

# **Clearing Permit Decision Report**

# 1. Application details and outcomes

## 1.1. Permit application details

Permit number: 10469/1

Permit type: Purpose Permit

Applicant name: BHP Nickel West Pty Ltd

Application received: 2 January 2024
Application area: 13 hectares

Purpose of clearing: Maintenance and replacement of underground water pipeline

Method of clearing: Mechanical Removal

Tenure: Miscellaneous Licence 26/288

Location (LGA area/s): City of Kalgoorlie-Boulder

Colloquial name: Binduli Water Pipeline

### 1.2. Description of clearing activities

BHP Nickel West Pty Ltd (BHP NiW) proposes to clear up to 13 hectares of native vegetation within a boundary of approximately 47.9 hectares, for the purpose of maintenance and replacement of underground water pipeline (BHP, 2024a). The project is located approximately 15 kilometres south of City of Kalgoorlie-Boulder, within the City of Kalgoorlie-Boulder.

Proposed activities include (BHP, 2024a):

- installation of new polyethylene pipe, majority of the piping being laid in exsisting trench and approximately 3.5 kilometres in a new trench,
- · connections to exsisting asbestos cement and polyethylene pipe, and
- removal and disposal of redundant asbestos cement pipeline by licenced contractor.

# 1.3. Decision on application and key considerations

Decision: Grant

Decision date: 26 March 2024

**Decision area:** 13 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 Energy, Mines, Industry Regulation and Safety (DEMIRS) on 16 January 2024. DEMIRS advertised the application for a public comment period of 21 days, and 1 submission was received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix E), supporting information provided by the applicant including the results of flora and vegetation surveys, 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 Delegated Officer also took into consideration the purpose of the clearing to facilitate the maintenance and replacement of underground water pipeline.

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.

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 have long-term adverse impacts on environmental values.

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

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

# 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 510 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)
- Health (Asbestos) Regulations 1992
- Mining Act 1978 (WA)
- Rights in Water and Irrigation Act 1914

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)
- Technical guidance Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2020)

# 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. Control measures were submitted by the applicant demonstrating (BHP, 2024b):

- previous cleared and disturbed areas will be prioritised to minimise clearance of native vegetation, where possible;
- clearing activities will be undertaken in a slow, progressive manner in a single direction towards adjacent native vegetation to allow fauna to move into adjacent native vegetation ahead of clearing;
- maintain the natural surface water flow of minor ephemeral watercourses;
- separate weed contaminated soil prior to stripping and stockpile and weed management through internal management process;
- topsoil will be stockpiled and reused for landscaping and rehabilitation, in accordance with BHP NiW Topsoil Stripping and Handling Procedure; and
- removal and disposal of asbestos will be undertaken by a licensed asbestos removalist, in accordance with BHP NiW Asbestos Containing Material Procedure.

## 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) 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 C) identified the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with avoid and minimize, hygiene measures and directional clearing management conditions.

### 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 16 January 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. One submission was received in relation to this application (Appendix A).

City of Kalgoorlie-Boulder Planning Officer raised concerns with the replacement of asbestos-containing water pipe in relation to Health (Asbestos) Regulations 1992 (Submission, 2024). The applicant has demonstrated awareness of asbestos-related requirements (BHP, 2024b).

There is one native title claim over the area under application (DPLH, 2024). This claim has been determined by the Federal Court on behalf of the claimant Marlinyu Ghoorlie (WC2017/007). 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, 2024). 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 Programme of Work 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 CPS 10469/1 Page 3

Appendix A. Details of public submissions	
Summary of comments	Consideration of comment
City of Kalgoorlie-Boulder Planning Officer raised concerns with the replacement of asbestos-containing water pipe.	Considered in Relevant planning instruments and other matters (3.3).

