

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8943/1
Permit Holder:	City of Gosnells
Duration of Permit:	30 October 2020 – 30 October 2025

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I-CLEARING AUTHORISED

1. Purpose for which clearing may be done Clearing for the purpose of extending a path network.

2. Land on which clearing is to be done

Railway Parade Road reserve (PIN 11870267 and 11845387), Beckenham Lot 320 on Deposited Plan 61379, Beckenham

3. Area of Clearing

The Permit Holder must not clear more than 22 native trees within the area hatched yellow on attached Plan 8943/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II - MANAGEMENT CONDITIONS

6. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in 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.

7. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the 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.

PART III - RECORD KEEPING AND REPORTING

8. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) 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 or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 6 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 7 of this Permit.

9. Reporting

The Permit Holder must produce the records required under condition 8 of this Permit when required by the *CEO*.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

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;

weed/s 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.

Mathew Gannaway MANAGER NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

7 October 2020

CPS 8943/1, 7 October 2020

Plan 8943/1

115.956068°

32.030304°S



15.9657



200m

1:4,828 (Approximate when reproduced at A4) GDA 94 (Lat/Long) Geocentric Datum of Australia 1994

M Date 07/10/2020 Mathew Gannaway

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



15.965718°E



Clearing Permit Decision Report

1. Application deta	ils and outcome
1.1. Permit application	on details
Permit number:	CPS 8943/1
Permit type:	Purpose permit
Applicant name:	City of Gosnells
Application received:	16 June 2020
Application area:	22 native trees
Purpose of clearing:	Extending a path network
Method of clearing:	Mechanical
Property:	Railway Parade Road reserve (PIN 11870267 and 11845387) and Lot 320 on Deposited Plan 61379, Beckenham
Location (LGA area/s):	City of Gosnells
Localities (suburb/s):	Beckenham

1.2. Description of clearing activities

The vegetation applied to be cleared is distributed across eight separate areas (see Figure 1, Section 1.5). The application is to clear 22 individual native trees along Railway Parade Road reserve for the purpose of extending the path network connecting Beckenham Station along Railway Parade between Bickley Road and Rochester Avenue.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	6 October 2020
Decision area:	22 native trees, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act* 1986 (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 16 June 2020. DWER advertised the application for public comment and no submissions were received.

In undertaking their assessment, and in accordance with section 510 of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Section 3).

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on significant habtat for forest red-tailed Black Cockatoo (*Calyptorhynchus banksia* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Carnaby's Cockatoo (*Calyptorhynchus latirostris*) or a significant remnant vegetation is an extensively cleared landscape.
- the implementation of a suitable weed and dieback management condition is appropriate to mitigate the impact of spreading weeds and dieback into adjacent vegetation (see Section 3.2.1).

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map	
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	Officer with delegated authority under Section 20 of the Environmental Protection Act 1986
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Figure 1. Map of the application area.

The areas cross-hatched yellow indicates 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 510 of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- 1. the precautionary principle;
- 2. the principle of intergenerational equity;
- 3. the principle of the conservation of biological diversity and ecological integrity; and

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 (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has advised that the proposed extension of the shared path has been designed in close consultation with the Public Transport Authority to retain as many trees as possible. The proposed shared path underwent several re-designs to ensure tree retention was maximised. Two sections of the path are proposed to be elevated to ensure the retention of large, iconic trees. A section of the path near Beckenham Station is proposed to be constructed of concrete to minimise disturbance to the significant trees. The remainder of the path is proposed to be constructed of red asphalt.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 510 of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix A) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix B.

This assessment identified that the clearing may pose a risk to the environmental values of biological values and significant remnant vegetation, and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values is provided below. Where the assessment found that the clearing presents an unacceptable risk to environmental values, conditions aimed at controlling and/or ameliorating the impacts have been imposed under sections 51H and 51I of the EP Act. These are also identified below.

3.2.1. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment:

A database search identified that three conservation significant fauna species may utilise the application area including forest red-tailed Black Cockatoo (*Calyptorhynchus banksia* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (collectively referred to as black cockatoos).

Carnaby's cockatoo is listed as endangered and forest-tailed cockatoo and Baudin's Cockatoo is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Biodiversity Conservation Act 2016* (BC Act). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012).

Potential nesting trees for black cockatoos are defined as "trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres" (Commonwealth of Australia, 2012).

The 19 *Corymbia calophylla* (marri) trees identified within the application area may provide foraging and breeding habitat for the black cockatoo species. A site inspection undertaken by the applicant determined that of the 19 trees identified within the application area five trees have a DBH that is 500 millimetres or greater (City of Gosnells, 2020). A site inspection and photographs provided by the applicant did not identify any hollows suitable for breeding by the black cockatoos within any tree proposed to be cleared (City of Gosnells, 2020).

Given that no suitable breeding hollows were identified, the small size of the application area (22 trees) and that suitable foraging habitat will remain within the adjacent road reserve, the application area is not likely to comprise significant breeding or foraging habitat for the black cockatoo species.

