



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9216/1
File Number: DWERVT7516
Duration of Permit: From 20 June 2021 to 20 June 2023

PERMIT HOLDER

Piara Waters Lifestyle Village Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 9007 on Deposited Plan 69864, Piara Waters

AUTHORISED ACTIVITY

The permit holder must not clear more than 1.8345 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	<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 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); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1 of this permit; (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2 of this permit.

4. Reporting

The permit holder must provide to the *CEO* the records required under condition 3 of this permit 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 <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.
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.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
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 – (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


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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

28 May 2021

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below

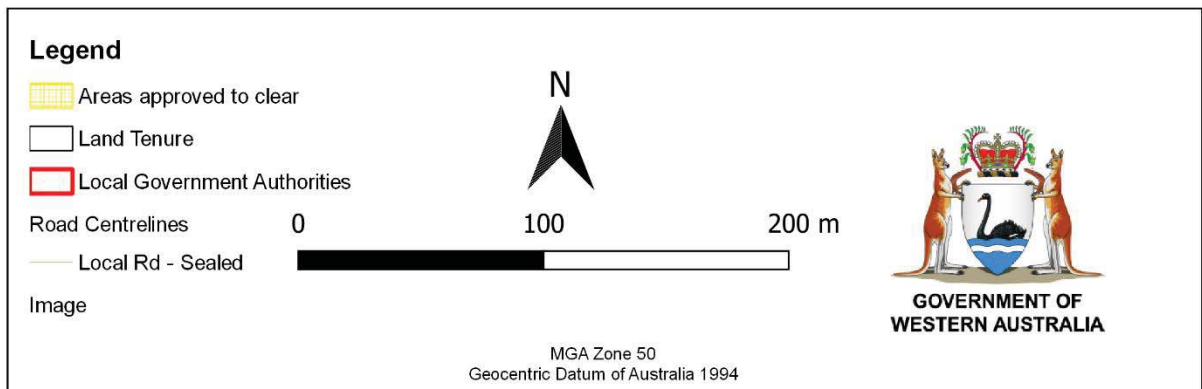


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9216/1
Permit type:	Area permit
Applicant name:	Piara Waters Lifestyle Resort Pty Ltd
Application received:	17 February 2021
Application area:	1.8345 hectares of native vegetation
Purpose of clearing:	Bulk earthworks
Method of clearing:	Mechanical
Property:	Lot 9007 on Deposited Plan 69864, Piara Waters
Location (LGA area/s):	City of Armadale
Localities (suburb/s):	Piara Waters

1.2. Description of clearing activities

The vegetation proposed to be cleared is 1.8345 hectares distributed across 86 separate areas within Lot 9007 on Deposited Plan 69864, Piara Waters (see Figure 1, Section 1.5). The purpose of the application is for bulk earthworks with a final land use of a lifestyle village.

1.3. Decision on application

Decision:	Granted
Decision date:	28 May 2021
Decision area:	1.8345 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 C), relevant datasets (see Appendix H.1), the findings of a vegetation survey (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing may 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; and
- potential impact to water resources

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 have long-term adverse impacts on water resources and hydrology. The proposed clearing can be managed to a degree that is unlikely to 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