# Appendix B. Site characteristics

# B.1. Site characteristics

Characteristic	Details
Local context	The project area is located approximately 15 kilometres south of Kalgoorlie-Boulder (GIS Database). The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). The predominant land use in the region is pastureland, conservation, and mining activities.
Conservation areas and ecological linkage	There are three conservation areas within 10 kilometres of the application area (GIS Database):  • Kurrawang Nature Reserve, approximately 4.8 kilometres southwest,  • Kalgoorlie Arboretum, approximately 6 kilometres northeast, and  • Lakeside Timber Reserve, approximately 8.7 kilometres east.  According to available databases, the application does not contain any known or mapped ecological
Vegetation description	<ul> <li>linkages (GIS Database).</li> <li>The vegetation of the application area is broadly mapped as the following Beard vegetation associations (GIS Database):         <ul> <li>Coolgardie 9: Medium woodland; coral gum (<i>Eucalyptus torquata</i>) and goldfields blackbutt (<i>Eucalyptus lesouefii</i>);</li> <li>Coolgardie 123: Succulent steppe with open low woodland; sheoak over saltbush and bluebush; and</li> <li>Coolgardie 1294: Medium woodland; coral gum (<i>Eucalyptus torquata</i>).</li> </ul> </li> <li>Flora and vegetation surveys were conducted over the application area by Biologic (2021) and Botanica (2023) during September, 2021 and October, 2022. The following vegetation associations were recorded within the application area (Biologic, 2021; Botanica, 2023):         <ul> <li>Eucalyptus Mid Woodland: Low open to mid woodland of <i>Eucalyptus salubris</i> and <i>Eucalyptus salmonophloia</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> and <i>Eremophila scoparia</i> and low open mixed shrubland on clay-loam plain and lower</li> </ul> </li></ul>
Vegetation	<ul> <li>slopes; and</li> <li>Eucalyptus Low Open Mallee Woodland: Low open woodland of Eucalyptus lesouefii and other Eucalyptus species over mid sparse shrubland of Melaleuca sheathiana and low mixed shrubland over occasional patches of Triodia hummock grasses on clay-loam plains and flats.</li> </ul>
Vegetation condition	Aerial imagery indicate the vegetation within the proposed clearing area is in Good to Completely Degraded (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix D. A large portion of the application area (20.3 ha, 43.2%) has already been cleared or has been previously disturbed from existing pipeline and access tracks (BHP, 2024b).
Climate and landform	The climate of the Coolgardie bioregion is characterised as arid to semi-arid, (CALM, 2002). The annual average rainfall is approximately 263 millimetres recorded at Kalgoorlie-Boulder Airport (BoM, 2024). The application area is mapped within elevations of 350 to 370 AHD (GIS Database).
Soil description and land degradation risk	<ul> <li>The soil is mapped as the following soil types (DPIRD, 2024):</li> <li>Mx45 atlas system: described as gently undulating valley plains and pediments; some outcrop of basic rock, and</li> <li>BB5 atlas system: described as rocky ranges and hills of greenstones-basic igneous rocks.</li> <li>The soils mapped within the application area have a high to extreme risk for wind and water erosion, and moderate to high waterlogging and inundation risk (GIS Database).</li> </ul>
Hydrogeography and waterbodies	The desktop assessment and aerial imagery indicated that three ephemeral drainage lines transect the area proposed to be cleared (GIS Database). There is a Goldfields Groundwater Area Management Plan under the <i>Rights in Water and Irrigation Act 1914</i> . The mapped groundwater salinity is between 14,000 to more than 35,000 milligrams per litre total dissolved solids which is described as hypersaline (GIS Database). There are no mapped Public Drinking Water Source Areas within or near the application area (30 kilometres) (GIS Database).
Flora	There are no records of Threatened or Priority flora within the application area (Biologic, 2021; Botanica, 2023; GIS Database). There are records of 24 conservation significant flora within 30 kilometres of the application area (GIS Database).
Ecological communities	There are no records of Threatened or Priority Ecological Communities within or near the application area (30 kilometres (GIS Database). The nearest Priority Ecological Community is Emu Land System (P3) located approximately 40 kilometres northeast from the application area (GIS Database).

Fauna and fauna habitat

There are no records of Threatened or Priority fauna within the application area (Biologic, 2021; Botanica, 2023; GIS Database). There are 16 records of conservation significant fauna within 30 kilometres of the application area (GIS Database). No fauna habitat has been defined within the application area (Biologic, 2021). The pipeline corridor consists of previous clearing and disturbances from existing roads and infrastructure (Biologic, 2021).

# B.2. Flora analysis table

Conservation significant flora taxa likelihood of occurrence within the application area and broader surrounds (Biologic, 2021).

