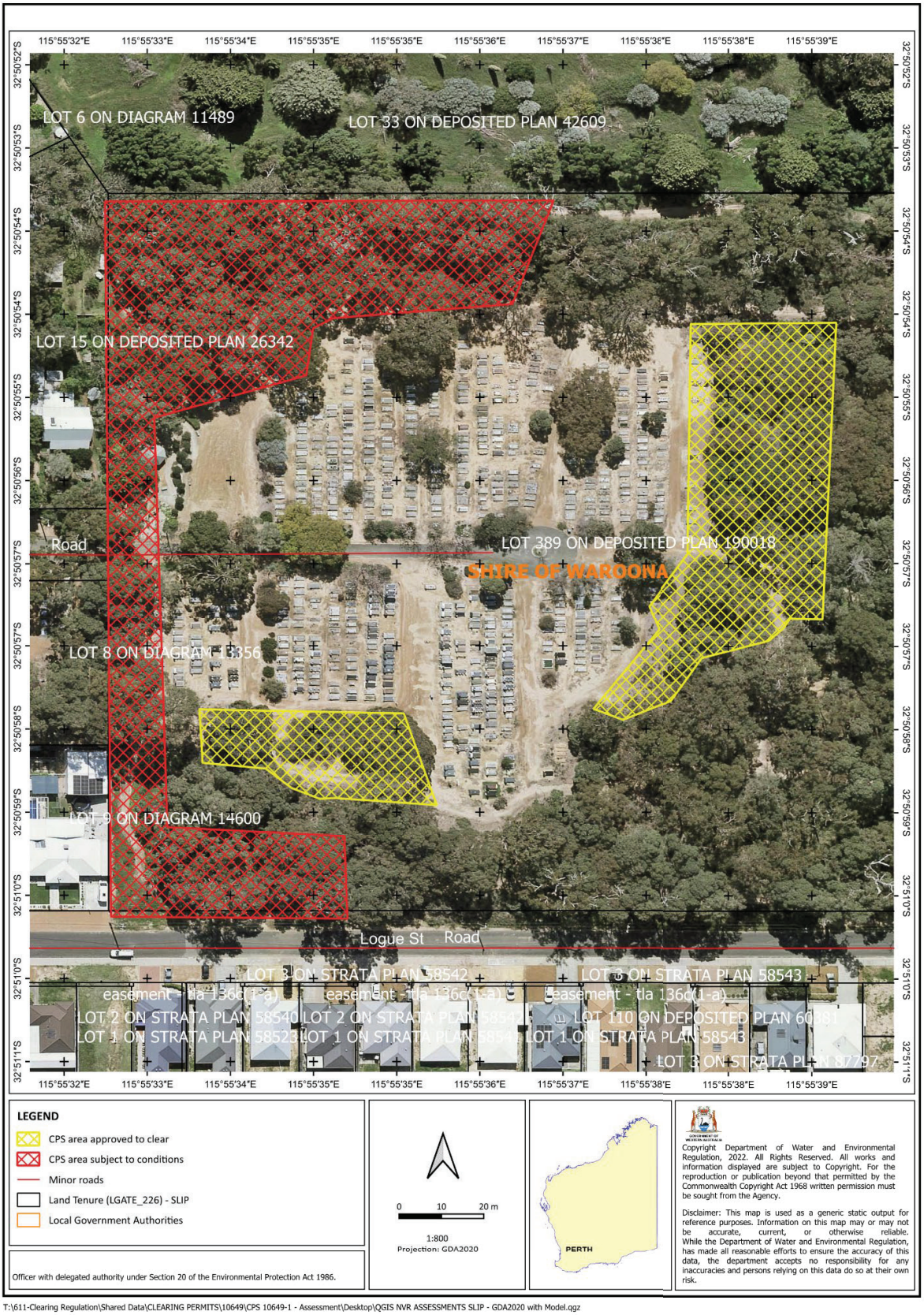

Figure 2: Map of the area (cross hatched red) subject to rehabilitation conditions.

Figure 3: Map of the area (cross-hatched green) within weed management conditions apply.

Figure 4: Map of the location where the fence is to be installed (red line) in accordance with condition 7.

SCHEDULE 2

Table 3: Completion criteria for the rehabilitation with the areas cross hatched red in Figure 2 of Schedule 1.

Aspect	Completion Criteria	Monitoring
Survival rate to be achieved	The *revegetation* and *rehabilitation* site must ensure a survival rate of at least 70 per cent of the seedlings initially planted.	The survival rate is to be assessed annually by an *environmental specialist* in spring in the three monitoring quadrats required by condition 8(b)(vi) for a minimum of three years after the last year plants were established.
Vegetation Structure	Vegetation in the *revegetation* and *rehabilitation* area must include native vegetation that is broadly representative of the FCT3b TEC, by establishing understorey and midstorey species and providing conditions suitable for expanding remnant understory species across the site.	The structure is to be assessed annually by an *environmental specialist* in spring in the three monitoring quadrats required by condition 8(b)(vi) for a minimum of three years after the last year plants were established.
Vegetation condition (Keighery, 1994)	Vegetation in the *revegetation* and *rehabilitation* area must achieve a vegetation condition of 'Good'.	The condition of the vegetation is to be assessed annually by an *environmental specialist* in spring in the three monitoring quadrats required by condition 8(b)(vi) for a minimum of three years after the last year plants were established.
Percentage of weeds present	Weed coverage within the *revegetation* and *rehabilitation* site to be no more than 15 per cent. No Weeds of National Significance (WoNS) within the rehabilitation site.	*Weed coverage* is to be monitored annually in spring by an *environmental specialist* in the three monitoring quadrats required by condition 8(b)(vi) for a minimum of three years after the last year plants were established.
Percentage cover of bare ground	The *rehabilitation* area has no more than 20 per cent of bare ground.	The percentage cover of bare ground is to be assessed annually by an *environmental specialist* in spring in the three monitoring quadrats required by condition 8(a)(vi) for a minimum of three years after the last year plants were established.
Declared weeds	No Declared Weeds under the *Biosecurity and Agricultural Management Act 2007* is present	Monitor the *rehabilitation* site for Declared weeds annually in autumn and spring for a minimum of three years after the last year plants were established.
Boundary Fence	Gates and boundary fence of *rehabilitation* area must be in good condition with no clear damage that will enable access by the general public or livestock	Annually until completion criteria has been met.