1.5. Site map

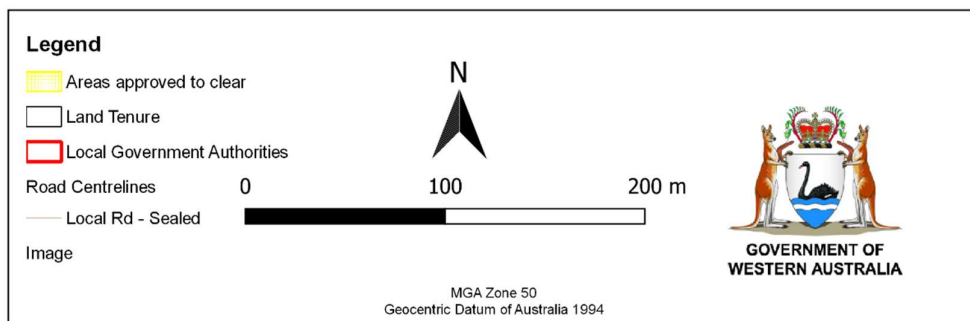
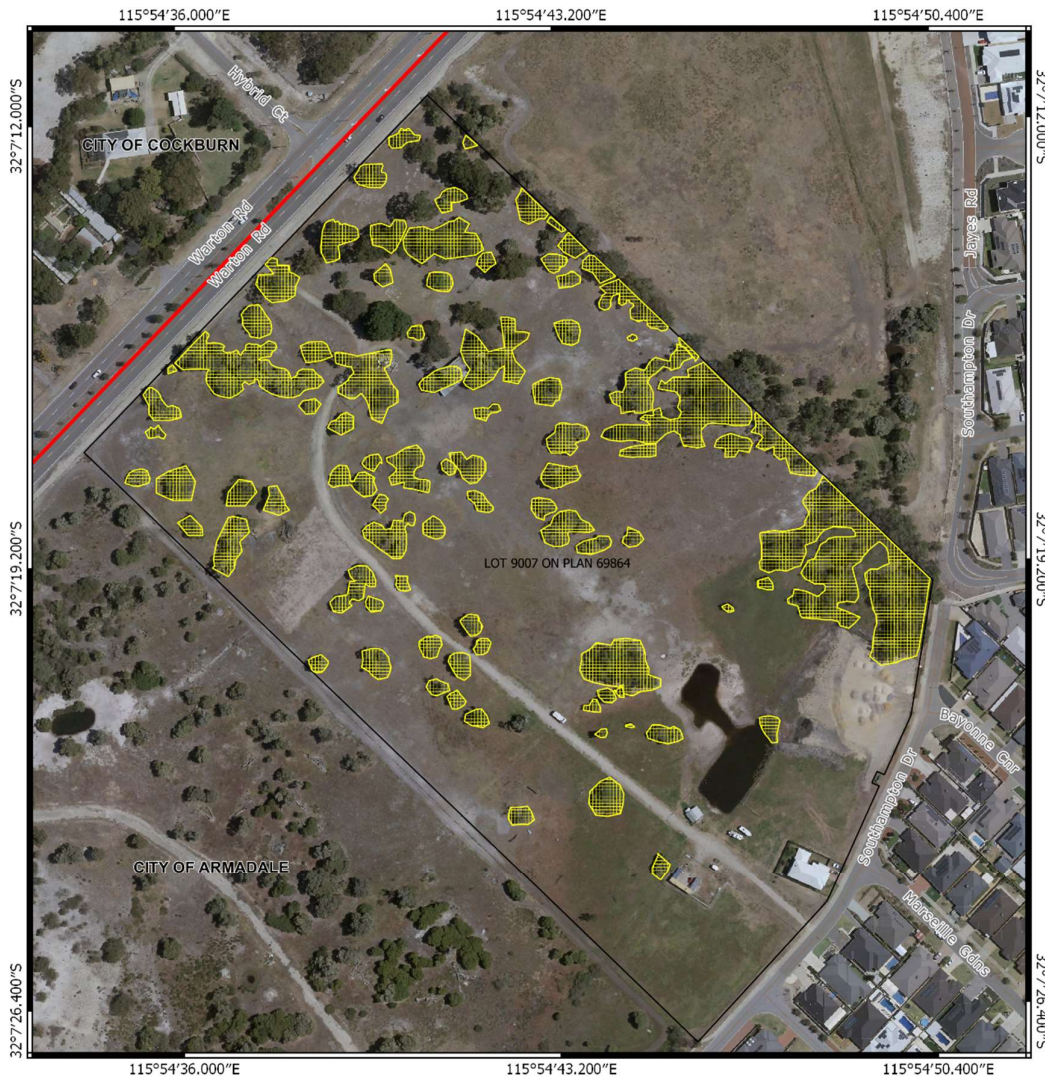


Figure 1: Map of the application area. The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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)
- *Planning and Development Act 2005* (WA) (P&D Act)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Information was submitted by the applicant, demonstrating that a number of trees are to be retained in the northern corner of the lot. The proposed clearing area was modified during the assessment process to remove the trees which will be retained, reducing the amount of clearing from 2.23 ha to 1.8345 ha.

The Delegated Officer was satisfied that the applicant has undertaken appropriate 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 D) identified that the impacts of the proposed clearing present a risk to land and water resources. 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. Land and water resources - Clearing Principles (f)

Assessment

A number of the application areas are located within a mapped multiple use wetland (dampland) with some areas in close proximity to a man-made dam (see Figure 2). The application areas contain a high amount of exotic species, with the understorey predominantly comprised of weeds.