	Conser	vation	Status		Distance	Likelihood
Taxon	DBCA	BC Act	EPBC Act	Habit and Habitat	to nearest record	of Occurrence
Eremophila praecox	P2			Broom-like shrub, 1.5-3 m high. Fl. purple, Oct or Dec. Red/brown sandy loam. Undulating plains.	1.2 km NE	Highly Likely
Alyxia tetanifolia	P3			Erect, rigid, pungent shrub, 1-2 m high, to 2.5 m wide. Fl. white-cream, May to Jun or Nov. Sandy clay, loam, concretionary gravel. Drainage lines, near lakes.	1.6 km N	Highly Likely
Notisia intonsa	P3			Prostrate, clumping annual herb, to 0.1 m high. Fl. grey-pink-brown, Sept-Nov. Red clay, ironstone/quartz gravel, cracking clay. Floodplains, slopes, salt lakes.	1.2 km S	Likely
Isolepis australiensis	P3			Annual, grass-like or herb (sedge), 0.03-0.055 m high. Fl. Jun or Sep. Silty sand, sandy clay. Lake margins, pools.	1.6 km WSW	Likely
Eucalyptus jutsonii subsp. jutsonii	P4			(Mallee), 4-7 m high, bark rough over most stems, grey to light grey-brown. Red to pale orange deep sands. Undulating areas and on dunes.	1.5 km W	Likely
Gastrolobium graniticum	Т	VU	EN	Erect, open shrub, to 2.5 m high. Fl. Yellow & orange & red, Aug to Sep. Sand, sandy loam, granite. Margins of rock outcrops, along drainage lines.	19.7 km SW	Possible
Acacia websteri	P1			Shrub, 1.2-5 m high, bark fibrous. Fl. Yellow, Jan, June. Red sand, clay or loam. Low-lying areas, flats.	19.7 km SW	Possible
Goodenia salina	P2			Annual, herb, 0.02-0.2 m high. Well-drained, saline, grey or brown loamy clay. Low gypseous dunes near salt pans.	1.6 km WSW	Possible
Elachanthus pusillus	P2			Ascending or decumbent annual, herb, to 0.15 m high. Fl. yellow-green, Aug to Oct.	8.2 km NE	Possible
Lepidium merrallii	P2			Erect to spreading annual (possibly ephemeral), herb, 0.03-0.15 m high. Clay loam.	19.7 km SW	Possible
Lepidium fasciculatum	P3			Erect annual, herb, (0.1-)0.3-0.6 m high.	7.8 km NE	Possible
Cyathostemon verrucosus	P3			Low spreading shrub, to 0.4 m tall. Fl. White, Mar-Apr, Sept-Dec. Yellow sand. Sandplain, flat or undulating.	10.3 km NNE	Possible

	Conser	vation	Status		Distance	Likelihood
Taxon	DBCA	BC Act	EPBC Act	Habit and Habitat	to nearest record	of Occurrence
Austrostipa sp. Carlingup Road (S. Kern & R. Jasper LCH 18459)	P3			Perennial tussock grass up to 0.4 m tall. Fl. Sept-Nov. Cracking clay, red rocky loam, sandy clay. Slopes and claypans.	11.7 km SE	Possible
Chrysocephalum apiculatum subsp. norsemanense	P3			Upright, spreading, herbaceous annual, to 0.4 m high. Fl. Yellow, Aug-Oct. Loamy sand. Gentle undulating plain, granite hills, sandplain.	19.1 km SW	Possible
Alyogyne sp. Great Victoria Desert (D.J. Edinger 6212)	P3			Erect shrub, 0.3-2 m high. Fl. pink/purple, Aug to Dec. Red/orange loamy sand. Flats and sandplains.	19.7 km SW	Possible
Eremophila caerulea subsp. merrallii	P4			Spreading or sprawling shrub, to 0.35 m high, to 0.8 m wide. Fl. blue-purple, Oct to Dec. Sand, clay or loam. Undulating plains.	11.1 km WSW	Possible

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

# B.3. Fauna analysis table

Conservation significant fauna taxa likelihood of occurrence within the application area and broader surrounds (Biologic, 2021).

