Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	9848/1
Permit type:	Purpose Permit
Applicant name:	Wonmunna Iron Ore Pty Ltd
Application received:	15 August 2022
Application area:	25 hectares
Purpose of clearing:	Haul Road
Method of clearing:	Mechanical Removal
Tenure:	Miscellaneous Licence 47/1025
Location (LGA area/s):	Shire of East Pilbara
Colloquial name:	Wonmunna Iron Ore: Southern Haul Road Project

1.2. Description of clearing activities

Wonmunna Iron Ore Pty Ltd proposes to clear up to 25 hectares of native vegetation within a boundary of approximately 195.36 hectares, for the purpose of a haul road. The project is located approximately 71 kilometres west, north-west of Newman, within the Shire of East Pilbara.

The application is to allow for the construction of a haul road to avoid heritage places.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	29 November 2022
Decision area:	25 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 15 August 2022. 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), the clearing principles set out in Schedule 5 of the EP Act (**Error! Reference source not found.**), 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 being for the construction of a haul road to avoid aboriginal heritage places.

The assessment identified that:

- the clearing has the potential for the introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- the clearing is not likely to have a significant impact on habitat for Priority flora species;
- the vegetation is not likely to represent significant habitat for fauna species; and
- the clearing will impact a minor ephemeral drainage line however, it will not impact surface water flow at a broad level.

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

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- avoid clearing watercourses where practicable, and ensure surface flows are maintained or reinstated downstream; and

- flora management to minimise impacts to *Aristida lazaridis*.

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)
- *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 2013)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

No evidence of avoidance or mitigation measures was provided to support the application.

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 identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values - Clearing Principles (a) and (b)

Assessment

The clearing permit application area is located within the Pilbara bioregion and Hamersley subregion. The vegetation within the revised disturbed footprint is mapped as Beard associations 18, 29 and 82 (Government of Western Australia 2019). These vegetation associates have more than 99% of their pre-European extent remaining at a bioregional and state level

A desktop and targeted flora and vegetation survey was conducted over the application area by Phoenix during March, 2022. The desktop analysis found a total 270 taxa comprising 207 perennial species and 63 annuals from 42 families and 124 genera within the broader survey area (Phoenix, 2022).

No Threatened flora, Threatened Ecological Communities or Priority Ecological Communities were identified during the field survey. One Priority flora species, *Aristida lazaridis* (Priority 2), was identified within the application area, however is outside the proposed mining disturbance footprint (Mineral resources, 2022). *Aristida lazaridis* is a cryptic species (Western Australian Herbarium, 1998-) and not readily identifiable in the field, with the defining taxonomic feature being “Lemma margins distinctly protruding from ventral furrow” if not “Lemma margins not protruding or if so, not distinctly” requiring a microscope/hand lens to detect (Phoenix, 2022). The population found is at the southern extent of the known range for the species however, with records nearby (within 15 kilometres) is it not counted as an extension of range (Phoenix, 2022; Western Australian Herbarium, 1998-)). *Aristida lazaridis* suitable habitat are plains and floodplains in sand to loam soils in Acacia woodlands and hummock grasslands (Phoenix, 2022). Potential impacts to *Aristida lazaridis* may be minimised by the implementation of a flora management condition.

A desktop review identified 15 introduced species within 40 kilometres of the Proposed Permit Area, none of which are a Declared Pest or Weed of National Significance (Mineral Resources, 2022). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the introduction of weeds may be minimised by the implementation of a weed management condition.

Five broad fauna habitats were identified in the proposed clearing area, these being (Mineral Resources, 2022):

- Creek Line;
- Drainage Line;
- Open woodland over shrubland;
- Spinifex grassland; and
- Woodland.

There is suitable habitat for the Northern Quoll (*Dasyurus hallucatus*), Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*), Ghost Bat (*Macroderma* gigas), Unpatterned Robust Slider (Robertson Range) (*Lerista macropistthopus remota),* and the Western pebble-mound mouse (*Pseudomys chapmani*) within the application area (GIS Database). Limited suitable habitat for these species exists within the application boundary, however they may use the application area for foraging and dispersal activities.