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 10649/1
Permit type:	Area permit
Applicant name:	Shire of Waroona
Application received:	17 June 2024
Application area:	0.50 hectare of native vegetation
Purpose of clearing:	Cemetery expansion
Method of clearing:	Mechanical clearing
Property:	Lot 389 on Deposited Plan 190018 (Crown Reserve 4835)
Location (LGA area/s):	Shire of Waroona
Localities (suburb/s):	Waroona

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained in two separate patches of vegetation within the site (see Figure 1, Section 1.5).

To facilitate the expansion of the cemetery, the Shire of Waroona (the Shire) is seeking approval to clear groundcover and shrub vegetation located beneath established trees within the application area. A significant portion of the proposed clearing comprises the removal of accumulated surface debris, including leaves, sticks, and bark. However, it is acknowledged that some native understorey vegetation will be impacted.

The Shire has committed to the retention of all existing trees within the application area. As a result, the extent of clearing is expected to be less than the 0.50 hectares assessed by the Department. This selective clearing approach will enable the placement of burial plots among the retained mature trees, preserving the site's natural character. Additionally, the proposed works will support broader land management objectives, including weed suppression and feral pest control (Shire of Waroona, 2024c).

1.3. Decision on application

Decision:	Granted
Decision date:	19 May 2025
Decision area:	0.50 hectare of native vegetation as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (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);
- 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 F); and
- additional information obtained during the assessment, including the findings of:
    - flora and vegetation survey (Ecoedge, 2022);
    - fauna survey (Harewood, 2024); and
    - photographs of the application area (Shire of Waroona, 2024b)

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 for public benefit;
- the reserve where the application area is located is vested for the purpose of a cemetery under the Shire of Waroona's local planning scheme No: 1357;
- the Shire has funding under the State NRM Community Steward Funds to undertake rehabilitation works on site; and
- shire proposes to complete a biosecurity project that involves weed mitigation for *Watsonia meriana* and a feral pest control program; and these programs can only be achieved with a long-term result if the clearing is undertaken as proposed (Shire of Waroona, 2024b).

The assessment identified that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- indirect impacts to a state listed Threatened Ecological Community (TEC);
- loss of native vegetation that is significant within an area that is extensively cleared; and
- potential mortality of fauna species utilising the application area at the time of clearing.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to long-term adverse impacts on environmental values and can be minimised and managed to be unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- fence clearing boundaries prior to clearing where the clearing is adjacent to areas of the *Corymbia calophylla-Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain TEC.
- retain all trees and *Xanthorrhoea preissii* (grass tree) identified within the application area;
- undertaking weed management up to and within the 20 metres from the application area; and
- revegetation of 0.4 hectares from a degraded/completely degraded condition (Keighery, 1994) to a good condition (Keighery, 1994) within the same site as the application area.

1.5. Site map

Figure 1 Map of the application area

The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

2 Legislative context

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

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

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The Shire has advised the department that during the planning phase of the cemetery expansion, the Shire has explored the following options (Shire of Waroona, 2024c):

- Investigate alternative sites for a new cemetery.
- Investigate acquiring land that adjoins to the current site to expand.
- Investigate the option of reducing the clearing impact to expand onsite.

The reserve was officially set aside to be used as a cemetery, and at first, the Shire planned to develop the entire site. However, after reviewing the Flora and Fauna reports (Ecoedge, 2023; Harewood.G, 2023) that were conducted to inform the environmental values of the site, the Shire presented the cemetery plan to Council, and the project was paused to explore other options, such as finding a different location or reducing the size of the development. The Shire advised that finding a new site for a cemetery is risky and financially challenging, and the Shire does not have the time or budget for it. Also, any new site would likely require clearing more native vegetation, which the Shire considered to be a concern given how much of it remains in the area. Because of this, the Shire with the Council's support preferred to continue developing the existing site (Shire of Waroona, 2024c).

As detailed above, alternative available options were investigated by the Shire. Given the constraints of limited funding and suitable land availability, the Shire decided to proceed with an onsite expansion of the cemetery. To minimise environmental impact, clearing has been limited to the removal of ground cover and shrubs within areas mapped as completely degraded, while retaining the established trees. This approach has enabled the design of new plots beneath the existing tree canopy (Shire of Waroona, 2024c).

Other measures that were implemented by the Shire to minimise the environmental impacts were:

- modifying the concept design and reducing the size of the application area;
- opting for groundcover clearing and retention of significant mature vegetation;
- sourcing of Flora and Fauna survey to determine where the most significant vegetation on the site is located;
- surveying of site to identify clearing area (the site will be pegged to ensure clearing is only completed within the allocated area); and
- securing funds to help enhance the native flora and fauna within the site.

In applying the above measures, the Shire was able to reduce the application area from one hectare to 0.5 hectares. Within the one-hectare area, some vegetation was identified as being in good to very good condition (Keighery, 1994) and was part of a state-listed TEC. The department requested the Shire to exclude these high-quality vegetation

areas from the application area. In response, the Shire reduced the clearing area from one hectare to 0.5 hectares, successfully avoiding major impacts to the state-listed TEC.

The Shire also intends to retain the significant mature vegetation within the application area, including species such as Marri, Banksia, and Xanthorrhoea, with clearing limited to groundcover only. The specified clearing area was calculated based on a total area measurement, as this method was most appropriate for the nature of the proposed clearing. However, due to the planned retention of mature native vegetation, the extent of mechanical clearing will be less than the calculated area. The Shire advised that a substantial portion of the clearing consists of removing surface debris such as leaves, sticks, and bark (Shire of Waroona, 2024b).

The Department requested clarification from the Shire regarding the decision not to utilise the completely degraded (Keighery, 1994) vegetation located along the northern boundary of the property for the proposed cemetery expansion. The Shire advised that this area was intentionally excluded to maintain an appropriate buffer zone around the perimeter of the site to ensure the cemetery is not visible outside of the property itself. In addition to this, the Fauna Assessment (Harewood. G, 2023) identified many habitat trees within the northern section, including trees containing small, medium, and large hollows. Three trees with hollows that were potentially suitable for the black cockatoo birds were also present within this northern section of the property. To minimise potential disturbance and noise to these habitat trees, the Shire determined that development in this area would not be appropriate (Shire of Waroona, 2024c).

The Shire also had the opportunity to apply for funding under the State NRM Community Steward Funds. A project was developed which allowed for the expansion, and allowed the Shire to include weed mitigation, feral pest control, flora and fauna enhancement. A revegetation initiative has also been included in the Shire's application for State NRM Community Stewardship Funding. In the event that the funding application is unsuccessful, the Shire will allocate budget provisions for the revegetation works in the 2025/26 financial year (Shire of Waroona, 2024c).