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	Conservation Status		s			currence			
Common Name (Scientific Name)	Preferred Broad Habitats	Nearest Record to the Survey Area	Likelihood of Occurrence	Осситенсе	Comments				
Mammals				(2)					
Greater bilby (Macrotis lagotis)	VU	vu		VU	Sandy spinifex and tussock grasslands/shrublands throughout current distribution. In the southwest, mixture of woodland including Jarrah, Marri and Wandoo (Abbott, 2001).	~5.2 km (NE) – from road corridor and ~13 km (N) – of Smelter Survey Area -1976 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Chuditch (Dasyurus geoffroii)	VU	yu		NT	The species is known to occupy in a wide range of habitats from woodlands, dry sclerophyli (leafy) forests, riparian vegetation, beaches and deserts (DEC, 2012). In the jarrah forest, Chuditch occur in moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest particularly in riparian vegetation (Orell & Morris, 1994).	~37 km SSE - 1974 (DBCA, 2021c)	Highly Unlikely	N/A	Suitable habitat not present
Birds								*,	
Curlew sandpiper (Calidris ferruginea)	CR/MG	CR/MG		NT	Inhabits intertidal mudflats in sheltered coastal areas (i.e. estuaries, bays, inlets and lagoons) (Geering et al., 2007). This rare species generally roosts on bare dry shingle, shell or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands (Geering et al., 2007).	~33.8 km (NNE) – 1999 (DBCA, 2021c)	Unlikely	N/A	May occur occasionally to forage. Suitable nesting habitat not present.
Night parrot (Pezoporus occidentalis)	EN	CR		EN	The Night Parrot prefers sandy/stony plain habitat with old-growth spinifex for roosting and nesting in conjunction with native grasses and herbs for foraging (DPaW, 2017).	~488 km (E) - 1972 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Carnaby's cockatoo (Calyptorhynchus latirostris)	EN	EN		EN	Proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests (Johnstone & Storr, 1998).	~11.42 km (NNW) - 2018 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Malleefowl (Leipoa ocellata)	VU	VU		VU	Inhabits semi-arid shrublands and low woodlands dominated by mallee eucalypts and/or Acacias with sandy loam soils (Benshemesh, 2007).	~9.05 km (SE) ~ 2013 (DBCA, 2021c)	Certain	Confirmed	Potential suitable habitat is found in Survey Area along with the historical remains of a mound within the Allocasuarina Shrubland habitat. The species may use the area for foraging or disturbance, the Survey Area does not present critical habitat for the species.
Princess parrot (Polytelis alexandrae)	VU		P4	NT	The Princess Parrot inhabits low open eucalypt woodlands and savannah shrublands in arid deserts, usually with Casuarina and Allocasuarina spp. Primarily breeds in Marble Gum hollows (Pavey et al., 2014).	~218 km (E) - 1983 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Grey falcon (Falco hypoleucos)	VU	VU		VU	Timbered lowlands, particularly Acacia shrubland and along inland drainage systems. Also frequent spinifex and tussock grassland (Burbidge et al., 2010; Olsen & Olsen, 1986)	~238km (N) – 1996 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Common sandpiper (Actitis hypoleucos)	МІ	М			Estuaries and deltas of streams, as well as banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans (Johnstone & Storr, 1998).	~28 km (WSW) ~ 2013 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Fork-tailed swift (Apus pacificus)	МІ	МІ			Inhabits dry/open habitats, inclusive of riparian woodlands and tea- tree swamps, low scrub, heathland or saltmarsh, as well as treleads grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes (Johnstone & Storr, 1998). Almost exclusively aerial.	~116 km (E) – 2015 (DBCA, 2021c)	Possible	N/A	May occasionally occur within the airspace above the Survey Area to forage. Unlikely to land o nest within Survey Area.
Grey wagtail (Motacilla cinerea)	MI	МІ			A rare vagrant to Western Australia where it has been recorded within various habitats with open waterbodies (Johnstone & Storr, 2004).	~670 km (SW) - 2013 (DBCA, 2021c)	Highly Unlikely	N/A	Suitable habitat not present.

