



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

### PERMIT DETAILS

Area Permit Number: CPS 9176/1  
File Number: DWERVT7321  
Duration of Permit: From 7 April 2021 to 7 April 2023

### PERMIT HOLDER

Arc Infrastructure Pty Ltd

### LAND ON WHICH CLEARING IS TO BE DONE

Railway reserve (PIN 1058526), Yilkari

### AUTHORISED ACTIVITY

The permit holder must not clear more than 0.98 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 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.

### 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"> <li>(a) the species composition, structure, and density of the cleared area;</li> <li>(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;</li> <li>(c) the date that the area was cleared;</li> <li>(d) the size of the area cleared (in hectares); and</li> <li>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and</li> <li>(f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 2.</li> </ul>

### 4. Reporting

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

## DEFINITIONS

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

**Table 2: Definitions**

<b>Term</b>	<b>Definition</b>
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.
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.

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## END OF CONDITIONS



**Meenu Vitarana**  
**A/MANAGER**  
NATIVE VEGETATION REGULATION

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

15 March 2021

# SCHEDULE 1

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

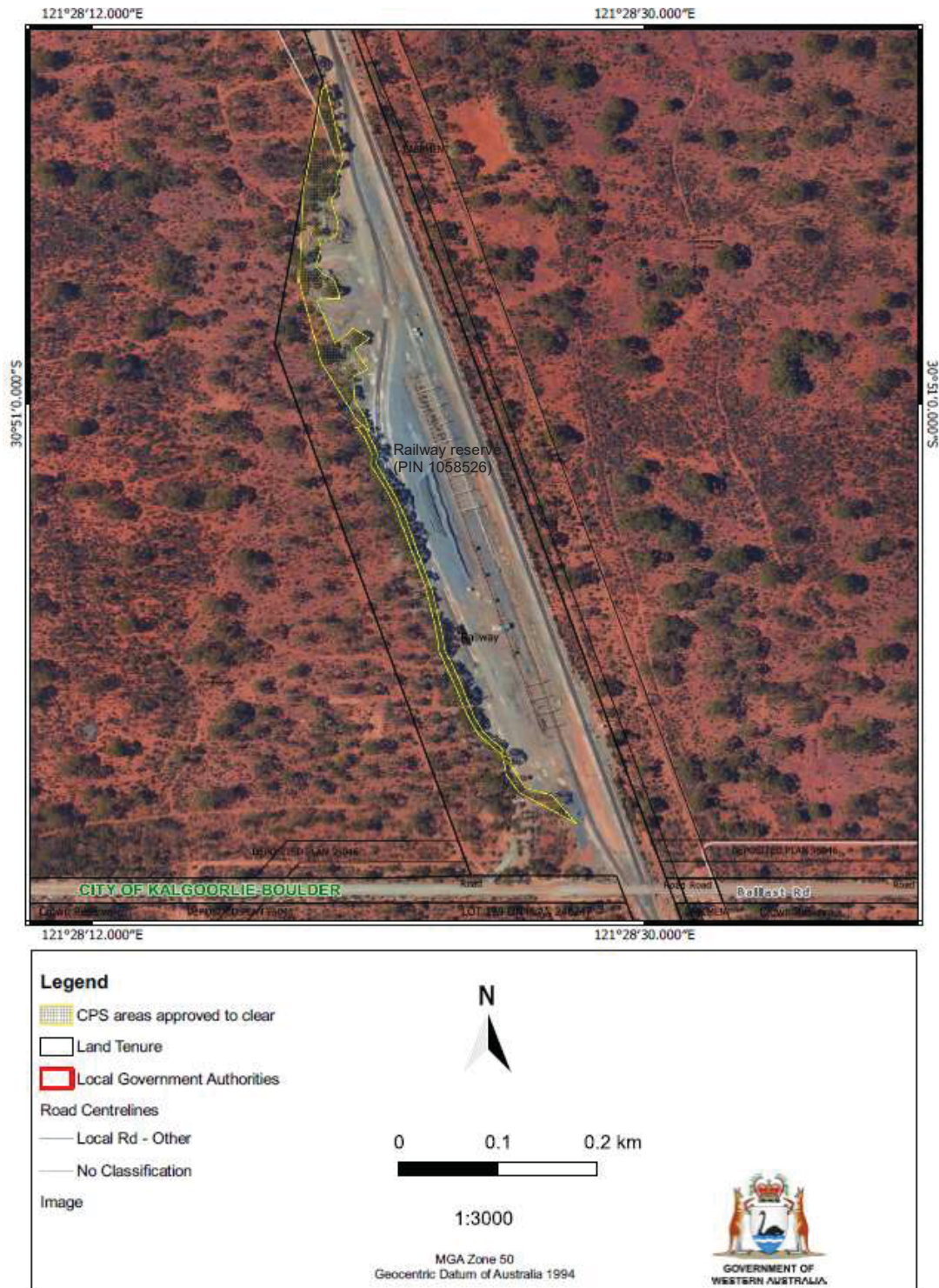


Figure 1: Map of the boundary of the area within which clearing may occur



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

<b>Permit number:</b>	CPS 9176/1
<b>Permit type:</b>	Area permit
<b>Applicant name:</b>	Arc Infrastructure Pty Ltd
<b>Application received:</b>	12/01/2021
<b>Application area:</b>	0.98 hectares of native vegetation
<b>Purpose of clearing:</b>	Railway infrastructure
<b>Method of clearing:</b>	Mechanical
<b>Property:</b>	Railway reserve (PIN 1058526)
<b>Location (LGA area/s):</b>	City of Kalgoorlie Boulder
<b>Localities (suburb/s):</b>	Yilkari

### 1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous (see Figure 1, Section 1.5). The application is to selectively clear trees and shrubs to facilitate the upgrade of a siding for use with the existing rail infrastructure.

### 1.3. Decision on application

<b>Decision:</b>	Granted
<b>Decision date:</b>	15 March 2021
<b>Decision area:</b>	0.98 hectares of native vegetation, as depicted in Section 1.5, below.

### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix G.1), 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 will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values

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 environmental values and can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing, and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

