GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 11062/1
Permit Holder:	Shire of Denmark
Duration of Permit:	From 7 August 2026 to 7 August 2031

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

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of constructing a mountain bike trail network.

2. Land on which clearing is to be done

Lot 429 on Deposited Plan 230727 (Crown Reserve 13255), Shadforth.

3. Clearing authorised

The permit holder must not clear more than 2.09 hectares of *native vegetation* within a 6.3 hectare footprint, within the area cross-hatched yellow in Figure 1 of Schedule 1.

PART II – MANAGEMENT CONDITIONS

4. 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.

5. Weed and dieback management

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

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

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

(c) restrict the movement of machines and other vehicles to the limits of the area to be cleared;

(d) where dieback or weed-affected soil, mulch, fill, or other material is to be removed from the area to be cleared, ensure it is transferred to areas of comparable soil disease status; and

(e) install and maintain *public clean down infrastructure* and associated signage at the trail head, or another suitable nearby location.

6. Demarcation of the clearing area

Prior to undertaking *clearing* authorised under this permit, the permit holder must clearly demarcate the area to be cleared using visible markers to avoid the inadvertent removal of adjacent *native vegetation*.

7. Fauna management – directional clearing

The permit holder must:

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

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

8. Fauna management – tree avoidance

The permit holder must:

(a) not clear any *Eucalyptus marginata*, *Corymbia calophylla*, or *Eucalyptus diversicolor* trees with a diameter at breast height greater than 100 millimetres;

(b) not clear within 10 metres of *recorded habitat trees* identified in Table 1 of Schedule 2; and

(c) in complying with *condition* 8(b), clearly mark *recorded habitat trees* with flagging tape or other visible markers prior to commencing *clearing* under this permit, in a manner that is clearly visible to machinery operators.

9. Priority flora avoidance

The permit holder must:

(a) not clear within 20 metres of *recorded priority flora*, as shown in Figure 2 of Schedule 1; and

(a) in complying with *condition* 9(a), clearly mark *recorded priority flora* locations with flagging tape or other visible markers prior to commencing *clearing* under this permit, in a manner that is clearly visible to machinery operators.

10. Revegetation (temporary works)

The permit holder must:

(a) retain the vegetative material and topsoil removed by *clearing* authorised under this permit and stockpile that material in a previously cleared area;

(b) at an optimal time within 12 months following *clearing* authorised under this permit, and no later than 7 August 2028, *revegetate* areas no longer required for the purpose for which they were cleared, by laying the vegetative material and topsoil retained under *condition* 10(a) on those areas;

(c) within 24 months of laying the vegetative material and topsoil in accordance with *condition* 10(b), engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated*, and prepare a report detailing those findings;

(d) where the *environmental specialist* determines under *condition* 10(c) that the species composition, structure and density of the *revegetated* area will not result in a similar species composition, structure and density to that of the pre-clearing vegetation in that area, *revegetate* the area by *planting* and/or *direct seeding native vegetation* that will result in a similar species composition, structure and density to the pre-clearing vegetation, using only *local provenance* seeds and propagating material;

(e) undertake *weed* control within areas no longer required for the purpose for which they were cleared prior to spreading vegetative material and topsoil in accordance with *condition* 10(b), and undertake follow-up *weed* control within 12 months after spreading vegetative material and topsoil in accordance with *condition* 10(b); and

(f) identify and relocate all previously fallen logs greater than 300 millimetres in diameter that contain a hollow from the authorised *clearing* area to adjacent retained vegetation, unless otherwise approved by the *CEO*.

PART III - RECORD KEEPING AND REPORTING

11. 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, vegetation structure, and density of the cleared area; (b) the location where the *clearing* occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (c) the date on which the area was cleared; (d) the size of the area cleared in hectares; (e) actions taken to avoid, minimise, and reduce the impacts and extent of *clearing*

No.	Relevant matter	Specifications
		in accordance with *condition* 4; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with *condition* 5, including the date and location that *public clean down infrastructure* was installed; (g) actions taken to demarcate the *clearing* area in accordance with *condition* 6; (h) fauna management measures implemented in accordance with *condition* 7; (i) actions taken to avoid trees in accordance with *condition* 8, including photographic evidence that *recorded habitat trees* had been clearly demarcated and avoided; and (j) actions taken to avoid *recorded priority flora* in accordance with *condition* 9, including photographic evidence that *recorded priority flora* locations have been clearly demarcated and avoided.
2.	In relation to the *revegetation* of temporarily cleared areas pursuant to *condition* 10	(a) the size of the area *revegetated*; (b) the dates on which *revegetation* was undertaken; (c) the boundaries of the area *revegetated*, recorded digitally as a shapefile; (d) the *environmental specialist's* report prepared under *condition* 10(c); (e) the date and method of *weed* control activities undertaken in accordance with *condition* 10(e); and (f) actions taken to identify and relocate hollow fallen logs under *condition* 10(f), including the number of logs relocated.

12. 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* 11; and

(ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.

(b) If no *clearing* authorised under this permit has been undertaken, a written report confirming that no *clearing* under this permit has been undertaken must be provided to the *CEO* on or before 30 June of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 days prior to the expiry date of the permit, a written report of records required under *condition* 11, where these records have not already been provided under *condition* 12(a).

DEFINITIONS

In this permit, the terms in Table have their 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	means a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 2.
dieback	means the effect of *Phytophthora* species on *native vegetation*.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
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	means the *Environmental Protection Act 1986* (WA).
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 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 July for undertaking planting and direct seeding.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
public clean down infrastructure	means infrastructure used to prevent the spread of *weeds* and *dieback*, including but not limited to a cleaning station with brushes and a metal grate.

Term	Definition
recorded habitat trees	means *Eucalyptus marginata, Corymbia calophylla, and/or Eucalyptus diversicolor* trees with a diameter at breast height greater than 500 millimetres that contain hollows, as recorded in the Southern Ecology (2025) biological survey titled 'Targeted Flora and Cockatoo Assessment, Turner Road Reserve. Prepared for the Shire of Denmark, March 2025'.
recorded priority flora	means individuals of the following flora species, *Bossiaea* sp. Mt Frankland (L. Graham 2174) (Priority 2) and *Netrostylis* sp. Blackwood River (A.R. Annels 3043) (Priority 3), recorded in the Southern Ecology (2025) biological survey titled 'Targeted Flora and Cockatoo Assessment, Turner Road Reserve. Prepared for the Shire of Denmark, March 2025'.
revegetate/ revegetated/ revegetation	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.
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

Ray Carvalho
A/MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

15 July 2026

Schedule 1

The boundary of the area within which clearing may occur is shown in Figure 1. The location of *recorded priority flora* subject to *condition* 9 is shown in Figure 2.



