



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10048/1
Permit Holder:	CPS Technology & Infrastructure
Duration of Permit:	From 06 July 2023 to 06 July 2033

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of providing power supply to telecommunications facility.

2. Land on which clearing is to be done

Lot 500 on Deposited Plan 18005, Badgingarra
Watheroo Road reserve (PIN: 11675072), Boothendarra

3. Clearing authorised

The permit holder must not clear more than 0.20 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 06 July 2028

PART II – MANAGEMENT CONDITIONS

5. 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.

6. 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.

7. Directional clearing

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

8. Wind erosion management

The permit holder must commence construction of power supply to proposed telecommunications facility no later than two (2) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

9. Revegetation and rehabilitation (temporary works)

Within 12 months of the area no longer being required for the purpose for which it was cleared and at an *optimal time*, the permit holder must implement and adhere to the following actions;

- (a) commence *revegetating* and *rehabilitating* the area cross-hatched yellow on Figure 1 of Schedule 1, by way of:
 - (i) deliberately *planting* tube stock and salvaged *native vegetation*; and
 - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
- (c) where monitoring of the area *revegetated* identifies that the *revegetation* is not going to resemble the surrounding five (5) of uncleared land, the permit holder is to repeat steps required under condition 9(a)-(b).

PART III - RECORD KEEPING AND REPORTING

10. 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	<ol 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

No.	Relevant matter	Specifications
		<p>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 direction of clearing;</p> <p>(e) the date construction of a power supply to telecommunications facility</p> <p>(f) the size of the area cleared (in hectares);</p> <p>(g) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; and</p> <p>(h) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 6; and</p> <p>(i) actions taken to minimize the risk of wind erosion in accordance with condition 8.</p>
2.	In relation to the <i>revegetation</i> and <i>rehabilitation</i> of areas pursuant to condition 9	<p>(a) size of the area <i>revegetated</i> and <i>rehabilitated</i>;</p> <p>(b) the date(s) on which the area <i>revegetation</i> and <i>rehabilitation</i> was undertaken;</p> <p>(c) the boundaries of the area <i>revegetated</i> and <i>rehabilitated</i> (recorded digitally as a shapefile);</p> <p>(d) description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken, including actions taken to implement hygiene protocols and weed control;</p> <p>(e) a copy of the monitoring report;</p> <p>(f) any remedial actions required to be undertaken.</p>

11. Reporting

The permit holder must provide to the *CEO* the records required under condition 10 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.

Term	Definition
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared.
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.
optimal time	means the period from April to July for undertaking planting and seeding.
planting	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species
rehabilitate / rehabilitated / rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate / vegetated / revegetation	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
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



Mathew Gannaway
MANAGER
 NATIVE VEGETATION REGULATION

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

12 June 2023

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



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



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10048/1
Permit type:	Purpose permit
Applicant name:	CPS Technology & Infrastructure
Application received:	18 January 2023
Application area:	0.20 hectares of native vegetation
Purpose of clearing:	Construction of power supply to proposed telecommunications facility
Method of clearing:	Mechanical
Property:	Lot 500 on Plan 18005, Badgingarra Watheroo road reserve (PIN: 11675072), Boothendarra
Location (LGA area/s):	Shire of Dandaragan
Localities (suburb/s):	Badgingarra Boothendarra

1.2. Description of clearing activities

CPS Technology & Infrastructure proposes to clear 0.20 hectares of native vegetation contained within a single continuous area in the intensive land use zone of Western Australia. The application area is on Lot 500 on Plan 18005 and Watheroo Road reserve (PIN 11675072), Badgingarra and Boothendarra (see Figures 1 and 2, Section 1.5). The proposed clearing will help facilitate the installation of a power supply to the proposed telecommunications facility.

1.3. Decision on application

Decision:	Granted
Decision date:	12 June 2023
Decision area:	0.20 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

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

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing, which is to facilitate the federal governments mobile phone blackspot program to insure mobile phone coverage across Australia.

The assessment identified that the proposed clearing:

- May introduce and spread weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values
- May lead to land degradation in the form of wind erosion and subsurface acidification
- Is located within an extensively cleared landscape.
- May potentially impact fauna that is present at the time of clearing.

After consideration of the available information, the Delegated Officer determined the impacts of the proposed clearing could be minimised and managed to not lead to unacceptable impacts on the environment.

The Delegated officer decided to grant a clearing permit subject to conditions to:

- Avoid, minimise to reduce the impacts and extent of clearing.
- Undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitats ahead of the clearing activity.
- Works to commence within three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.
- Take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.
- Revegetation of temporary cleared areas to minimise the impact of further clearing within an extensively cleared landscape.

1.5. Site maps



Figure 1: Context map of the application area CPS 10048/1. 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 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)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

In accordance with the objectives of the Federal Government's Mobile Phone Blackspot Program, the clearing of 0.20 hectares of native vegetation has no option to be reduced in size or change the location with regards to the location of power route (CPS Technology & Infrastructure, 2023a). Additional communication with Western Power and CPS Technology & Infrastructure has confirmed that the application area can be revegetated after the installation of the proposed works (CPS Technology & Infrastructure, 2023b).