### 1.5. Site map

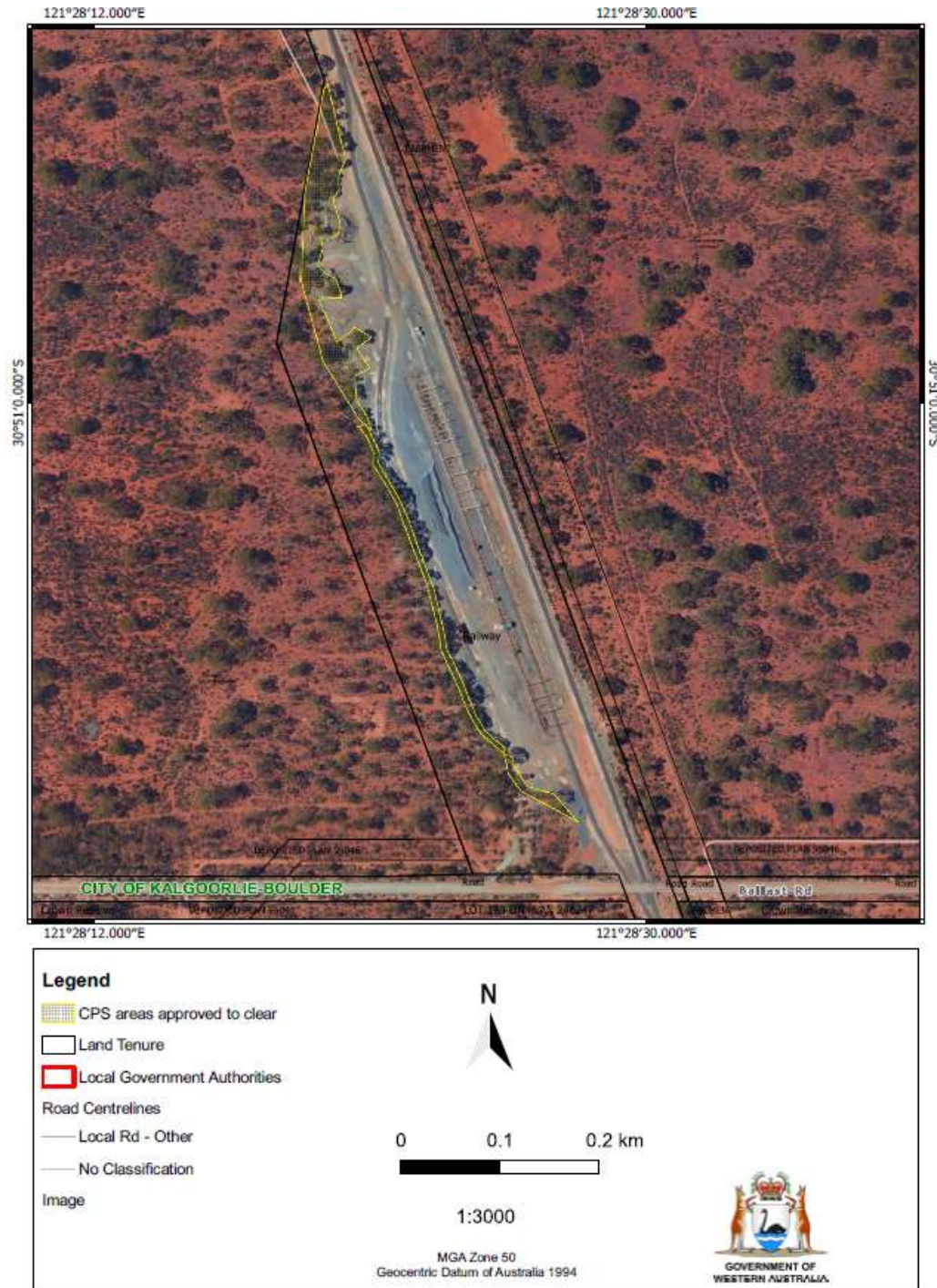


Figure 1 Map of the application area

The area crosshatched 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

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

## 3 Detailed assessment of application

### 3.1. Avoidance and mitigation measures

Comments submitted by the applicant, demonstrating that the area chosen for proposed rail siding was an area previously cleared and therefore mostly consists of regrowth due to previous 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.

### 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 **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to the surrounding vegetation in the form of introduced weeds. 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. Remnant vegetation

##### Assessment

The application area is adjacent to intact remnant vegetation which is likely to be within a very good (Keighery, 1994) condition or better. The proposed clearing has the potential to introduce weeds to the adjacent vegetation.

##### Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on the adjacent vegetation can be managed by taking steps to minimise the risk of the introduction and spread of weeds.

##### Conditions

To address the above impacts, weed management condition will be required as a management measure on the clearing permit.

### 3.3. Relevant planning instruments and other matters

The City of Kalgoorlie Boulder were invited to comment on the proposed clearing but did not provide a response.

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

**End**

## Appendix C. Site characteristics

### C.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It adjacent to existing rail infrastructure on one side and a large area of native vegetation on the other. The proposed clearing area is part of a large area of vegetation.</p> <p>Aerial imagery indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 90 per cent of the original native vegetation cover.</p>
Ecological linkage	No ecological linkages are mapped within the application area, no significant linkages are considered to exist within the application area as the local area retains a high amount of remnant vegetation.
Conservation areas	The nearest conservation area to the application area is the Lakeside Timber Reserve which is located just over 10 kilometers from the application area.