The Woodland habitat occurs in small clumps throughout the application area (2.9%) and consists of *Acacia* and *Eucalyptus* trees, *Acacia* shrubland and spinifex grassland. The caves and clifftops within this habitat may provide suitable habitat for bats, of which some may be of conservation significance (Phoenix, 2022). This habitat is unlikely to be disturbed by the proposed clearing (Mineral Resources, 2022).

The Creek line habitat covers 2.3% of the application area and comprised the dry Weeli Wolli Creek line (Phoenix, 2022). It represents suitable foraging habitat for the Northern Quoll, Pilbara Leaf-nosed Bat and the Ghost Bat. Approximately 7% of this habitat is proposed to be disturbed as a result of this Project.

The Drainage line was the smallest habitat recorded, comprising only 1.7% of the application area, and branches off from the Creek line habitat. It is two drainage lines consisting of scattered *Eucalyptus* trees, *Acacia* shrubland and spinifex grassland, with rocky surface and clay-loams throughout. It was not identified as comprising suitable habitat for any significant species (Phoenix 2022). This habitat is unlikely to be disturbed by the proposed clearing.

No fauna habitats were identified as being of significance to any significant fauna and are common and widespread in the region (Phoenix, 2022).

The field survey yielded a low amount of short-range endemic (SRE) invertebrates that consisted of three potential SRE species, two of which were pseudoscorpions and one which was a millipede (Phoenix, 2022). None of the recorded species matched those identified within the desktop assessment (Phoenix, 2022) or are noted to be of conservation significance (Mineral Resources, 2022).

Conclusion

Based on the above assessment, the proposed clearing is unlikely to significantly impact on biodiversity and fauna habitats values of the application area.

For the reasons set out above, it is considered that the impacts of the proposed clearing on biodiversity can be managed by implementing a flora management condition and taking steps to minimise the risk of the introduction and spread of weeds.

Conditions

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

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no known weed-affected soil, mulch, fill or other material is brought into the area to be cleared;
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared;
- avoid clearing riparian vegetation;
- maintain surface water flow; and
- no clearing within 10 metres of the identified record of *Aristida lazaridis*.

3.3. Relevant planning instruments and other matters

The clearing permit application application was advertised on 26 August 2022 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 (WC2013/003) over the area under application (DPLH, 2022). This claim has been determined by the Federal Court 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, 2022). 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