As a mitigation measure for the removal of understorey vegetation, the Shire proposes to undertake rehabilitation along the western boundary of the site. To ensure the native planting completed and the planting is successful, the Shire proposes to complete watering twice a week and conduct regular inspections. The revegetation is within areas which will act as a buffer zone within the property and will not be cleared (Shire of Waroona, 2025).

Figure 2: A map of the proposed revegetation area

The department notes the Shire's advice that the works planned on the site will allow the Shire to complete biosecurity projects such as weed mitigation for Watsonia which is difficult to control within the site due to the dense buildup of groundcover and debris. By removing the groundcover and debris under this clearing permit, the Shire is able to undertake the management of *Watsonia meriana* on site. There is also a feral pest control program scheduled to be undertaken which is for rabbit baiting and this will commence prior to clearing so that any borrows can be ripped once they are easily accessible. These biosecurity projects would not be achievable with a long-term result if the clearing is not completed (Shire of Waroona, 2025)

Taking the above into consideration, the department is satisfied that the Shire has taken appropriate avoidance and mitigation measures to ensure that no significant residual impacts of clearing native vegetation remains.

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 adjacent flora and vegetation and significant remnant vegetation. 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 (flora and ecological community) - Clearing Principles (a, c and d)

Assessment

The application area is located within the Swan Coastal Plain IBRA region of Western Australia. A flora and vegetation survey conducted for the application area (Ecoedge, 2023) indicate the vegetation consists of *Open forest of Eucalyptus marginata* and *Corymbia calophylla* over low open woodland of *Banksia grandis* over medium open shrubland of *Daviesia divaricata, Xanthorrhoea preissii* and *Xylomelum occidentale* over low shrubland of *Bossiaea ornata, Dasypogon bromeliifolius, Lysiandra calycina,* scattered forbs including *Haemodorum laxum* and *Lomandra sericea* and open sedgeland of *Lepidosperma squamatum, Mesomelaena tetragona* and *Morelotia octandra* on grey-brown sandy loam. The vegetation condition of the application area ranges from degraded to completely degraded (Keighery, 1994) condition (Ecoedge, 2023).

Conservation significance flora

According to the available databases, 31 conservation significance flora species were identified from the local area, that include six threatened flora and 25 priority flora species. A likelihood of occurrence assessment of conservation significant flora within the local area was undertaken for the application area. Noting the distribution and preferred habitat types, including soil and vegetation types mapped within the application area, the likelihood analysis concluded that the application area is not likely to provide suitable habitat for conservation significant flora species identified from the local area.

A detailed flora and vegetation survey was conducted on 09 September 2022 (Ecoedge, 2023) in accordance with the recommended timing for surveys within the south-west botanical province (EPA, 2016). 110 vascular flora taxa were identified within the survey area, of which 35 (32%) were non-native species.

No Threatened or Priority flora species were recorded during the survey (Ecoedge, 2023). Ecoedge also undertook a likelihood of occurrence assessment of the flora species identified from the local area and determined that none of these flora species are likely to occur within the vegetation and soil types that occur within the application area (Ecoedge, 2023). *Watsonia meriana* was the only Declared pest plant that was identified from the survey area.

Considering the above, the extent of the application area and the condition of the vegetation within the application area being degraded to completely degraded (Keighery, 1994), it is unlikely that that flora species of conservation significance found within the local area would occur within the application area.

Ecological community

According to the available databases, the application area is the Banksia Woodlands of the Swan Coastal Plain ecological community.

Following the vegetation survey and multivariate analysis of quadrat floristic data conducted by Ecoedge in 2022, the vegetation within the survey area was classified as Floristic Community Type 3b (FCT3b), as originally described in Gibson et al. (1994): *Corymbia calophylla – Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain. This finding was unexpected and represents a significant northern range extension for this ecological community. The Department of Biodiversity, Conservation and Attractions (DBCA) has also confirmed, through analysis consistent with Gibson et al. (1994), that the vegetation present aligns with the characteristics of FCT3b. This ecological community is listed as "Endangered" under the *Biodiversity Conservation Act 2016* but is not currently listed as a Threatened Ecological Community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

According to the fact sheet by DBCA (2023), this FCT3b ecological community is found in alluvial soils and better-drained sites largely on the eastern side of the southern Swan Coastal Plain. It is understood that the most occurrence of this community is dominated by both *Corymbia calophylla* (marri) *and Eucalyptus marginata (jarrah)* with additional common taxa comprising low shrubs, sedges, grasses and herbs. These include *Bossiaea eriocarpa* (common brown pea), *Conostylis juncea, Hibbertia hypericoides* (yellow buttercups), *Morelotia octandra, Chamaescilla corymbosa* (blue squill), *Desmocladus fasciculatus, Banksia dallanneyi* (couch honeypot), *Mesomelaena tetragona* (semaphore

sedge), *Babingtonia* camphorosmae (camphor myrtle), *Lepidosperma squamatum, Neurachne alopecuroidea* (foxtail mulga grass), *Philotheca spicata* (pepper and salt), *Burchardia congesta* (milkmaids), *Caesia micrantha* (pale grass-lily), *Kingia australis* (kingia), *Drosera erythrorhiza* (red ink sundew), *Lomandra hermaphrodita* and *Caladenia flava* (cowslip orchid) (DBCA, 2023).

Based on the above findings, the department considers that the areas of vegetation in good to very good condition (Keighery, 1994) within the survey area that is characterised by a diverse understorey of low shrubs, sedges, grasses, and herbs are representative of the identified TEC and must be protected from clearing. In contrast, areas assessed as degraded or completely degraded (Keighery, 1996) are unlikely to support the understorey structure and species composition necessary to be considered representative of this TEC.

The Shire's original application included one hectare of vegetation, including areas mapped as being in good to very good (Keighery,1994) condition. In response, the department requested that any clearing avoid these higher-quality vegetation areas to prevent modification of the TEC through the removal of understorey vegetation. Consequently, the application area was reduced to include only those portions classified as degraded or completely degraded (Keighery, 1994).

According to the DBCA's (2023) fact sheet on this FCT3b TEC, key recovery actions include fencing and restricting access to remnant areas containing the community, implementing weed control measures, monitoring and managing dieback disease to prevent its spread, and conducting hydrological studies (DBCA, 2023).