Figure 1: Area cross-hatched yellow within which clearing authorised under this permit may occur.



Figure 2: *Recorded priority flora* locations cross-hatched red, subject to a 20 metre avoidance buffer under *condition* 9.

Schedule 2

The *recorded habitat trees* required to be avoided and provided with a 10 metre buffer in accordance with *condition* 8 are listed in Table 1.

Table 1: *Recorded habitat trees* that are subject to avoidance and buffer requirements under *condition* 8.

Tree number	Species	Longitude (GDA2020)	Latitude (GDA2020)
1	*Eucalyptus marginata*	117.3008	-34.9495
2	*Eucalyptus marginata*	117.3006	-34.9500
3	*Corymbia calophylla*	117.3050	-34.9472
4	*Corymbia calophylla*	117.3044	-34.9466
5	*Corymbia calophylla*	117.3047	-34.9465
6	*Corymbia calophylla*	117.3048	-34.9465
7	*Corymbia calophylla*	117.3048	-34.9465
8	*Corymbia calophylla*	117.3050	-34.9466
9	*Corymbia calophylla*	117.3053	-34.9469
10	*Corymbia calophylla*	117.3048	-34.9469
11	*Eucalyptus marginata*	117.3040	-34.9469
12	*Corymbia calophylla*	117.2977	-34.9498
13	*Corymbia calophylla*	117.2977	-34.9498
14	*Corymbia calophylla*	117.2977	-34.9495
15	*Eucalyptus marginata*	117.2976	-34.9494
16	*Eucalyptus diversicolor*	117.2981	-34.9494
17	*Corymbia calophylla*	117.3029	-34.9463
18	*Corymbia calophylla*	117.3015	-34.9463
19	*Corymbia calophylla*	117.3009	-34.9498
20	*Corymbia calophylla*	117.3006	-34.9498
21	*Corymbia calophylla*	117.3004	-34.9493
22	*Corymbia calophylla*	117.3009	-34.9483
23	*Eucalyptus diversicolor*	117.3051	-34.9460
24	*Corymbia calophylla*	117.3054	-34.9466
25	*Eucalyptus marginata*	117.3052	-34.9479
26	*Corymbia calophylla*	117.3050	-34.9476
27	*Eucalyptus marginata*	117.3025	-34.9489
28	*Corymbia calophylla*	117.3014	-34.9471
29	*Corymbia calophylla*	117.3047	-34.9468
30	*Corymbia calophylla*	117.2988	-34.9467
31	*Eucalyptus marginata*	117.2977	-34.9473
32	*Corymbia calophylla*	117.3014	-34.9457
33	*Corymbia calophylla*	117.3009	-34.9457
34	*Eucalyptus marginata*	117.3038	-34.9498

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 11062/1
Permit type:	Purpose permit
Applicant name:	Shire of Denmark
Application received:	8 April 2025
Application area:	2.09 hectares of native vegetation within a 6.3 hectare footprint
Purpose of clearing:	Constructing a mountain bike trail network
Method of clearing:	Manual clearing by hand and some mechanical clearing
Property:	Lot 429 on Deposited Plan 230727 (Crown Reserve 13255)
Location (LGA area/s):	Shire of Denmark
Localities (suburb/s):	Shadforth

1.2. Description of application

The application is to clear up to 2.09 hectares of native vegetation in a 6.3 hectare development footprint, within Lot 429 on Deposited Plan 230727 (Crown Reserve 13255 – Turner Road Reserve), to construct the Turner Road Mountain Bike Trail Network (see Figure 1, Section 1.5).

The applicant has advised that the trail network will create a locally significant recreational asset, providing a formal mountain biking facility for the Denmark community. The trail network forms an integral component of the *Great Southern Regional Trails Master Plan* (GSRTMP) (Magic Dirt Trailworx, 2024). The GSRTMP aims to deliver a sustainable network of trails to enhance the recreational and tourism profile of Western Australia trails and support long term economic sustainability (GSCORE, 2020).

The applicant has advised that Denmark currently has no sanctioned mountain bike trail networks, and that informal trails are being developed and used by the public, resulting in environmental degradation and increased pressure on surrounding vegetation. The proposed trail network is intended to reduce these impacts by providing a managed and formalised alternative (Shire of Denmark, 2025).

Turner Road Reserve (the Reserve) is zoned for 'Public Use – Gravel' under the Local Planning Scheme.

The application was revised during the assessment process following a review by the Shire of Denmark, which resulted in alteration of the trail alignment and improved quantification of the extent of native vegetation to be cleared.

1.3. Decision on application

Decision:	Granted
Decision date:	15 July 2026
Decision area:	2.09 hectares of native vegetation, as shown in Section 1.5.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and received no submissions. A revised application (reflecting a change in the proposed clearing area) was re-advertised on 17 March 2026 for a further 7 days, and no submissions were received.

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

- the site characteristics of the application area (see Appendix A);
- relevant environmental datasets (see Appendix D);
- the findings of biological surveys of the application area;
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix B);
- the applicant's efforts to avoid, minimise and mitigate the environmental impacts of the proposed clearing;
- the public benefit associated with the project; and
- other relevant matters detailed in Section 3.

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

- the loss of suitable habitat for black cockatoos, western ringtail possum, south-west brush-tailed phascogale, chuditch and quenda;
- indirect impacts to priority flora and other adjacent native vegetation through the spread of weeds and dieback; and
- a risk of injury to native fauna during clearing operations.

The Delegated Officer determined that the above risks can be adequately managed through conditions applied to the clearing permit.

Given the nature and extent of impacts, and the avoidance and minimisation measures applied, the Delegated Officer considered it appropriate to grant a clearing permit subject to conditions. Therefore, the clearing permit includes conditions requiring the applicant to:

- avoid all *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah) and *Eucalyptus diversicolor* (karri) trees with a diameter at breast height (DBH) of greater than 100 millimetres;
- apply a 10-metre avoidance buffer to all marri, jarrah, and karri trees with a DBH greater than 500 millimetres that contain hollows;
- apply a 20-metre avoidance buffer to all recorded priority flora;
- demarcate the clearing area, habitat trees and recorded priority flora locations to avoid inadvertent clearing of adjacent high-quality native vegetation;
- undertake slow, progressive, one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of clearing;
- retain hollow fallen logs to minimise impacts to terrestrial fauna habitat;
- implement hygiene and weed control measures to minimise the risk of introduction and spread of weeds and dieback; and
- revegetate temporary cleared areas by spreading cleared vegetative material and topsoil and undertaking weed control.

The applicant has applied for the clearing of 2.09 hectares within a larger 6.3 hectare footprint, to allow it the flexibility to comply with the above conditions and avoid specific environmental values.