<u>Outcome:</u> Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not likely to impact significant habit for fauna and no fauna management conditions are required.

3.2.2. Environmental value: significant remnant vegetation and conservation areas – Clearing Principles (e)

<u>Assessment:</u> As referred to in Appendix A, the application area is located within the Swan Coastal Plain IBRA bioregion. This bioregion has approximately 38.62 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2019a). The application area is also mapped as Guildford Complex, which retains approximately 5 per cent pre-European extent (Government of Western Australia, 2019b). The local area retains approximately 16 per cent native vegetation.

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (Commonwealth of Australia, 2001). However, in the Perth Metropolitan and Bunbury regions, the Environmental Protection Authority (EPA) has a modified objective to retain at least 10 per cent of the pre-clearing extent of vegetation complexes for defined constrained areas (intensely developed) (EPA, 2015; EPA, 2003; Government of Western Australia, 2000). The application area is located within the Perth Metropolitan Region. Whilst the remnant vegetation within the local area is above the 10 percent threshold, the application area is considered to be located within an extensively cleared landscape.

The application area contains vegetation in a completely degraded (Keighery, 1994) condition, does not comprise a high biological diversity, significant habitat for fauna, threatened or priority flora or a threatened or priority ecological community. No ecological linkages will be impacted by the proposed clearing. The application area consisting of 22 individual native trees stretching along a one kilometre area of road reserve is not considered to be significant as a remnant of native vegetation.

The application area is located adjacent to remnant vegetation that may be indirectly impacted by the proposed clearing through the spread of weeds and dieback.

<u>Outcome:</u> Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not considered to be a significant remnant within an extensively cleared landscape. There will not be a significant residual impact from the proposed clearing.

Conditions:

To mitigate potential impacts from the clearing, a weed and dieback condition will be added to the permit. Weed and dieback management that requires earth-moving machinery to be clean of weeds and soil when entering and exiting the clearing area, ensure that no known weed or dieback affected soil, mulch, fill or other material is brought into the area to be cleared and restrict the movement of machines and other vehicles to the limits of the area to be cleared.

3.3. Relevant planning instruments and other matters

No Aboriginal sites of significance have bene mapped within the application area.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix D.

1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area is located along approximately a one kilometre stretch of Railway Parade road reserve. It is located adjacent to an existing road and railway reserve.
	Spatial data indicates the local area (10 km radius of the proposed clearing area) retains approximately 16% of the original native vegetation cover.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of individual <i>Corymbia calophylla</i> (19), <i>Melaleuca preissiana</i> (1) and a juvenile <i>Allocasuarina</i> sp. (1) (City of Gosnells, 2020). Representative photos are available in Appendix D.
	This is consistent with the Swan Coastal Plain mapped vegetation type 'Guildford Complex' which is described as 'a mixture of open forest to tall open forest of <i>Corymbia calophylla</i> (marri) - <i>Eucalyptus wandoo</i> (wandoo) - <i>Eucalyptus marginata</i> (jarrah) and woodland of <i>Eucalyptus wandoo</i> (wandoo) (with rare occurrences of <i>Eucalyptus lane-poolei</i> (salmon white gum)). Minor components include <i>Eucalyptus</i> <i>rudis</i> (flooded gum) - <i>Melaleuca rhaphiophylla</i> (swamp paperbark) (Heddle et al., 1998).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in completely degraded (Keighery, 1994) condition (City of Gosnells, 2020).
	The full Keighery condition rating scale is provided in Appendix E.
Soil description	The soil is mapped as EnvGeol S10 Phase which is described as relatively thin veneer over sandy clay to clayey sand of aeolian origin (Department of Primary Industry and Regional Development, 2017).
Land degradation risk	The clearing of 22 individual trees along a one kilometre stretch of road reserve in in a completely degraded (Keighery, 1994) condition is not likely to cause land degradation.
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses or wetlands are located within the application area. The closest watercourse is Yule Brook a major watercourse located approximately 65 metres from the application area.
Conservation areas	The closest nature reserve is a Greater Brixton Street (Kenwick) Wetlands, an A class nature reserve, located approximately 410 metres south east of the application area.
Climate and landform	Rainfall: 900 Evapotranspiration: 800 Geology: Alluvial, shoreline, and eolian deposits
	Groundwater Salinity (Total Dissolved Soilds): 500-3000 mg/L

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, relevant datasets (see Appendix E) and photographs provided by the applicant, conservation significant flora species and ecological communities are not likely to be impacted by the clearing

With consideration for the site characteristics set out above, relevant datasets (see Appendix E), the following conservation significant fauna species may be impacted by the clearing.

