



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10706/1
File Number: DWERVT15474
Duration of Permit: From 11 January 2025 to 11 January 2027

PERMIT HOLDER

City of Gosnells

LAND ON WHICH CLEARING IS TO BE DONE

Barrett Street road reserve (PIN 11871363)

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.025 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. 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.

2. Weed and dieback management

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

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

- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Directional clearing

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

4. 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	<ul style="list-style-type: none"> (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 Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 2; and (g) actions taken in accordance with condition 3.

5. Reporting

The permit holder must provide to the *CEO* the records required under condition 4 of this permit when requested by the *CEO*.

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 <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
fill	means material used to increase the ground level, or to fill a depression
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.
weeds	means any plant – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; 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



Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

19 December 2024

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



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10706/1
Permit type:	Area permit
Applicant name:	City of Gosnells
Application received:	26 July 2024
Application area:	0.025 hectares (ha) of native vegetation
Purpose of clearing:	Installation of a footpath and road alignment
Method of clearing:	Cutting and stump grinding
Property:	Barrett Street road reserve (PIN 11871363)
Location (LGA area/s):	City of Gosnells
Localities (suburb/s):	Southern River

1.2. Description of clearing activities

The vegetation proposed to be cleared is distributed across three separate areas within the Barrett Street road reserve (see Figure 1, Section 1.5).

The purpose of the proposed clearing is to install a new footpath and a slow point along the road.

1.3. Decision on application

Decision:	Granted
Decision date:	19 December 2024
Decision area:	0.025 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), the photographs provided by the applicant (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing would result in:

- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

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 appreciable have long-term adverse impacts on environmental values and can be minimised and managed to unlikely lead to an unacceptable risk to environmental values.

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 and one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity

1.5. Site map

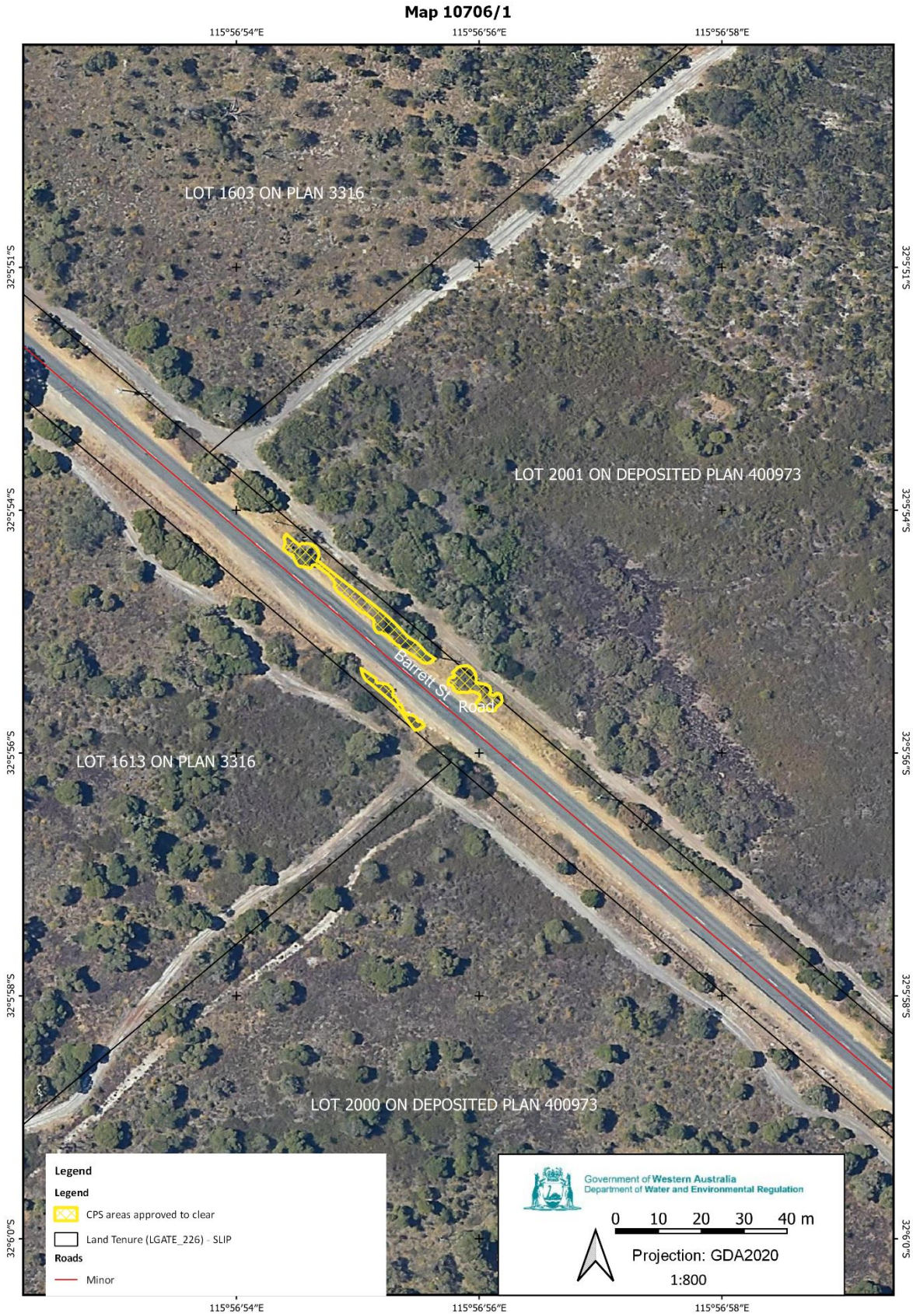


Figure 1 Map of the application area
The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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 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)

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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that the proposed clearing occurs within a dedicated road reserve which is sparsely vegetated and adjacent to an existing road. The areas within which a new footpath and a slow point are to be constructed comprise vegetation which is of lower value than that present in adjacent areas. The slow point has been positioned to require the minimum amount of vegetation to be removed.

The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna, adjacent flora and vegetation), significant remnant vegetation and conservation areas. 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) - Clearing Principles (a) and(c)

Assessment

According to available databases, a total of 57 conservation significant fauna species have been recorded in the local area (10 km radius from the application area). The application area may provide suitable habitat for the following four conservation significant fauna species which have been recorded within similar habitats to those present within the application area:

- *Isoodon fusciventer* (quenda)
- *Zanda latirostris* (Carnaby's black cockatoo)
- *Notamacropus Irma* (Western brush wallaby)
- *Zanda baudinii* (Baudin's cockatoo)

Black cockatoos

The proposed clearing is located within the mapped distribution areas of threatened black cockatoo species. Within a 10-kilometre radius of the application area, there are 1,738 records of Carnaby's cockatoo and 155 records of Baudin's cockatoo, with the closest records approximately 1.06 and 6.49 kilometres, respectively, from the application

area. While habitat requirements for these species of black cockatoo differ, the requirements in general can be categorised as breeding habitat, foraging habitat and night roosting habitat.

Suitable breeding habitat for black cockatoos include trees which either have a suitable nest hollow or are of a suitable Diameter Breast Height (DBH) to develop a nest hollow. For most tree species, a suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). There are no confirmed or potential breeding habitats recorded within the local area and the vegetation to be cleared does not represent breeding resources for these species.

Night-roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and a water source (DAFF,2024). There are number of roost sites recorded within the local area, with the closest known roost site located 1.29 kilometres northwest of the application area. Tall Eucalyptus trees near a permanent watercourse within close proximity to high quality foraging habitat are identified as the trees that provide preferable roosting habitat for the black cockatoos (DAFF,2024). Based on the vegetation within the application area, it is unlikely that the proposed clearing would provide roosting habitat.

Food resources within the range of breeding sites and roost sites are important to sustain black cockatoo populations. Foraging resources are therefore, viewed in the context of known breeding and night roosting sites. It is considered that foraging habitat within 6 to 12 kilometres of a known roosting and a breeding site are a significant food source (DAFF,2024). According to the available databases, 50 known black cockatoo roosting sites are mapped within a 10-kilometre radius of the application area.

The proposed clearing contains a mix of *Regelia ciliata*, *Lepidosperma longitudinale* and *Hakea varia* and may be utilised as foraging habitat for black cockatoo species. *Hakea varia* is considered as a foraging source for both Carnaby and Baudin cockatoos (Bancroft and Bamford, 2023). Given the minimal extent of clearing within the road reserve and considering the availability of higher- quality foraging habitat adjacent to the application area, the removal of a minor amount of *Hakea varia* is not considered to represent a significant impact to the availability of foraging resources for black cockatoos.