1.5. Site map

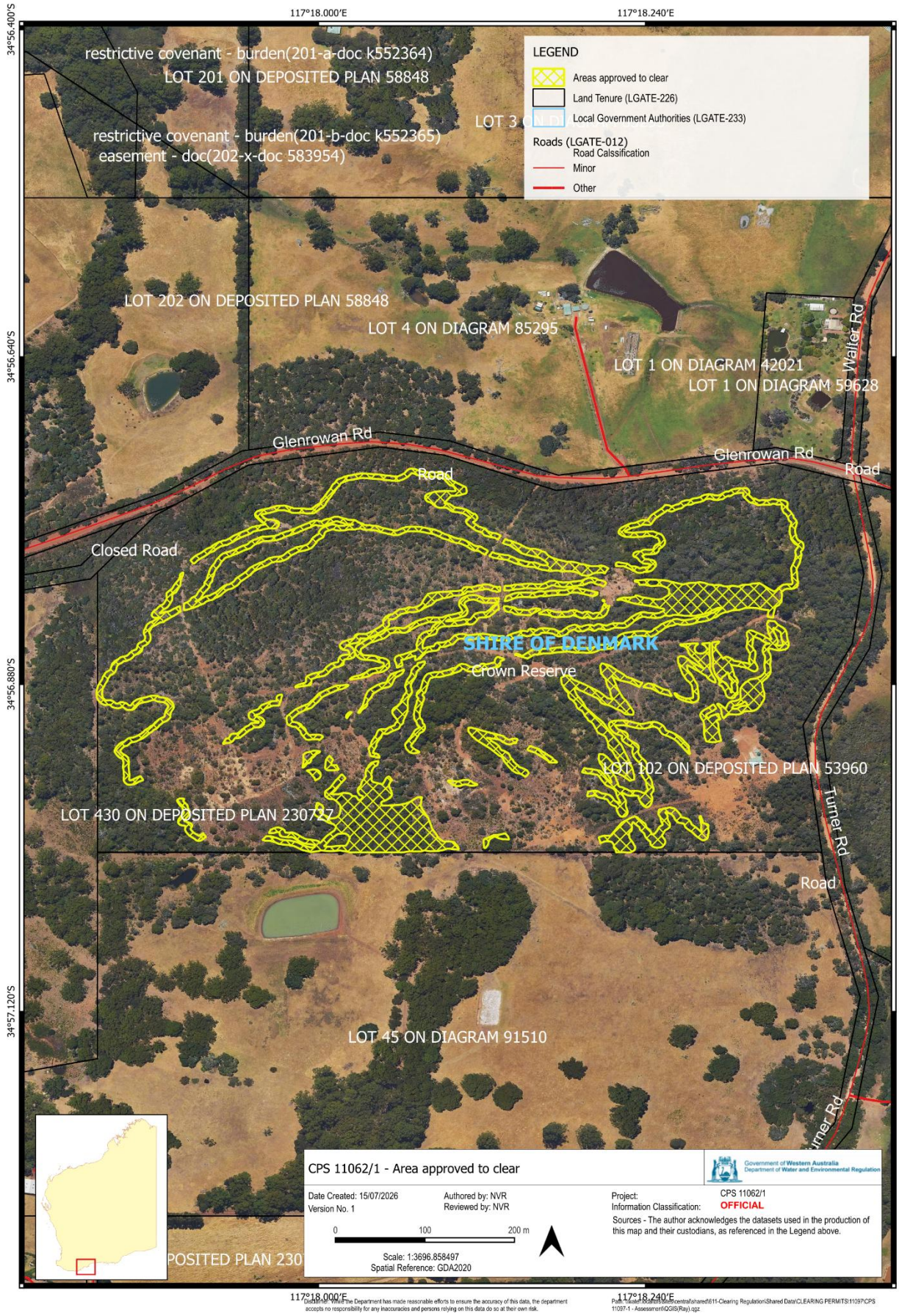


Figure 1. Approved clearing area footprint, shown cross-hatched yellow.

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; and
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act);
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act); and
- *Planning and Development Act 2005* (WA) (P&D Act).

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013);
- *Procedure: Native vegetation clearing permits* (DWER, October 2019);
- *Environmental Offsets Guidelines* (August 2014);
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016); and
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant submitted supporting information demonstrating the measures taken to avoid, minimise and mitigate the impacts of the proposed clearing.

The applicant advised that Turner Road Reserve was selected as the preferred location for the trail network over the previously identified Mount Hallowell area (A Class Reserve), due to the existing level of disturbance within the Turner Road Reserve and higher comparative environmental values of Mount Hallowell.

The applicant has advised that the following avoidance and minimisation measures have been, or will be, implemented (Shire of Denmark, 2025; Shire of Denmark, 2025a):

- limiting all trails to a maximum width of 1.2 metres;
- undertaking manual clearing by hand where practicable, in favour of mechanical clearing with large machines;
- preferentially aligning the trail network through degraded and completely degraded vegetation, where possible;
- relocating the proposed car park from an area supporting native vegetation containing priority flora to a partially cleared area with a higher level of disturbance;
- utilising existing vehicle access tracks to minimise additional clearing for access roads and parking areas;
- avoiding *Eucalyptus marginata* (jarrah), *Corymbia calophylla* (marri), and *Eucalyptus diversicolor* (karri) trees with a diameter at breast height (DBH) greater than 100 millimetres;
- avoiding jarrah, marri, and karri trees with hollows (DBH greater than 500 millimetres) by maintaining a minimum 10 metre buffer from clearing activities;
- avoiding all recorded priority flora by maintaining a minimum 20 metre buffer from clearing activities;
- retaining and stockpiling cleared vegetative material for use in site revegetation and naturalisation of temporary cleared batters and backslopes;
- undertaking weed control within temporary cleared batters and backslopes; and
- relocating logs with defined hollows adjacent the trail.

The applicant also advised that Denmark currently has no sanctioned mountain bike trail networks, and that informal trails are being developed and used by the public, resulting in environmental degradation. The proposed trail network is therefore expected to reduce the proliferation of informal trails and associated environmental impacts (Shire of Denmark, 2025a).

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer had regard to the site characteristics (see Appendix B), biological survey findings, and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to conservation listed flora and fauna. 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 - Principle (b)

Assessment

Background

The application area was subject to a targeted flora and black cockatoo assessment (the assessment). The assessment included the following fauna related surveys (Southern Ecology, 2025):

- a black cockatoo tree assessment of the preliminary trail alignments (7.6 hectares), undertaken on 26 October and 16 November 2023;
- a black cockatoo habitat assessment of the preliminary trail alignment, including a 30 metre trail buffer and proposed infrastructure areas, undertaken on 21 and 22 November 2024; and
- a further black cockatoo habitat assessment, including a 30 metre trail buffer and proposed infrastructure areas, undertaken on 10 December 2024.

