



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9318/3
File Number: DWERVT8077
Duration of Permit: From 21 October 2023 to 21 June 2027

PERMIT HOLDER

Jamie Peter Burton and Victoria Jane Burton

LAND ON WHICH CLEARING IS TO BE DONE

Lot 9000 on Deposited Plan 66307, Derby

AUTHORISED ACTIVITY

The permit holder must not clear more than 404.77 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. Trees not authorised to clear

- (a) Prior to undertaking any clearing authorised under this Permit, the permit holder must identify, record, and photograph all trees with a diameter at breast height of 50 centimetres or greater within the areas cross-hatched red in Figure 2 of Schedule 1.
- (b) The permit holder must retain all trees with a diameter at breast height of 50 centimetres or greater as identified in condition 2(a).

- (c) On completion of clearing authorised under this Permit, the permit holder must identify, record, and photograph all trees retained in accordance with condition 2(b).

3. Weed 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *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.

4. Directional clearing

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

5. 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	<p>(a) the species composition, structure, and density of the cleared area;</p> <p>(b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings;</p> <p>(c) the date that the area was cleared;</p> <p>(d) the size of the area cleared (in hectares);</p> <p>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and</p> <p>(f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 3.</p>

No.	Relevant matter	Specifications
2.	In relation to condition 2	<p>(a) the location of all trees with a diameter at breast height of 50 centimetres or greater identified and retained, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings;</p> <p>(b) photographs of all trees identified, taken prior to clearing; and</p> <p>(c) photographs of all trees retained, taken after clearing.</p>

6. Reporting

The permit holder must provide to the *CEO* the records required under condition 5 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.
fill	means material used to increase the ground level, or to fill a depression.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS



Meenu Vitarana

Manager

NATIVE VEGETATION REGULATION

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

6 November 2024

SCHEDULE 1

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

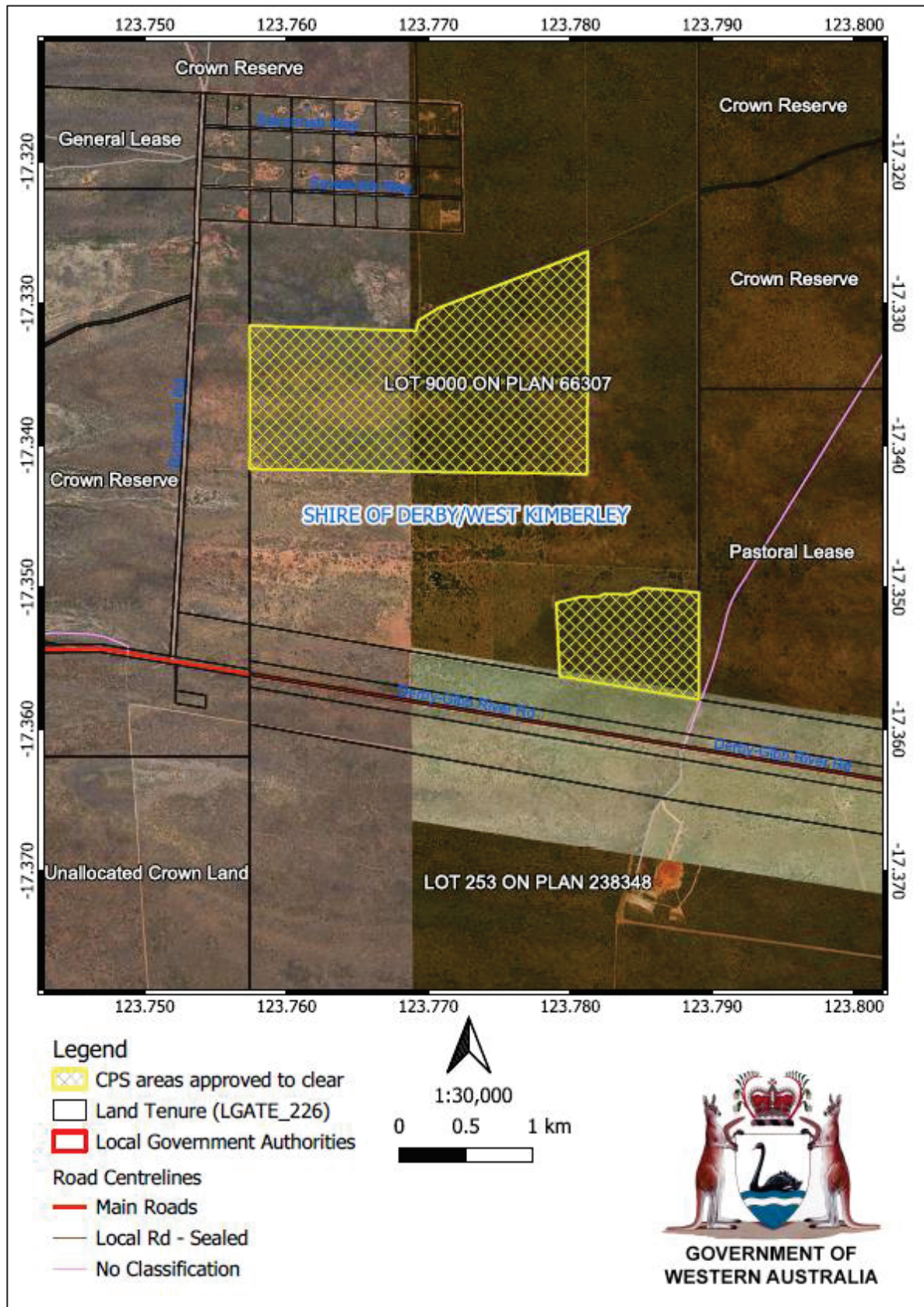


Figure 1: Map of the boundary of the area within which clearing may occur

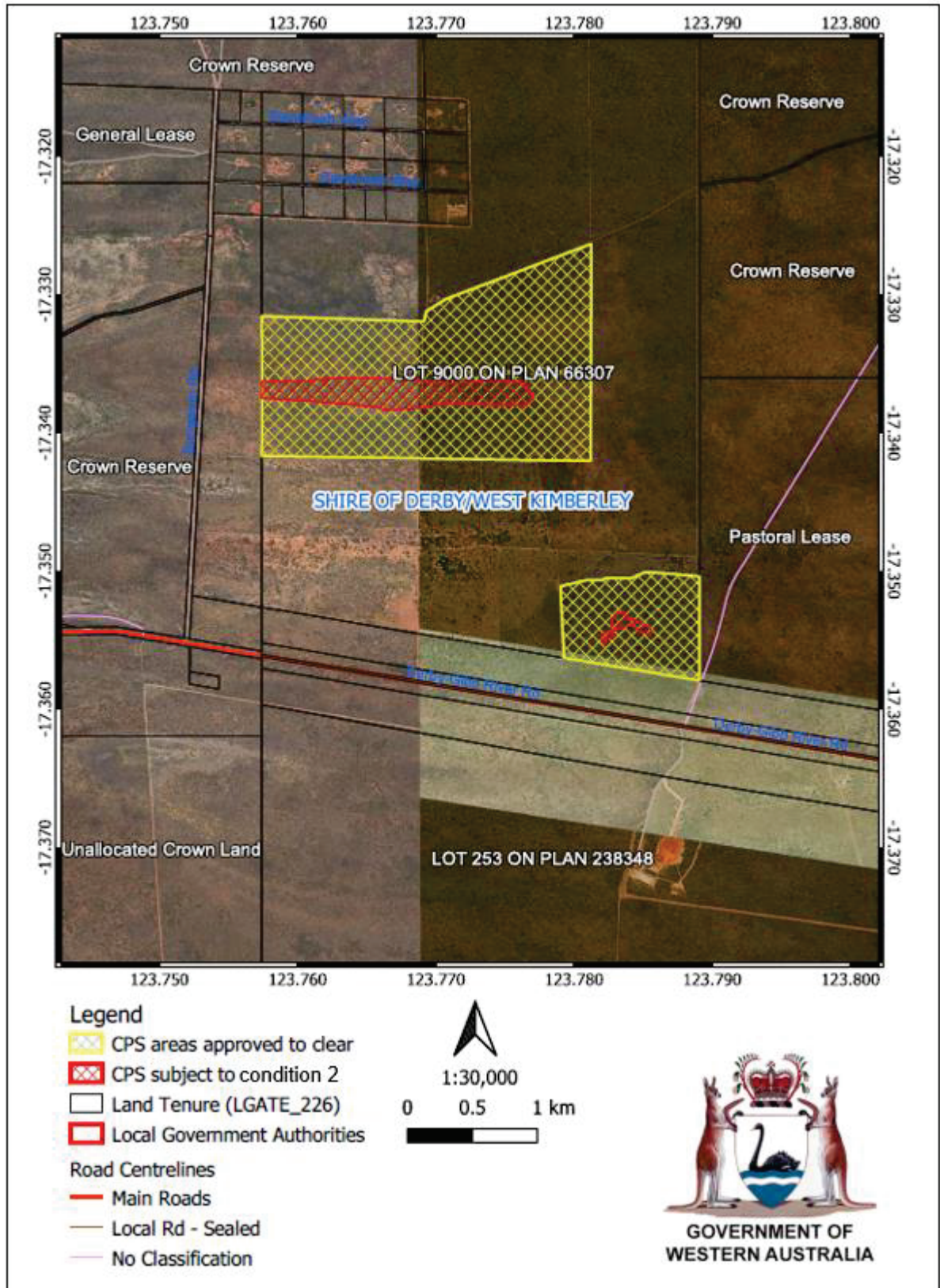


Figure 2: Map of the areas subject to condition 2 (crosshatched red)



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9318/3
Permit type:	Area permit
Applicant name:	Jamie Peter Burton and Victoria Jane Burton
Application received:	31 July 2024
Application area:	404.77 hectares of native vegetation
Purpose of clearing:	Pasture quality improvement for cattle grazing and hay production
Method of clearing:	Mechanical and burning
Property:	Lot 9000 on Deposited Plan 66307
Location (LGA area/s):	Shire of Derby
Localities (suburb/s):	Derby

1.2. Description of clearing activities

CPS 9318/1, issued on 27 September 2023, allowed for the clearing up to 404.77 hectares of native vegetation for the purpose of pasture quality improvement for cattle grazing and hay production. Two appeals had been lodged objecting to the grant of the clearing permit CPS 9318/1 and the Minister for Environment (Minister) had determined to allow the appeal in part (Appeal number: 044 of 2023) and requested DWER to amend the permit with two minor amendments. The ministerial amendment CPS 9318/2 was issued on 28 June 2024 to give effect to the appeal determination made by the Minister and the permit duration was kept unchanged to that of CPS 9318/1.

On 31 July 2024, the applicant submitted an application for an amendment to the clearing permit CPS 9318/2 to extend the permit duration for eight (8) months to account for the time lost during the appeals review process of CPS 9318/1 (JP and VJ Burton, 2024).

1.3. Decision on application

Decision:	Granted
Decision date:	6 November 2024
Decision area:	404.77 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit amendment 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 **Error! Reference source not found.**), relevant datasets (see Appendix **Error! Reference source not found.**), the findings of a vegetation survey (see **Error! Reference source not found.**), the clearing principles set out in Schedule 5 of the EP Act (see

Error! Reference source not found.), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

A review of current environmental information identified that the environmental values present within the permit area remain unchanged from the previous assessments of the permit (details of this assessment can be found under the Decision Report for CPS 9318/1). The assessment under CPS 9318/1 identified that the proposed clearing would result in:

- impacts on fauna individuals present at the application area during the time of the clearing; and
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

The Delegated Officer determined that the existing permit conditions of not undertaking the clearing of trees with diameter at breast height of 50 centimetres or greater within specific areas; adhering to hygiene protocols to avoid the introduction and spread of weeds; and applying directional clearing remain adequate to mitigate these impacts and the proposed clearing is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