Multiple use wetlands have few remaining important attributes or functions, and management development of these wetlands should be considered in the context of ecologically sustainable development and best management practice catchment planning. The role of these wetlands in managing the natural hydrological function and hydrogeological regime of the general area should be maintained. Approximately 73 percent of the remaining wetlands on the Swan Coastal Plain are assigned the Multiple Use category. Multiple Use wetlands are not a priority for conservation (DBCA 2017).

The application areas and the lot they are located in are largely cleared and are in degraded to completely degraded condition. The current and historical land use of the application area and adjacent lots is agricultural use including stock agistment and equestrian activities. The waterbody visible in Figure 2 is an artificial wetland constructed by excavation to below the summer levels of the water table and serves an ornamental and passive recreation purpose

(Applicant, 2021). The landscape around the artificial wetland is highly modified with minimal native vegetation and is predominantly pasture (see Appendix G).

Given the application areas are within a mapped Multiple Use wetland, the surrounding landscape has been cleared as pasture and the anthropogenic nature of the dam on the site, it is unlikely the clearing will represent any significant residual impact to the hydrography of the local area. It is unlikely, given the minimal hydrological function of the wetland and high number of exotic species, that the application areas would meet a higher classification of wetland.

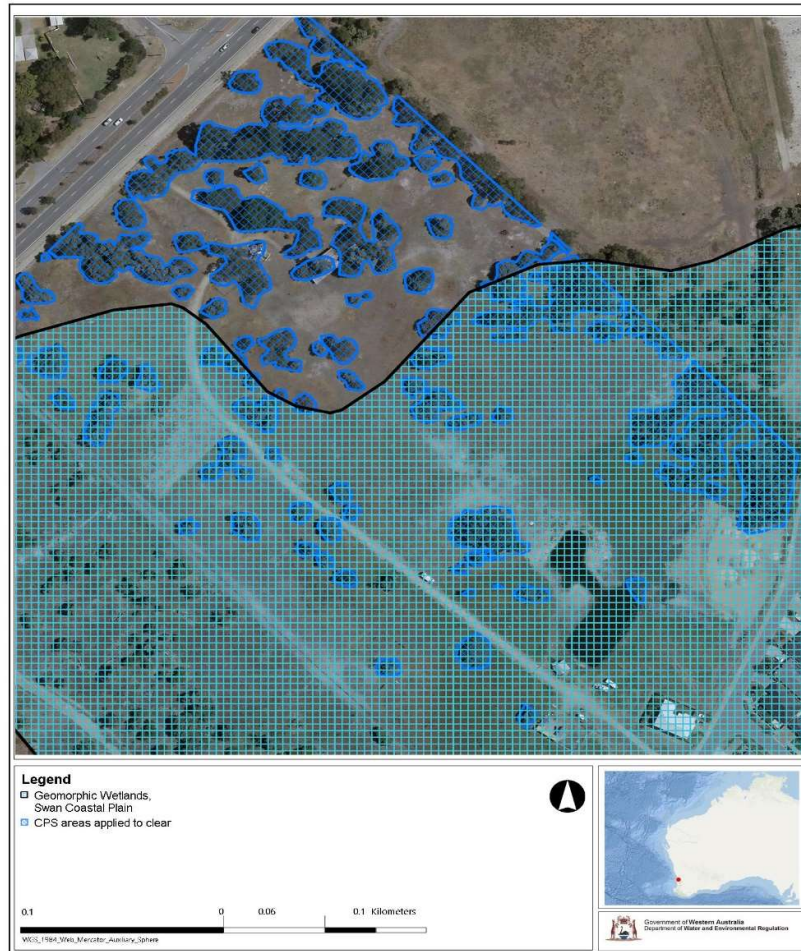


Figure 2: Aerial imagery showing the application areas (dark blue-hatched lines) located within a mapped multiple use wetland (light blue-hatched lines)

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing do not constitute a significant residual impact.

Conditions

No water resource conditions required.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- Development approval under the *Planning and Development Act 2005* (issued by the City of Armadale).
- Licence to abstract water under the *Rights in Water and Irrigation Act 1914* (RIWI).

The City of Armadale advised DWER that local government approvals have been obtained (DA:10.2021.17.1), and that the proposed clearing is consistent with the Shire's Local Planning Scheme (City of Armadale, 2021a).