The department acknowledges that while the proposed clearing is limited to vegetation in degraded to completely degraded (Keighery, 1994) condition, the absence of an adequate buffer to areas of good to very good (Keighery, 1994) condition vegetation may lead to indirect impacts on adjacent vegetation representative of the TEC. To mitigate these potential impacts, the department recommends that weed management conditions, and a condition requiring the permit holder to fence the boundary of the application area adjacent to areas of this TEC prior to clearing, will limit impacts to adjacent areas of this PEC. In addition, the Shire is expected to implement weed management within a 20-metre buffer surrounding the application area, targeting adjacent TEC vegetation to reduce the risk of weed invasion.

Conclusion

Based on the information above, it is considered unlikely that the application area contains suitable habitat for priority or threatened flora species recorded within the local area. As the proposed clearing is confined to vegetation in degraded to completely degraded (Keighery, 1994) condition, it is not expected to result in direct modification of the identified TEC. However, there remains potential for indirect impacts to adjacent areas of TEC vegetation.

The proposed clearing will not result in a significant residual impact on the environmental values of the TEC. The application of appropriate mitigation measures, including the implementation of weed and dieback management within the surrounding buffer area and the installation of fencing to protect remnant vegetation, is expected to effectively manage and minimise any indirect impacts on adjacent TEC areas.

Condition

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

- undertaking weed management of adjacent areas of the TEC, within a 20-metre buffer of the application area;
- rehabilitation of 0.4 hectares from a degraded/completely degraded condition to a good condition (Keighery, 1994); and
- weed and dieback management conditions within the application area

3.2.2. Biological values (fauna) - Clearing Principles (b)

Assessment

According to the available databases, 17 conservation significant fauna species were recorded from the local area, that includes seven bird species, eight mammal species, one reptile and one invertebrate. The most common species recorded from the local area is the *Calyptorhynchus banksii naso* (Forest-red tailed black cockatoo) and the closest recorded fauna is *Isoodon fusciventer* (Quenda) identified at 0.5 kilometres from the application area.

According to the fauna report, two fauna habitat types were identified. These are:

- Jarrah and marri dominated woodland over a shrubland; or
- Grassland and existing cleared/partially cleared areas.

Fauna Habitat Description	Example Image
Jarrah and Marri dominated woodland with occasional Banksia over a shrubland/low shrubland or grassland and open shrubland .	

Fauna Habitat Description	Example Image
Existing cleared areas with scattered endemic, non-endemic and exotic trees and shrubs included firebreaks and tracks.	

Figure 3: Fauna habitat identified within the survey area.

The survey described that majority of the vegetation within the survey area appears to be in good to very good condition (Keighery, 1994) and able to support a number of fauna species (these areas have since been removed from the application area). However, given the isolated nature of the application area surrounded by residential areas and cleared areas around the boundary, it is not likely that many ground dwelling fauna will be utilising the application area (Harewood.G, 2023). The application area is able to provide significant habitat for bird species. The Shire is committed to retaining all trees within the application area. Based on this, habitat for bird species is unlikely to be impacted by the proposed clearing.

Noting the limited access to the application area for ground dwelling fauna and given the application area is degraded to completely degraded, as mentioned above, it is unlikely that the application area will support ground dwelling fauna species. However, bird species may still utilise the application area.

The following species have been further considered in the assessment.

Black cockatoos

- *Zanda baudinii* (Baudin's black cockatoo)
- *Zanda latirostris* (Carnaby's black cockatoo)
- *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo)

According to the survey results, 106 habitat trees comprising of marri and jarrah were recorded within the survey area. Six of these trees contained at least one hollow considered potentially suitable for black cockatoo nesting. Roosting evidence by black cockatoos were not identified. However, some of the larger trees may be suitable for roosting (Harewood.G, 2023). Breeding habitat for black cockatoos includes trees that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. Suitable DBH for nest hollows is 500 millimetres for most tree species (DAWE, 2022) however, is reduced to 300 millimetres for wandoo and salmon gum (Commonwealth of Australia, 2012). The Shire is committed to retaining all trees that are greater than 30 centimetres DBH within the application area. Hence, no impact is likely to breeding and roosting habitat of the black cockatoo birds.

Marri and Jarrah are considered primary foraging habitat species for all three black cockatoos (DAWE, 2022). Evidence of foraging by Forest-red tailed black cockatoos and Carnaby's black cockatoos was observed in the form of chewed marri and jarrah fruits within the survey area (Harewood.G, 2022).

Given that the Shire proposes to retain all mature trees within the application area that is over the 30-centimetre DBH, the proposed clearing will not impact on significant foraging habitat for black cockatoo species as well. There are banksia trees and *Xanthorrhoea preissii* (grass tree) also present within the application area. The Shire has committed to retaining these species that provides foraging value to black cockatoo birds.

Isoodon fusciventer (Quenda)

Quendas are ground dwelling marsupials that tend to inhabit forest, woodland and heathland, usually with dense understorey vegetation, sometime wetland fringes. They forage for plant material, fungi and insects by digging in leaf

litter and soil (DBCA, 2017). In their natural habitat, Quenda's live in dense understories in swampland areas, Banksia and Jarrah (Eucalyptus marginata) woodlands. However, Quendas have adapted to urban and suburban habitats in recent years (DBCA, 2017).

The survey area contained areas of dense groundcover representing potential habitat areas for Quenda. Given the proposed clearing is limited to areas that are in degraded to completely degraded condition (Keighery, 1994), it is unlikely that the application area will provide significant habitat for Quenda. Considering the isolated nature of the application area, it is unlikely Quenda will use the application area and if it was present, it would have been detected during the targeted search survey. The fauna assessment did not identify any quenda individuals or evidence of use by Quenda (Harewood.G, 2023).

Falsistrellus mackenziei (Western False Pipistrelle)
According to the information provided by the fauna survey (Harewood.G, 2023), the application area is located within the documented range of the Western False Pipistrelle. The trees within the application area containing hollows may provide refuge for this fauna species. Given only the understorey within the degraded to completely degraded (Keighery, 1994) areas are proposed for clearing, the habitat for this species is unlikely to be significantly impacted by the proposed clearing. It is possible that this fauna may utilise the application area to disperse through the site if present. Hence, to ensure no indirect impacts occurs, a directional condition would be implemented on the clearing permit.