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

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora), significant remnant vegetation (native vegetation in an area that have been extensively cleared), and land and water resources (land degradation). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (Significant habitat for fauna) - Clearing Principle (b)

Assessment

The application area is located within the Geraldton Sandplains IBRA region. According to the supporting information with the application, the vegetation proposed to be cleared appears to be in a degraded to very good condition (Keighery, 1994).

According to available databases, four conservation significant fauna species have been recorded within the local area (10-kilometre radius). Two of these species have been recorded within similar soil and vegetation types to the application area. Noting the habitat requirements of the recorded species, proximity to the application area, condition of the vegetation and migratory patterns, the application area may comprise suitable habitat for the *Apus pacificus* (Fork-tailed swift) and the *Aspidites ramsayi* (Woma python (southwest subpopulation)).

Forked tail swift (Migratory)

The fork-tailed swift is protected under international migratory bird protection agreements. It is a highly mobile avian species with extensive home ranges. The forked-tail swift is highly adapted to spend most of the year flying and will only land during breeding seasons. The species breeds within southeast Asia and will migrate to much of Australia during non-breeding seasons (DSEWPC, 2012). It is doubtful that the species utilises the application area for feeding as their diet consists of aerial plankton from coastal regions (DSEWPC, 2012). Given the distance of the application area from the coast, it is unlikely that the application area comprises significant habitat for forked tail swift.

Woma python (southwest subpopulation) (Priority 1)

The Woma is a large, rarely observed python found throughout semi-arid central Australia. The Woma is a nocturnal species adapted to fossorial living and hunting (Burton, 2013). The species shelters predominately in underground burrows pre-excavated by burrowing species (rabbits, mice) and occasionally move overland between shelter sites or when actively foraging (Burton, 2013). Woma's are associated with arid, sandy areas favouring open myrtaceous heath on sandplains and dune flats dominated by spinifex. However, they have also been known to occupy shrubby Banksia heathland and cleared farmlands (Burton, 2013). With the only record being 5.82 kilometres from the application area, it is likely that Woma may be found along the application area as it moves through the landscape. Given the extent of the clearing proposed, and the species' predilection for sandy open plains, the application area is not considered significant habitat for Woma.

Conclusion:

Given the limited extent of the clearing (0.20 hectares) and the mostly degraded condition of the vegetation, the application area is not likely to comprise significant habitat for conservation significant fauna, nor be significant for the continued survival of conservation significant fauna. However, individuals may be present at the time of clearing whilst they traverse the landscape. Slow, directional clearing will mitigate the risk to individuals. In addition, the clearing activities have the potential to impact the quality of the surrounding fauna habitat by facilitating the spread of weeds and dieback.

Conditions:

To address potential impacts to nearby native vegetation from the proposed clearing and impacts to fauna individuals, the following conditions will be required:

- weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

3.2.2. Biological values (flora) - Clearing Principle (a)

Assessment

According to available databases, four threatened flora (listed under the BC Act) and 29 priority flora species have been recorded within a 10-kilometre radius of the application area.

Noting the preferred habitat features, including soil and vegetation types mapped over the application area and the local records, there is potential that the application area may comprise suitable habitat for the following two priority flora species:

- *Jacksonia carduacea*
- *Verticordia fragrans*

***Jacksonia carduacea* (Priority 3)**

Three populations consisting of four individuals of *Jacksonia carduacea* have been recorded within a 10-kilometre radius of the application area. Available databases indicate that there are 17 more known populations, not including those from the local 10-kilometre radius within the Geraldton Sandplains region. The application area is in the middle of the species range and will not likely remove any population that will significantly impact the species distribution. Within the local area, the recorded *Jacksonia carduacea* are not in or a part of a continuous vegetation connecting the application area. Furthermore, the three records of the *Jacksonia carduacea* (in the local area) were recorded in 1962 and 1988, respectively. The environment surrounding the application area has been extensively cleared since

then, and the populations of *Jacksonia carduacea* are unlikely to remain. Noting the small size of the application area and the majority of the clearing occurring in the degraded environment, the proposed clearing will not likely have a significant impact on the conservation status.

***Verticordia fragrans* (Priority 3)**

Two populations consisting of two individuals of *Verticordia fragrans* have been recorded within a 10-kilometre radius of the application area. Available databases indicate that there are 29 more known populations, not including those from the local 10-kilometre radius within the Geraldton Sandplains region. Within the local area, the recorded *Verticordia fragrans* are not in or a part of a continuous vegetation connecting the application site to the recorded location of the *Verticordia fragrans*. Furthermore, the two records of the *Verticordia fragrans* (in the local area) were recorded in 1991 and 2001, respectively. The locations that have recorded *Verticordia fragrans* are in extensively cleared areas. The distance to the closest record of *Verticordia fragrans* is 1.74 kilometres west of the application area. The proposed clearing is unlikely to impact the conservation status of *Verticordia fragrans*.