As a result of the modifications to application area, the proposed clearing will satisfy condition 14E of the Determination on Development Assessment Panel Application for Planning Approval (DAP/19/01575), stating “retention and protection of existing trees as identified on the approved site plan in accordance with Australian Standard AS 4970 Protection of Trees on Development Sites”. The City of Armadale have advised that the tree retention plan is acceptable and should be adapted into the overall Landscape and Streetscape Plan to be submitted to the City (City of Armadale, 2021b).

A licence to abstract groundwater (GWL205952) for Lot 9007 on Deposited Plan 69864, Piara Waters has been granted by the Minister under section 5C of the *Rights in Water and Irrigation Act 1914* (DWER, 2021).

The Department of Water and Environmental Regulation’s Water Source Protection branch does not have any objections to the proposed clearing, however, iterates that future development must be connected to reticulated sewer and must be consistent with *Water Quality Protection Note 38 Priority 3* (P3*) areas* (DWER 2021).

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. Additional information provided by applicant

Summary of comments	Consideration of comment
Applicant supplied a vegetation survey of a number of lots in Piara Waters, including the lot the application areas are located in.	The vegetation survey assisted in informing the condition and composition of the vegetation, along with existing and historical land uses.
Applicant supplied plan showing trees that will be retained.	The plan allowed DWER to ensure the clearing would not be contravention of condition 14E of DAP (2020)
Applicant supplied amended clearing plan reflecting the trees to be retained as per (Applicant, 2021c).	The plan was used to amend the application area to ensure any clearing was not in contravention of Development Assessment Panel determination (Government of Western Australia, 2020).

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	<p>The areas proposed to be cleared consist of isolated and small patches of native vegetation within a predominantly cleared lot within the intensive land use zone of Western Australia.</p> <p>The subject lot is within rural zoning and is adjacent to urban zoning to the south-east. Small urban residential lots are located south-east of the application areas. Largely cleared rural blocks are adjacent to the application areas to the north and south-west and Warton Rd and rural residential lots are adjacent to the north. Remnant vegetation is mapped within the adjacent lot to the south-west and to the north-west.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 17.81 per cent of the original native vegetation cover.</p>
Ecological linkage	The application areas are not part of any formal ecological linkages.
Conservation areas	The application area does not intersect any mapped conservation areas. The closest reserve is a Class C Unmanaged Reserve located within the residential area approximately 90 m to the east.
Vegetation description	<p>A Vegetation survey (2021-0049) was undertaken by Bowman and Partners Environmental Pty Ltd in March 2019 encompassing the entirety of vegetation within Lot 9007. This survey indicated the vegetation within the proposed clearing area consists of <i>Eucalyptus rudis</i>, <i>Melaleuca rhapsiophylla</i>, <i>M. teretifolia</i>, and a myriad of exotic species. Representative photos and survey descriptions and maps are available in Appendix F.</p> <p>This is broadly consistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> Southern River Complex – described as open woodland of <i>Corymbia calophylla</i> (Marri) – <i>Eucalyptus marginata</i> (Jarrah) – Banksia species with fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) – <i>Melaleuca rhapsiophylla</i> (Swamp Paperbark) along creek beds (Heddlé et al. 1980). <p>The mapped vegetation type retains approximately 18.43 per cent of the original extent (Government of Western Australia, 2019).</p>