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Forest Red-tailed Black Cockatoo (<i>Calyptorhynchus</i> <i>banksii</i> subsp. <i>naso</i>)	0.7 kilometres	Yes (Corymbia calophylla)	N/A
Baudin's Cockatoo (Calyptorhynchus baudinii)	4.5 kilometres	Yes (Corymbia calophylla)	N/A
Carnaby's Cockatoo (Calyptorhynchus latirostris)	0.7 kilometres	Yes (Corymbia calophylla)	N/A

3. Vegetation extent

	Pre- European extent (ha)	Current extent (ha)	% remaining	Current extent in all DBCA managed land (ha)	% current extent in all DBCA managed land (proportion of pre-European extent)
IBRA bioregion					
Swan Coastal Plain	1,501,222	579,813	39	222,917	3
Vegetation complex	<u>.</u>	<u>.</u>	<u>.</u>		
Guildford	90,513	4,608	5	287	0.32

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Appendix D Assessment a	gainst the orearing rinnerpres

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
 <u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity." <u>Assessment:</u> The proposed clearing area does not contain locally or regionally significant flora, fauna, habitats or assemblages of plants. Given the condition of the vegetation the application area is not likely to comprise a high level of biodiversity. 	Not likely to be at variance to this Principle.	No
 <u>Principle (b):</u> "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." <u>Assessment:</u> The proposed clearing area contains foraging and potential breeding habitat for Carnaby's cockatoo, forest red tailed cockatoo and Baudins cockatoo. 	Not likely to be at variance to this Principle	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 proposed clearing area is unlikely to contain habitat for threatened flora species listed under the BC Act.	Not likely to be at variance to this Principle.	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 proposed clearing area does not contain species that are representative of a threatened ecological community as listed by the Minister for	Not likely to be at variance to this Principle.	No
Environment.		
Environmental values: significant remnant vegetation and conservation at <u>Principle (e)</u> : "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared." <u>Assessment:</u> A review of available databases has determined that the local area and mapped 'Guildford' vegetation complex retains approximately 16 and 5 per cent native vegetation cover of their pre-European clearing extent respectively, which is less than the national objectives and targets for biodiversity conservation in Australia. The area proposed for clearing is not considered to be part of a significant ecological linkage or considered to be significant as a remnant.	Not likely to be at variance to this Principle	Yes Refer to Section 3.2.2 above.
<u>Principle (h):</u> "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."	Not likely to be at variance to this Principle.	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Assessment:		
Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas. No ecological linkages will be severed by the proposed clearing.		
Environmental values: land and water resources		
<u>Principle (f):</u> "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."	Not likely to be at variance to	No
Assessment:	this Principle.	
Given the closest wetland and watercourse are located approximately 50 and 65 metres respectively from the application area, the clearing is unlikely to impact on site hydrology and water quality. The application area is not considered to be growing in association with a watercourse or wetland.		
<u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	Not likely to be at	No
Assessment:	variance to this Principle.	
The mapped soils are moderately to highly susceptible to wind erosion and waterlogging. Noting the extent of the proposed clearing and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.		
<u>Principle (i):</u> "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."	Not likely to be at variance to	No
Assessment:	this Principle.	
Given, the small area proposed to be cleared, the completely degraded (Keighery, 1994) condition of the vegetation and that no watercourses or wetlands are recorded within close proximity of the proposed clearing area, the clearing is unlikely to impact surface or ground water quality.		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance to	No
Assessment:	this Principle.	
Given the completely degraded (Keighery, 1994) condition of the application area and that no water courses or wetlands are recorded within the proposed clearing area, the clearing is unlikely to contribute to waterlogging or exacerbate the incidence or intensity of flooding.		

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.

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.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Appendix D – Photographs of the vegetation



Figure 2: Photograph of application area (City of Gosnells, 2020)

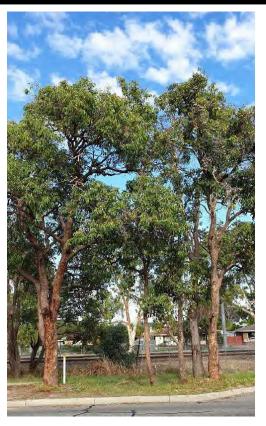


Figure 3: Photograph of application area (City of Gosnells, 2020)

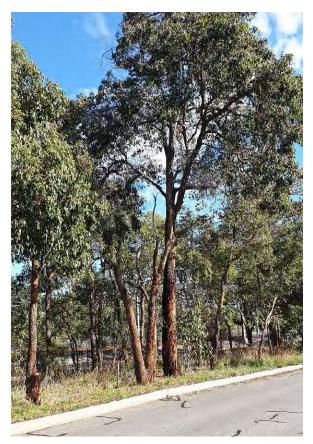


Figure 5: Photograph of application area (City of

Gosnells, 2020)

Figure 4: Photograph of application area (City of Gosnells, 2020)

Appendix E – References and databases

1. GIS datasets

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

- Aboriginal Heritage Places (DPLH-001)
- 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)
- IBRA Vegetation Statistics
- Local Planning Scheme Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping Best Available

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)

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2. References

- City of Gosnells (2020) Sumary of proposed clearing for the Railway Parade Shared Path and Parking Realignment in Beckenham. Western Australia. DWER Ref: A1907880
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Primary Industry and Regional Development (2017). NRInfo Digital Mapping. Department of Primary industry and Regional Development. Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/. Accessed February 2019.
- 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, Perth.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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.