



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10355/1
Permit type:	Purpose Permit
Applicant name:	Catalyst Metals Limited
Application received:	20 September 2023
Application area:	53.4 hectares
Purpose of clearing:	Mineral production and associated infrastructure
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 52/183 Mining Lease 52/217 Mining Lease 52/218 Miscellaneous Licence 52/54
Location (LGA area/s):	Shire of Meekatharra
Colloquial name:	Marymia Trident Project

1.2. Description of clearing activities

Catalyst Metals Limited proposes to clear up to 53.4 hectares of native vegetation within a boundary of approximately 499 hectares, for the purpose of mineral production and associated infrastructure. The project is located approximately 185 kilometres south of Newman, within the Shire of Meekatharra.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	21 December 2023
Decision area:	53.4 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 20 September 2023. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

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

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to conservation significant fauna;
- potential land degradation in the form of erosion;
- impacts to conservation significant flora; and
- impacts to riparian vegetation.

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 to:

- avoid, minimise to reduce the impacts and extent of clearing;

- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence construction no later than six months after undertaking clearing to reduce the risk of erosion;
- avoid clearing within 10 metres of recorded Priority flora; and
- avoid clearing riparian vegetation where possible and maintain water flows.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

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, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The supporting documentation submitted by the applicant (RPM Global, 2023), stated environmental management measures were taken such as avoidance of conservation significant species during planning and ensuring that all vehicles and equipment on site meet hygiene requirements (free of soil, weeds, seeds, and vegetative matter). The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with standard avoid and minimize, hygiene, and staged clearing management conditions, as well as vegetation, flora, and fauna management conditions.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 24 October 2023 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WCD2017/011) over the area under application (DPLH, 2023). This claim has been determined by the Federal Court on behalf of the claimant group (Gingirana). 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 five registered Aboriginal Sites of Significance within the application area (DPLH, 2023). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

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

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by native vegetation and the landscape of the Gascoyne region (GIS Database). The dominant land use is native pasture grazing with small areas of mining, Unallocated Crown Land, and Crown Reserves (RPM Global, 2023).
Ecological linkage	Based on aerial imagery, the application area does not form part of any formal or informal ecological linkages (GIS Database).
Conservation areas	The application area is not located within any known or mapped conservation areas. The closest mapped conservation area is the Collier Range National Park located 53 kilometres northwest of the application area. An unofficial Unallocated Crown Land with Department interest is located 36 kilometres south of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <p>18: Low woodland; mulga (<i>Acacia aneura</i>); 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 111: Hummock grasslands, shrub steppe; <i>Eucalyptus gamophylla</i> over hard spinifex (GIS Database).</p> <p>A flora and vegetation survey was conducted over the application area by Onshore Environmental Consultants during November, 2018 and May, 2019. The following vegetation associations were recorded within the application area (Onshore, 2019):</p>