Conclusion
Black cockatoo birds are known to rely on trees for both roosting and nesting opportunities, particularly trees with suitable hollows. As no trees are proposed for removal, the habitat necessary to support black cockatoo populations will be retained on site. Therefore, the proposed clearing that is limited to understorey and groundcover vegetation will not result in the loss of critical habitat for these protected species. No species of foraging value to the black cockatoo species will be lost through the proposed clearing.

For the reasons set out above, it is considered that the impacts of the proposed clearing does not constitute to a significant residual impact on conservation significant fauna species. Any indirect impacts to fauna can be managed through permit conditions.

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

- Slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.

3.2.3. Significant remnant vegetation - Clearing Principles (e)

The application area is located within the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) region of Western Australia. The Swan Coastal Plain bioregion has approximately 38.6 per cent of its original extent of native vegetation remaining (Government of Western Australia, 2019a).

The application area falls within the vegetation complex 29; described as vegetation ranging from open forest of *Corymbia calophylla* (Marri) - *Eucalyptus wandoo* (Wandoo) - *Eucalyptus marginata* (Jarrah) to open forest of *Eucalyptus marginata* - *Corymbia calophylla* - *Allocasuarina fraseriana* (Sheoak) - Banksia species. Fringing woodland of *Eucalyptus rudis* (Flooded Gum) in the gullies that dissect this landform. The mapped 'Forrestfield complex' retains approximately 12.29 per cent of it its pre-European vegetation extent within the bioregion (Government of Western Australia, 2019b).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent the clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The department's assessment notes that the vegetation in the application area consists of Jarrah-Marri open forest in degraded to completely degraded condition (Keighery, 1994). Based on the condition of the vegetation, it is unlikely to be representative of the vegetation complex and the mapped vegetation association and is not considered significant as a remnant of native vegetation.

Within the local area (10-kilometre radius around the application area), approximately 32 per cent of its original native vegetation extent remains, this is marginally above the 30 per cent retention threshold of the Commonwealth of Australia (2001). Based on this, the application area is not considered to be within an extensively cleared landscape.

However, when taking into account previously approved clearing permit applications within the local area, as well as other potential clearing activities that may have occurred without formal approval or outside of regulated processes, it is likely that the extent of remnant native vegetation remaining in the locality has been reduced to below the 30 per cent threshold.

In this context, the proposed clearing contributes to the cumulative loss of native vegetation and is therefore considered to have a significant impact on the remaining extent of remnant vegetation in the area. Reductions in native vegetation can lead to increased fragmentation, reduced habitat connectivity, and long-term declines in biodiversity. As a result, the significance of the proposed clearing is assessed not in isolation, but in conjunction with broader landscape-level vegetation loss.

Based on the above considerations, the department has requested that on-site revegetation/rehabilitation works be undertaken to mitigate the impacts of the proposed clearing. In response, the Shire has proposed to rehabilitate a 0.4-hectare area currently assessed as being in degraded to completely degraded (Keighery, 1994) condition through the re-establishment of native understorey vegetation. The successful revegetation of this to a good condition (Keighery, 1994) would counterbalance the impacts associated with the clearing of native vegetation within a landform that has already been extensively cleared.

In implementing this approach, the department used the 'rehabilitation credit calculation' element within the significant residual impact module of the WA environmental Offsets Calculator to determine the value of any proposed rehabilitation actions. The calculation has determined that 0.4 hectares of rehabilitation will counterbalance the impacts by 100 per cent.

Conclusion

For the reasons set out above, and the mitigation measures provided by the Shire, it is considered that potential impacts of the proposed clearing on remnant vegetation can be managed by re-planting native vegetation within the site to reach a condition of good (Keighery, 1994).

Conditions

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

- Rehabilitation of 0.4 hectares from a degraded/completely degraded condition to a good condition (Keighery, 1994).

3.3. Relevant planning instruments and other matters

The zoning of the application area is 'cemetery' under the Shire of Waroona's local planning scheme no 1357. The Shire has confirmed that Lot 389 Mitchell Avenue, Waroona is a reserve under management order for the purpose of a cemetery, known as the Drakesbrook Cemetery (Shire of Waroona, 2024b).

The application area is located within the Peel-Harvey Policy Boundary. The department sent a direct interest letter to the Peel Harvey Catchment Council for comments on the clearing application. No comments were received to date.

The department notes that the clearing is proposed to occur within a registered Aboriginal Site and Heritage Place Gas Pipeline 93. It is the Shire's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Additional information provided by applicant

information	Description
Supporting information (Shire of Waroona, 2024b)	The Shire provided information about the project and the avoidance measures implemented by the Shire during the planning phase of the development. The Shire also provided photographs of the application area.
Targeted flora and vegetation survey (Ecoedge, 2023)	Ecoedge was engaged by the Shire to undertake a spring Targeted and Detailed flora and vegetation survey of the application area. The survey was undertaken on 9 September 2022.
Fauna survey (Harewood.G, 2023)	On behalf of Ecoedge, a fauna survey was undertaken by Greg Harewood. The survey was conducted on 30 November 2022 over an area of 4.1 hectares. The following were undertaken as part of the survey: • A basic level 1 fauna assessment; • Targeted search for black cockatoo habitat/site use; and • Targeted searches for evidence of the likely presence of other fauna species of conservation significance.
Response to request for further information letter dated 20 December 2024 (Shire of Waroona, 2024c)	The department sent the Shire a letter requesting further information on the efforts to further avoid and minimise the application area. The Shire responded with information about the avoidance measures that were considered during the planning phase and mitigation measures that the Shire proposes to mitigate the impacts of the proposed clearing.
Response to request for further information letter dated 13 February 2025 (Shire of Waroona, 2025)	The department sent the Shire a letter requesting further information on the following items: • re-assessment of the TEC as DBCA has advised that a re-assessment of the TEC was required by the applicant to confirm the TEC that is present within the survey area; • Further efforts to avoid and minimise the proposed clearing; • If vegetation representative of the TEC cannot be avoided, the identification of offsets. The Shire's response to the RFI included: • a map of a proposed revegetation area; • a shapefile of the revised application area; and • a revised flora report with corrections to the TEC assessment.

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 the 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 application area is located east of the South Western Highway within the boundaries of the townsite of Waroona. It is within the Swan Coastal Plain IBRA region.