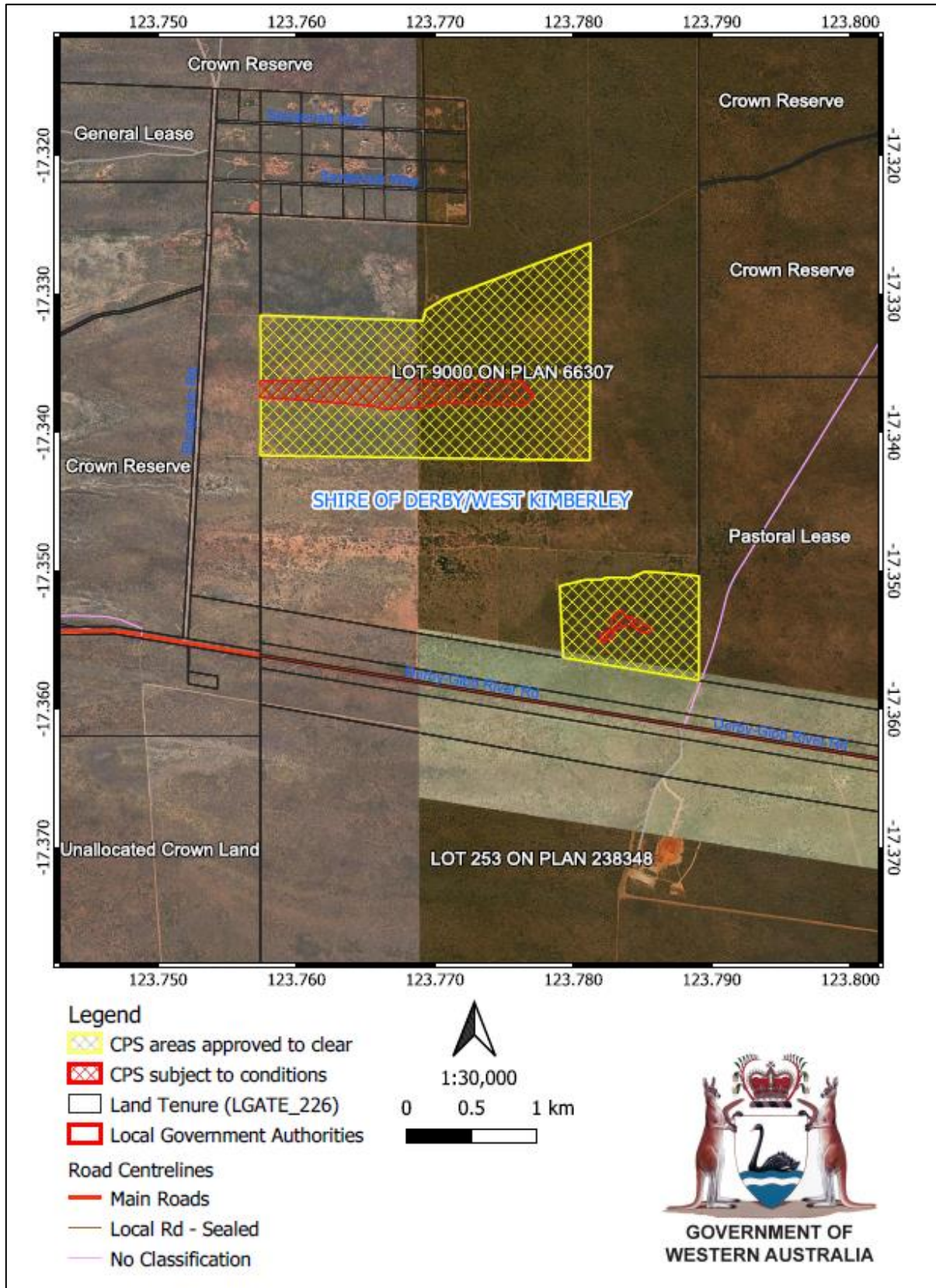


Figure 1. Map of the application area

The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit. The areas crosshatched red indicate areas within which specific conditions apply.

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)
- *Conservation and Land Management Act 1984* (WA) (CALM 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)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

During the assessment process of CPS 9318/1, the applicant has proposed to retain large trees in two areas that have high density of larger trees from clearing. 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. The proposed avoidance and mitigation measure has been converted as a condition in the granted permit.

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix C) reveals that the assessment against the clearing principles has not changed from the previous assessments of the permit.

The proposed amendment to CPS 9318/2 relates to the extension of the permit duration by eight months to account for the time consumed during the appeals review process. Given the nature of the proposed amendment and that the previous assessment was undertaken in September 2023, the Delegate Officer determined that the extent of impacts remains unchanged from the previous assessment of the permit and can be found in the Decision Report prepared for Clearing Permit CPS 9318/1.

3.3. Relevant planning instruments and other matters

In addition to relevant planning instruments and other matters mentioned in the Decision Report prepared for Clearing Permit CPS 9318/1 that are still applicable for this amendment, the Shire of Derby/West Kimberley (the Shire) advised DWER that the application area is located outside the Shire's Town Planning Scheme No.7 and therefore there were no comments from a planning perspective (Shire of Derby/West Kimberley, 2024).