A1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the intensive land use zone of Western Australia (GIS Database). It is surrounded by land that is predominantly used for mining operations (GIS Database).
Ecological linkage	According to available databases, there are no formal ecological linkages within the application area (GIS Database).
Conservation areas	No conservation areas were identified within the permit area (Phoenix 2022; GIS Database). The nearest conservation area is the ex Juna Downs pastoral station located approximately 24 kilometres north-west of the application area, and Karijini National Park, which is a A Class Nature Reserve, located approximately 47 kilometres west of the application area.
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation associations: 18: Low woodland; mulga (*Acacia aneura*); and 29: Sparse low woodland; mulga, discontinuous in scattered groups (GIS Database). A desktop and targeted flora and vegetation survey was conducted over the application area by Phoenix during March, 2022. The following vegetation associations were recorded within the application area (Mineral Resources, 2022): • **M2** - Isolated low *Acacia spp*., *Corymbia hamersleyana* and *Eucalyptus leucophloia* trees over isolated low *E. repullulans* mallee to low mallee woodland over isolated mixed low shrubs to low open shrubland with *Corchorus lasiocarpus subsp. lasiocarpus, Indigofera monophylla, Ptilotus spp*. and *Goodenia spp.* prominent in a low open *Triodia brizoides* hummock grassland with a low *Eucalyptus repullulans* woodland over a mid-open *Acacia bivenosa* shrubland over a *Triodia longiceps* and *T. pungens* hummock grassland in drainage lines. Vegetation recovering from fire. • **M3** - Isolated low *Acacia aptaneura*, *A. pruinocarpa* and *A. synchronicia* trees or tall shrubs over isolated low mixed *Eucalyptus gamophylla*, *E. repullulans* and *E. socialis* mallee to low open mallee woodland over a low to mid *Triodia brizoides* and *T. wiseana* hummock grassland. • **M4** - Isolated low *Eucalyptus leucophloia* trees and *E. gamophylla* mallee to low open woodland over isolated tall mixed *Acacia spp*. and *Petalostylis labicheoides* shrubs to open shrubland over isolated low mixed shrubs to low open shrubland with *Gompholobium polyzygum*, *Dampiera candicans* and *Goodenia scaevolina* common over a *Triodia pungens* and *T. wiseana* hummock grassland with pockets of a low *Acacia distans* and *Eucalyptus leucophloia* woodland over isolated tall mixed shrubs and isolated clumps of *Triodia pungens* hummocks on steep rocky slopes near the crest of plateaus and isolated mid *Eucalyptus leucophloia* trees over a low *E. repullulans* mallee and tall *Petalostylis labicheoides* shrubland over *Triodia longiceps* and *T. pungens* mid hummock grassland in drainage lines. • **SS1** - Isolated low trees, frequently *Corymbia hamersleyana* and *Acacia inaequilatera* over isolated low to tall mixed shrubs with *Acacia spp*., *Grevillea wickhamii* and *Hakea chordophylla* common over isolated low *Indigofera rugosa* shrubs in a low *Triodia brizoides* hummock grassland with isolated clumps of *Themeda triandra* in drainage foci. • **C1** - Isolated mid *Eucalyptus camaldulensis* trees to mid *E. camaldulensis* woodland over isolated low trees to low *Acacia citrinoviridis* and *Eucalyptus xerothermica* woodland over isolated mixed tall shrubs to tall shrubland frequently with *Gossypium sturtianum* and *Petalostylis labicheoides* shrubs over a mixed low to mid grassland of *Eulalia aurea*, *Themeda triandra* and *Triodia spp*. • **C3** - A low *Eucalyptus xerothermica* and *E. socialis* woodland, occasionally with *E. repullulans* mallee over a mid to tall *Gossypium sturtianum*, *Petalostylis labicheoides* and *Acacia spp*. shrubland over a low to mid mixed grassland of *Themeda triandra* and *Triodia spp*.
Vegetation condition	The vegetation survey indicates the vegetation within the proposed clearing area is in Pristine to Good (Keighery, 1994) condition, described as • Pristine: No obvious signs of disturbance; and • 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 (Keighery, 1994).