Characteristic	Details
Vegetation condition	<p>Vegetation survey (2021-0049) indicates the vegetation within the proposed clearing area is in degraded to completely degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> • 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix E. The full survey descriptions and mapping] are available in Appendix F.</p>
Climate	<p>The annual mean rainfall for the application area is 900 mm</p> <p>The evapotranspiration for the application area is 800 mm</p>
Topography	<p>The topography of the application areas ranges from 27 m AHD in the north west corner of the lot to 28 m AHD in the south east corner.</p>
Soil description	<p>The soils are mapped as:</p> <ul style="list-style-type: none"> • Bassendean B2 Phase (212Bs_B2) – Described as flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale-yellow B horizon or a weak iron-organic hardpan 1-2 m. • Bassendean B3 Phase (212Bs_B3) – Described as closed depressions and poorly defined stream channels with moderately deep, poorly to very poorly drained bleached sands with an iron-organic pan, or clay subsoil. Surfaces are dark grey sand or sandy loam. • Bassendean B4 Phase (212Bs_B4) – Described as broad poorly drained sandplain with deep grey siliceous sands or bleached sands, underlain at depths generally greater than 1.5 m by clay or less frequently a strong iron-organic hardpan.
Land degradation risk	<p>The application areas have the following land degradation risks:</p> <ul style="list-style-type: none"> • <3% of the map unit has a moderate to high flood risk • 30-50% of the map unit has a moderate to high flood risk • >70% of the map unit has a high to extreme phosphorus export risk • >70% of map unit has a high subsurface acidification risk or is presently acid • 3-10% of map unit has a moderate to very high risk of waterlogging risk • >70% of map unit has a moderate to very high waterlogging risk • 3-10% of map unit has a high to extreme wind erosion risk • 10-30% of map unit has a high to extreme wind erosion risk • 30-50% of map unit has a high to extreme wind erosion risk
Waterbodies	<p>The desktop assessment and aerial imagery indicates that approximately 50% of the subject lot is within a mapped multiple use wetland. One of the application areas is growing in association with a man-made dam that is associated with the multiple use wetland.</p>
Hydrogeography	<p>The application areas are located within the Priority 2 Jandakot Underground Water Pollution Control Area and the Jandakot Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i>. The application areas also located within the proclaimed Southern River surface water area.</p> <p>Approximately half of the lot is located within a well head protection zone.</p>
Flora	<p>There are 196 records from 61 species of conservation significance within the local area, 35 of which can be found on the same soil type as the application area. There</p>

Characteristic	Details
	<p>are no records of priority or threatened flora species within 1 km of the application area.</p> <p>The application areas are not likely to have any threatened or priority flora species for the following reasons:</p> <ul style="list-style-type: none"> • Degraded to completely degraded condition of the application areas, • Largely cleared nature of the subject lot, • High abundance of exotic and invasive species, • Disturbance as a result of grazing, • Surrounding land use comprising residential dwellings, grazing, and rural residential and, • Surveys not detecting presence of any priority or threatened species.
Ecological communities	<p>There are 2097 records of Threatened or Priority Ecological Communities within the local area. The most common is the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (Banksia Woodland) with 2055 records. The closest record is a mapped area of Banksia Woodland located in the adjacent lot approximately 15 m away.</p> <p>The application areas do not intersect any Threatened or Priority Ecological Communities. The species composition and condition of the application areas are not representative of any TECs or PECs.</p>
Fauna	<p>There are 4788 records from 57 species of conservation significance in the local area. The most common species is <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo) with 1916 records, followed by <i>Isodon fusciventer</i> (Quenda) with 1119 records.</p> <p>The closest record to the application area is of a Quenda located approximately 150 m south-east.</p> <p>The closest confirmed breeding location is approximately 8.7 km north west of the application areas. A confirmed Black Cockatoo roost is located approximately 750 m north east of the application area. The area is not mapped as Black Cockatoo feeding habitat. Given the small size of the <i>Eucalyptus rudis</i> (Applicant, 2021a) it is unlikely to be utilised for breeding purposes. Foraging species are not likely to be present within the application areas (Bamford 2013; Applicant 2021a)</p>

C.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	58,781.48	10,832.18	18.43	940.36	1.60

*Government of Western Australia (2019a)

	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
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**Government of Western Australia (2019b)