Quenda

Quenda (*Isoodon fusciventer* – Priority 4) are ground-dwelling marsupials, typically associated with forest or woodlands near watercourses, where understorey consists of dense scrub and leaf litter is abundant. Quenda individuals are known to have overlapping home ranges between 1-2 hectares (DEC, 2012a). This species is known from 1,255 records within the local area, occurring as close as 140 meters from the application area. Quendas are likely to be transient visitors to the application area while moving through to adjacent vegetation. Given that the application area is located along an existing road and the proposed clearing area is small, it is unlikely to represent significant habitat for this species.

Western brush wallaby

The western brush wallaby (*Notamacropus Irma* – Priority 4) was common in Western Australia in the past, but its population reduced significantly due to agricultural development. Their preferable habitat is associated with open, seasonally wet flats with low grasses and open scrubby thickets (DEC, 2012b). There are 48 records of this species in the local area, with the closest record mapped approximately 2.67 kilometres from the application area. However, given the limited extent of clearing within the degraded road verge and the extent of adjacent remnant native vegetation, the application area is unlikely provide significant habitat for this species.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in a significant loss in biodiversity or impact to significant to populations of threatened and priority fauna However the proposed clearing has the potential to introduce weeds and pathogens into the area, which could impact on the quality of the adjacent vegetation and its habitat values. To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid and minimise clearing, to minimise the direct impacts to native vegetation
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.2.2. Biological values (flora) - Clearing Principles (a) and (c)

Assessment

According to available databases, a total of 100 conservation significant flora are recorded in the local area (10 km radius). The application area may provide suitable habitat for six conservation significant flora species which have been recorded within similar habitats.

Caladenia huegelii is a threatened species with 70 records in the local area, with the closest being 980 metres from the application area. It is associated with mixed woodland of jarrah, *Banksia* spp., *Allocasuarina* spp., and marri, over dense shrubs (Western Australian Herbarium, 2024). *Jacksonia gracillima* is a priority three species with 14 records in the local area, with the closest being 1.17 kilometres from the application area. It is associated with Low woodland, often marri-jarrah, *Banksia* spp., or *Melaleuca* spp. dominated, with sheoak, *Xanthorrhoea* spp., *Hypocalymma* spp., *Adenanthos* spp., *Astartea* spp., *Regelia ciliata*, *Meeboldina* spp., *Kunzea* spp., *Lepidosperma* spp., and open sedgeland: often swampy vegetation or winter wet flats. Given that both of the above species have been recorded within the same vegetation type but not within the same soil type, it is unlikely that they would be present within the application area which is in a degraded condition within the road verge.

Diuris purdiei is a threatened species with 28 records in the local area, with the closest being 1.39 kilometres from the application area. It is a perennial herb associated with sedges and dense heath in areas subject to winter inundation (Western Australian Herbarium, 2024). *Verticordia lindleyi* subsp. *lindleyi* is a Priority 4 species with 25 records in the local area, with the closest being 1.64 kilometres from the application area. It is an erect shrub up to 0.75 metres high associated with low woodland or heath with *Banksia* and *Melaleuca* species in a swamp or wetland vegetation (Western Australian Herbarium, 2024). Both of the above species have been recorded within the same soil and same vegetation type as that present within the application area. However, given the amount of clearing, the condition of the vegetation within the application area and noting that the site is not characterised by the swampy or wet conditions preferred by these species, it is unlikely that either of these species would be present within the application area.