Conclusion:

Given the limited extent of the clearing (0.20 hectares), the mostly degraded nature of the vegetation, the application area is unlikely to be significant for the continued survival of conservation significant flora. Additionally, the potential removal of the two species above is unlikely to have a significant impact to the species range or conservation status. The clearing activities have the potential to impact the quality of the surrounding flora habitat by facilitating the spread of weeds and dieback.

Conditions:

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

- weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation.

3.2.3. Significant remnant vegetation (extensively cleared) - Clearing Principle (e)

Assessment

The application area is located within the Western Australia's Geraldton Sandplains Interim Biogeographic Regionalisation for Australia (IBRA) region, on the boarder of the mapper Swan Coastal Plain IBRA region. The Geraldton Sandplains bioregion has approximately 44.78 per cent of its original extent of native vegetation remaining (*Government of Western Australia, 2019a*).

The application area falls within the Geraldton Sandplains vegetation association 1031, described as a mosaic scrub-heath/ heathland, with vegetation consisting of a mixture of *Eucalyptus todtiana*, *Eremaea pauciflora*, and *Adenanthos cygnorum* (Shepherd et al, 2001).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent the clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The native vegetation mapped within a 10-kilometre radius of the application area is below the national objectives and targets for biodiversity conservation in Australia. The 10-kilometre radius retains approximately 22.69 per cent of its pre-European vegetation extent within the bioregion (*Government of Western Australia, 2019b*).

The clearing of 0.20 hectares of native vegetation within an extensive cleared landscape with consideration of cumulative impacts from other approved clearing within the local area is considered a significant impact on the extent of remanent vegetation remaining. The application area is able to be revegetated after the installation of the power supply. The revegetation of the application area post clearing will only result in a temporary loss of native vegetation and will mitigate against the cumulative loss of native vegetation in the region. DWER considers that the revegetation post clearing will not result in a significant residual impact and an offset is not required.

Conclusion:

The application proposed to be cleared is within an extensively cleared landscape below the national objectives and targets for biodiversity conservation. Based on correspondences with Western Power and CPS Technology & Infrastructure, the application area is only temporarily being used for the construction of a power supply. Once the construction has been completed, the application area is able to be revegetated to a good condition.

Conditions:

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

- the permit holder must commence revegetation and rehabilitation areas cleared for temporary works within six (6) months of the area no longer being required for the purpose
- weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation.

3.2.4. land and water resources (land degradation) - Clearing Principle (g)

Assessment

According to available databases, clearing of the proposed native vegetation is likely to have a high to extremely high risk of wind erosion and subsurface acidification. This is due to the sandy nature of the topsoil across the application area. If appropriate management measures such as ground cover or adequate dust suppression on exposed surfaces are put in place, then the environmental impacts caused by wind erosion can be managed. Ensuring works commence within two months of clearing will minimise exposure to bare soils.

As the purpose of the proposed clearing is to undertake the construction of a power supply to the proposed telecommunications facility for mobile phone blackspot program, then the soils will not be dug to an excessive depth, and subsurface acidification will unlikely be affected by the removal of native vegetation over the application area.

Conclusion:

Based on the above assessment, the proposed clearing may cause land degradation through wind erosion. Ensuring works commence within two months will minimise this risk.

Conditions:

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

- the permit holder must commence the construction of the power supply no later than two (2) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

3.3. Relevant planning instruments and other matters

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

The permit area intersects Lot 500 on Plan 18005 and Watheroo Road reserve, Badgingarra and Boothendarra. The Shire of Dandaragan advised that they have no concern with consenting to the proposed clearing and construction. Additionally, the Shire of Dandaragan has provided development approval (CPS Technology & Infrastructure, 2023b).