Conservation		ion Status				пепсе	-		
Common Name (Scientific Name)	IUCN	Preferred Broad Habitats	Nearest Record to the Survey Area	Likelihood of Occurrence	Occurrence	Comments			
Pectoral sandpiper (Calidris melanotos)	МІ	МІ			Coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands (Johnstone & Stort, 2004; Johnstone et al., 2013). It prefers wetlands with open fringing mudflats and low, emergent or fringing vegetation (Geering et al., 2007).	~327 km (S) – 2010 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Sharp-tailed sandpiper (Calidris acuminata)	М	МІ			Coastal and inland areas saline and freshwater but prefers non-tidal fresh or brackish wetlands (Geering et al., 2007)	~8.8km (ESE) – 1980 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Common greenshank (Tringa nebularia)	МІ	МІ			Species occurs as a non-breeding summer Migrant which occurs throughout the region. Occurs mainly in Tidal mudflats, mangrove creeks, flooded samphire flats, beaches, river pools, and saltwork and sewage ponds (Johnstone et al., 2013).	~23.38 km (WNW) – 2001 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Wood sandpiper (Tringa glareola)	MI	МІ			Freshwater wetlands and occasional brackish intertidal mudflats (Geering et al., 2007).	~5.58 km (N) – 2005 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Red-necked stint (Calidris ruficollis)	МІ	МІ		NT	Lives in permanent or ephemeral wetlands of varying salinity, and also regularly at Sewage farms and saltworks. They are recorded less often at reservoirs, waterholes, soaks, bore-drain swamps and flooded inland lakes. In Western Australia they prefer freshwater to marine environments. The species usually forages in shallow water at the edge of wetlands and roost or loaf on tidal mudflats, near low saltmarsh, and around inland swamps (Johnstone & Storr, 1998).	~37.04km (NNE) – 2001 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Glossy ibis (Plegadis falcinellus)	мі	МІ			Freshwater wetlands, irrigated areas, margins of dams, floodplains, brackish and saline wetlands, tidal mudflats, pastures, lawns and public gardens (Johnstone et al., 2013).	~14.07 km (NNW) - 1981 (DBCA, 2021c)	Possible	N/A	May occur occasionally to forage.
Peregrine falcon (Falco peregrinus)		os			In arid areas, it is most often encountered along cliffs above rivers, ranges and wooded watercourses where it hunts bids (Johnstone & Storr, 1998). It typically nests on rocky ledges occurring on tall, vertical cliff faces between 25 m and 50 m high (Olsen et al., 2004; Olsen & Olsen, 1989).	~73 km (NW) – 2014 (DBCA, 2021c)	Possible	N/A	Likely to occur occasionally to forage. Suitable nesting habits not present.
Hooded plover (Thinornis rubricollis)			P4	VU	Margins and shallows of salt lakes, sandy and sea-weedy beaches and estuaries and also damns (Johnstone & Storr, 1998).	~31.98 km (N) – 1980 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Sanderling (Calidris alba)	МІ	МІ			Broad ocean beaches of firm sand, depositing strands and mounds of seaweed. Often near river mouths, tidal mudflats, inlets and coastal lagoons (Pizzey & Knight, 2007).	~6.9km (NE) - 2016 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Grey-tailed tattler (Tringa brevipes)	МІ	МІ	P4	NT	Found mainly in tidal mudflats, estuaries; shores and reefs of islands and coastal swamps and commercial salt fields (Pizzey & Knight, 2007).	6.21 km (WNW) - 2017 (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present
Reptiles	9	38	32		20	,			
Western spiny-tailed skink (Egernia stokesii badia)	EN	VU			Found in tall shrubland, open heath and woodland habitats (Cogger et al., 1993). In the north-eastern wheatbelt, the species occupied heavier clay and loam soils supporting euclayft woodlands which provided shelter in the form of fallen and hollow logs (Cogger et al., 1993).	~27 km ENE - (DBCA, 2021c)	Unlikely	N/A	Suitable habitat not present

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

inland hairstreak (*Jalmenus aridus*, P1) and arid bronze azure butterfly (*Ogyris subterrestris petrina*, CR) within 30 kilometres of the application area (GIS Database).

Assessment against the clearing principles

Appendix C.

### Assessment against the clearing principles Variance level Is further consideration required? Environmental value: biological values Principle (a): "Native vegetation should not be cleared if it comprises a high level of Not likely to be No biodiversity. at variance Assessment: There are no records of conservation significant flora or fauna within the application area (GIS Database). Five conservation significant flora species are considered likely to occur and 11 to possibly occur, however, given none were recorded during field surveys (Biologic, 2021; Botanica, 2023), the proposed clearing is unlikely to lead to impact the conservation status of these species. Three introduced flora species have been recorded within the application area (Biologic, 2021). None are considered Weeds of National Significance, however one species; Echium plantagineum is listed as a Declared Pest under Section 22 of the Biosecurity and Agriculture Management Act 2007, however is exempt from control requirements (Biologic, 2021; Botanica, 2023). Weeds have potential to out-complete native flora and reduce biodiversity of an area. Impacts of the proposed clearing can be managed with a weed management condition. Principle (b): "Native vegetation should not be cleared if it comprises the whole or a Not likely to be No part of, or is necessary for the maintenance of, a significant habitat for fauna." at variance The area proposed to be cleared in not likely to contain critical habitat for conservation significant fauna. Habitat types recorded surrounding the application area are common and widespread through the local area and region (Biologic, 2021). One Malleefowl (Leipoa ocellata, VU) mound was recorded during field survey in adjacent area, however the application area does not contain suitable habitat for foraging or breeding, although individuals may disperse through the application area (GIS Database). There are records of 16 conservation significant fauna species including