Jacksonia sericea is a priority four species with three records in the local area, with the closest being 3.06 kilometres from the application area. It is associated with Low woodland or tall scrub, often with *Eucalyptus* spp., *Banksia* spp., *Melaleuca* spp. over *Xanthorrhoea* spp., *Allocasuarina* spp., *Acacia* spp., *Hakea* spp., *Calytrix* spp., *Hibbertia* spp., *Bossiaea* spp., *Eremaea* spp., and herbs and has been previously found within highly disturbed roadside vegetation. *Morelotia australiensis* is a threatened species with six records in the local area, with the closest being 4.38 kilometres from the application area. It is associated with marri woodland, sometimes with jarrah, often over low scrubland or sedgeland associated with *Xanthorrhoea* spp., *Kingia australis*, *Banksia* spp., *Hakea* spp., *Nuytsia floribunda*, *Stirlingia* spp., and *Acacia* spp. This species has been previously found within roadside remnant vegetation. Both of the above species have been recorded within the same vegetation but not within the same soil types as those mapped within the application area. Given that the proposed clearing is limited to one *Melaleuca preissiana*, one *Melaleuca phaphiophylla* and mix of *Regelia ciliata*, *Lepidosperma longitudinale* and *Hakea varia*, it is unlikely that either of these species would be impacted from the proposed clearing of 0.025 ha.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in a significant loss in biodiversity, or impact on populations of threatened and priority flora species. However, the proposed clearing has the potential to introduce weeds and pathogens, which could impact on the quality of the adjacent vegetation and its habitat values. To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid and minimise clearing, to minimise the direct impacts to native vegetation
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.2.3. Biological values (significant ecological community) - Clearing Principles (a) and(d)

Assessment

According to available databases, the *Banksia* woodlands of the Swan Coastal Plain (*Banksia* woodlands) Threatened Ecological Community is mapped adjacent to the application area. There are 13 conservation significant ecological communities recorded in the local area, with 12 of those being Threatened Ecological Communities and one a Priority Ecological community. According to the provided photographs and clearing plan (Appendix D), it is

evident that no *Banksia* species will be disturbed through the proposed clearing and the proposed clearing is not indicative of this community. However, the proposed clearing may impact by spreading weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

Conclusion

Given that the proposed clearing comprises of 0.025 ha of already disturbed vegetation within the road reserve, and it is not indicative of the Threatened Ecological Community, it is not considered to contain a high level of biodiversity or contain significant habitat for threatened flora or fauna. Any minor impacts can be managed through taking hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.2.4. Significant remnant vegetation - Clearing Principles (e)

Assessment

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008).

The mapped vegetation community over the application area is the Southern River Complex 42, which is described as Open woodland of *Corymbia calophylla* (Marri) - *Eucalyptus marginata* (Jarrah) - *Banksia* species with fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca raphiophylla* (Swamp Paperbark) along creek beds (Government of Western Australia, 2019). This community is highly cleared, with 18.43% vegetation remaining (Table B.2.).

The local area (10-kilometre radius from the centre of the area proposed to be cleared) has been highly cleared with 19.71% native vegetation remaining. However, the application area does not comprise significant environmental value and is not considered significant as remnant vegetation within the local area. Further, it is consistent with the 10 per cent threshold level within the Perth Metropolitan region.

The application area occurs within the Perth Regional Ecological linkage, however, the vegetation is highly disturbed and in a degraded condition. The vegetation within the application area is not considered to be necessary for maintaining linkage function at a landscape level.

Conclusion

The proposed clearing is not considered significant as a remnant of native vegetation.

Conditions

Nil conditions

3.4.5. Conservation area - Clearing Principles (h)

According to available databases, the vegetation proposed to be cleared is within Bush Forever site 125. However, the proposed works are to be conducted within the road reserve and it is noted that existing cleared or developed areas within Bush Forever areas are not intended for protection under State Planning Policy 2.8, or are to be excluded from future development. As the proposed clearing comprises 0.025 ha of disturbed vegetation within the road reserve, it is not considered likely to have a significant impact on environmental values within the Bush Forever site.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in a significant impact on the environmental values within the Bush Forever site. However the proposed clearing has the potential to introduce weeds and pathogens into the area, which could impact on the quality of the adjacent vegetation and its habitat values. To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid and minimise clearing, to minimise the direct impacts to native vegetation

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.4.6. Watercourse or wetland - Clearing Principles (f)

According to available databases, the vegetation proposed to be cleared is within a mapped multiple use wetland, categorised as a dampland. Given that a wetland and the riparian species *Melaleuca preissiana* and *Melaleuca raphiophylla* are recorded within the application area, the proposed clearing is considered to be growing in association with a wetland. However, noting that the degraded condition of the application area which is not characterised by swampy or wet conditions, the proposed clearing is not likely to impact conservation significant flora species or result in any long-term impact to the ecological values of the riparian vegetation community within the application area.

Conclusion

The proposed clearing is not considered significant as a riparian vegetation.