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 proposed clearing area comprises 0.20 hectare isolated patch of native vegetation surrounded by sparse native vegetation with most of the land being cleared extensively.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 22.69 per cent of the original native vegetation cover.</p>						
Ecological linkage	<p>The application is not a part of any larger ecological links. The closest roadside ecological linkage is approximately 8.27 metres from the application area; this is a roadside conservation verge managed by the Shire of Dandaragan (No infested weeds). The proposed clearing is not likely to sever or impact the linkage functionality.</p>						
Conservation areas	<p>Multiple recreational reserves surround the application area. The closest conservation area is Boothendarra Nature Reserve, located approximately 3.95 kilometres northeast of the application area. An unnamed research station is approximately 5.76 kilometres west of the application area. Furthermore, TJ parkland is located approximately 4.64 kilometres south of the application area. The proposed clearing is not likely to impact any conservation areas.</p>						
Vegetation description	<p>Photographs supplied by the applicant indicate that the vegetation within the proposed clearing area consists of several native species, <i>Adenanthos</i> sp., <i>Allocasuarina</i> sp., <i>Chamaelucium</i> sp., <i>Eucalyptus</i> sp., <i>Ptilotus</i> sp., <i>Verticordia</i> sp., and <i>Xanthorrhoea</i> sp. Additionally several weed species are found within the application area including <i>*Bromus diandrus</i>, <i>*Ehrharta calycina</i>, <i>*Eragrostis curvula</i>, and <i>*Neurachne alopecuroidea</i> (Appendix D).</p> <p>This is consistent with the mapped vegetation type:</p> <table border="1"> <thead> <tr> <th>Pre-European vegetation complex</th> <th>Vegetation description</th> </tr> </thead> <tbody> <tr> <td>Beard Vegetation association 1031</td> <td>A scrub-heath / Heathland with vegetation on the application area. Low open woodland/heath with a mixture of <i>Eucalyptus todtiana</i>, <i>Eremaea pauciflora</i>, <i>Adenanthos cygnorum</i>.</td> </tr> </tbody> </table>	Pre-European vegetation complex	Vegetation description	Beard Vegetation association 1031	A scrub-heath / Heathland with vegetation on the application area. Low open woodland/heath with a mixture of <i>Eucalyptus todtiana</i> , <i>Eremaea pauciflora</i> , <i>Adenanthos cygnorum</i> .		
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Vegetation condition	<p>Photographs supplied by the applicant indicate that the native vegetation within the proposed clearing area to be in a degraded to very good condition, with the majority in a degraded condition. Approximately 50 per cent of the total clearing area consists of native vegetation, and the remainder consists of cleared ground and multiple weed species.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>						
Climate and landform	<p>The climate experienced in the area is Mediterranean, with dry, hot summers and cool, wet winters. The average rainfall is 400-600 millimetres per annum, with the majority falling between June and August (BOM 2021).</p>						
Soil description	<table border="1"> <tbody> <tr> <td>Name</td> <td>Coalara 5 plain phase</td> </tr> <tr> <td>Soils</td> <td>222Co_5a</td> </tr> <tr> <td>Description</td> <td>Plain, hillcrests and very gently inclined hillslopes; pale sandy gravels, gravelly pale deep sand, pale and yellow deep sands.</td> </tr> </tbody> </table>	Name	Coalara 5 plain phase	Soils	222Co_5a	Description	Plain, hillcrests and very gently inclined hillslopes; pale sandy gravels, gravelly pale deep sand, pale and yellow deep sands.
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Description	Plain, hillcrests and very gently inclined hillslopes; pale sandy gravels, gravelly pale deep sand, pale and yellow deep sands.						
Land degradation risk	<p>The degradation risk factors mapped over the application area are detailed below:</p> <table border="1"> <tbody> <tr> <td>Coalara 222Co_5a</td> </tr> </tbody> </table>	Coalara 222Co_5a					
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Characteristic	Details																															
	Wind erosion	H2 > 70% high to extreme risk																														
	Water erosion	L1 < 3% high to extreme risk																														
	Salinity risk	L1 < 3% high to extreme risk																														
	Phosphorous export	L1 3-10% high to extreme risk																														
	Waterlogging	L1 < 3% high to extreme risk																														
	Subsurface acidification	H2 > 70% high to extreme risk																														
	Acid sulphate soils	No acid sulphate soils mapped																														
	Flooding	L1 < 3% high to extreme risk																														
	Floodplains	No																														
Waterbodies	<p>There are no Ramsar sites or directly important wetlands within a 20 kilometre radius of the application area.</p> <p>There are 28 Geomorphic wetlands mapped within a 20 kilometres radius of the application area consisting of nine Barkarra, one Dampland, one Artificial lake, 11 Paluslopes, one Palusplain, three Playa and two Sumplands. The closest is an artificial lake approximately 13.03 kilometres west of the application area.</p> <p>Non-perennial river complexes surround the application area. The closest is an unnamed natural river located approximately 1.10 kilometres east of the application site. No Non-perennial watercourse transects in the area proposed to be cleared or will be affected by the proposed clearing.</p> <p>Given the distance away from the application area the proposed clearing is unlikely to impact the wetlands within the radius of the application area.</p>																															
Hydrogeography	<table border="1" data-bbox="432 1167 1193 1312"> <tr> <td>Hydrological Zone</td> <td colspan="2">Dandaragan Plateau</td> </tr> <tr> <td>Basin</td> <td colspan="2">Moore-Hill Rivers (617)</td> </tr> <tr> <td>Hydrographic Catchment</td> <td colspan="2">Hill River</td> </tr> </table> <table border="1" data-bbox="432 1346 1385 1760"> <tr> <td>RIWI Act Surface Water and Irrigation District</td> <td>Yes</td> <td>Hill River and Tributaries Catchment</td> </tr> <tr> <td>RIWI Act Rivers</td> <td>No</td> <td></td> </tr> <tr> <td>RIWI Act Groundwater Areas</td> <td>Yes</td> <td>Jurien Ground water area UFI (17)</td> </tr> <tr> <td>CAWS Act Clearing Control Catchment</td> <td>No</td> <td></td> </tr> <tr> <td>Public Drinking Water Source Areas</td> <td>No</td> <td></td> </tr> <tr> <td>Wellhead Protection Zone</td> <td>No</td> <td></td> </tr> <tr> <td>Reservoir Protection Zone</td> <td>No</td> <td></td> </tr> </table> <p>The salinity of the application area is mapped at 500-1000 total dissolved solids milligrams per litre.</p>		Hydrological Zone	Dandaragan Plateau		Basin	Moore-Hill Rivers (617)		Hydrographic Catchment	Hill River		RIWI Act Surface Water and Irrigation District	Yes	Hill River and Tributaries Catchment	RIWI Act Rivers	No		RIWI Act Groundwater Areas	Yes	Jurien Ground water area UFI (17)	CAWS Act Clearing Control Catchment	No		Public Drinking Water Source Areas	No		Wellhead Protection Zone	No		Reservoir Protection Zone	No	
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Public Drinking Water Source Areas	No																															
Wellhead Protection Zone	No																															
Reservoir Protection Zone	No																															
Flora	<p>According to the available databases, 103 conservation significant flora species have been recorded within the local area (20-kilometre buffer) five Priority 1, 19 Priority 2, 52 Priority 3 species, 16 Priority 4, and 11 Threatened flora taxa. None of these records occur over the application area. The closest protected flora is 0.12 kilometres from the application area, being <i>Jacksonia carduacea</i> (P3).</p>																															