Characteristic	Details
	Aerial imagery and spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 32 per cent of the original native vegetation cover.
Ecological linkage	The application area does not occur within a mapped significant ecological linkage. The South West Regional ecological linkage is mapped approximately 900 metres from the application area.
Conservation areas	The application area is not mapped within a conservation area. The closest conservation area is an Agreement to Reserve that is legislated under the *Soil and Land Conservation Act 1945,* located approximately 956 metres to the east of the application area
Vegetation description	The flora vegetation survey (Ecoedge, 2023) indicates the vegetation within the application area consists of Jarrah-Marri open forest. A detailed description is available under section 3.2.1 of this decision report. Representative photos and the full survey descriptions and maps are available in Appendix E. The broadscale mapped vegetation complex within the application area is the Forresfield complex (29) that is described as open forest of *Corymbia calophylla* (Marri) - *Eucalyptus wandoo* (Wandoo) - *Eucalyptus marginata* (Jarrah) to open forest of *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri) - *Allocasuarina fraseriana* (Sheoak) - Banksia species. Fringing woodland of *Eucalyptus rudis* (Flooded Gum) in the gullies that dissect this landform. The mapped vegetation type retains approximately 12 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	A vegetation survey (Ecoedge, 2023) indicates the vegetation within the application area ranges from degraded to completely degraded (Keighery, 1994) condition. 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 E.
Climate and landform	The southwest of Western Australia experiences a mediterranean climate of hot dry summers and cool wet winters, and the application area is situated within the 'Temperate – distinctly dry and warm summer' Köppen climate class. An average of 680.6 millimetres of rainfall is recorded annually from the Pinjarra South weather station. The application area is mapped within the Forrestfield F2b Phase which is described as low slopes and foot slopes up to 5-10 per cent.
Soil description	The soil is mapped as well drained moderately deep to deep, gravelly acidic yellow duplex soils and rare laterite.
Land degradation risk	The land degradation table B.5 outline the land degradation risk levels for the Forrestfield F2b Phase (DPIRD, 2019).
Waterbodies	The application area is located within the Coastal Plain hydrological zone of Western Australia (DPIRD-059). The desktop assessment and aerial imagery indicated that no wetlands or watercourses transect the application area.
Hydrogeography	The application area falls within the Murray groundwater area and the Waroona Irrigation District surface water area proclaimed under the RiWI Act (DWER-034).

Characteristic	Details
	The application area is not within an area subject to the *Country Areas Water Supply Act 1947* clearing control catchments or within any public drinking water source areas (DWER-033). The groundwater salinity level (Total Dissolved Solids) is mapped as 500-1,000 milligrams per litre (fresh) (DWER-026).
Flora	According to the available databases, 31 conservation significance flora species were identified from the local area, that include six threatened flora and 25 priority flora species. The closest flora recorded is *Melaleuca viminalis* var. *viminalis* at 0.9 kilometres from the application area. The most recorded flora is *Grevillea bipinnatifida* subsp. *Pagna*, with 14 records in the local area.
Ecological communities	According to the desktop assessment, a portion of the application area is mapped within the Threatened Ecological Community, Banksia Woodlands of the Swan Coastal Plain ecological community. The survey has determined that this ecological community was not found within the application area. According to the survey results (Ecoedge, 2023) and TEC analysis, the site contains vegetation identified as Floristic Community Type 3b (FCT3b) – *Corymbia calophylla* – *Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain.
Fauna	According to the available databases, 17 conservation significant fauna species were recorded from the local area, that include of seven bird species, eight mammal species, one reptile and one invertebrate. The most common species recorded from the local area is the forest-red tailed black cockatoo and the closest recorded fauna is quenda identified at 0.5 kilometres from 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*					
Swan Coastal Plain	1,501,221	579,813	38.62	222,916	14.85
Vegetation complex					
Forrestfield Complex 29	22,812.92	2,803.36	12.29		
Local area					
10km radius	31,967	10,280	32	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Acacia lasiocarpa var. *bracteolata long peduncle variant* (G.J. Keighery 5026)	1	Y	N	2.61	1	N
Amanita fibrillopes	3	Y	N	2.61	1	N
Grevillea bipinnatifida subsp. *pagna*	1	N	N	3.99	14	N
Melaleuca viminalis var. *viminalis*	2	Y	Y	0.90	1	N
Morelotia australiensis	T	Y	N	7.93	4	N
Synaphea stenoloba	T	Y	N	7.46	4	N

B.4. Fauna analysis table

Species scientific name	Species common name	Conservation status	Distance of closest record to application area (km)	Number of known records (total)	Did survey identify fauna evidence?
Calyptorhynchus banksii naso	forest red-tailed black cockatoo	VU	0.37	68	Y
Falco peregrinus	peregrine falcon	OS	8.86	4	N
Falsistrellus mackenziei	western false pipistrelle, western falsistrelle	P4	5.55	3	N
Isoodon fusciventer	quenda, southwestern brown bandicoot	P4	0.56	30	N
Zanda baudinii	Baudin's cockatoo	EN	2.05	21	N
Zanda latirostris	Carnaby's cockatoo	EN	0.38	19	Y

B.5. Land degradation risk table

Risk categories	***Forrestfield F2b Phase***
Wind erosion	90% of map unit has a high to extreme hazard
Water erosion	0% of map unit has a very high to extreme hazard
Salinity	0% of map unit has a moderate hazard
Subsurface Acidification	100% of map unit has a high susceptibility
Flood risk	0% of the map unit has a moderate to high hazard
Water logging	0% of map unit has a moderate to very high risk
Phosphorus export risk	2% of map unit has a high to extreme hazard