Appendix D. 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></p> <p>The area proposed to be cleared does not contain any locally or regionally significant flora, fauna, habitats, assemblages of plants. The application areas are in degraded to completely degraded condition and contain a high abundance of exotic species (Applicant, 2021a) The application areas do not intersect any or contain representative species of TECs or PECs.</p>	Not likely to be at variance	No
<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></p> <p>The area proposed to be cleared does not contain foraging, roosting, or breeding habitat for conservation significant fauna. The application areas are degraded to completely degraded with a high abundance of exotic species which does not provide habitat for terrestrial fauna. The vegetation survey (Applicant, 2021a) identified the flora species present as <i>Eucalyptus rudis</i>, <i>Melaleuca rhapsiphyllo</i>, and <i>M. teretifolia</i>. These <i>Melaleuca</i> species are not utilised by Black Cockatoos for foraging purposes (Bamford, 2013) and given the <i>E. rudis</i> present are predominantly saplings (Applicant, 2021a) are not likely to provide habitat for Carnaby's Cockatoos.</p>	Not likely to be at variance	No
<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></p> <p>Given the degraded to completely degraded vegetation condition and existing and surrounding land uses of the application area, the area proposed to be cleared is unlikely to contain habitat for flora species listed as threatened under the BC Act.</p>	Not likely to be at variance	No
<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></p> <p>The area proposed to be cleared does not contain species indicative of any ecological communities listed as "Threatened" under the <i>Biodiversity Conservation Act 2016</i>. The clearing areas do not intersect any mapped state listed Threatened Ecological Communities.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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></p> <p>The local area retains approximately 17.81 per cent of the original native vegetation cover. 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). 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, 2008).</p> <p>Based on the above and with consideration to the limited environmental values, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.</p>	Not likely to be at variance	No
<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> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area (90 m) and the buffer of extensive residential development, the proposed clearing is not likely to have an impact on the environmental values of any nearby conservation areas.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<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></p> <p>A number of the application areas are located within a mapped multiple use wetland (dampland). A number of the application areas contain vegetation growing within close proximity to a manmade dam. Given the condition of the vegetation and associated multiple use wetland, the clearing is unlikely to represent a significant impact to local hydrography.</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<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></p> <p>Portions of the mapped soils are highly susceptible to acidification, nutrient export and waterlogging. Noting the extent of the application area, the condition of the vegetation, and the filling of the site to occur as part of the development approval, 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></p> <p>The application areas are located within a mapped Priority 2 drinking water source area (mapping to be updated to Priority 3*) with some areas located within a well head protection zone (WHPZ). A man-made dam is located in</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
close proximity to some of the clearing areas. The Department of Water and Environmental Regulation's Water Source Protection branch had no objections to the proposed clearing and advised that any future developments should be connected to reticulated sewer (DWER, 2021).		
<p><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."</p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix E. 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 F. Photographs of the vegetation and Tree Retention Plan



Figure 4: Representative photograph of the small *E. rudis* within some of the application areas. Pasture and exotic species visible in the foreground.