Assessment against the clearing principles	Variance level	Is further consideration required?
No invertebrate surveys were conducted. Given the extent of clearing and historical disturbances, and the narrow, linear nature of the proposed clearing, it is unlikely to impact the conservation status of these species or contain critical habitat for conservation significant species. The applicant has planned clearing activities to be undertaken in a slow, progressive manner in a single direction towards to allow fauna to move into adjacent vegetation ahead of clearing.		
<u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."	Not likely to be at variance	No
Assessment:		
The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act (Biologic, 2021; Botanica, 2023).		
<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."	Not likely to be at variance	No
Assessment:		
The area proposed to be cleared does not contain species that indicate a Threatened Ecological Community (TEC). No TECs have been recorded within the application area or nearby (Biologic, 2021; Botanica, 2023).		
Environmental value: significant remnant vegetation and conservation areas	•	
<u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."	Not at variance	No
<u>Assessment:</u> The extent of the mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia. The current extent of vegetation associations remaining (Government of Western Australia, 2019):		
<ul> <li>Coolgardie 9: 97.78% (235,100.97 ha)</li> <li>Coolgardie 123: 97.93% (8,902.02 ha)</li> <li>Coolgardie 1294: 96.06% (6,047.45 ha)</li> </ul>		
The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.		
<u>Principle (h):</u> "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."	Not likely to be at variance	No
Assessment:		
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 (GIS Database).		
Environmental value: land and water resources		
Principle (f): "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."	Not likely to be at variance	No
Assessment:		
Given no major 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 (GIS Database).		
<u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	Not likely to be at variance	No
Assessment:		
The mapped soils are high to extremely susceptible to wind and water erosion (DPIRD, 2024). Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.		
<u>Principle (i):</u> "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."	Not at variance	No
		i e

Assessment against the clearing principles	Variance level	Is further consideration required?
Given no major watercourses or watercourses are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality (GIS Database).		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance	No
Assessment:  Given no major water courses are recorded within the application area and the applicant has planned to maintain natural surface water flow of minor ephemeral watercourses, the proposed clearing is unlikely to contribute to waterlogging (GIS Database).		

# Appendix D. 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 E. Sources of information

#### E.1.GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Contours (DPIRD-073)
- Clearing Regulations Schedule One Areas (DWER-057)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments Catchments (DWER-028)
- Hydrography Inland Waters Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- 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 Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality Wind Erosion Risk (DPIRD-016)
- 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)

### E.2.References

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<a href="https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f">https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f</a> (Accessed 13 March 2024).

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Submission (2024) Public submission in relation to clearing permit application CPS 10469/1, received 5 February 2024.

# 4. Glossary

# Acronyms:

BC Act Biodiversity Conservation Act 2016, Western Australia
BoM Bureau of Meteorology, Australian Government

DAA Department of Aboriginal Affairs, Western Australia (now DPLH)

DAFWA Department of Agriculture and Food, Western Australia (now DPIRD)

**DCCEEW** Department of Climate Change, Energy, the Environment and Water, Australian Government

**DBCA** Department of Biodiversity, Conservation and Attractions, Western Australia

**DEMIRS** Department of Energy, Mines, Industry Regulation and Safety

**DER** Department of Environment Regulation, Western Australia (now DWER)

**DMIRS** Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)

**DMP** Department of Mines and Petroleum, Western Australia (now DEMIRS)

Dobe Department of the Environment and Energy (now DCCEEW)

Dow Department of Water, Western Australia (now DWER)

**DPaW** Department of Parks and Wildlife, Western Australia (now DBCA)

**DPIRD** Department of Primary Industries and Regional Development, Western Australia

**DPLH** Department of Planning, Lands and Heritage, Western Australia

**DRF** Declared Rare Flora (now known as Threatened Flora)

**DWER** Department of Water and Environmental Regulation, Western Australia

**EPA**Environmental Protection Act 1986, Western Australia

EPA

Environmental Protection Authority, Western Australia

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System
ha Hectare (10,000 square metres)

IBRA Interim Biogeographic Regionalisation for Australia

**IUCN** International Union for the Conservation of Nature and Natural Resources – commonly known as the

World Conservation Union

PEC Priority Ecological Community, Western Australia

RIWI Act Rights in Water and Irrigation Act 1914, Western Australia

TEC 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.