Characteristic	Details
	<p>Noting the distribution of the recorded species, the mapped vegetation type, the mapped soil types and the condition of the vegetation within the application area. The application area may comprise suitable habitat for the following flora species:</p> <ul style="list-style-type: none"> • <i>Jacksonia carduacea</i> • <i>Verticordia fragrans</i>.
Ecological communities	<p>According to available databases, 35 conservation significant ecological communities have been mapped within the local area (20-kilometre buffer). None of these records occurs over the application area. The closest TEC is a Banksia dominated woodlands located approximately 9.35 kilometres northeast of the application area.</p> <p>The proposed clearing application area does not resemble a TEC or Priority Ecological Community.</p>
Fauna	<p>According to available databases, four conservation significant fauna species have been recorded within the local area comprising one Priority 1 species, one Migratory species, and two Endangered species.</p> <p>Of the four terrestrial fauna species, one is non-avian. <i>Aspidites ramsayi</i> (the southwestern Woma) has been reported approximately 5.82 kilometres from the application area.</p> <p>The remaining three terrestrial species are all avian. <i>Zanda latirostris</i> (Carnaby's cockatoo), <i>Apus pacificus</i> (Fork-tailed swift), and <i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' (White-tailed black cockatoo) located 4.30-kilometres, 6.20-kilometres, and 8.12-kilometres from the application area respectively.</p> <p>Four natural black cockatoo hollows have been located within a 12-kilometre radius of the application area. The closest being approximately 4.73 kilometres from the application area. One Black cockatoo roost has been observed 11.83 kilometres southwest of the application area.</p> <p>Noting the habitat requirements, the distribution of the recorded species, the mapped vegetation type, and the condition of the vegetation within the application area and the migratory patterns, the application area may comprise suitable habitat for the <i>Aspidites ramsayi</i> (southwest Woma).</p>

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	38.45
Geraldton Sandplains	3,136,037.83	1,404,424.32	44.78	568,255.10	18.24
Beard Vegetation Association in Bioregion*					
1031	241,349.97	83,217.27	34.48	37,047.79	15.35
Local area					
10 km radius	31,767.26	7,207.19	22.69	-	-

*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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A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), 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>Jacksonia carduacea</i>	P3	Y	Y	Y	0.12	7	N
<i>Banksia splendida</i> subsp. <i>macrocarpa</i>	P3	Na	Na	Y	1.74	19	N
<i>Boronia scabra</i> subsp. <i>condensata</i>	P2	N	N	Y	1.74	1	N
<i>Verticordia fragrans</i>	P3	Y	Y	Y	1.74	2	N
<i>Verticordia insignis</i> subsp. <i>eomagis</i>	P3	N	N	Y	1.74	7	N
<i>Banksia subulata</i>	P3	N	Y	Y	2.22	9	N
<i>Grevillea saccata</i>	P4	N	Y	Y	2.22	19	N
<i>Hakea longiflora</i>	P3	N	N	Y	2.22	2	N
<i>Grevillea rudis</i>	P4	N	N	Y	4.08	188	N
<i>Grevillea thyrsooides</i> subsp. <i>thyrsooides</i>	P3	N	N	Y	4.08	52	N
<i>Hypocalymma serrulatum</i>	P2	N	N	N	4.34	4	N
<i>Calytrix ecalycata</i> subsp. <i>pubescens</i>	P1	N	N	Y	4.63	9	N
<i>Tetratheca remota</i>	P2	Na	Na	Y	5.12	1	N
<i>Banksia nana</i>	P3	Na	Na	Y	6.43	9	N
<i>Beyeria gardneri</i>	P3	N	Y	Y	6.51	2	N
<i>Phlebocarya pilosissima</i> subsp. <i>pilosissima</i>	P3	N	Y	Y	6.51	5	N
<i>Petrophile septemfida</i>	P3	N	Y	Y	7.3	4	N
<i>Lasiopetalum decoratum</i>	P2	N	N	Y	7.45	503	N
<i>Banksia cypholoba</i>	P3	N	N	Y	7.59	118	N
<i>Eucalyptus leprophloia</i>	T	Y	Y	Y	7.6	2	N
<i>Desmocladius elongatus</i>	P4	Y	Na	Y	7.65	8	N
<i>Lepidobolus quadratus</i>	P3	N	Y	Y	7.65	9	N
<i>Eucalyptus crispata</i>	T	N	N	Y	7.9	2	N
<i>Eucalyptus macrocarpa</i> subsp. <i>elachantha</i>	P4	N	N	N	8.13	4	N
<i>Beaufortia eriocephala</i>	P3	Y	Y	Y	8.3	2	N
<i>Hypocalymma tetrapterum</i>	P3	N	N	N	8.3	1	N
<i>Tetratheca angulata</i>	P3	NA	NA	Y	8.3	4	N
<i>Banksia serratuloides</i> subsp. <i>perissa</i>	T	N	N	Y	8.37	105	N
<i>Thysanotus vernalis</i>	P3	NA	NA	Y	8.37	1	N
<i>Eucalyptus pruiniramis</i>	T	NA	NA	Y	9.21	10	N
<i>Acacia cummingiana</i>	P3	N	N	Y	9.68	3	N
<i>Thomasia tenuivestita</i>	P3	NA	NA	N	9.84	2	N
<i>Acacia plicata</i>	P3	Na	Na	N	10.22	1	N
<i>Acacia retrorsa</i>	P2	Na	Na	Y	10.22	1	N

