GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9143/1

File Number: DWERVT7171

Duration of Permit: From 15 April 2021 to 15 April 2023

PERMIT HOLDER

City of Gosnells

LAND ON WHICH CLEARING IS TO BE DONE

Spencer Road reserve (PIN 12095983), Thornlie

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.035 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. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), 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); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2.

4. Reporting

The permit holder must provide to the *CEO* the records required under condition 3 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.

Term	Definition
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or fill a hollow.
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 – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Meenu Vitarana
A/MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

23 March 2021

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

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 9143/1
Permit type:	Area permit
Applicant name:	City of Gosnells
Application received:	10 December 2020
Application area:	0.035 hectares of native vegetation
Purpose of clearing:	Road widening
Method of clearing:	Mechanical
Property:	Spencer Road reserve (PIN 12095983)
Location (LGA area/s):	City of Gosnells
Localities (suburb/s):	Thornlie

1.2. Description of clearing activities

The vegetation proposed to be cleared includes five isolated street trees with a total canopy area of 0.035 hectares, adjacent to Spencer Road and residential properties (see Figure 1, Section 1.5). The proposed clearing is to facilitate the widening of the existing undivided Spencer Road to provide a formal raised median of sufficient width to improve the safety of local intersections under the City of Gosnells Road Improvement Program.

1.3. Decision on application

Decision:	Granted
Decision date:	23 March 2021
Decision area:	0.035 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 14 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 findings of a tree inspection report (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 Delegated Officer also took into consideration that the purpose of the proposed clearing was to improve the safety of this section of Spencer Road reserve.

The assessment identified that the proposed clearing may result in the loss of 0.035 hectares of suitable foraging habitat for black cockatoo species and has the potential to result in the introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values. However, given the condition of the vegetation, the extent of the proposed clearing, the adjacent land uses, and the isolation of the

application area within a fragmented landscape, the proposed clearing was not considered likely to result in significant environmental impacts.

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 can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values. The Delegated Officer decided to grant a clearing permit subject to standard avoid and minimise and weed and dieback management conditions.

1.5. Site map

Figure 1 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

The applicant advised that alternative designs to widen Spencer Road that would avoid clearing altogether had been considered, however due to the narrow width of the road reserve and the minimum width requirements of the raised median, the trees could not be avoided (City of Gosnells, 2020). The applicant advised that the road widening had been planned to minimise impact to other mature trees adjacent to Glydenbourne Park (north-east of the clearing area), including modifications to drainage design and pedestrian paths (City of Gosnells, 2020).

The Delegated Officer was satisfied that the applicant has made a reasonable effort 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 A) 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). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (fauna) - Clearing Principle (b)

Assessment

A review of available databases indicates that a total of 54 conservation significant fauna species have been recorded within the local area (see Appendix A.3). These species were listed under the state *Biodiversity Conservation Act 2016* (BC Act) and/or *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), as Priority species by DBCA, or are migratory species listed under International Agreements (MI). Of the conservation significant fauna species recorded within the local area, five species were considered to have the potential to be found within the application area, based on habitat preferences; forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), Dell's skink (*Ctenotus delli*), and Coastal Plains skink (*Ctenotus ora*).

Black cockatoo species (forest red-tailed black cockatoo, Baudin's cockatoo and Carnaby's cockatoo) are known to nest in hollows of live and dead trees, including marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), karri (*Eucalyptus diversicolor*), wandoo (*Eucalyptus wandoo*), tuart (*Eucalyptus gomphocephala*), flooded gum (*Eucalyptus rudis*), and other *Eucalyptus* spp. (Commonwealth of Australia, 2012). 'Breeding habitat' for black cockatoo species includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is 500 millimetres for most tree species (Commonwealth of Australia, 2012). While breeding, black cockatoos also generally forage within a 6 to 12

km radius of their nesting site (Commonwealth of Australia, 2012). According to available datasets, mapped potential black cockatoo feeding habitat is recorded within 12 kilometres of the application area, making it a suitable location for breeding if appropriate hollows are present. The application area is also mapped within the known breeding range of Carnaby's cockatoo and within the potential breeding range for the forest red-tailed black cockatoo (Commonwealth of Australia, 2012). However, the application area is mapped outside of the known breeding range for Baudin's cockatoo (Commonwealth of Australia, 2012), and is not considered to comprise suitable breeding habitat for this species.