Conditions

Nil conditions.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 16 September 2024, inviting submissions from the public within a 21-day period. No submissions were received in relation to this application.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is within the Barret Street road reserve and is adjacent to an expansive tract of native vegetation within the intensive land use zone of Western Australia.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 19.71 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is within the formally mapped Perth regional ecological linkage.
Conservation areas	The application area is mapped with Bush Forever site 125.
Vegetation description	<p>Photographs and the clearing plan supplied by the applicant indicate the vegetation within the proposed clearing area consists of one <i>Melaleuca preissiana</i>, one <i>Melaleuca raphiophylla</i> and mix of <i>Regelia ciliata</i>, <i>Lepidosperma longitudinale</i> and <i>Hakea varia</i>. In addition, the proposed clearing includes non-native <i>Acacia longifolia</i> and weedy grasses.</p> <p>This is consistent with the mapped vegetation type of Southern River Complex 42, which is described as Open woodland of <i>Corymbia calophylla</i> (Marri) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species with fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca raphiophylla</i> (Swamp Paperbark) along creek beds (Government of Western Australia, 2019).</p> <p>The mapped vegetation type retains approximately 18.43 per cent of the original extent (Government of Western Australia, 2019).</p> <p>Representative photographs and the clearing plan are available in Appendix D.</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in degraded (Keighery, 1994) condition, with evidence of disturbance and weed infestation within the road verge.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C.</p> <p>Representative photographs are available in Appendix D.</p>
Climate and landform	The highest mean maximum temperature is in February at 36.6°C, the lowest is in July at 17.3°C. The average annual rainfall is 774mm
Soil description and Land degradation risk	<p>The soil is mapped as Pinjarra P1b Phase (213Pj_P1b), described as Flat to very gently undulating plain with deep acidic mottled yellow duplex (or effective duplex) soils. Moderately deep pale sand to loamy sand over clay: imperfectly drained and moderately susceptible to salinity in limited areas.</p> <p>The mapped soil type has a high risk of land degradation resulting from wind erosion, water logging, water repellence and surface acidification (DPIRD, 2019).</p>
Waterbodies and Hydrogeography	<p>The desktop assessment and aerial imagery indicated that the application area is within a mapped multiple use wetland, categorised as a dampland.</p> <p>The application area is mapped within the Perth Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (the RIWI Act). The application area does not transect any other proclaimed surface or groundwater resources.</p>

Characteristic	Details
Flora	<p>The desktop assessment identified that a total of 100 conservation significant flora species have been recorded within the local area. These records comprise 24 threatened (T), 11 Priority one (P1), 14 Priority two (P2), 32 Priority three (P3) and 18 Priority four (P4) and one presumed extinct flora species (Western Australian Herbarium, 1998-). None of these existing records occur within the application area. The closest record is an occurrence of <i>Caladenia huegelii</i> (T) located approximately 0.98 kilometres from the application area, which is separated by existing cleared areas, residential properties and road infrastructure.</p> <p>With consideration for the site characteristics set out above and relevant datasets (see Appendix E.1), the application area may provide suitable habitat for six of the aforementioned conservation significant flora species and impacts to these species required further consideration (see Appendix B.3).</p>
Ecological communities	<p>The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of the Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain TEC, approximately 2.16 kilometres southeast of the application area.</p> <p>The closest priority ecological community (PEC) is an occurrence of the Banksia Woodlands of the Swan Coastal Plain IBRA Region, mapped within and adjacent to the application area.</p>
Fauna	<p>The desktop assessment identified a total of 57 threatened or priority fauna species that have been recorded within the local area. These records comprise 17 threatened (T), 17 Priority fauna, 21 Migratory birds, one conservation dependant fauna and one other specially protected fauna species (Western Australian Herbarium, 1998). None of these existing records occur within the application area, with the closest record being an occurrence of <i>Isoodon fusciventer</i> (P) located approximately 0.14 kilometres from the application area.</p> <p>With consideration for the site characteristics set out above and relevant datasets (see Appendix E.1), the application area may provide suitable habitat for four of the aforementioned conservation significant fauna species and impacts to these species required further consideration (see Appendix B.3).</p>

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Southern River Complex	58781.48	10832.18	18.43	940.36	1.60
Local area					

	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
10km radius	30902.75	6091.67	19.71	-	-

*Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix 0), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	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]
<i>Caladenia huegelii</i>	T		Y	N	0.98	70	N/A
<i>Jacksonia gracillima</i>	P3		Y	N	1.17	14	N/A
<i>Diuris purdiei</i>	T		Y	Y	1.39	28	N/A
<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	P4		Y	Y	1.64	25	N/A
<i>Jacksonia sericea</i>	P4		Y	N	3.06	3	N/A
<i>Morelotia australiensis</i>	T		Y	N	4.38	6	N/A

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

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Isoodon fusciventer</i>	P	Y	Y	0.14	1255	N/A
<i>Zanda latirostris</i>	EN	Y	Y	1.06	1738	N/A
<i>Notamacropus irma</i>	P	Y	Y	2.67	48	N/A
<i>Zanda baudinii</i>	EN	Y	Y	6.49	155	N/A

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

A.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	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]
Banksia Woodlands of the Swan Coastal Plain ecological community	P3	Y	Y	Y	0	1446	N/A

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

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared contains 0.025 ha which is a mix of native and non-native vegetation, including weedy grasses within the degraded road reserve. The area proposed to be cleared does not contain locally or regionally significant flora, fauna, habitats, assemblages of plants.</p> <p>However, the proposed clearing area is adjacent to the ‘Banksia Woodlands of the Swan Coastal Plain ecological community’ (Priority 3) priority ecological community (PEC). Noting that the vegetation does not represent this priority ecological community, the proposed clearing does not comprise a high level of biodiversity.</p>	Not likely to be at variance	Yes Refer to Section 3.2.1.,3.2.2. and 3.2.3 above.
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared includes <i>Hakea varia</i> which is known to provide suitable foraging habitat for threatened black cockatoo species. However, the small scale of clearing proposed is not likely to have a significant habitat on conservation significant fauna.</p>	At variance	Yes Refer to Section 3.2.1, above.
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared is unlikely to contain habitat for threatened flora species listed under the BC Act.</p>	Not likely to be at variance	Yes Refer to Section 3.2.2, above.
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared does not contains species that indicative of a threatened ecological community (TEC) listed under BC Act or EPBC Act. Given the distance and separation from the closest TEC, the proposed clearing is not likely to impact or be necessary for the maintenance of any State or Commonwealth listed TEC</p>	Not likely to be at variance	Yes Refer to Section 3.2.3 above
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u> The extent of native vegetation in the local area is less than the 30% threshold set by the national objectives and targets for biodiversity conservation in Australia. However, it is within the Metropolitan Region Scheme which is subject to the EPA modified objective of 10% vegetation retention within a constrained area. The proposed clearing is consistent with the EPA’s modified objective.</p>	Not likely to be at variance	Yes Refer to Section 3.2.4, above.
<p><u>Principle (h):</u> <i>“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.”</i></p>	May be at variance	Yes

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Assessment:</u> The application area is within a Bush Forever site, therefore the proposed clearing may have an impact on the environmental values within the Bush Forever. However, given the extent of the clearing and degraded condition of the vegetation, it is unlikely to have a significant impact on the environmental values within this site.</p>		<p><i>Refer to Section 3.2.5, above.</i></p>
<p>Environmental value: land and water resources</p>		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> Given that a wetland and riparian vegetation are recorded within the application area, the proposed clearing is considered to be growing in association with a wetland.</p>	At variance	<p>No</p> <p><i>Refer to Section 3.2.6, above.</i></p>
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soil is highly susceptible to wind erosion, water logging, water repellence and surface acidification (DPIRD, 2019). Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u> The application area is mapped within a proclaimed groundwater area. However, given the extent of the proposed clearing and that the vegetation is in degraded (Keighery, 1994) condition, the proposed clearing is unlikely to impact surface or groundwater quality.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soil type within the application area is highly susceptible to waterlogging. However, given the degraded (Keighery, 1994) condition and extent of the clearing, the proposed clearing is not likely to exacerbate the incidence or intensity of flooding</p>	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 Southwest 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.

Condition	Description
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 D. Representative photographs and plan of the vegetation



Figure 2: Clearing plan for the proposed footpath and road alignment



Figure 3: Representative photograph of *Melaleuca raphiophylla*



Figure 4: Representative photograph of *Melaleuca preissiana*

Appendix E. Sources of information

E.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)

E.2. References

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