The assessment identified that the application area is dominated by marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) forest interspersed with areas of karri (*Eucalyptus diversicolor*) forest (Southern Ecology, 2025).

Based on habitat suitability, vegetation condition, and extent and proximity of records, the application area is considered to provide suitable habitat for the following conservation listed fauna species:

- western ringtail possum (*Pseudocheirus occidentalis*) (Critically Endangered - BC Act and EPBC Act);
- Baudin's cockatoo (*Zanda baudinii*) (Endangered - BC Act and EPBC Act);
- Carnaby's cockatoo (*Zanda latirostris*) (Endangered - BC Act and EPBC Act);
- forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) (Vulnerable - BC Act and EPBC Act);
- chuditch (*Dasyurus geoffroii*) (Vulnerable - BC Act and EPBC Act);
- south-west brush-tailed phascogale (*Phascogale tapoatafa wambenger*) – (Other specially protected fauna - BC Act);
- peregrine falcon (*Falco peregrinus*) (Other specially protected fauna - BC Act); and
- quenda (*Isoodon fusciventer*) (Priority 4 - DBCA listed).

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

The application area is within the known range of all 3 black cockatoo species, and multiple records of each species occur within the local area.

The application area contains jarrah and marri forest, which provides preferred foraging habitat for Baudin’s cockatoo and forest red-tailed black cockatoo. These species may also utilise karri forest as secondary foraging habitat where present. Marri and jarrah also provide a foraging resource for Carnaby’s cockatoo.

Southern Ecology provided supplementary information regarding understorey foraging resources within the application area. Common understorey foraging plants were generally sparse, comprising less than 5% foliage cover (estimated). Species included *Allocasuarina decussata*, *Banksia grandis*, *Persoonia longifolia*, *Hakea oleifolia*, *Hakea ruscifolia* and *Hakea prostrata* (Southern Ecology, 2026).

The importance of foraging habitat increases where it occurs within functional foraging distance of breeding and roosting habitat. The Commonwealth referral guideline (DAWE, 2022) recognises proximity to breeding habitat (within approximately 12 km) and known night roosting habitat (within approximately 20 km) as factors contributing to higher-quality foraging habitat for Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black-cockatoo.

There are no known black cockatoo breeding sites within 12 kilometres of the application area. However, 7 black cockatoo roost sites occur within 20 kilometres.

The assessment identified several flocks of Baudin's cockatoo and forest red-tailed black cockatoo during the surveys, together with evidence of foraging throughout the Reserve (Southern Ecology, 2025).

Based on the habitat characteristics described above, the application area provides suitable foraging habitat for black cockatoos. To minimise the impact to this habitat, the applicant has committed to retaining all marri, jarrah and karri trees with a DBH of greater than 100 millimetres (Shire of Denmark, 2025). This commitment will retain the most significant foraging resources within the Reserve, noting that trees below this threshold generally provide limited current foraging value. While some understorey foraging habitat will be impacted, its density is low and extensive alternative habitat will remain within the Reserve and surrounding landscape.

Given the retention of established foraging trees, the availability of higher quality habitat within the 42 hectare Reserve, and the well-vegetated local context, the proposed clearing is not likely to impact on significant black cockatoo foraging habitat, subject to appropriate management conditions.

Breeding habitat for black cockatoos includes trees that either have a suitable nest hollow or are of a suitable DBH to develop a nest hollow (500 millimetres (mm) for most tree species) (DAWE, 2022). Black cockatoos commonly night roost in tall eucalypts near food and water resources. Trees commonly used for breeding and roosting include karri, marri and jarrah trees, which all occur within the application area.

Southern Ecology (2026) provided supplementary information to support the black cockatoo habitat assessment and advised that, while the survey methodology was limited to a basic ground inspection only, no breeding or breeding behaviour was observed within the Reserve.

Given that all marri, jarrah and karri trees with a DBH greater than 100 millimetres will be retained, and that all hollow bearing trees will be protected by a minimum 10-metre buffer (Shire of Denmark, 2025), the proposed clearing is not likely to impact breeding or roosting habitat for black cockatoos.

Western ringtail possum and south-west brush-tailed phascogale

Both species are known to occur within jarrah, marri and karri forest in the Denmark area and broader south coast region. Available datasets indicate there are 18 records of western ringtail possum and 13 records of south-west brush-tailed phascogale in the local area. One of the south-west brush-tailed phascogale records, recorded in 2000, occurs within the southern portion of the application area.

These species use hollow bearing trees in jarrah, marri and karri forest for shelter and breeding. Western ringtail possums also construct dreys in trees that provide adequate canopy cover and structural complexity (Department of Parks and Wildlife (Parks and Wildlife), 2017).

As noted above, the applicant has committed to retaining all marri, jarrah and karri trees with a DBH of greater than 100 millimetres (established trees) (Shire of Denmark, 2025). This commitment will ensure that suitable breeding, shelter and foraging habitat for these species is retained.

While western ringtail possums may forage on the foliage of marri, jarrah and karri trees, the retention of established trees will ensure that impacts to foraging habitat are minimal. Accordingly, the proposed clearing is not likely to impact on significant habitat for either species.

Quenda, peregrine falcon and chuditch

Given that established marri, jarrah and karri trees will be retained, the proposed clearing is not likely to impact potential breeding habitat for peregrine falcon.

While quenda may use the application area, the proposed clearing will result in the clearing of up to 2.09 hectares within a larger Reserve supporting about 42 hectares of native vegetation. Approximately 40 hectares of native vegetation, including several larger areas in very good to excellent condition, will remain. Therefore, the proposed clearing is not likely to impact on significant habitat for quenda.

The application area also falls within the known distribution of chuditch, which utilise a variety of habitats including forest, woodland, shrubland and arid environments. Chuditch require suitable den and refuge sites, such as hollow logs and burrows, together with adequate prey availability (Department of Environment and Conservation (DEC), 2012). This species has been recorded once in the local area, around 2.3 kilometres from the application area.

The application area provides suitable habitat for this species, including jarrah and marri forest with potential hollow horizontal logs that may provide refuge (Southern Ecology, 2025). Although no targeted survey for chuditch was undertaken, the proposed clearing represents a small proportion of the available habitat within both the Reserve and the local area.

The applicant has committed to relocating any hollow logs encountered within the trail alignment into adjacent native vegetation. Together with the retention of established marri, jarrah and karri trees, these measures are expected to minimise impacts to potential chuditch habitat, such that the proposed clearing is not likely to impact on significant habitat for this species.