Characteristic	Details	
	Veg Code	Description
	Hill Crest	
	HC AsuAi TslAsu SeEIPs	High Open Shrubland of <i>Acacia subcontorta</i> and <i>Acacia incurvaneura</i> over Open Shrubland of <i>Thryptomene sp. Leinster</i> (B.J. Lepschi & L.A. Craven 4362) and <i>Acacia subcontorta</i> over Low Open Shrubland of <i>Sida cf. ectogama</i> , <i>Eremophila latrobei subsp. latrobei</i> and <i>Ptilotus schwartzii</i> over Very Open Tussock Grassland of <i>Eriachne mucronata</i> , <i>Thyridolepis xerophila</i> and <i>Eragrostis eriopoda</i> on orange sandy loam on weathered ironstone ridges
	Hill Slopes	
	HS Apt SglSs Ema	Low Open Woodland of <i>Acacia pteraneura</i> over Open Shrubland of <i>Senna glutinosa subsp. x larcenies</i> and <i>Senna stricta</i> over Low Open Shrubland of <i>Eremophila margarethae</i> on brown sandy loam on hillslopes
	HS AptAi EmPrPo Tb	Low Open Woodland (or Low Woodland) of <i>Acacia pteraneura</i> and <i>Acacia incurvaneura</i> over Low Shrubland of <i>Eremophila margarathe</i> , <i>Ptilotus rotundifolius</i> and <i>Ptilotus obovatus</i> and Scattered Hummock Grasses of <i>Triodia basedowii</i> on orange sandy clay loam on hillslopes
	HS CdPr EfGbAf	Low Shrubland of <i>Calytrix cf. desolata</i> and <i>Ptilotus rotundifolius</i> with Open Shrubland of <i>Eremophila fraseri</i> , <i>Grevillea berryana</i> and <i>Acacia fuscaneura</i> (<i>Senna glutinosa subsp. x luerssenii</i>) on brown sandy loam on hillslopes
	Minor Drainage Lines	
	MI AptAcGb DpAc SeShSsp	Low Woodland of <i>Acacia pteraneura</i> , <i>Acacia citrinoviridis</i> and <i>Grevillea berryana</i> (<i>Acacia pruinocarpa</i>) over High Open Shrubland of <i>Dodonaea pachyneura</i> and <i>Acacia crasepedocarpa</i> (hybrid) over Low Open Shrubland of <i>Sida cf. ectogama</i> , <i>Senna artemisioides subsp. helmsii</i> and <i>Scaevola spinescens</i> (Open Shrubland of <i>Senna glutinosa subsp. x luerssenii</i>) on brown sandy loam on minor drainage lines
	MI Ac DpAtSsp Tb	Low Open Woodland of <i>Acacia citrinoviridis</i> (<i>Acacia pteraneura</i>) over Open Shrubland of <i>Dodonaea pachyneura</i> , <i>Acacia tetragonophylla</i> and <i>Scaevola spinescens</i> over Very Open Hummock Grassland of <i>Triodia basedowii</i> on orange silty loam on hillslopes and minor drainage lines
	Medium Drainage Lines	
	ME AapAan EfEff Tt	Low Open Forest of <i>Acacia aptaneura</i> and <i>Acacia aneura</i> over Open Shrubland of <i>Eremophila fraseri</i> and <i>Eremophila forrestii subsp. forrestii</i> over Very Open Tussock Grassland of <i>Themeda triandra</i> on brown sandy clay loam on medium drainage lines
	Floodplains	
	FP Ai ArlPIGb EffSeEf TxEe Cs	Low Open Forest (to Low Closed Forest) of <i>Acacia incurvaneura</i> (<i>Acacia pruinocarpa</i> , <i>Acacia ayersiana</i> , <i>Acacia aptaneura</i> , <i>Acacia aneura</i> , <i>Grevillea berryana</i>) over High Shrubland of <i>Acacia ramulosa</i> var. <i>linophylla</i> , <i>Psyrax latifolia</i> and <i>Grevillea berryana</i> over Shrubland of <i>Eremophila forrestii subsp. forrestii</i> , <i>Sida cf. ectogama</i>