Photographs of the application area and a tree inspection report provided by the City of Gosnells, indicates that three of the five trees proposed to be cleared are of suitable DBH to develop a nest hollow; two jarrah and one marri (City of Gosnells, 2021). However, none of these potential breeding trees contained hollows of any size (City of Gosnells, 2021) and therefore, would not be suitable for use as breeding habitat by Carnaby's cockatoo or the forest red-tailed black cockatoo. Noting that no hollow-bearing trees will be cleared, the application area is not considered to comprise significant breeding habitat for any black cockatoo species. Further, it is noted that the application area is located approximately 500 metres north-west of Bush Forever Site 246, which contains approximately 160 hectares of riparian woodland that is likely to contain potential and future breeding habitat for these species.

It is noted that the three potential habitat trees identified within the application area are also likely to represent suitable roosting habitat for black cockatoo species. However, Carnaby's cockatoo and Baudin's cockatoo typically utilise habitat trees in riparian environments or near permanent water sources for roosting, and forest red-tailed black cockatoos typically roost in tall trees within or on the edges of forests (Commonwealth of Australia, 2012). Therefore, the riparian habitat trees present within Bush Forever Site 246 are likely to represent more favourable roosting habitat than the isolated trees within the application area. Noting the extent of the proposed clearing and the proximity of the application area to Bush Forever Site 246, the proposed clearing is not considered likely to significantly impact roosting habitat for black cockatoo species in the local area.

Black cockatoo species are noted to forage on a range of plant species, predominantly the seeds and flowers of marri, jarrah and proteaceous species (e.g. *Banskia* spp., *Hakea* spp. and *Grevillea* spp.) (Commonwealth of Australia, 2012). As the application area contains marri and jarrah, is mapped within 12 kilometres of known breeding and roosting sites, and occurs within the predicted occurrence range for all three black cockatoo species, the application area is likely to provide 0.035 hectares of suitable foraging habitat. However, it is noted that the application area includes four individual foraging plants (one marri and three jarrah) that are isolated from larger remnants of suitable habitat in the local area, do not include suitable breeding hollows, and are adjacent to highly disturbed residential and road infrastructure. Further, the application area is lacking in proteaceous species, typically utilised for foraging by Baudin's cockatoo and Carnaby's cockatoo, and the majority of remnant vegetation in the local area is mapped as suitable foraging habitat for black cockatoo species, including portions of Bush Forever Site 246. Noting the extent of the proposed clearing, the condition of the vegetation and the availability of suitable habitat resources in the local area, it is not considered likely that the clearing of 0.035 hectares of suitable foraging habitat will represent a significant impact to the forest red-tailed black cockatoo, Baudin's cockatoo, or Carnaby's cockatoo.

Noting that the local area is highly modified, and a large degree of historical clearing has occurred, the application area may also provide an ecological linkage for black cockatoo species moving through the local area. However, noting the extent of the proposed clearing and that larger remnants of suitable linkage habitat are available within 500 metres of the application area, it is unlikely that the proposed clearing of 0.035 hectares will significantly reduce the capacity of the remaining vegetation within the local area to act as an ecological linkage.

The habitat preferences of Dell's skink and the Coastal Plains skink are poorly known. The Coastal Plains skink has been recorded in sandy substrates with low vegetation in Eucalyptus or Banksia woodland (Kay and Keogh, 2012). Dell's skink is thought to be associated with jarrah and marri woodlands that have a shrub-dominated understorey on laterite, sand or clay soils and are occasionally found on granite outcrops (Storr, 1974). Given the application area occurs within the known range of these species and given the uncertainty surrounding their habitat preferences, there is the potential for Dell's skink and the Coastal Plains skink to occur within the application area. However, the application area consists of five individual trees over a weed understorey in Completed Degraded (Keighery, 1994) condition and has been highly disturbed by historical clearing and adjacent residential and road infrastructure. Noting this and that the application area is isolated from larger remnants of suitable habitat in the local area, it is not considered likely that these species would utilise the application area. The proposed clearing of 0.035 hectares is not likely to have a significant impact to Dell's skink or the Coastal Plains skink. Given the condition of the vegetation, the extent of the proposed clearing and the isolation of the application area within a fragmented landscape, the application area was also not considered likely to comprise suitable or significant habitat for any other ground-dwelling fauna species.