Ecological linkage

The remnant native vegetation within Turner Road Reserve forms part of the mapped Strategic Zone A of the Western Australian South Coast Macro Corridor Network. The Network was designed to identify a regional-scale macro corridor network of native vegetation, and extends 700 kilometres from Israelite Bay, east of Esperance and west through Albany and beyond along Western Australia's southern coastline (CALM, 2006). The vegetation in Zone A forms the most strategic link between major protected areas and is therefore of potentially higher value and significance for fauna movement across the landscape.

The proposed clearing will reduce the extent of native vegetation that contributes to the corridor. However, given the narrow width of the trail, that about 40 hectares of native vegetation will remain within the Reserve post clearing, and that the applicant has committed to avoiding all jarrah, marri and karri trees with a DBH of greater than 100 millimetres, the proposed clearing is not likely to have a significant impact on the corridor, or on the movement of fauna through the landscape.

Other impacts

The proposed clearing presents a risk of injury or mortality to fauna present at the time of clearing. This risk can be minimised through fauna management measures, including slow, progressive, one-directional clearing.

Conclusion

The application area provides suitable habitat for black cockatoos, western ringtail possum, south-west brush-tailed phascogale, chuditch, quenda, and peregrine falcon. The applicant has committed to retaining all established jarrah, marri and karri trees within the application area, maintaining a minimum 10 metre buffer around hollow bearing trees, and relocating any hollow fallen logs in the trail alignment. These measures will ensure that the proposed clearing will not impact on significant habitat for these species.

Conditions

To address the identified impacts, and ensure the applicant's commitments are implemented, the clearing permit includes conditions requiring the permit holder to:

- avoid all *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah) and *Eucalyptus diversicolor* (karri) trees with a diameter at breast height (DBH) of greater than 100 millimetres;
- apply a 10-metre avoidance buffer to all marri, jarrah, and karri trees with a DBH greater than 500 millimetres that contain hollows;
- relocating any hollow fallen logs with a DBH of 300 millimetres or more from the application area to adjacent vegetation;
- demarcate the clearing area and habitat trees to avoid inadvertent clearing of adjacent high-quality native vegetation and habitat features;
- undertake slow, progressive, one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of clearing;
- revegetate temporary cleared areas by spreading cleared vegetative material and topsoil and undertaking weed control; and

- implement hygiene and weed control measures to minimise the risk of introduction and spread of weeds and dieback

3.2.2. Biological values – priority flora - Principle (a)

Assessment

Background

As mentioned under Section 3.2.1, the application area was subject to a targeted flora and black cockatoo assessment. The assessment included the following flora related surveys (Southern Ecology, 2025):

- a reconnaissance flora and vegetation survey across the Turner Road Reserve (about 42 hectares), undertaken on 30 August 2023;
- a targeted flora survey of the preliminary trail alignments (7.6 hectares), undertaken on 26 October and 16 November 2023; and
- a targeted flora survey of the preliminary trail alignment, including a 30 metre trail buffer and proposed infrastructure areas, undertaken on 21 and 22 November 2024.

Targeted surveys for threatened and priority flora identified through desktop assessment were undertaken during the appropriate survey period. Vegetation and habitat types considered suitable for these taxa were surveyed using intensive meandering transects. The survey methodology and level of survey effort were consistent with the Environmental Protection Authority's *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016) (Southern Ecology, 2025).

The assessment identified that Turner Road Reserve is dominated by marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) forest (5.71 hectares of the clearing footprint), interspersed with areas of karri (*Eucalyptus diversicolor*) forest (0.58 hectares of the clearing footprint). The vegetation condition within the application area ranged from completely degraded to very good (Keighery, 1994; Southern Ecology, 2025). Evidence of weed invasion, *Phytophthora cinnamomi* (dieback) infestation and historical timber extraction was observed throughout the Reserve. Several introduced plant species were recorded, including *Vinca major* and *Watsonia meriana* var. *bulbillifera* (Southern Ecology, 2025).

Based on habitat suitability, vegetation condition, and extent and proximity of known records, the application area provides potentially suitable habitat for the following conservation listed flora species:

- *Bossiaea* sp. Mt Frankland (L. Graham 2174) (Priority 2);
- *Andersonia* sp. Virolens (G.J. Keighery 12000) (Priority 3);
- *Lasiopetalum* sp. Denmark (B.G. Hammersley 2012) (Priority 3);
- *Amanita drummondii* (Priority 3);
- *Netrostylis* sp. Blackwood River (A.R. Annels 3043) (Priority 3); and
- *Banksia serra* (Priority 4).

The vegetation within the application area is not considered representative of any threatened or priority ecological communities (Southern Ecology, 2025). No threatened flora were recorded during the surveys undertaken within or adjacent to the application area (Southern Ecology, 2025).

Priority flora

The flora survey identified two priority listed flora species in the Reserve (see Figure 2):

- *Bossiaea* sp. Mt Frankland (L. Graham 2174); and
- *Netrostylis* sp. Blackwood River (A.R. Annels 3043).

Bossiaea sp. Mt Frankland (L. Graham 2174) is a medium-sized shrub known from 6 records across a range of 110 kilometres (east-west). This species was recorded as two sub-populations within the Reserve, comprising about 250 individuals (see Figure 2) (Southern Ecology, 2025).

Netrostylis sp. Blackwood River (A.R. Annels 3043) is an inconspicuous sedge which is known from 17 records across a range of 330 kilometres (east-west). This species was recorded from one main population in the moister north-eastern portion of the Reserve, associated with karri and *Eucalyptus patens* forest. An additional sub-population was also recorded. Together, these records comprised about 1,050 individuals (Southern Ecology, 2025).

The applicant has committed to avoiding all recorded occurrences of these species and maintaining a minimum 20-metre buffer from clearing activities (Shire of Denmark, 2025).

Given this commitment, which will be required through conditions on the clearing permit, and noting that the survey methods and coverage are considered appropriate to identify conservation listed flora within the application area and broader Reserve, the proposed clearing is not likely to directly impact on any conservation listed flora species.

Considering the above, the proposed clearing is not likely to directly impact on vegetation containing a high level of biodiversity, given:

- the application area largely comprises jarrah-marri and karri forest vegetation that is well represented in the local area and broader region;
- the application area is not representative of any threatened or priority ecological communities;
- no threatened flora have been recorded within the application area;
- recorded priority flora occurrences will be avoided through the application of a minimum 20-metre buffer; and
- the applicant has committed to retaining all marri, jarrah and karri trees with a DBH of greater than 100 millimetres.