Characteristic	Details
	The full Keighery (1994) condition rating scale is provided in Appendix BC.
Climate and landform	The climate has been described by Beard (1990) as arid tropical with 9-11 dry months a year and summer rainfall influenced by the local topography. A major influence on the flora and vegetation are heavy rains associated with cyclones. Cyclones often cross the coastline and travel over the Fortescue Valley system toward Newman (Mineral Resources, 2022). The application area elevation ranges between 700-750 metres AHD (GIS Database). The average yearly rainfall is approximately 324.4 millimetres and the average annual evaporation rate is approximately 3200 millimetres (BoM, 2022). The Wonmunna project is located within the hot summer (October to April) - mild winter (May to September) bioclimatic region.
Soil description	The soil is mapped as Fa14 (GIS Database). The Fa14 soil unit is described as 'Steep hills and steeply dissected pediments on areas of banded jaspilite and chert along with shales, dolomite, and iron ore formations; some narrow winding valley plains: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5.11) soils on the steeper slopes. (Dr2.33 and Dr2.32) soils which occur on the pediments are more extensive than in unit Fa13. (Um5.52) and (Uf6.71) soils occur on the valley plains.'
Land degradation risk	The three land systems (Egerton, Newman and Rocklea) that intersect the application area are not generally susceptible to erosion; however, with the removal of vegetation and topsoil, water and wind erosion risk is increased, particularly following rainfall events (GIS Database).
Waterbodies	No permanent waterbodies or wetlands intersect the application area. A minor, non-perennial watercourse transects the area proposed to be cleared (GIS Database).
Hydrogeography	The application area falls within the Pilbara groundwater area as per the *Rights in Water and Irrigation Act* 1914 (RIWI Act) (GIS Database). The application area does not occur within any public drinking water source areas (GIS Database). The application area is located within the Fortescue River Upper catchment area (GIS Database). Salinity within the area ranges from 500 – 1000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database).
Flora	There are records of 28 priority flora within 20 kilometres of the application area (GIS Database). The species are outlined in section **Error! Reference source not found.** One conservation significant flora species was recorded within the application area during a targeted flora survey conducted by Phoenix Environmental Services Pty Ltd (Phoenix, 2022)..
Ecological communities	There are no Threatened or Priority Ecological Communities (TEC/PECs) within the application area. The nearest ecological community is the Weeli Wolli ecological community (Priority 1), which is approximately 7.7 kilometres north-east of the application area (GIS Database).
Fauna	According to available databases, five conservation significant fauna species have the potential to occur within the application area (GIS Database). These species are: •Northern Quoll (*Dasyurus hallucatus*) – Endangered •Pilbara Leaf-nosed bat (*Rhinonicterus aurantia*) – Vulnerable •Ghost bat (*Macroderma gigas*) – Vulnerable •Unpatterned Robust Slider (Robertson Range) (*Lerista macropistthopus remota)* – P2 •Western pebble-mound mouse (*Pseudomys chapmani*) – P4.

A2. 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 - Pilbara	17,808,657	17,731,765	~99	1,801,715	10.12
Beard vegetation associations - State					
Veg Assoc No. *18* *29*	 19,892,306 7,903,991	 19,843,148 7,898,973	 ~99 ~99	 1,319,179 496,368	 6.62 6.28
Beard vegetation associations					

- Bioregion					
Veg Assoc No.					
18	676,557	671,843	~99	25.17	25.35
29	1,133,220	1,131,712	~99	9.38	9.39

Government of Western Australia (2019)

A3. 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. The species identified below in blue is the only one that was found to be present within the application area.

Taxon	Conservation status	Habitat (WA Herbarium 1998)	Distance from Survey area	Likelihood of occurrence
Seringia exastia	T	Plains in open woodlands and shrublands over hummock grasses.	Within 5 km	Possible, found within 5 km of the survey area with similar habitat present.
Thryptomene wittweri	T	High in landscape on rocky hills and ridges in hummock grasslands.	42.9 km NW of survey area	Unlikely, lack of suitable habitat found within survey area.
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	P1	Red-brown skeletal soils, ironstone. Steep slopes, summits.	19.7 km NW of survey area	Unlikely, small area of suitable habitat in survey area adequately searched.
Eremophila sp. West Angelas (S. van Leeuwen 4068)	P1	Hill slopes, high in landscape in *Triodia* grasslands, open mallee and *Acacia aneura* woodland.	34.2 km west of survey area	Unlikely, lack of suitable habitat found within survey area.
Rhodanthe ascendens	P1	Sand over clay, red cracking clay with mulga and grasses.	48.6 km west of survey area	Unlikely, lack of suitable habitat found within survey area.
Synostemon hamersleyensis	P1	Hummock grassland on rocky ironstone hill with brown sandy loam soil.	48 km North of survey area	Unlikely, small area of suitable habitat in survey area adequately searched.
Triodia sp. Karijini (S. van Leeuwen 4111)	P1	Hill slopes in sandy to loam soils in hummock grasslands.	19 km NW of survey area	Unlikely, small area of suitable habitat in survey area adequately searched.
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)	P1	Plains and floodplains in mallee woodlands and hummock grasslands.	16.7 km SW of survey area	Possible, similar habitat found within survey area.
Aristida lazaridis	P2	Plains and floodplains in sand to loam soils in *Acacia* woodlands and hummock grasslands.	Within 5 km	Found in survey area.
Cladium procerum	P2	Perennial pools.	31.3 km NE of survey area	Unlikely, lack of suitable habitat found within survey area.
Eremophila pusilliflora	P2	Plains in sandy loam to loamy clay soils in *Acacia* woodlands and hummock grasslands.	Within 5 km	Possible, found within 5 km of the survey area with similar habitat present.
Gompholobium karijini	P2	Plateau, flat to gently undulating.	28.6 km NE of survey area	Unlikely, lack of suitable habitat found within survey area.