End

Appendix A. Site characteristics

A.1. 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 B.

Characteristic	Details
Local context	<p>The area proposed to be cleared including two separate patches of native vegetation which are parts of an expansive tract of native vegetation in the extensive land use zone of Western Australia. The north-western patch is surrounded by remnant vegetation, whilst the south-eastern patch is adjacent to the Derby Gibb River Road to its south and surrounded by remnant vegetation in other sides. The proposed clearing areas are parts of a large area of vegetation.</p> <p>Spatial data indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is not within any mapped ecological linkages.
Conservation areas	There are no conservation areas mapped within the local area. The closest on-land conservation area is Bandiingan National Park, located approximately 123 kilometres from the application area.
Vegetation description	<p>A survey (Docherty, 2022) identified two native vegetation types within the site:</p> <ul style="list-style-type: none"> Open woodland of <i>Eucalyptus miniata</i> with <i>Ethrophleum chlorostachys</i>, or <i>Planchonia careya</i> over scattered tussock grassland on sand dune ridges. Pindan shrubland with isolated trees including <i>Corymbia greeniana</i> and <i>Petalostigma pubescens</i> over a dense shrubland of predominately <i>Calytrix extipulata</i> and <i>Dodonea hispidulus</i> in sand dunes interdunes and flats. Representative photos are available in Error! Reference source not found.. <p>This is inconsistent with the mapped vegetation type:</p> <ul style="list-style-type: none"> Beard 764 and 755, which is described as Acacia thicket with scattered low trees over spinifex <i>Acacia eriopoda</i>, <i>Corymbia dichromophloia</i>, <i>Triodia pungens</i>, <i>T. bitextura</i>. (Shepherd et al, 2001) <p><i>The mapped vegetation types retain approximately 97.6 to 99.8 per cent of their original extents (Government of Western Australia, 2019).</i></p>
Vegetation condition	<p>The survey on 2022 (Docherty) indicated the vegetation in the area is in very good (Trudgen, 1991) condition, described as:</p> <ul style="list-style-type: none"> Very good: Some relatively slight signs of damage caused by human activities since European settlement. <p>The full Trudgen (1991) condition rating scale is provided in Error! Reference source not found.. Representative photos are available in Error! Reference source not found..</p>
Climate and landform	<p>Climate: Mean maximum temperature is 34.8 degrees Celsius. Mean minimum temperature is 21.5 degrees Celsius.</p> <p>Rainfall: Mean annual rainfall is 698.5 millimetres. (BOM, 2024)</p> <p>The application area lays within two types of landforms:</p> <p>337Cm: Sandplains and dunefields, with little organised drainage; stable dunefields with swales opening locally into sandplain; restricted marginal plains with thin sand</p>

Characteristic	Details
	cover occur adjacent to dissected tracts and there are minor, isolated hills up to 60 m high; limited surface drainage mainly as sheet-flow in tracts downslope from uplands and extending for short distances into dunefields; relief up to 12 m (majority of the application area); 337Wa: Sandplain and dunefields with through-going drainage; sandplain, mainly in the upper parts, with stable dunefields, low-lying sandplain, and scattered pans and depressions; sparse to moderately dense branching drainage pattern; relief up to 9 m (DPIRD, 2022).
Soil description	The soils are mapped as 337Cm and 337Wa, which are described as sandplains, swales and linear sand dunes supporting low pindan woodlands of acacias and low woodlands of bauhinia and bloodwood with curly spinifex and ribbon grass.
Land degradation risk	The mapped soil types are not susceptible to erosion and degradation (DPIRD, 2022). The soils are likely to have reasonable Phosphor (P) retention based on their red colour (CSLC, 2021).
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses transect the areas proposed to be cleared. The closest watercourse is a non-perennial minor river, located approximately 65 - 100 metres and 900 metres away from the north-western part and south-eastern part of the proposed clearing area, respectively.
Hydrogeography	The application area falls within the Canning-Kimberley Groundwater Area, as proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act). The groundwater salinity level is mapped as less than 500 milligrams total dissolved solids per litre.
Flora	No threatened flora species and 11 priority flora species are mapped within the local area (excluding the ocean). None of these priority flora species are recorded within the application area. The closest recorded priority species is <i>Nymphoides beaglensis</i> , located approximately 2.2 kilometres from the application area. There are five species found on the same soil type and vegetation type as the application area.
Ecological communities	No threatened ecological communities are mapped within the local area. The closest mapped priority ecological community is Gogo Land System, located approximately 21 kilometres away from the application area.
Fauna	The desktop assessment identified that a total of 55 threatened or priority fauna species have been recorded within the local area (excluding the ocean), including 11 threatened fauna species, nine priority fauna species, and 35 specially protected fauna species.