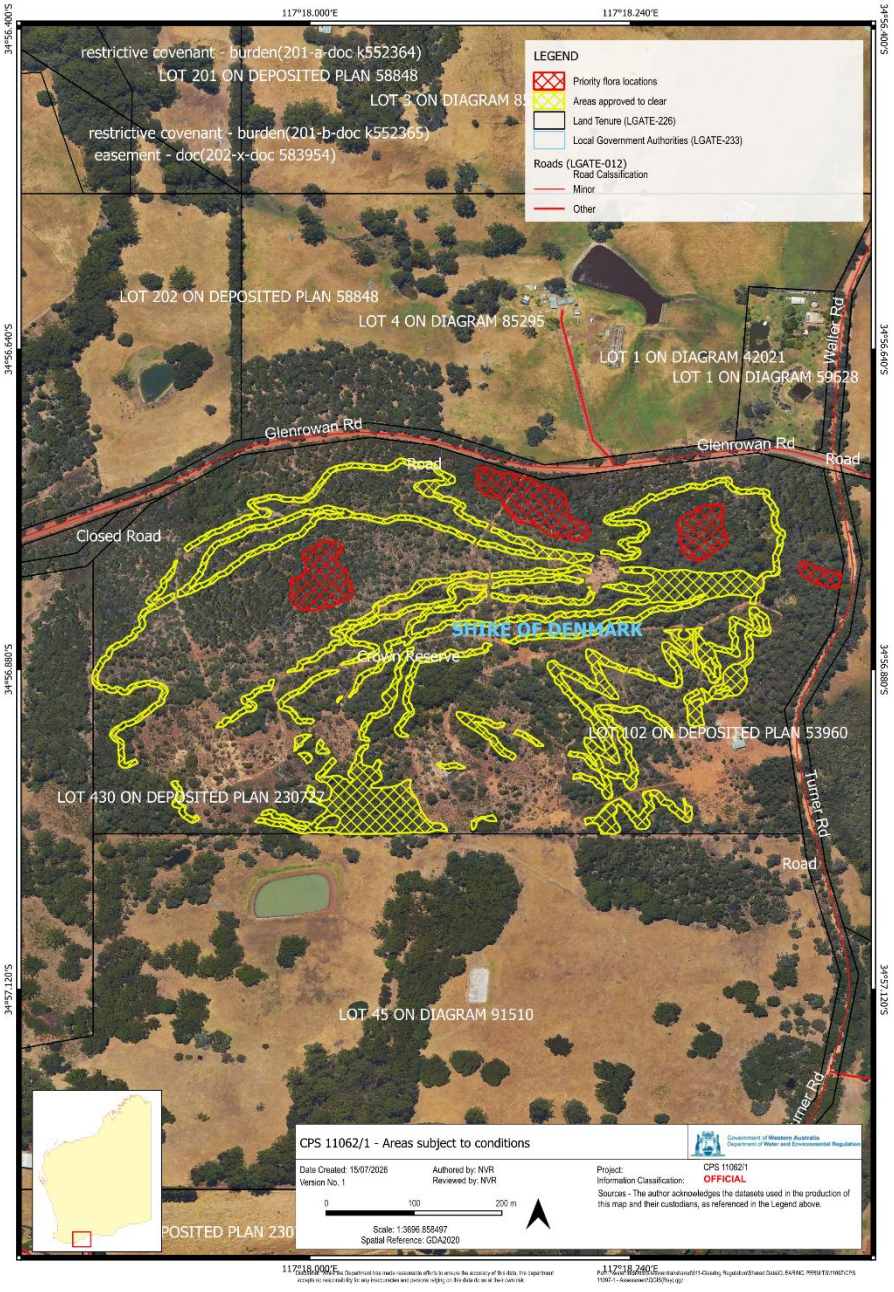


Figure 2. Recorded priority flora locations cross-hatched red.

Weed and dieback spread

The proposed clearing and subsequent use of the area as a mountain bike trail network may increase the risk of weeds and dieback spreading into adjacent native vegetation. This includes areas of native vegetation in very good to excellent condition (Keighery, 1994), which support priority flora and higher-quality fauna habitat.

The applicant commissioned a *Phytophthora* Dieback Occurrence Survey over the Reserve, which identified that most of the Reserve is infested/unprotectable (Great Southern Bio Logic, 2017) (see Figure 3).

The applicant has prepared an Operational Hygiene Management Plan which outlines several measures to minimise the risk of weeds and dieback spread, including (Shire of Denmark, 2025a):

- implementing vehicle and footwear inspection protocols, including clean-on-entry and clean-on-exit requirements, and maintaining inspection records;
- restricting machinery and vehicle movements to approved clearing areas;
- undertaking staff and contractor inductions that include biosecurity awareness training;
- preventing the redistribution of weed-infested vegetative material within the Reserve or adjacent native vegetation;
- installing and maintaining hygiene infrastructure and signage at trail access points; and
- undertaking hygiene inspections during construction to ensure management measures are being implemented.

The applicant has also committed to manually removing weeds that establish within temporarily cleared backslope areas within 12 months of clearing, and to placing vegetative material over these areas to promote natural regeneration (Shire of Denmark, 2025).

The Delegated Officer considers that these management measures are adequate to minimise the risk of weeds and dieback spreading as a result of the proposed clearing and subsequent operation of the trail network. In making this determination, the Delegated Officer also had regard to the existing condition of the Reserve, including the widespread occurrence of weeds and the findings of the *Phytophthora* Dieback Occurrence Survey, which identified that much of the Reserve is already infested/unprotectable.