Oxalis sp. Pilbara (M.E. Trudgen 12725)	Rocky hillslopes, gorges and drainage lines in woodlands and hummock grasslands.	P2	X	X	
Tetratheca fordiana	Cliff faces and hill slopes in hummock grassland.	P2	X		X
Teucrium pilbaranum	Plains and drainage lines in shrublands over tussock grasses in clay to clay-loam soils.	P2	X		
Acacia daweana	Stony red loamy soils on low rocky rises, along drainage lines in shrublands over hummock grasses.	P3	X		X
Acacia effusa	Stony red loam soils on scree slopes of low ranges in shrublands over hummock grasses.	P3	X		X
Acacia subtiliformis	Rocky hills, plains frequently associated with calcrete in woodlands and shrublands over hummock grasslands.	P3	X	X	
Amaranthus centralis	Granite outcrops, plains and drainage lines in tussock grasslands, mulga woodlands and *Eucalyptus* woodland.	P3	X	X	
Aristida jerichoensis var. *subspinulifera*	Plains in loamy clay to clay soils in open woodlands over hummock grasslands.	P3	X		X
Dampiera metallorum	Skeletal red-brown gravelly soil over banded ironstone on steep slopes, summits of hills in hummock grasslands.	P3	X		X
Eremophila magnifica subsp. *velutina*	Hills, rocky slopes in hummock grasslands.	P3	X		X
Eremophila rigida	Hardpan plains and stony clay depressions in mulga woodlands and *Acacia* shrublands.	P3	X		
Eremophila sp. Hamersley Range (K. Walker KW 136)	In red clay-loam on rocky hill slopes, hill crests and upper hill slopes in hummock grasslands.	P3	X	X	
Euphorbia australis var. *glabra*	Plains and drainage lines in clay soils in woodlands and shrublands.	P3	X		
Euphorbia clementii	Gravelly hillsides and stony ground in hummock grasslands.	P3	X		X
Euphorbia stevenii	In black clay soils in bunch grass and tussock grass grasslands.	P3	X		X
Fimbristylis sieberiana	In mud in skeletal soil pockets in pool edges and sandstone cliffs.	P3	X		X
Glycine falcata	In black clayey sands along drainage lines and river floodplains.	P3	X		X