Conclusion
Based on the above assessment, the Delegated Officer determined that proposed clearing is unlikely to result in impacts to significant habitat for fauna species and does not constitute a significant residual impact.

Conditions
No fauna management conditions required.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 7 January 2021, inviting submissions from the public within a 14-day period. No submissions were received in relation to this application.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is an isolated patch of five native trees, with a total canopy area of 0.035 hectares, over a weed understorey in the intensive land use zone of Western Australia. It is surrounded by parkland cleared areas and residential properties and is adjacent to Spencer Road. The isolated trees are not expected to act as an ecological linkage or contribute to vegetation connectivity in the local area. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 20.05 per cent of the original native vegetation cover.
Conservation areas	The desktop assessment identified that the closest conservation area is Bush Forever Site 246, which includes Crown Reserve 48327, occurring approximately 500 metres south-east of the application area and is separated by previously cleared areas, residential properties and road infrastructure.
Vegetation description	Photographs supplied by the applicant indicate that the vegetation within the proposed clearing area consists of five individual trees with a total canopy area of 0.035 hectares, including three jarrah (*Eucalyptus marginata*) trees, one marri (*Corymbia calophylla*) and one *Melaleuca preissiana* (City of Gosnells, 2020). The application area is entirely devoid of native mid- and understorey species and has experienced significant degradation and weed invasion (City of Gosnells, 2020). Representative photos are available in Appendix D. This is inconsistent with the mapped Swan Coastal Plain vegetation type; the Southern River Complex, described as an open woodland of *Corymbia calophylla* (marri) - *Eucalyptus marginata* (jarrah) - *Banksia* species with fringing woodland of *Eucalyptus rudis* (flooded gum) - *Melaleuca rhaphiophylla* (swamp paperbark) along creek beds (Heddle et al., 1980).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Completely Degraded (Keighery, 1994) condition, described as areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs. The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.
Soil description	The soil is mapped as EnvGeol S10 Phase (213Pj_S10), described as sand; a relatively thin veneer over sandy clay to clayey sand of eolian origin (DPIRD, 2019). The mapped soil type has a low risk of land degradation resulting from water erosion, wind erosion, salinity, flooding and phosphorus export, but has a moderate to high risk of land degradation resulting from waterlogging and subsurface acidification (DPIRD, 2019).
Waterbodies and hydrogeography	The desktop assessment and aerial imagery indicated that no watercourses or wetlands intersect the application area. The closest wetland is a multiple use palusplain approximately 500 metres south-east of the application area which includes a non-perennial tributary of Canning River and is separated from the application area by parkland cleared areas, residential properties and road infrastructure.

Characteristic	Details
	The application area is mapped within the Perth Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (the RIWI Act). The application area does not transect any other proclaimed surface or groundwater resources.
Flora	The desktop assessment identified that a total of 102 threatened or priority flora species have been recorded within the local area, comprising 10 Priority 1 (P1) flora, 12 Priority 2 (P2) flora, 36 Priority 3 (P3) flora, 20 Priority 4 (P4) flora, and 24 threatened flora (Western Australian Herbarium, 1998-). None of these existing records occur within the amended area, with the closest record being an occurrence of *Byblis gigantea* (P3) approximately 300 metres from the application area, separated by parkland cleared areas, residential properties and road infrastructure. With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), the current land use, the habitat preferences of the aforementioned species, and the distribution and extent of existing records, impacts to conservation significant flora species or significant habitat for these species were not considered likely to result from the proposed clearing and did not require further consideration.
Ecological communities	The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of the herb rich shrublands in clay pans (floristic community type 8 as originally described in Gibson et al. (1994)) TEC and an occurrence of the *Corymbia calophylla - Kingia australis* woodlands on heavy soils, Swan Coastal Plain (floristic community type 3a as originally described in Gibson et al. (1994)) TEC, both approximately 3.1 kilometres north-west of the application area. The closest state-listed priority ecological community (PEC) is an occurrence of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region, approximately 250 metres east of the application area, separated by residential properties and road infrastructure.
Fauna	The desktop assessment identified that a total of 54 threatened or priority fauna species have been recorded within the local area, including 17 threatened fauna species, 16 priority fauna species, 19 fauna species protected under international agreement, and two other specially protected fauna species (DBCA, 2007-). None of these records occur within the application area, with the closest record being a southern death adder (*Acanthophis antarcticus*) and a Carnaby's cockatoo (*Calyptorhynchus latirostris*) occurring approximately 450 metres from the application area. With consideration for the site characteristics set out above and relevant datasets (see Appendix E.1), the application area may provide suitable habitat for five of the aforementioned conservation significant fauna species and impacts to these species required further consideration (see Appendix A.3).