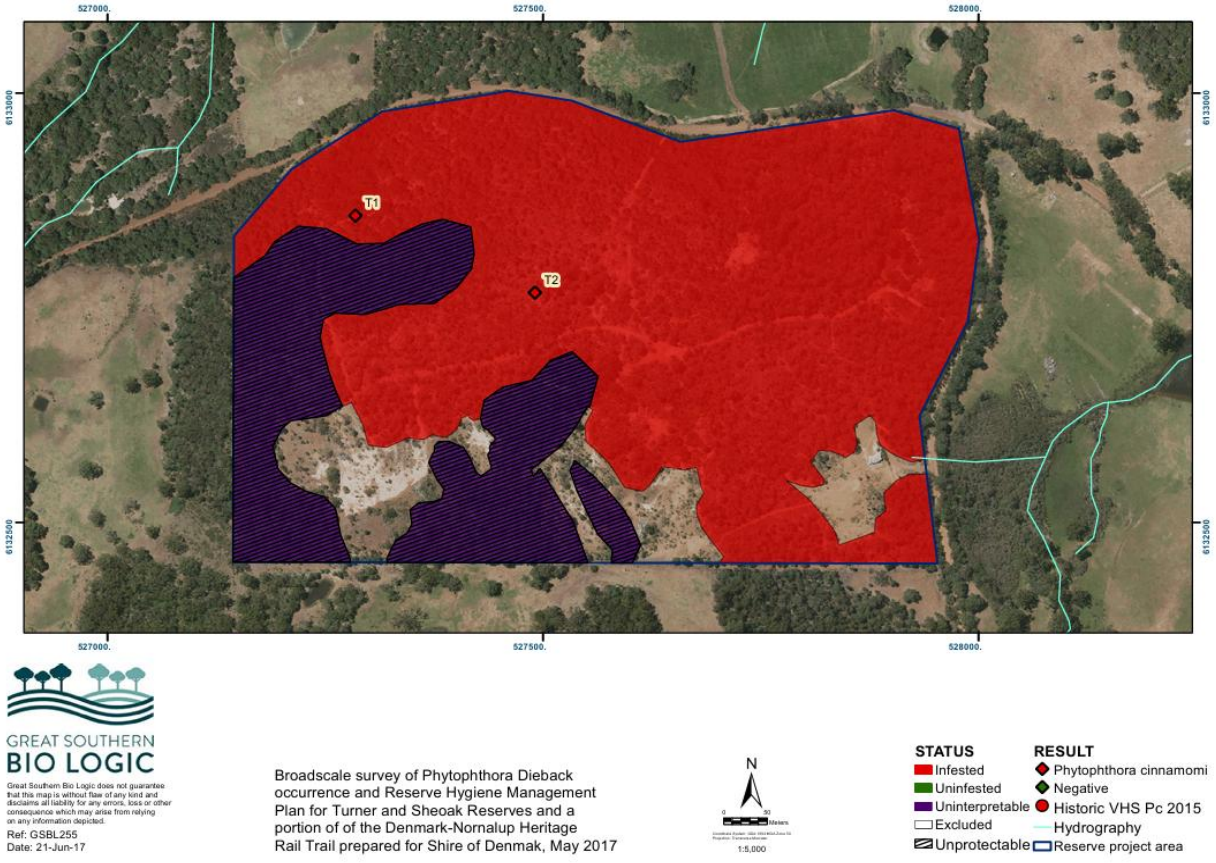


Figure 3. Dieback mapping over Turner Road Reserve.

Conclusion

The proposed clearing is not likely to impact vegetation comprising a high level of biodiversity. This is based on the absence of threatened flora and ecological communities within the application area, the avoidance of all recorded priority flora occurrences through the application of a 20-metre buffer, and the implementation of weed and dieback management measures. In making this determination, the Delegated Officer also had regard to the existing condition of the Reserve, including the widespread occurrence of weeds and dieback, and the finding that much of the Reserve is classified as infested/unprotectable.

Conditions

To address the identified impacts, and ensure the applicant's commitments are implemented, the clearing permit includes conditions requiring the permit holder to:

- avoid all *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah) and *Eucalyptus diversicolor* (karri) trees with a diameter at breast height (DBH) of greater than 100 millimetres;
- apply a 10-metre avoidance buffer to all marri, jarrah and karri trees containing hollows with a DBH greater than 500 millimetres;
- apply a 20-metre avoidance buffer to all recorded priority flora locations;
- demarcate the clearing area, habitat trees and recorded priority flora locations to avoid inadvertent clearing of adjacent high-quality native vegetation;
- revegetate temporary cleared areas by spreading cleared vegetative material and topsoil and undertaking weed control; and
- implement hygiene and weed control measures to minimise the risk of introduction and spread of weeds and dieback, including but not limited to vehicle clean on entry and exit protocols, and providing clean down infrastructure for the public using the trail.

3.3. Relevant planning instruments and other matters

Turner Road Reserve is zoned 'Public Use – Gravel' under the Shire of Denmark Local Planning Scheme. The applicant has advised that the Reserve purpose and planning framework will be updated, where required, to reflect the proposed mountain bike trail recreational land use.

The proposed trail network is consistent with the environmental management objectives set out in the *Western Australian Mountain Bike Management Guidelines* (DBCA, 2019).

The trail network forms an integral component of the Great Southern Regional Trails Master Plan (GSRTMP) (Magic Dirt Trailworx, 2024). The GSRTMP seeks to support the development of a sustainable regional trail network that enhances recreation and tourism opportunities within the Great Southern region and contributes to long-term economic sustainability (GSCORE, 2020).

There are no Aboriginal Sites of Significance mapped within or adjacent to 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.

Appendix A. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	The application area is part of a larger area of native vegetation (about 42 ha) within the intensive land use zone of Western Australia. The application area is in the Warren IBRA Region. The application area is about 4 km from the Denmark town centre in an area that is surrounded by a mix of agricultural land and remnant vegetation, including timber reserves. Spatial data indicates the local area (10-kilometre radius from the centre of the application area) retains approximately 53.7% of the original native vegetation cover.

Characteristic	Details
Ecological linkage	The application area is mapped within Strategic Zone A of the South Coast Macro Corridor.
Conservation areas	Turner Road Reserve is not recognised as a conservation area. The nearest conservation area is an unnamed DBCA managed timber reserve which occurs about 350 metres west of the application area. The Redman Road Nature Reserve is located about 2 kilometres east of the application area.
Vegetation description	The biological survey identified *Corymbia calophylla (*marri) and *Eucalyptus marginata (*jarrah) forest (5.71 ha of the clearing footprint), interspersed with areas of *Eucalyptus diversicolor* (karri) forest (0.58 ha of the clearing footprint) within the application area (Southern Ecology, 2025). This is consistent with the mapped vegetation complexes: • Keystone (Kb), described as tall open forest of yellow tingle (*Eucalyptus guilfoylei*), red tingle (*Eucalyptus jacksonii*) and karri (*Eucalyptus diversicolor*) trees, on hills with sheoak, *Banksia* and peppermint trees on slopes of wet areas and tall open forest of *Eucalyptus* species and marri near rocky outcrops; and • Keystone (Ky), which is described as: open forest of jarrah, marri and *Banksia* species on mild hills. These mapped vegetation complexes retain about 78% and 90% of their pre-European extents, respectively (Government of Western Australia, 2019).
Vegetation condition	The vegetation within the application area ranges from completely degraded to very good condition (Keighery, 1994; Southern Ecology, 2025). The application area shows signs of moderate to heavy disturbance from previous gravel extraction, timber harvesting and *Phytophthora cinnamomi* infestation. The full Keighery (1994) condition rating scale is provided in Appendix C.
Climate and landform	The application area occurs within a temperate climate with mild, wet winters and cool summers. The average annual rainfall is 1058.2 mm. Mean maximum temperature is approximately 25.9°C in January, and mean minimum temperature is approximately 6.9°C in July and August (BoM, 2025). The application area is located at an elevation of approximately 95–170 m above sea level and slopes downwards from south to north.
Soil description	The application area comprises two mapped soil units; • Keystone brown duplex phase (254WhKYb) – described as brown gravelly soils and red or yellow earths with laterite (about 80% of the application area); and • Keystone yellow duplex phase (254WhKYy) – described as gravelly yellow duplex soils (about 20% of the application area).
Land degradation risk	The soils within the application area are highly susceptible to wind erosion, subsurface acidification and phosphorus export, and moderately susceptible to water erosion. They are at low risk of waterlogging, water repellence, salinity and flooding.
Waterbodies	The desktop assessment, aerial imagery and biological survey indicate there are no wetlands or watercourses mapped within or nearby the application area.
Hydrogeography	The application area is not within an area proclaimed under the *Rights in Water and Irrigation Act 1914* or public drinking water source area. Groundwater salinity is mapped at between 500-1000 TDS mg/L (considered marginal).
Conservation listed flora	Available datasets indicate there are records of 37 conservation listed flora species within the local area, including 5 threatened species. The survey recorded two priority flora species within Turner Road Reserve, being *Bossiaea* sp. Mt Frankland (L.