Goodenia lyrata	Plains and claypans in red loamy soils and clay in mulga over spinifex and *Tecticornia* shrublands.	P3	X		X
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	Low undulating plains in clay soils in mallee woodlands and hummock grasslands.	P3	X		X
Grevillea saxicola	Drainage lines, gullies plains in hummock grassland.	P3	X	X	
Gymnanthera cunninghamii	Creeks, drainage lines and floodplains in sandy soils in woodlands and grasslands.	P3	X		X
Indigofera gilesii	Hillslopes and gorges in shrublands and hummock grasslands.	P3	X		X
Oldenlandia sp. Hamersley Station (A.A. Mitchell PRP 1479)	Claypan, drainage lines plains in clay soils in tussock grassland.	P3	X		X
Olearia mucronata	Hillslopes and drainage lines in hummock grasslands.	P3	X		X
Pilbara trudgenii	Cliffs and hill crests in hummock grasslands.	P3	X		X
Rhagodia sp. Hamersley (M. Trudgen 17794)	Hills and plains in.. woodlands and hummock grasslands.	P3	X		X
Rostellularia adscendens var. *latifolia*	Creeks and rocky hills woodlands, shrublands over tussock grasses.	P3	X		X
Sida sp. Barlee Range (S. van Leeuwen 1642)	Rocky hills and gorges in hummock grassland.	P3	X		X
Sida sp. Hamersley Range (K. Newbey 10692)	Hills, gullies and breakaways in shrublands over hummock grasslands.	P3	X	X	
Solanum kentrocaule	Hillslopes and gullies in open woodlands over hummock grasslands.	P3	X	X	
Stackhousia clementii	Plains and floodplains in open woodlands over hummock grasslands.	P3	X		X
Stylidium weeliwolli	Water courses in woodlands and shrublands over tussock grasses.	P3	X		X
Swainsona thompsoniana	Floodplains and drainage lines in clay soils in tussock grasslands.	P3	X		
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	Clay soils in claypans and grass plains.	P3	X		X
Triodia basitricha	Hills and plains in hummock grassland.	P3	X	X	
Triodia sp. M.E. Trudgen 12739)	Hillslopes, gorges and gullies in open woodlands over hummock grasslands.	P3	X		X

Xerochrysum boreale	Plains in open woodland over hummock grassland.	P3	X	X	
Acacia bromilowiana	Rocky hillslopes and gullies in hummock grasslands.	P4	X		X
Eremophila magnifica subsp. *magnifica*	Rocky hillslopes in hummock grasslands.	P4	X	X	
Goodenia nuda	Plains and drainage lines in mulga woodlands and tussock grasslands.	P4	X		X
Lepidium catapycnon	Hillslopes in open woodlands over hummock grasslands.	P4	X		X
Ptilotus mollis	Stony hills in hummock grasslands.	P4	X		X
Seringia exastia	Plains in open woodlands and shrublands over hummock grasses.	T	X	X	
Thryptomene wittweri	High in landscape on rocky hills and ridges in hummock grasslands.	T	X		X

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

A4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Are surveys adequate to identify? [Y, N, N/A]
Western Pebble-mound Mouse (*Pseudomys chapmani*)	Priority 4	Y	Y	Y
Unpatterned Robust Slider (*Lerista macropistthopus remota)*	Priority 2	N	Y	Y
Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*)	Vu	Y	Y	Y
Ghost Bat (*Macroderma* gigas)	Vu	Y	Y	Y
Northern Quoll (*Dasyurus hallucatus*)	Vu	Y	Y	Y