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>Gompholobium gairdnerianum</i>	P3	Na	Na	N	10.22	4	N
<i>Grevillea uniformis</i>	P3	N	N	N	10.22	2	N
<i>Leucopogon plumuliflorus</i>	P2	Na	Na	Y	10.22	10	N
<i>Xanthosia tomentosa</i>	P4	N	Y	Y	10.22	1	N
<i>Eucalyptus pendens</i>	P4	NA	Y	Y	10.82	74	N
<i>Banksia kippistiana</i> var. <i>paenepeccata</i>	P3	N	Y	N	10.91	21	N
<i>Goodenia xanthotricha</i>	P2	Na	Na	Y	10.91	2	N
<i>Grevillea leptopoda</i>	P3	N	Y	N	10.91	1	N
<i>Guichenotia alba</i>	P3	N	N	N	10.91	8	N
<i>Hypocalymma gardneri</i>	P3	N	Y	Y	10.91	1	N
<i>Persoonia rudis</i>	P3	N	N	N	10.91	1	N
<i>Allocasuarina grevilleoides</i>	P3	N	N	N	11.03	7	N
<i>Eucalyptus absita</i>	T	N	N	N	11.03	89	N
<i>Eucalyptus absita</i> x <i>loxophleba</i>	P1	N	N	N	11.03	2	N
<i>Rhetinocarpha suffruticosa</i>	P1	Na	N	N	11.03	108	N
<i>Beaufortia bicolor</i>	P3	N	N	Y	11.16	6	N
<i>Allocasuarina ramosissima</i>	P3	N	N	N	11.19	16	N
<i>Styphelia filamentosa</i>	P3	Na	Na	Na	11.3	2	N
<i>Lasiopetalum rupicola</i>	P1	Na	Na	Na	11.37	1	N
<i>Acacia wilsonii</i>	T	Na	Na	Y	12.14	3	N
<i>Hensmania stoniella</i>	P3	Na	Na	Y	12.36	4	N
<i>Austrostipa</i> sp. Cairn Hill (M.E. Trudgen 21176)	P3	Na	Na	Na	12.64	1	N
<i>Spirogardnera rubescens</i>	T	N	N	N	12.77	9	N
<i>Banksia fraseri</i> var. <i>crebra</i>	P3	Na	Na	N	12.82	1	N
<i>Calothamnus accedens</i>	P4	N	N	N	12.82	1	N
<i>Thysanotus</i> sp. Badgingarra (E.A. Griffin 2511)	P2	N	Y	Y	13.1	1	N
<i>Petrophile biternata</i>	P3	N	Y	N	13.14	3	N
<i>Hypolaena robusta</i>	P4	N	N	Y	13.19	1	N
<i>Hypocalymma</i> sp. Cataby (G.J. Keighery 5151)	P2	Na	Na	N	13.31	2	N
<i>Thelymitra apiculata</i>	P4	N	Y	Y	13.31	6	N
<i>Acacia flabellifolia</i>	P3	Y	N	Y	13.34	1	N
<i>Banksia chamaephyton</i>	P4	N	Y	Y	13.34	3	N
<i>Banksia nobilis</i> subsp. <i>fragrans</i>	P3	Na	N	N	13.34	3	N
<i>Conospermum scaposum</i>	P3	Y	N	Y	13.34	1	N
<i>Ptychosema pusillum</i>	T	Y	Y	Y	13.34	1	N
<i>Verticordia rutilastra</i>	P3	N	Y	Y	13.34	6	N
<i>Arnocrinum gracillimum</i>	P3	N	N	N	13.49	1	N
<i>Calectasia palustris</i>	P2	N	N	Y	13.49	22	N
<i>Desmocladius biformis</i>	P3	N	N	N	13.72	4	N
<i>Hakea neurophylla</i>	P4	N	Y	N	13.72	1	N
<i>Tripterococcus</i> sp. <i>Brachylobus</i> (A.S. George 14234)	P4	N	N	N	13.72	1	N
<i>Drosera allantostigma</i>	P1	N	N	N	13.8	4	N
<i>Desmocladius microcarpus</i>	P2	Na	Na	Na	13.81	3	N
<i>Jacksonia rubra</i>	P2	N	N	N	13.81	2	N
<i>Stylidium torticarpum</i>	P3	N	Y	Y	13.97	101	N
<i>Stylidium inversiflorum</i>	P4	N	Y	Y	14.31	4	N