Characteristic	Details
	Graham 2174) (Priority 2) and *Netrostylis* sp. Blackwood River (A.R. Annels 3043) (Priority 3). The application area maintains a minimum 20-metre buffer to the recorded occurrences of these species.
Threatened and Priority ecological communities	The application area is not within or nearby any threatened or priority ecological communities. The nearest conservation listed ecological community is mapped about 8 kilometres from the application area.
Conservation listed fauna	Within the local area, there are records of 48 different conservation listed fauna species. The biological survey identified Baudin's cockatoo (*Zanda baudinii*) and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) using the application area (Southern Ecology, 2025). There is also one mapped record of the *Phascogale tapoatafa wambenger* (south-west brush-tailed phascogale) within the southern portion of the application area.

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The application area largely comprises jarrah-marri and karri forest vegetation that is well represented in the local area and broader region. The application area does not contain threatened or priority flora (priority flora recorded nearby, but avoided), threatened or priority ecological communities, or other features indicative of a particularly high level of biodiversity. While it provides habitat for several conservation-listed fauna species, the habitat is not considered significant, given the avoidance, minimisation and mitigation proposed. Therefore, the application area is unlikely to comprise a high level of biodiversity. However, impacts to biodiversity have been assessed under Section 3.2.2 given the proximity of the application area to priority flora and potential for weed and dieback spread into adjacent vegetation.	Not likely to be at variance	Yes *Refer to Section 3.2.2.*
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 provides suitable habitat for several conservation listed fauna species; however, this habitat is not likely to be significant, subject to appropriate management to prevent clearing of mature jarrah, marri and karri trees.	May be at variance	Yes *Refer to Section 3.2.1.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No threatened flora are known to occur within or near the application area based on available datasets and the appropriately timed biological survey (Southern Ecology, 2025; Western Australian Herbarium, 1998–). Given the	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
site characteristics, the application area is unlikely to support any threatened flora species known from the local area.		
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 threatened ecological communities are known to occur within or near the application area. The vegetation within the application area is not considered representative of any known threatened ecological communities.	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 identify a target to prevent the clearance of ecological communities with an extent below 30% of that present prior to 1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The local area retains approximately 53.7% of its original native vegetation extent. The mapped vegetation complexes within the application area (Kb and Ky) retain approximately 78% and 90% of their pre-European extent, respectively. As both the local area and the mapped vegetation complexes retain substantially more than 30% of their original extent, the application area is not considered to occur within an extensively cleared landscape, and is not considered significant as a remnant of native vegetation in an area that has been extensively cleared.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: While an unnamed DBCA managed timber reserve occurs nearby (350 m west), the proposed clearing is unlikely to impact the environmental values of this reserve or other conservation reserves in the local area given the: • relatively small scale of clearing; • retention of vegetation connectivity and avoidance of mature trees; and • absence of direct impacts to 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: There are no wetlands or watercourses recorded near the application area, and no riparian vegetation was recorded during the biological survey (Southern Ecology, 2025). Therefore, the proposed clearing is unlikely to impact vegetation growing in association with a wetland or watercourse.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The soils mapped over the application area and recorded during the biological survey are highly susceptible to wind erosion, subsurface acidification and phosphorus export, and moderately susceptible to water erosion. The trail network will be limited to a maximum width of 1.2 metres and is situated within a forested environment where surrounding native vegetation and retained mature trees will continue to provide soil stability and protection from wind and water erosion. The applicant has also committed to retaining all jarrah, marri and karri trees with a DBH greater than 100 millimetres. Given the limited extent and nature of the proposed clearing, it is unlikely to result in appreciable 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 water or groundwater."* Assessment: Given the absence of wetlands or watercourses near the application area, the marginal groundwater salinity levels, and that mature trees are not proposed for clearing, the proposed clearing is unlikely to impact on the quality of surface water or groundwater.	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: Given the mapped soils and topographic contours of the application area, and absence of nearby watercourses or wetlands, the proposed clearing is unlikely to cause or exacerbate flooding.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.

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

Appendix D. Sources of information

D.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- 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
- South Coast Wetlands

Restricted GIS Databases used:

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

D.2. References

Bureau of Meteorology (BOM) (2025) *Climate statistics of Australian locations.* Available from: Climate Data Online - Map search.

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

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.

Department of Biodiversity, Conservation and Attractions (DBCA) (2019). *Western Australian Mountain Bike Management Guidelines*. Developed in partnership with the Department of Local Government, Sport and Cultural Industries.

Department of Conservation and Land Management (CALM) (2006). *The Western Australian South Coast Macro Corridor Network*. A bioregional Strategy for Nature Conservation.

Department of Environment and Conservation (DEC) (2012). *Chuditch (Dasyurus geoffroii) Recovery Plan*. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia.

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 (Parks and Wildlife) (2017). *Western Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan.* Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA.

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

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.

Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. EPA, Western Australia.

Environmental Protection Authority (EPA) (2020). *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment.* EPA, Western Australia.

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

Great Southern Bio Logic (2017) *Phytophthora Dieback Occurrence Survey. Turner Road, Sheoak Drive and the Heritage Rail Trail Reserves*. Prepared for Shire of Denmark (DWER Reference: DWERDT1247710).

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.

Shire of Denmark (2025) *Clearing Permit Application CPS 11062/1.* Received 8 April 2025 (DWER Reference: DWERDT1102335).

Shire of Denmark (2025a) *Additional information provided to support Clearing Permit Application CPS 11062/1*. Received 15 December 2025 (DWER Reference: DWERDT1247692 and DWERDT1247702).

Southern Ecology (2025) *Targeted Flora and Cockatoo Assessment, Turner Road Reserve*. Report prepared for Shire of Denmark, March 2025 (DWER Reference: DWERDT1102335).

Southern Ecology (2026) Additional information provided to support Clearing Permit Application CPS 11062/1. Received 27 May 2026 (DWER Reference: DWERDT1332091).

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed May 2026).