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 site contains vegetation identified as Floristic Community Type 3b (FCT3b) – *Corymbia calophylla – Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain, which is recognised as a TEC. However,	May be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
as the proposed clearing is restricted to areas mapped as being in degraded to completely degraded condition (Keighery, 1994), it is not expected to result in a direct impact on the TEC. Nonetheless, indirect impacts to the adjacent TEC vegetation may occur as a consequence of the proposed clearing activities. There will be no significant residual impact to habitat considered suitable for priority or threatened flora and species nor will there be any significant impact on conservation significant fauna species.		
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 contains vegetation and habitat features that may be of significance for conservation-listed fauna species. However, the proponent has committed to avoiding the removal of all mature trees within the application area and has limited the proposed clearing to understorey vegetation within areas classified as degraded to completely degraded (Keighery, 1994). Given the retention of all trees and the restricted scope of clearing activities, it is considered unlikely that the proposed clearing will result in a significant impact on any conservation significant fauna species. The retention of canopy vegetation will maintain critical habitat structure and connectivity, thereby reducing the risk of habitat fragmentation. Fauna such as the western false pipistrelle may utilise the application area to traverse through the landscape. Any impacts to such fauna can be managed through permit conditions.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act. The survey conducted by Ecoedge (2023) did not identify any threatened flora or habitat for threatened flora within the application area.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed for clearing does contain species that are indicative of the TEC, *Corymbia calophylla – Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain. However, due to the degraded to completely degraded condition (Keighery, 1994) of the vegetation within the application area, it is unlikely to be representative of the TEC. In contrast, vegetation immediately adjacent to the application area is in better condition and is considered representative of the TEC. As a result, there is a high likelihood of indirect impacts to this adjacent TEC vegetation occurring from the proposed clearing activities. To address this, appropriate permit conditions are implemented on the clearing permit to manage and mitigate potential impacts, ensuring that no significant impacts occurs on the TEC vegetation	May be at variance	Yes *Refer to Section 3.2.1, above.*
Environmental value: significant remnant vegetation and conservation areas		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation types and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	Yes *Refer to Section 3.2.3, above.*
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. The proposed clearing does not include clearing of 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: The mapped soils are highly susceptible to wind erosion and subsurface acidification. Noting the extent and the location of the application area and the degraded to completely degraded condition (Keighery, 1994) of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
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: No watercourses, wetlands or public drinking water sources areas are recorded within the application area. Soils will not be excavated at depth and no wells or groundwater bores are proposed. The proposed clearing is unlikely to impact surface or groundwater quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.	Not likely to be at variance	No

Appendix 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. Biological survey information excerpts and photographs of the vegetation (Shire of Waroona, 2024b); (Ecoedge, 2023); (Harewood.G, 2023)

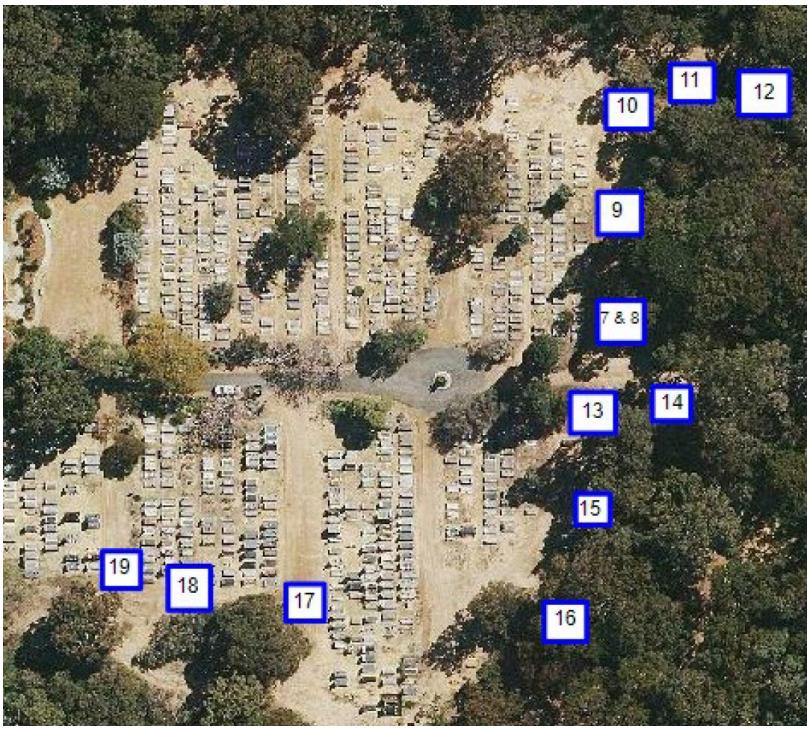

Figure 4: A map representing the photo point locations.

Photographs of the application area

Image 7: The uniting area backing onto the vegetation. The ground cover, shrubs and saplings will be cleared and the established trees including banksias, Marri, Jarrah and Grass Trees will not be cleared.

Image 8: An example of the ground cover buildup. There are some shrubs and saplings within this area which will be removed with the forestry mulching.

Image 9: Minor clearing of ground cover required within this section.

Image 10: This section has a large quantity of Xanthorrhoea Preissii which will not be removed.

Image 18: This section is linked to image 17, the shrubs will be cleared, and the banksia trees will remain.

