



# Clearing Permit Decision Report

## 1. Application details and outcomes

### 1.1. Permit application details

Permit number:	10286/1
Permit type:	Purpose Permit
Applicant name:	Silver Lake (Integra) Pty Ltd
Application received:	1 August 2023
Application area:	125 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 25/125 Mining Lease 25/133
Location (LGA area):	City of Kalgoorlie-Boulder
Colloquial name:	Maxwells / Cock-Eyed Bob Project

### 1.2. Description of clearing activities

Silver Lake (Integra) Pty Ltd proposes to clear up to 125 hectares of native vegetation within a boundary of approximately 260.16 hectares, for the purpose of mining related infrastructure. The project is located approximately 50 kilometres north west of Bulong, within the Shire of Kalgoorlie Boulder.

The application is to allow for mining activities which include a cut back to an existing open pit and extension of previously disturbed areas for associated infrastructure (Silver Lake, 2023).

### 1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	26 September 2023
Decision area:	125 hectares of native vegetation

### 1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 1 August 2023. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), results of a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may 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;
- impacts to riparian vegetation; and
- impacts to conservation significant fauna.

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 can be managed by conditions and is not likely to lead to an unacceptable risk to environmental values.

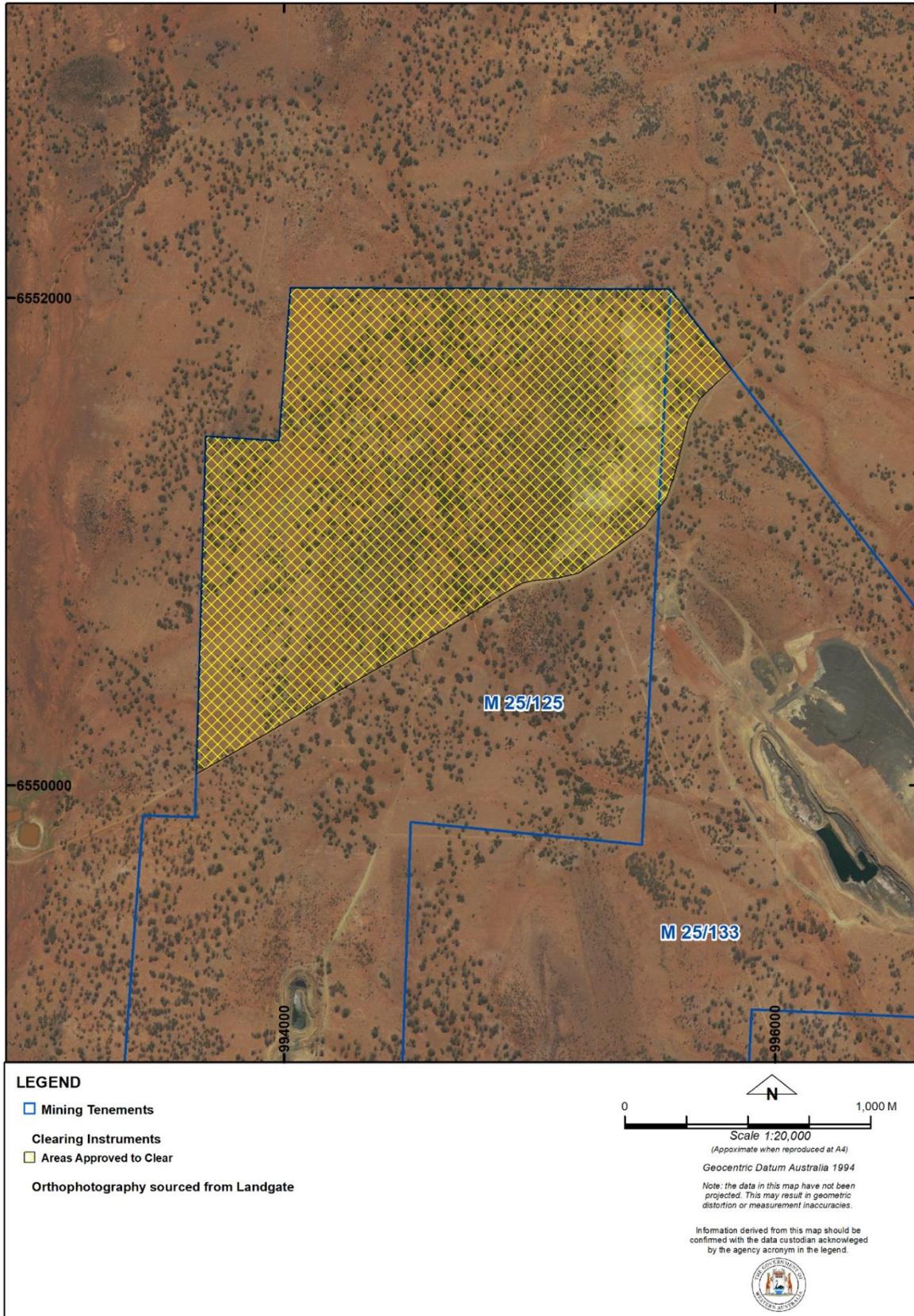
The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity; and

- where practicable, avoid clearing riparian vegetation.