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
Swan Coastal Plain vegetation complex*					
Southern River Complex	58,781.48	10,832.18	18.43	940.36	1.6
Local area					
10km radius	30,794.34	6,791.15	22.05	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Fauna analysis table

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

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 in local area (total)	Are surveys adequate to identify? [Y, N, N/A]
Calyptorhynchus banksii naso (Forest red-tailed black cockatoo)	VU	Y	Y	1.0	122	N/A
Calyptorhynchus baudinii (Baudin's cockatoo)	EN	Y	Y	4.6	150	N/A
Calyptorhynchus latirostris (Carnaby's cockatoo)	EN	Y	Y	0.2	1753	N/A
Ctenotus delli (Dell's skink)	P4	Y	Y	2.0	1	N/A
Ctenotus ora (Coastal Plains skink)	P3	Y	Y	2.7	1	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		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared includes five individual trees within a parkland cleared road reserve adjacent to residential properties and a major road, and does not contain locally or regionally significant flora,	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
fauna, habitats ecological communities, or ecological linkages. The proposed clearing area does not comprise a high level of biodiversity.		
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 area proposed to be cleared may contain suitable habitat for conservation significant fauna species (see Appendix A.3). However, given the extent of the proposed clearing, the condition of the vegetation and that no hollow-bearing trees will be removed, it is unlikely that the clearing of 0.035 hectares of isolated trees will result in the loss of significant habitat for these species.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The application area includes 0.035 hectares within a parkland cleared road reserve adjacent to residential properties and a major road and does not include any native mid- or understorey species. The area proposed to be cleared is unlikely to contain significant habitat for any flora species listed under the BC Act.	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared includes five individual trees within a parkland cleared road reserve and is not consistent with any threatened ecological community (TEC) listed under the BC 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-listed TEC.	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 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). Noting that the application area occurs within the Perth Metropolitan Region Scheme, the extent of the mapped vegetation type and native vegetation in the local area is consistent with this objective (see Appendix A.2). The vegetation proposed to be cleared is also parkland cleared and is not considered to be part of a significant ecological linkage in the local area.	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: Given the distance to and separation from the nearest conservation area by existing road and residential infrastructure, the proposed clearing is not likely to have an impact on the environmental values of adjacent or nearby conservation areas.	Not likely to be at variance	No

Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given the closest watercourse and wetland are recorded 500 metres from the application area and the application area includes a riparian species (*Melaleuca preissiana*), the application area may be growing in association with an environment associated with a watercourse or wetland. However, given the application area is in Completely Degraded (Keighery, 1994) condition and is separated from the closest watercourse and wetland by existing infrastructure, the proposed clearing is unlikely to impact on- or off-site hydrology or to impact the environmental values of the associated riparian communities.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils have a low risk of land degradation resulting from water erosion, wind erosion, salinity, flooding and phosphorus export, but have a moderate to high risk of land degradation resulting from waterlogging and subsurface acidification. Noting the extent of the application area and that the vegetation is in Completely Degraded (Keighery, 1994) condition, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: The application area is mapped within a proclaimed groundwater area and is 500 metres from a watercourse. However, given the extent of the proposed clearing, the separation from the nearest source of surface water by existing infrastructure, and that the vegetation is in Completely Degraded (Keighery, 1994) condition, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate that the application area is susceptible to flooding. Noting this, the extent of the proposed clearing and condition of the vegetation, the proposed clearing is unlikely to contribute to increased incidence or intensity of 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.
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. Photographs of the vegetation

Figure 1. Photographs of Tree 1 (*Corymbia calophylla*) proposed to be cleared, including damage to trunk resulting from a motor vehicle accident (City of Gosnells, 2021).