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>Chordifex reseminans</i>	P2	Na	Y	Na	14.35	1	N
<i>Acacia epacantha</i>	P3	Na	Na	N	14.36	1	N
<i>Catacolea enodis</i>	P2	N	N	Y	14.65	3	N
<i>Drosera prophylla</i>	P3	Na	Na	Na	14.65	135	N
<i>Conostephium magnum</i>	P4	N	Y	Y	15.07	3	N
<i>Jacksonia anthoclada</i>	P3	N	N	Y	15.07	1	N
<i>Patersonia spirifolia</i>	T	N	Y	Y	15.07	1	N
<i>Comesperma rhadinocarpum</i>	P3	N	Y	N	15.21	1	N
<i>Stylidium aeonioides</i>	P4	Y	Y	Y	15.21	3	N
<i>Banksia pteridifolia</i> subsp. <i>vernalis</i>	P3	N	N	N	15.23	22	N
<i>Conostylis</i> sp. Eneabba (M. Hislop 3864)	P2	Na	Na	Na	15.56	1	N
<i>Banksia dallanneyi</i> subsp. <i>pollostata</i>	P3	N	Y	Y	16.09	2	N
<i>Hemiandra rutilans</i>	T	Na	Na	Y	16.18	1	N
<i>Macarthuria keigheryi</i>	T	N	N	Y	16.18	20	N
<i>Thysanotus glaucus</i>	P4	N	Y	Y	16.36	1	N
<i>Hemigenia curvifolia</i>	P2	N	Y	Y	17.06	11	N
<i>Calytrix ecalycata</i> subsp. <i>brevis</i>	P3	N	N	N	17.75	1	N
<i>Dampiera tephrea</i>	P2	N	N	N	17.81	1	N
<i>Verticordia muelleriana</i> subsp. <i>muelleriana</i>	P3	N	Y	Y	17.99	1	N
<i>Persoonia filiformis</i>	P3	N	N	N	18.1	1	N
<i>Thelymitra pulcherrima</i>	P2	N	N	N	18.8	10	N
<i>Stackhousia</i> sp. Red-blotched corolla (A. Markey 911)	P3	N	Y	N	18.96	1	N
<i>Petrophile clavata</i>	P2	N	N	Y	19.6	75	N

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

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Birds						
<i>Apus pacificus</i> (Fork-tailed swift)	MI	Y	Y	6.20 km	1	N
<i>Zanda latirostris</i> (Carnaby's cockatoo)	EN	Y	N	4.30 km	249	N
<i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	Y	N	8.12 km	173	N
Reptiles						
<i>Aspidites ramsayi</i> (southwest subpop.) (Woma (southwest subpop.))	P1	Y (probably no)	Y	5.82 km	1	N

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

A.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	P3	N	Y	N	9.35 km	35	N

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

A.6. Land degradation risk table

Risk categories	Land Unit 1
Wind erosion	M1: 10-30% of the map unit has a high to extreme hazard
Water erosion	L2: 3-10% of the map unit has a very high to extreme hazard
Salinity	L2: 3-10% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	M2: 30-50% of the map unit has a high susceptibility
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L2: 3-10% of the map unit has a moderate to very high to risk
Phosphorus export risk	L2: 3-10% of the map unit has a high to extreme hazard

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> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u> The area proposed to be cleared does not contain locally / regionally significant flora, fauna, habitats, or assemblages of plants. The proposed clearing includes 0.20 hectares of vegetation in a degraded to very good condition with an area of disturbance through the middle of the application area. Given the limited clearing area and the low species diversity, it is not likely that the vegetation in the application area is representative of an area of high biodiversity. Suitable habitat for priority flora may be present.</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><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."</p> <p><u>Assessment:</u> The native vegetation may contain suitable habitat for the <i>Aspidites ramsayi</i> (Woma (southwest subpop)).</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u> The area proposed to be cleared is not likely to contain suitable habitat for Threatened flora.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> "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."</p>	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community (TEC). The vegetation within the application area is not likely to comprise the whole or a part of, or be necessary for the maintenance of, a TEC.</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> The extent of native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is considered to be part of a roadside ecological linkage in the local area.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<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> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of adjacent and/or nearby conservation areas.</p>	Not 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> Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.</p>	Not at variance	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> The mapped soils are highly susceptible to wind erosion and subsurface acidification.</p>	May be at variance	Yes <i>Refer to Section 3.2.4, above.</i>
<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> Noting the extent and purpose of the proposed clearing and its location, impacts to the Hill River and Tributaries Catchment are expected to be minimal. Additionally, no Public Drinking Water Sources Areas are recorded within the application area. The proposed clearing is unlikely to impact surface or groundwater quality.</p>	Not at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soils in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses overlap the application area and the sandy soils present, the proposed clearing is unlikely to contribute to waterlogging.</p>	Not at variance	No