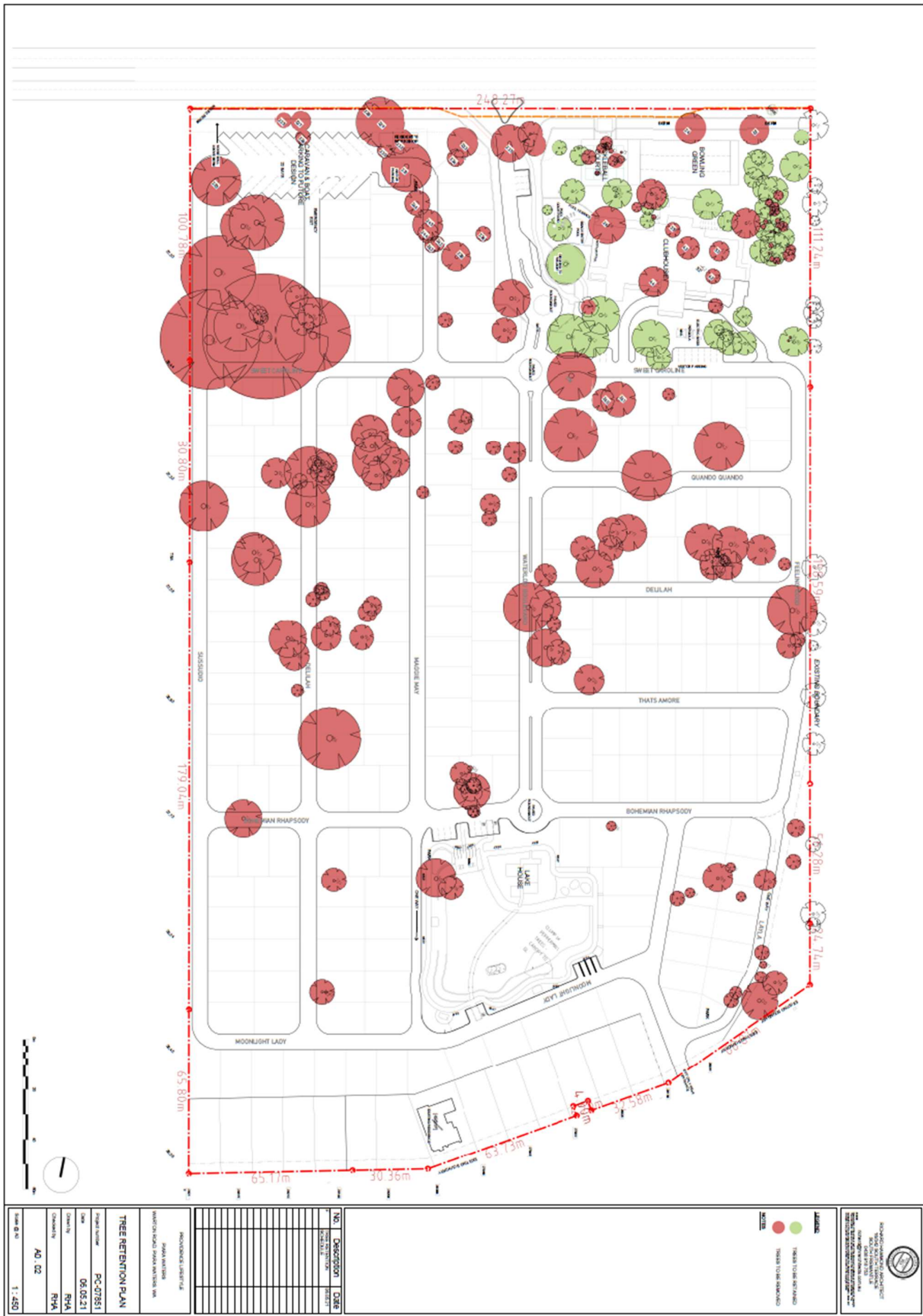


Figure 5: Plan showing the trees to be retained as per condition 14E of the JDAP Development Approval (Government of Western Australia, 2020)

Appendix H. Sources of information

H.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)

H.2. References

Applicant (2021) *Clearing permit application CPS 9216/1*, received 17 February 2021 (DWER Ref: DWERDT415532).

Applicant (2021a) *Supporting information for clearing permit application CPS 9216/1*, received 17 February 2021 (DWER Ref: A1989358).

Applicant (2021b) *Tree Retention Plan CPS 9216/1*, received 07 May 2021 (DWER Ref: A2004951).

Applicant (2021c) *Amended Application Area CPS 9216/1*, received 14 May 2021 (DWER Ref:A2007714).

Bamford Consulting Ecologists (Bamford) (2013). *Plants known to be used for foraging, roosting and nesting by black cockatoos in south-western Western Australia*. Data compiled from the literature (Davies, 1966; Saunders, 1974, 1979a, b, 1980; Saunders et al. 1982; Saunders, 1986; Johnstone and Storr, 1998; Higgins 1999; Johnstone and Kirkby, 1999, 2008; Groom, 2011; Johnstone et al. 2011; DSEWPaC, 2012a, b; c, R. Johnstone pers. comm.) in Bamford (2013) Wedgetail Circle, Parkerville Fauna Assessment. Prepared for Coterra Environment. Bamford Consulting Ecologists. Prepared by Jeff Turpin, Simon Cherriman and Mike Bamford. 14th August 2013.

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

City of Armadale (2021a) *Advice for clearing permit application CPS 9216/1*, received 08 April 2021 (DWER Ref: A1995089).

City of Armadale (2021b) *Advice for clearing permit application CPS 9216/1*, received 17 May 2021 (DWER Ref: A2008487).

Department of Biodiversity, Conservation and Attractions 2017, A methodology for the evaluation of wetlands on the Swan Coastal Plain, draft prepared by the Wetlands Section of the Department of Biodiversity, Conservation and Attractions and the Urban Water Branch of the Department of Water and Environmental Regulation, Perth.

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 16 March 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.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2021) *Rights in Water and Irrigation Act 1914 advice for clearing permit application CPS 9216/1*, received 17 May 2021 (DWER Ref: A2008458).

Government of Western Australia (2020). *Determination on Development Assessment Panel; Application for Planning Approval*. Development Assessment Panels, Perth.

Environmental Protection Authority (EPA) (2008). Environmental Guidance for Planning and Development Guidance Statement No. 33. Environmental Protection Authority, Western Australia. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/GS33-270508.pdf

Environmental Protection Authority (EPA) (2008). Environmental Guidance for Planning and Development Guidance Statement No. 33. Environmental Protection Authority, Western Australia. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/GS33-270508.pdf

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

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

- Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Hedde, 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.
- City of Armadale (2020) *Advice for clearing permit application CPS 9216/1*, received 08 April 2021 (DWER Ref: A1995089).
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs* Resource Management Technical Report No. 280. Department of Agriculture.
- Shah, B. (2006) *Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia*. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 10 March 2021)