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

Appendix B. Assessment against the clearing principles

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 biodiversity."* Assessment: There are no Threatened or Priority Ecological Communities located within the application area (GIS Database). There are no records of any Threatened flora within the application area. One Priority flora species (*Aristida lazaridis* – Priority 2) has been recorded within the application area, however is outside the proposed disturbance footprint (Mineral Resources, 2022). Potential impacts to *Aristida lazaridis* may be minimised by the implementation of a flora management condition. The fauna habitats within the application area are common in the local area and are not likely to support a high level of faunal diversity (Mineral Resources, 2022).	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (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."* Assessment: The area proposed to be cleared does not contain critical foraging and denning habitat for conservation significant fauna (Mineral Resources, 2022).	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat flora species listed under the BC Act.	Not likely to be at variance	No
Principle (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."* Assessment: According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). Similarly, the vegetation survey conducted by Phoenix (2022) did not identify any of the vegetation recorded as being a TEC.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (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."* Assessment: The application area falls within the Pilbara Interim Biogeographic Regionalisation of Australia bioregion, in which approximately 99% of the pre-European vegetation remains (Government of Western Australia, 2019; GIS Database). The vegetation within the application area has been mapped as Beard vegetation associations 18 and 29 (GIS Database). Over 99% of these Beard vegetation associations remain at both a state and bioregional level (Government of Western Australia, 2019). Based on aerial imagery, the vegetation within the application area is neither a remnant itself nor does it form part of any remnants within the local area (GIS Database).	Not at variance	No
Principle (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."* Assessment: According to available databases, the application area does not lie within a conservation area (GIS Database). The nearest conservation areas are the ex Juna Downs pastoral station located approximately 24 kilometres north-west of the application area, and Karijini National Park, which is an A Class Nature Reserve, located approximately 47 kilometres west of the application area (GIS Database). Given the distance of these conservation areas from the application area, it is considered unlikely that the proposed clearing will impact on the environmental values of these areas.	Not likely to be at variance	No
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."* Assessment: There is one minor ephemeral watercourse which intersects the application area (GIS Database). Drainage lines are common in the local area (20 kilometre radius) and the proposed clearing is not likely to have a significant impact on riparian vegetation and surface water flow on a broader scale.	At variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The application area lies over three land systems, including the Egerton land system, Newman land system and Rocklea land system (GIS Database). These land systems are not generally susceptible to erosion, and the linear nature of the proposed clearing is not likely to cause appreciable land degradation. However, with the removal of vegetation and topsoil, water and wind erosion risk is increased, particularly following rainfall events (GIS Database). Potential impacts from erosion may be minimised by the implementation of a staged clearing condition.		
Principle (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."* Assessment: The application area does not occur within a Public Drinking Water Source Area. The application area includes a minor, non-perennial watercourse, which is a tributary of the Weeli Wolli spring (Phoenix, 2022; GIS Database). Groundwater salinity in the local area is slightly alkaline, reaching a maximum 600 milligrams/Litre Total Dissolved Solids (TDS) which is considered marginal (GIS Database). On average, groundwater levels are 32 metres below surface water (Mineral Resources, 2022). Given the depth to groundwater, the proposed clearing activity is not likely to cause deterioration of groundwater within the project area.	Not likely to be at variance	No
Principle (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."* Assessment: The mean annual rainfall in Newman is approximately 324.4 millimetres (BoM, 2022). The Pilbara region represents a transitional zone between semi-arid and tropical climates, and receives a majority of its rainfall during the summer months (CALM, 2002). It is likely that during times of intense rainfall there may be some localised flooding. The proposed clearing is unlikely to significantly alter the intensity of flooding within the application area or surrounding areas. The application area is located within the Fortescue River Upper catchment area (GIS Database). However, given the size of the area to be cleared (25 hectares) in relation to the size of the catchment area (2,975,192 hectares), the proposed clearing is not likely to increase the potential for flooding in this region (GIS Database).	Not likely to be at variance	No

Appendix B. 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.

Condition	Description
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Sources of information

D.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- 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)
- Flood Risk (DPIRD-007)
- 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
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- 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 Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available (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

BoM (2022) Bureau of Meteorology Website – Climate Data Online, Newman. Bureau of Meteorology. http://www.bom.gov.au/climate/data/ (Accessed 24 November 2022).

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Department of Planning, Lands and Heritage (DPLH) (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 24 November 2022).

Department of Primary Industries and Regional Development (DPIRD) (2022) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (Accessed 25 November 2022).

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

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

Environmental Protection Authority (EPA) (2016) Technical Guidance – Terrestrial Fauna Surveys. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf

Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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

Mineral Resources (2022) Wonmunna Iron Ore Project: Southern Haul Road. Clearing permit supporting documentation –Rev 0 – L47/1025. Unpublished report prepared by and for Mineral Resources, August 2022.

Phoenix (2022) Memo report for the desktop assessment and field validation reconnaissance survey for an additional tenement at the Wonmunna Iron Ore Mine Project. Unpublished report prepared for Mineral Resources Limited by Phoenix Environmental Sciences, June 2022.

Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 28 November 2022).

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)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
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
EP Act	*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.