### 1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.



**Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur 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)
- *Mining Act 1978* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

## 3. Detailed assessment of application

### 3.1. Avoidance and mitigation measures

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.

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures such as those listed below will be utilised:

- clearing will be kept to a minimum;
- previously disturbed areas will be utilised where possible; and
- induction and ongoing education programs will be used to reinforce awareness of procedures to prevent and control the spread of weeds, dust management and clearing within the Timber Reserve.

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 the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with standard avoid and minimise / hygiene management conditions.

### 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 22 August 2023 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (Kakarra Part A – WAD297/2020) over the area under application (DPLH, 2023). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2023). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

- A Mining Proposal / Mine Closure Plan approved under the *Mining Act 1978*.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

End

## Appendix A. Site characteristics

### A.1. Site characteristics

Characteristic	Details
Local context	The project is located approximately 50 kilometres north-west of Bulong, within the Shire of Kalgoorlie Boulder (GIS Database). The area is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). It is surrounded by similar vegetation and previous historical mining production (GIS Database).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	The southern portion of the application area is located within the Randell Timber Reserve (GIS Database). The condition of the vegetation in Randell Timber Reserve has been previously degraded by stock and feral animals (Outback Ecology, 2009), and historical mineral production has occurred within the application area (GIS Database). Previous advice from DPaW (2014) and aerial imagery (GIS Database) indicates that the proposed clearing will have some impact to the flora or vegetation values of the reserve, however not significantly.
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation association/s:</p> <ul style="list-style-type: none"> <li>501: Wheatbelt; York gum, salmon gum etc. <i>Eucalyptus loxophleba</i>, <i>E. salmonophloia</i>. Goldfields; gimlet, redwood etc. <i>E. salubris</i>, <i>E. oleosa</i>. Riverine; rivergum <i>E. camaldulensis</i>. Tropical; messmate, woolyb; and</li> <li>506: Salmon gum &amp; gimlet <i>Atriplex</i> spp., <i>Maireana</i> spp., <i>Eucalyptus salmonophloia</i>, <i>E. salubris</i> (GIS Database).</li> </ul> <p>A flora and vegetation survey was conducted over the application area by Outback Ecology during October, 2008 (Outback Ecology, 2009). The following vegetation associations were recorded within the application area (Outback Ecology, 2009):</p> <p><b>Acacia tall shrubs/low trees over low Shrubland:</b></p> <ul style="list-style-type: none"> <li>Ab: <i>Acacia burkittii</i> tall open scrub over mixed open shrubland over scattered herbs.</li> </ul> <p><b>Chenopod shrublands</b></p> <ul style="list-style-type: none"> <li>AtPa: <i>Acacia tetragonophylla</i>, <i>Pittosporum angustifolium</i> scattered low trees over <i>Maireana sedifolia</i> open low heath.</li> </ul> <p><b>Creek and major drainage line complex</b></p> <ul style="list-style-type: none"> <li>EuC: Mixed <i>Eucalyptus</i> Open Forest</li> </ul> <p><b>Eucalypt open forest/woodland over Chenopod heath</b></p> <ul style="list-style-type: none"> <li>EmIMs: <i>Eucalyptus melanoxyton</i>, <i>Eucalyptus lesouefii</i> open forest over <i>Maireana sedifolia</i> open low heath.</li> <li>EsIMs: <i>Eucalyptus salmonophloia</i>, <i>Eucalyptus lesouefii</i> open forest over <i>Maireana sedifolia</i>, <i>Tecticornia</i> sp.</li> </ul>
Vegetation condition	<p>The vegetation survey (Outback Ecology, 2009) indicates the vegetation within the proposed clearing area is in 'Very Good' to 'Completely Degraded' (Trudgen, 1991) condition, described as</p> <ul style="list-style-type: none"> <li>Very Good: Majority of the application area. 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; and</li> <li>Completely Degraded: The pit. 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.</li> </ul> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>
Climate and landform	The region is characterised as semi-arid warm Mediterranean climate with a mean annual rainfall of 264.6 millilitres (BoM, 2023). The application area is located within the Kalgoorlie Province which consists of undulating plains (with some sandplains, hills and salt lakes) on the granite rocks and greenstone of the Yilgarn Craton (Tille, 2006).
Soil description	The soils of the application area are broadly mapped as the following soil type: <ul style="list-style-type: none"> <li>265k9: Mx43 land system. Gently undulating valley plains and pediments; some outcrop of basic rock (DPIRD, 2023).</li> </ul>
Land degradation risk	The application area is mapped within the Mx43 land system, which is characterised by gently undulating valley plains and pediments ad some outcrops (DPIRD, 2023). The Mx43 land system associated with the application area is not susceptible to erosion (Tille, 2006).