Vegetation description	<p>Photographs provided by the applicant indicate the vegetation within the proposed clearing area consists of several Eucalypt species over mixed shrubs. Representative photos are available in Appendix F.</p> <p>This is consistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> <li>Coolgardie 9, which is described as Wheatbelt, York gum, salmon gum etc. Eucalyptus loxophleba, E. salmonophloia. Goldfields; gimlet, redwood etc. E. salubris, E. oleosa. Riverine; rivergum E. camaldulensis. Tropical; messmate, woollybutt (Shepherd et al, 2001)</li> </ul> <p>The mapped vegetation type retains approximately 97 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>Photographs provided by the applicant indicate the vegetation within the proposed clearing area is in good to degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> <li>Good: Vegetation structure significantly altered with obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate; to</li> <li>Degraded: Basic vegetation structure severely impacted by disturbance, scope for regeneration but not to a state approaching good condition without intensive management.</li> </ul> <p>The full Keighery (1994)) condition rating scale is provided in Appendix E. Representative photos are available in Appendix F.</p>
Climate and landform	The mean annual rainfall mapped within the application area is 300 millimeters. The application area is within a flat landscape.
Soil description	The soil is mapped as Mx43, briefly described as; Gently undulating valley plains and pediments; some outcrop of basic rock
Land degradation risk	The mapped soil type has low risk of all forms of land degradation.
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses and/or wetlands intersect the application area. The closest water body to the application area is Lake Lefroy which is located approximately 1.6 kilometres from the application area.



Characteristic	Details
Hydrogeography	The application area is within the Goldfields Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> . The mapped groundwater salinity within the application area is >35000 milligrams per litre.
Flora	15 flora records in local area, none of which area threatened. The nearest flora record is a Priority 3 species <i>Alyxia tetanifolia</i> found on the same soil type as the application area.
Ecological communities	There are no mapped Threatened Ecological Communities or Priority Ecological Communities within the local area.
Fauna	11 fauna records of conservation significance within the local are with the nearest record being 6.3 kilometers from the application area. This record is of a of a grey-tailed tattler, a type of wading bird.

## Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<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> The area proposed to be cleared is not likely to contain locally or regionally significant flora, fauna, habitats, assemblages of plants.</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> The area proposed to be cleared does not contain critical, habitat for conservation significant fauna.</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> The area proposed to be cleared is unlikely to contain habitat for flora species listed 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> The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance	No
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<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 the mapped vegetation type is 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>	Not 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> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance	Yes (refer 3.2 above)
<b>Environmental value: land and water resources</b>		
<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 1.6 kilometers the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><b>Principle (g):</b> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><b>Assessment:</b> The mapped soils are not susceptible to wind, water erosion, nutrient export, salinity or phosphorus export loss. Noting the extent of the application area, the condition of the vegetation and quantity of intact vegetation that will remain, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p><b>Principle (i):</b> <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><b>Assessment:</b> Given no water courses or wetlands are recorded within the application and the distance to the closest waterbody is 1.6 kilometers away from the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No
<p><b>Principle (j):</b> <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><b>Assessment:</b> 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>Given no water courses or wetlands are recorded within 1.6 kilometres of the application area, the proposed clearing is unlikely to contribute to waterlogging.</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.

Condition	Description
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

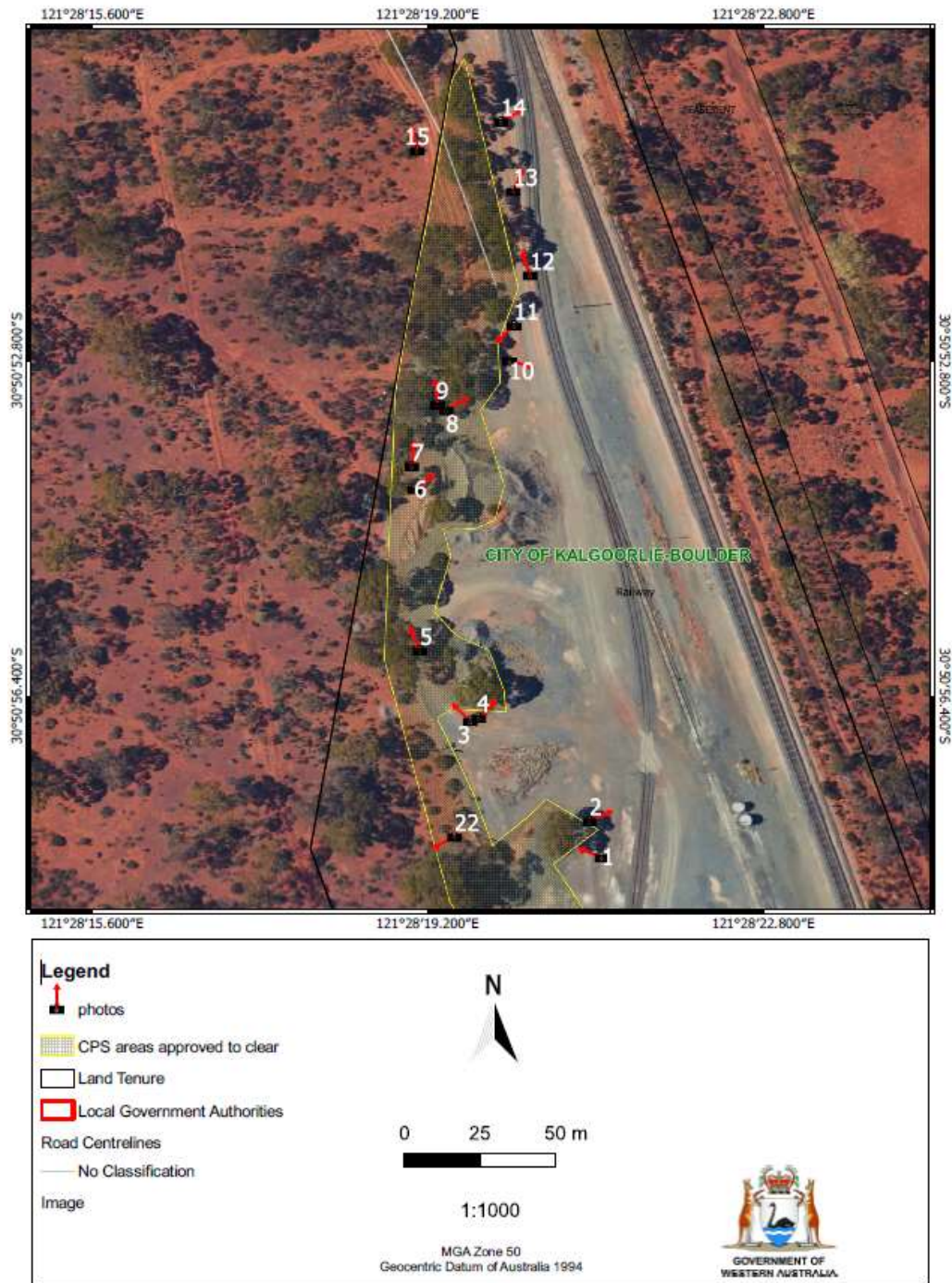


Figure 2: Map showing locations from which photographs were taken



Figure 3: Map showing locations from which photographs were taken



Photograph 1: Representative vegetation application area within the application area (Arc Infrastructure Pty Ltd, 2021)



Photograph 2, (Arc Infrastructure Pty Ltd, 2021)



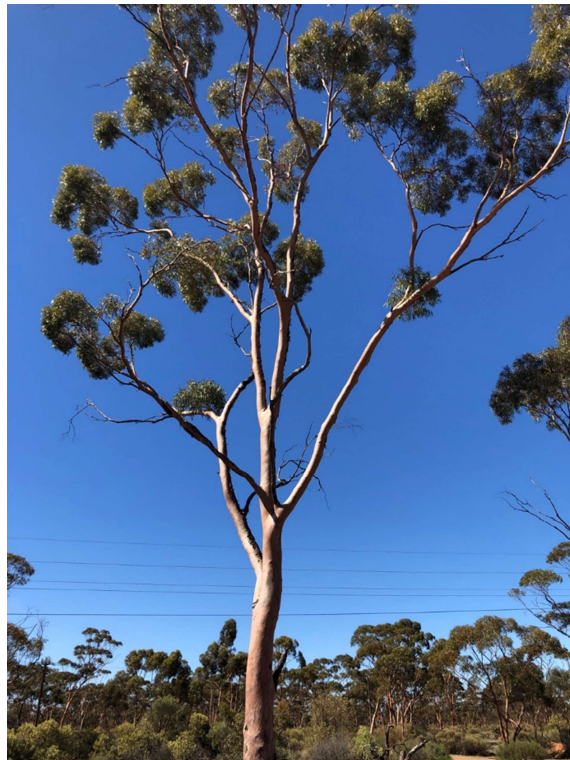
Photograph 3, (Arc Infrastructure Pty Ltd, 2021)



Photograph 4 (Arc Infrastructure Pty Ltd, 2021)



Photograph 5 (Arc Infrastructure Pty Ltd, 2021)



Photograph 6 (Arc Infrastructure Pty Ltd, 2021)





Photograph 7 (Arc Infrastructure Pty Ltd, 2021)



Photograph 8 (Arc Infrastructure Pty Ltd, 2021)



Photograph 9 (Arc Infrastructure Pty Ltd, 2021)



Photograph 10 (Arc Infrastructure Pty Ltd, 2021)



Photograph 11 (Arc Infrastructure Pty Ltd, 2021)



Photograph 12 (Arc Infrastructure Pty Ltd, 2021)



Photograph 13 (Arc Infrastructure Pty Ltd, 2021)



Photograph 14 (Arc Infrastructure Pty Ltd, 2021)



Photograph 15 (Arc Infrastructure Pty Ltd, 2021)



Photograph 16 (Arc Infrastructure Pty Ltd, 2021)



Photograph 17 (Arc Infrastructure Pty Ltd, 2021)



Photograph 18 (Arc Infrastructure Pty Ltd, 2021)



Photograph 19 (Arc Infrastructure Pty Ltd, 2021)



Photograph 20 (Arc Infrastructure Pty Ltd, 2021)



Photograph 21 (Arc Infrastructure Pty Ltd, 2021)



Photograph 22 (Arc Infrastructure Pty Ltd, 2021)

## Appendix G. Sources of information

### G.1. GIS databases

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

## G.2. References

Arc Infrastructure Pty Ltd (2021) *Clearing permit application CPS 9176/1*, received 12 January 2021 (DWER Ref: DWERDT400418).

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

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](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 2 February 2021 June 2020).

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](https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF).

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>

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

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

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.

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 04 February 2021)