Figure 2. Photograph of Tree 2 (*Melaleuca preissiana*) proposed to be cleared (City of Gosnells, 2021).

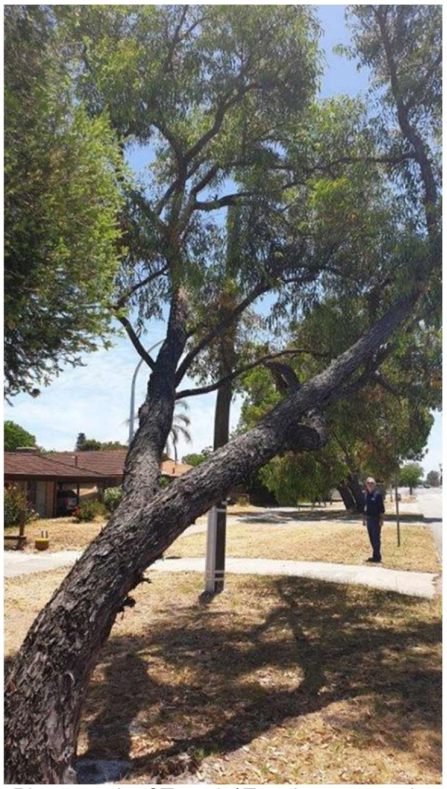

Figure 3. Photograph of Tree 3 (*Eucalyptus marginata*) proposed to be cleared (City of Gosnells, 2021).

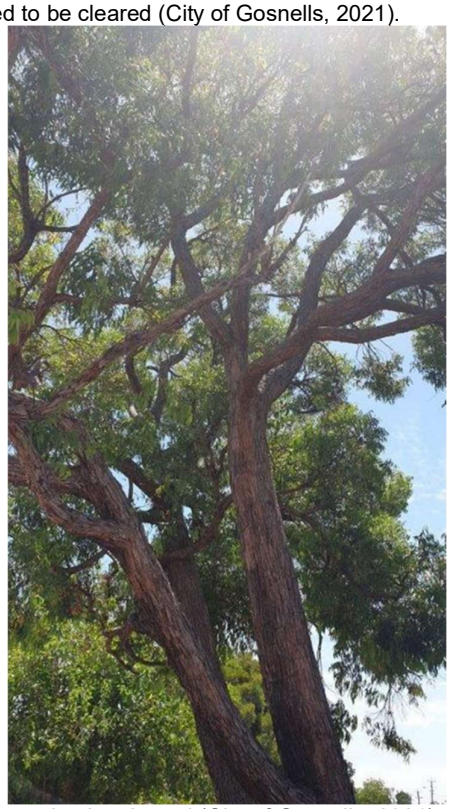

Figure 4. Photographs of Tree 4 and Tree 5 (*Eucalyptus marginata*) proposed to be cleared (City of Gosnells, 2021).

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

City of Gosnells (2020) *Clearing permit application CPS 9143/1*, received 10 December 2020 (DWER Ref: DWERDT389825).

City of Gosnells (2021) *Tree report submitted to support clearing permit application CPS 9143/1,* received 15 January 2021 (DWER Ref: DWERDT402570).

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

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

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/ (accessed January 2021).

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

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed January 2021).

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) (2008) *Environmental Guidance for Planning and Development Guidance Statement No 33*. Environmental Protection Authority, Western Australia.

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

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

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Kay, G.M. and Keogh, J.S. (2012) *Molecular phylogeny and morphological revision of the Ctenotus labillardieri (Reptilia: Squamata: Scincidae) species group and a new species of immediate conservation concern in the southwestern Australian biodiversity hotspot*. Zootaxa, 3390(1), pp.1-18.

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

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

Storr, G.M. (1973) *The genus Ctenotus (Lacertilia, Scincidae) in the south-west and Eucla divisions of Western Australia*.

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed January 2021)