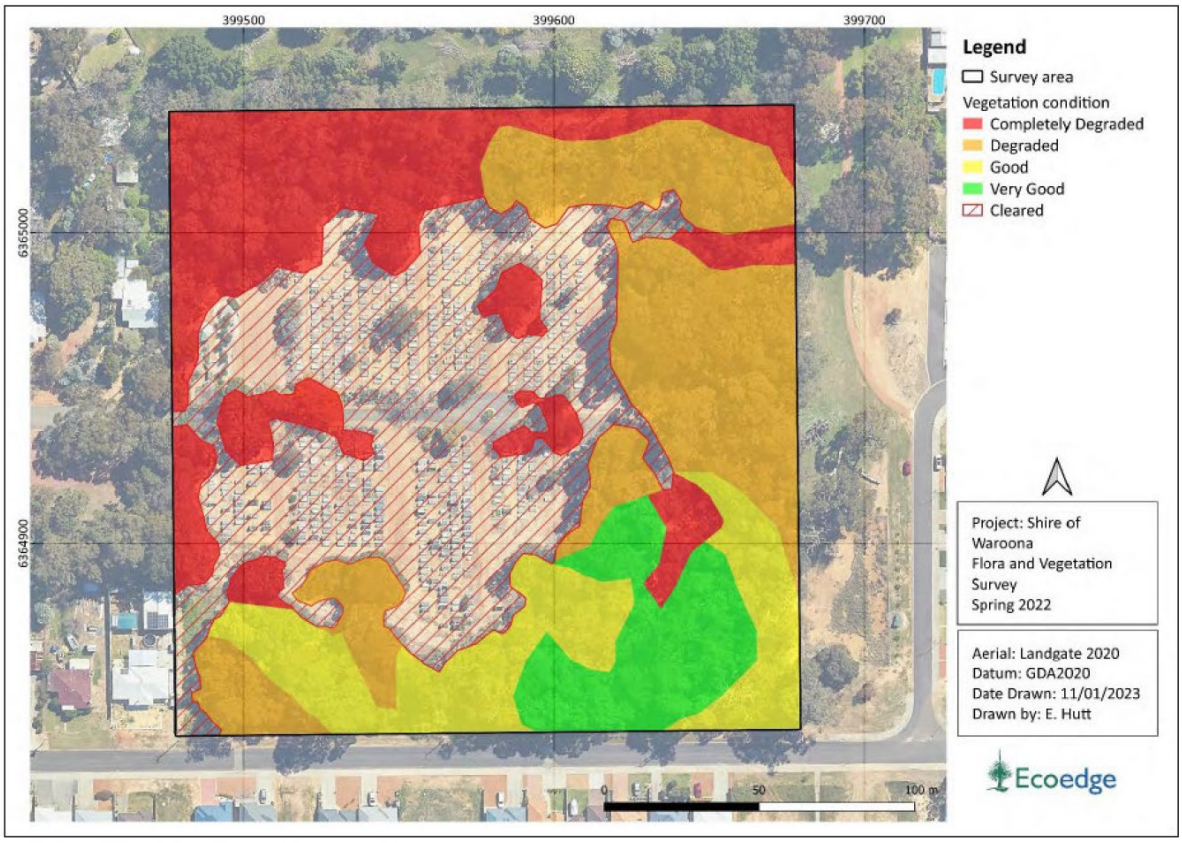

Figure 5: A map representing the vegetation condition (Keighery, 1994) of the survey area.

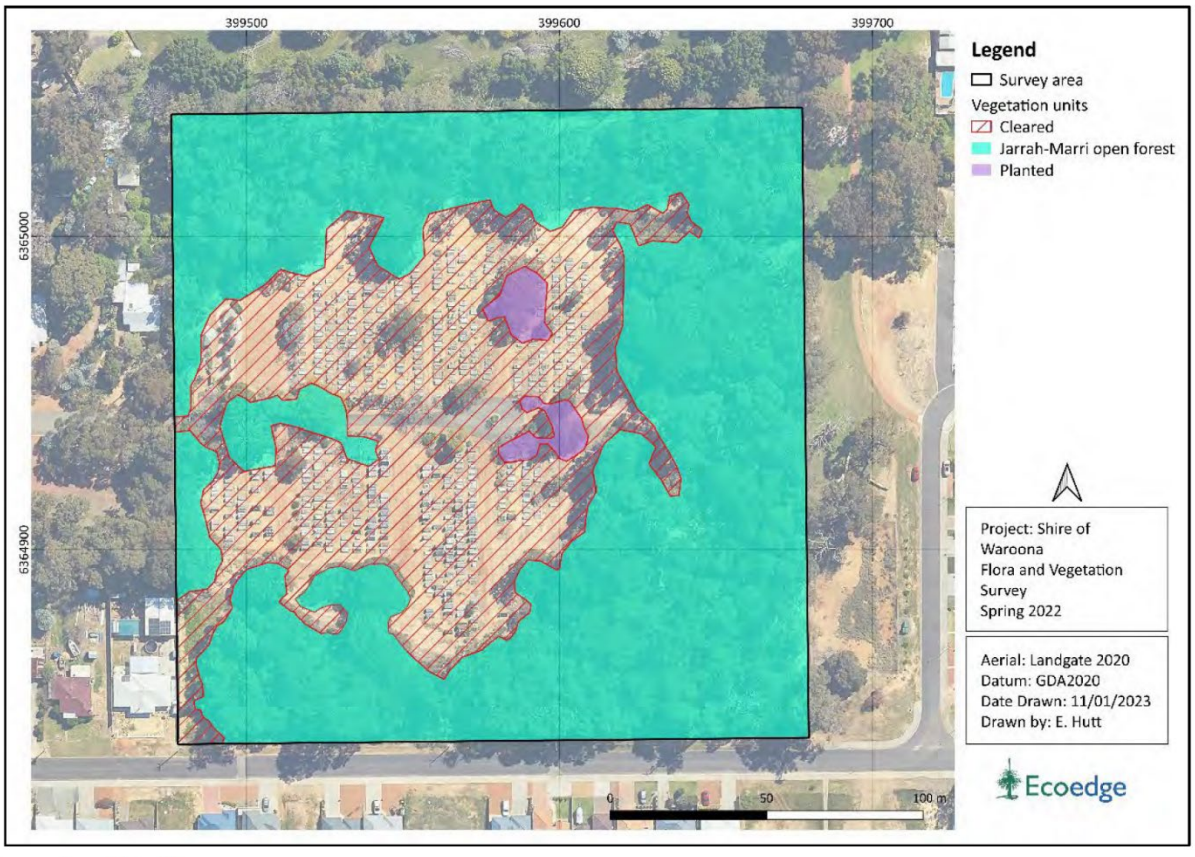

Figure 6: A map representing the vegetation type of the survey area.

Figure 7: A map representing the habitat trees within the survey area.

Appendix F. Sources of information

F.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)

F.2. References

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 Biodiversity, Conservation and Attractions (DBCA) (2017) Fauna Notes - Living with Quenda. Government of Western Australia

Department of Biodiversity, Conservation and Attractions (DBCA) (2023) Threatened ecological community fact sheet, *Corymbia calophylla – Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. 1994) available from scp3b_tec_fact_sheet_0 (5).pdf

Department of Biodiversity, Conservation and Attractions (DBCA) (2025) *Species and Communities Branch TEC advice for clearing permit application CPS 10649/1*, received 13 January 2025. Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: DWERDT1062379).

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 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 30 April 2025).

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.

Ecoedge (2023) Detailed and Targeted Flora and Vegetation Survey Drakesbrook Public Cemetery Mitchell Avenue, Waroona Western Australia. Received 29 July 2024 (DWER Ref: DWERDT983144)

Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf.

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 (2023) Fauna report – Waroona Cemetry Crown Reserve 4835 Lot 389 Michell Avenue Waroona. Received 29 July 2024 (DWER Ref: DWERDT983150)

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.

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.

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.

Shire of Waroona (2024a) *Clearing permit application CPS 10649/1*, received 17 June 2024 (DWER Ref: DWERDT964403).

Shire of Waroona (2024b) *Supporting information for clearing permit application CPS 10649/1,* received 17 June 2024 (DWER Ref: DWERDT973641).

Shire of Waroona (2024c) Shire's response to the request for further information letter dated 20 December 2024 for CPS 10649/1, received 23 December 2024 (DWER Ref: DWERDT1079397 and DWERDT1079399)

Shire of Waroona (2025) Shire's response to the request for further information letter dated 13 February 2025 for CPS 10649/1, received 19 February 2025 (DWER Ref: DWERDT1079397 and DWERDT1079399)

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 30 April 2025)