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Photographs of the Vegetation (CPS Technology and Infrastructure, 2023)

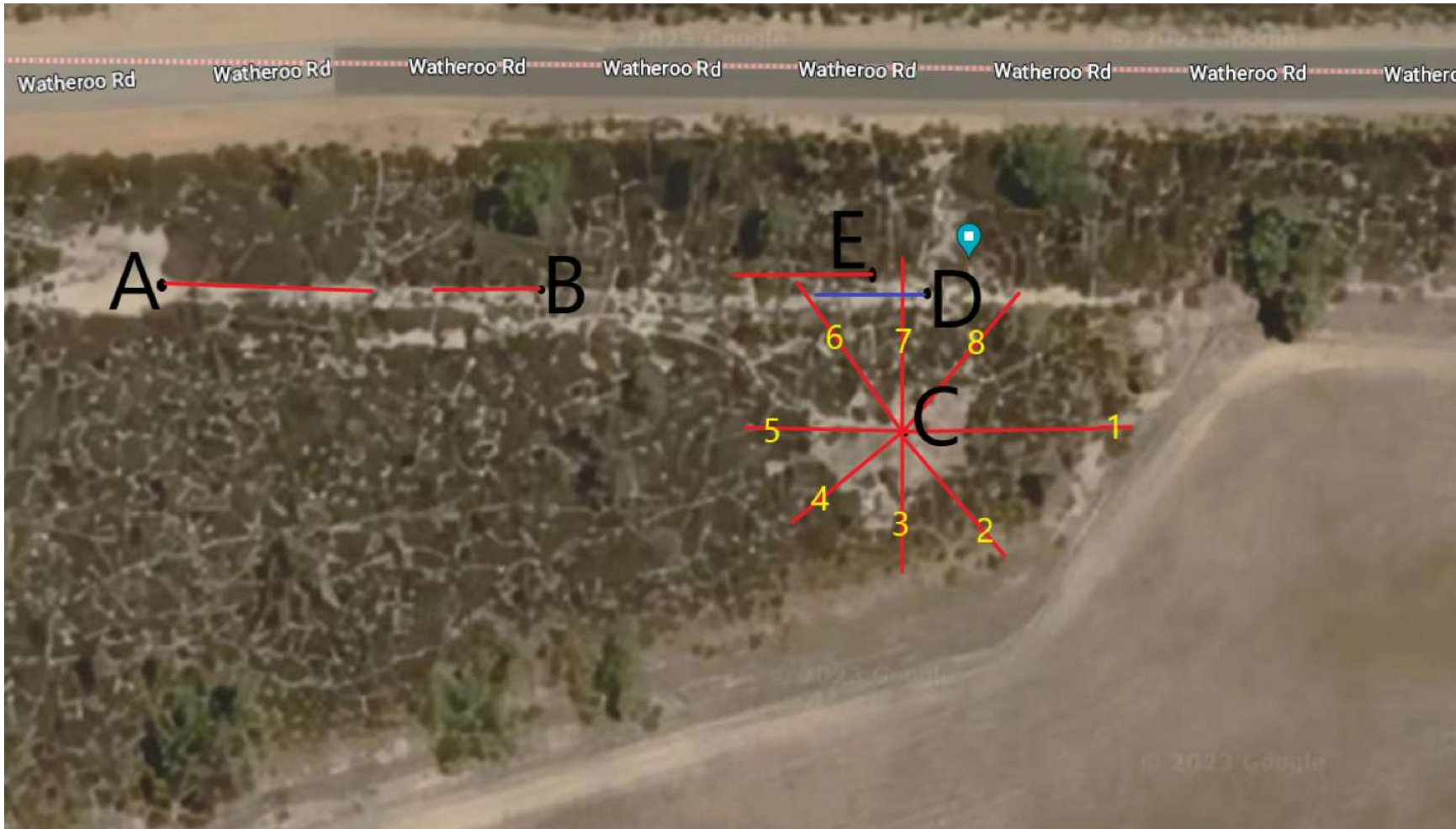


Figure a: Aerial map indicating the direction vegetation photos on Lot 500 on Plan 18005 road reserve Pin 11675072 (CPS Technology & Infrastructure, 2023).



Figure b: Application are photo a, photo taken in east direction.



Figure c: Application are photo B, photo taken in north-western direction.



Figure d: Application are photo C6, photo taken in north-western direction.



Figure e: Application are photo C7, photo taken in northern direction.



Figure f: Application are photo D, photo taken in western direction.



Figure g: Application are photo E, photo taken in a western direction.

Appendix E. Sources of information

E.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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