Characteristic	Details
Waterbodies	The desktop assessment and aerial imagery indicated that there are no permanent watercourses or water bodies mapped within the application area (GIS Database). One minor non-perennial watercourse runs north to south through the middle of the application area (GIS Database).
Hydrogeography	The application area is located within the proclaimed Goldfields groundwater area under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database).
Flora	No Threatened or Priority flora species were recorded within the application area (Outback Ecology, 2009).  One priority flora species, <i>Eremophila arachnoides subsp. tenera</i> (Priority 3) has been recorded within 20 kilometres of the application area and suitable habitat (plains receiving overland flow/along drainage lines) (Western Australian Herbarium, 1998-) is present within the application area.
Ecological communities	No Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Outback Ecology, 2009; GIS Database).  The application area is mapped within the Priority 3 'Mt Belches <i>Acacia quadrimarginea</i> / <i>Ptilotus</i> Banded Ironstone Community' (GIS Database). This Priority Ecological Community (PEC) was found on low-relief Banded Ironstone Formation (BIF) ridges east of the application area within the Randell Timber Reserve and is historically known from the project area where it has been disturbed by mining (Outback Ecology, 2009).
Fauna	There was no fauna survey conducted over the application area. There are no conservation significant fauna species that have been recorded within the application area (GIS Database). Based on the flora and vegetation survey conducted by Outback Ecology (2009) and previous fauna records within the surrounding area, two conservation significant fauna species could potentially occur.

## A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion Coolgardie	12,912,204.35	12,648,491.39	97.96	2,114,349.37	16.37
Beard vegetation associations - State					
Veg Assoc No. 501	48,022.40	47,889.33	99.72	6,766.43	14.09
Veg Assoc No. 506	98,187.43	98,050.28	99.86	12,572.20	12.80
Beard vegetation associations - Bioregion					
Veg Assoc No. 501	43,938.63	43,805.56	99.70	6,766.43	15.40
Veg Assoc No. 506	98,187.43	98,050.28	99.86	12,572.20	12.80

Government of Western Australia (2019)

## A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
<i>Eremophila arachnoides subsp. tenera</i>	P3	Y	<20	16
<i>Eucalyptus x brachyphylla</i>	P4	N	<20	24
<i>Eucalyptus kruseana</i>	P4	N	<10	27
<i>Eucalyptus websteriana subsp. norsemanica</i>	P1	N	<20	15

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
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T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

### A.1. Fauna analysis table

Species name	Common name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)
<i>Actitis hypoleucos</i>	common sandpiper	MI	N	<10
<i>Amytornis textilis textilis</i>	western grasswren, thick-billed grasswren (western)	P4	Y	<40
<i>Calidris ruficollis</i>	red-necked stint	MI	N	<40
<i>Leipoa ocellata</i>	malleefowl	VU	N	<40
<i>Platycercus icterotis xanthogenys</i>	western rosella (inland)	P4	Y	<20

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: Other Specially Protected, MI: Migratory

### Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<p><b>Principle (a):</b> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>The vegetation associations, fauna habitats and landform types present within the permit area, are well represented in surrounding areas (Outback Ecology, 2009; GIS Database).</p> <p>One priority flora species, <i>Eremophila arachnoides subsp. tenera</i> (Priority 3) has been recorded within 20 kilometres of the application area and suitable habitat (plains receiving overland flow/along drainage lines (Western Australian Herbarium (1998-)) is present within the application area. This species is known from 16 records from the Coolgardie, Great Victoria Desert and Murchison Interim Biogeographic Regionalisation for Australia (IBRA) regions (Western Australian Herbarium (1998-)). The application area is not considered significant for this species as the habitat present is available within the surrounding environment and impacts to this species may be managed through implementing permit conditions to avoid riparian vegetation where possible.</p>	Not likely to be at variance	No
<p><b>Principle (b):</b> "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></p> <p>The area proposed to be cleared does contain potential foraging habitat for two conservation significant (Priority 4) avian species: <i>Amytornis textilis textilis</i> and <i>Platycercus icterotis xanthogenys</i> (Outback Ecology, 2009; GIS Database). These species are likely to use the application area for foraging and dispersal, but it is not likely to represent significant habitat for these species as suitable habitat is available in the surrounding environment. Impacts to fauna can be managed by implementing slow directional clearing to allow fauna to move into the adjacent receiving environment.</p>	Not likely to be at variance	No
<p><b>Principle (c):</b> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
No Threatened flora species were recorded within the application area and no threatened flora species have been recorded within 20 kilometres of the application area (Outback Ecology, 2009; GIS Database).		
<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>No Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Outback Ecology, 2009; GIS Database).</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></p> <p>The extent of the mapped vegetation type 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>	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></p> <p>The application area is partly located within the Randell Timber Reserve (GIS Database). The condition of the vegetation in Randell Timber Reserve has been previously degraded by stock and feral animals (Outback Ecology, 2009), and historical mineral production has occurred within the application area (GIS Database). The proposed clearing is therefore at variance to principle (h) however it is not likely to significantly impact on the environmental values of this area (GIS Database).</p>	At variance	No
<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></p> <p>Given no permanent water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. One minor non-perennial watercourse runs north to south through the middle of the application area (GIS Database). Impacts to associated vegetation may be managed with a water management condition, requiring proponents to avoid riparian vegetation where feasible.</p>	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></p> <p>The mapped soils are not susceptible to erosion. Noting the [extent / location] of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>Given no permanent water courses, wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be 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></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

## Appendix 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.
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. Sources of information

### D.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)
- Bush Forever (Regional Scheme) (DPLH-022)
- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- 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)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim 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 Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities

- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

## D.2. References

- Bureau of Meteorology (BoM) (2023) Bureau of Meteorology Website – Climate Data Online. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 19 September 2023).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- Department of Environment Regulation (DER) (2014) *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)
- DPaW (2014) Advice regarding Randells Timber Reserve for CPS 6329/1. Department of Parks and Wildlife, Environmental Management Branch, December 2014.
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 18 September 2023).
- Department of Primary Industries and Regional Development (DPIRD) (2023) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 18 September 2023).
- Department of Water and Environmental Regulation (DWER) (2021) 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)
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: [http://www.epa.wa.gov.au/sites/default/files/Policies\\_and\\_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey\\_Dec13.pdf](http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf)
- Government of Western Australia (2019) 2018 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>
- Outback Ecology (2009) Salt Creek Level 2 and Maxwells/Cock-Eyed Bob Level 1 Vegetation and Flora Surveys. Report prepared for Integra Mining Limited by Outback Ecology, April 2009.
- Silver Lake (2023) Clearing permit application form, CPS 10286/1, received 1 August 2023.
- Tille, P (2006) Soil-landscapes of Western Australia's Rangelands and Arid Interior. Technical Report 313. Department of Agriculture and Food, Western Australia. ISSN 1039-7205.
- 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.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 20 September 2023).

## 4. Glossary

### Acronyms:

<b>BC Act</b>	<i>Biodiversity Conservation Act 2016</i> , Western Australia
<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water, Australian Government
<b>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DMIRS)
<b>DoEE</b>	Department of the Environment and Energy (now DCCEEW)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora (now known as Threatened Flora)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

## **Definitions:**

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

### **T            Threatened species:**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

**Threatened fauna** is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

**Threatened flora** is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

### **CR            Critically endangered species**

Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

### **EN            Endangered species**

Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

### **VU            Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

## **Extinct Species:**

### **EX            Extinct species**

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

### **EW            Extinct in the wild species**

Species that "*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

## **Specially protected species:**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

- MI**      **Migratory species**  
 Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).
- Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.
- Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.
- CD**      **Species of special conservation interest (conservation dependent fauna)**  
 Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).
- Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.
- OS**      **Other specially protected species**  
 Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).
- Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.
- P**      **Priority species:**
- Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.
- Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.
- Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1**      **Priority One - Poorly-known species**  
 Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2**      **Priority Two - Poorly-known species**  
 Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
- P3**      **Priority Three - Poorly-known species**  
 Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
- P4**      **Priority Four - Rare, Near Threatened and other species in need of monitoring**  
 (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special

protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**Principles for clearing native vegetation:**

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) 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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) 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) 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.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.