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*					
Dampier land	8,343,944.95	8,319,879.14	99.71	142,055.31	1.70
Vegetation complex					
Beard vegetation association 764*	53,248.07	51,954.64	97.57		

	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
Beard vegetation association 755*	428,287.59	427,621.40	99.84		

*Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above and relevant datasets (see Appendix **Error! Reference source not found.**), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Eriochloa fatmensis</i>	P3	Y	Y	N	2.6	2	Y
<i>Euploca calvariavis</i>	P1	Y	N	N	31.8	1	Y
<i>Gomphrena cucullata</i>	P3	N	Y	Y	2.6	6	N/A
<i>Goodenia sepalosa</i> var. <i>glandulosa</i>	P3	Y	Y	Y	13.8	5	Y
<i>Nymphoides beaglensis</i>	P3	N	Y	Y	2.2	3	N/A
<i>Utricularia byrneana</i>	P1	N	Y	Y	2.4	1	N/A
<i>Utricularia tubulata</i>	P1	N	Y	Y	2.4	1	N/A

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

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area	Most recent record in local area	Are surveys adequate to identify? [Y, N, N/A]
<i>Erythrura gouldiae</i> (Gouldian finch)	P4	Y	13.3	5	1984	N/A
<i>Falco hypoleucos</i> (Grey falcon)	VU	Y	15.9	5	1999	N/A
<i>Falco peregrinus</i> (Peregrine falcon)	OS	Y	2.4	7	2010	N/A
<i>Macrotis lagotis</i> (Greater Bilby)	VU	Y	61.8	No records in local area		Y

VU: vulnerable, OS: Other Specially Protected, P: priority

A.5. Land degradation risk table

Risk categories	Land Unit 337Cm	Land Unit 337Wa
Erosion	Not prone to erosion and degradation; minor susceptibility to wind erosion but stabilise rapidly after rain	Not prone to erosion and degradation
Salinity	100% of the map unit has a slight to nil hazard	
Subsurface Acidification	100% of the map unit has a low hazard	

(DPIRD, 2022)

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain suitable habitat for conservation significant flora and fauna species.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
<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 significant habitat for conservation significant fauna.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
<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>The area proposed to be cleared is unlikely to contain flora species listed under the BC Act.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
<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 that can indicate a threatened ecological community.</p>	<p>Not at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
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 extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	<p>Not at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
<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, the proposed clearing does not have an impact on the environmental values of nearby conservation areas.</p>	<p>Not at variance</p> <p>(as per CPS 9318/1)</p>	<p>No</p>
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<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>Given that no watercourses are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	<p>Not likely to be at variance (as per CPS 9318/1)</p>	No
<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>The mapped soil Unit 337Cm is slightly susceptible to wind erosion but quickly stabilizes after fire (CSLC, 2021). Considering the final land use and the applicant’s commitment to retain large trees, the proposed clearing is unlikely to have an appreciable impact on land degradation.</p>	<p>Not likely to be at variance (as per CPS 9318/1)</p>	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>Given that no watercourses are recorded within the application area, the proposed clearing is unlikely to impact surface water quality.</p> <p>Groundwater salinity is mapped at less than 500 milligrams per litre of Total Dissolved Solids which is considered to be fresh. Given the low salinity levels of the groundwater within the area under application and that the local area (50-kilometre radius) is highly vegetated, the clearing proposed is not likely to cause deterioration in the quality of groundwater.</p>	<p>Not likely to be at variance (as per CPS 9318/1)</p>	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></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>	<p>Not likely to be at variance (as per CPS 9318/1)</p>	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 Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.

Condition	Description
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	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.

Appendix D. Biological survey information excerpts / photographs of the vegetation



Figure D1. Some representative photos of vegetation in the application area
(Top: from JP and VJ Burton, 2021; Bottom: from Kimberly Boab Consulting, 2022)

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)
- Cadastre (LGATE-218)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- 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)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- 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

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

E.2. References

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