Characteristic	Details	
		and <i>Eremophila fraseri</i> over Very Open Tussock Grassland of <i>Thyridolepis xerophila</i> and <i>Eragrostis eriopoda</i> and Very Open Herbs of <i>Cheilanthes austrotenuifolia</i> on brown sandy clay loam on floodplains
	Hardpan Plains	
	HP AiGbApt AiAth EffPsEsb	Low Open Woodland of <i>Acacia incurvaneura</i> , <i>Grevillea berryana</i> and <i>Acacia pteraneura</i> over High Open Shrubland of <i>Acacia incurvaneura</i> and <i>Acacia thoma</i> and Low Open Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>Ptilotus swartzii</i> and <i>Eremophila spectabilis</i> (Very Open Tussock Grassland of <i>Eragrostis eriopoda</i>) on brown clay loam on hardpan plains
	HP Ai EffEsb	Low Woodland of <i>Acacia incurvaneura</i> over Low Open Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i> and <i>Eremophila spectabilis</i> subsp. <i>brevis</i> over Very Open Hummock Grassland of <i>Triodia basedowii</i> on brown sandy clay loam on hardpan plains
	Stony Plains	
	SP AptAiAp AsuAthAi SeEIPs	Low Open Woodland of <i>Acacia pteraneura</i> , <i>Acacia incurvaneura</i> and <i>Acacia pruinocarpa</i> over High Open Shrubland of <i>Acacia subcontorta</i> , <i>Acacia thoma</i> and <i>Acacia incurvaneura</i> over Low Open Shrubland of <i>Sida cf. ectogamma</i> , <i>Eremophila lanata</i> and <i>Ptilotus schwartzii</i> (Scattered Tussock Grassland of <i>Eriachne mucronata</i> and <i>Eragrostis eriopoda</i>) on brown sandy clay loam on stony plains
	SP Ai EfSgEff PsPoSl	High Open Shrubland of <i>Acacia incurvaneura</i> (<i>Acacia pteraneura</i> , <i>Acacia pruinocarpa</i>) over Open Shrubland of <i>Eremophila fraseri</i> , <i>Senna glaucifolia</i> and <i>Eremophila forrestii</i> subsp. <i>forrestii</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) over Low Open Shrubland of <i>Ptilotus schwartzii</i> , <i>Ptilotus obovatus</i> and <i>Solanum lasiophyllum</i> on brown sandy loam on stony plains
	SP AptAi AclSgl EmSsPo	High Open Shrubland of <i>Acacia pteraneura</i> and <i>Acacia incurvaneura</i> (<i>Acacia macraneura</i> , <i>Hakea preissii</i>) over Open Shrubland of <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i> and <i>Senna glutinosa</i> subsp. <i>x luerssenii</i> over Low Open Shrubland of <i>Eremophila margarethae</i> , <i>Senna stricta</i> and <i>Ptilotus obovatus</i> on brown sandy loam on stony plains
	SP EIPs EmEe GbAiApt	Low Open Shrubland of <i>Eremophila lanata</i> and <i>Ptilotus schwartzii</i> over Very Open Tussock Grassland of <i>Eriachne mucronata</i> and <i>Eragrostis eriopoda</i> with Scattered Tall Shrubs of <i>Grevillea berryana</i> , <i>Acacia incurvaneura</i> and <i>Acacia pteraneura</i> on brown sandy loam on stony plains
	SP EsEfPo	Low Open Shrubland of <i>Eremophila spathulata</i> , <i>Eremophila fraseri</i> and <i>Ptilotus obovatus</i> on orange sandy clay loam on stony plains
	Mosaic of HP Tb AiAth EffEIPs & SP EIPs EmEe GbAiApt	Mosaic of Hummock Grassland of <i>Triodia basedowii</i> with High Open Shrubland of <i>Acacia incurvaneura</i> and <i>Acacia thoma</i> and Low Open Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>Eremophila lanata</i> and <i>Ptilotus schwartzii</i> (Scattered Low Trees of <i>Acacia pruinocarpa</i> and <i>Grevillea berryana</i>) on orange sandy clay loam on hardpan plains & Low Open Shrubland of <i>Eremophila lanata</i> and <i>Ptilotus schwartzii</i> over Very Open Tussock Grassland of <i>Eriachne mucronata</i> and <i>Eragrostis eriopoda</i> with Scattered Tall Shrubs of <i>Grevillea berryana</i> , <i>Acacia incurvaneura</i> and <i>Acacia pteraneura</i> on brown sandy loam on stony plains

Characteristic	Details				
	<p>Sandy/ Stony Plains</p> <table border="1"> <tr> <td>SS Tb AanAiAap EffEd</td> <td>Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia incurvaneura</i> and <i>Acacia pruinocarpa</i> (<i>Grevillea berryana</i>, <i>Acacia ayersiana</i>) and High Open Shrubland of <i>Acacia rhodophloia</i> (<i>Acacia ramulosa</i> var. <i>linophylla</i>, <i>Acacia thoma</i>) and Low Open Shrubland of <i>Eremophila</i> cf. <i>citrina</i> and <i>Eremophila spathulata</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) on brown/orange sandy loam on sandy/stony plains and low rises</td> </tr> <tr> <td>SS EffEsEc Tb ApAaApt</td> <td>Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i>, <i>Eremophila spathulata</i> and <i>Eremophila</i> cf. <i>citrina</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) over Open Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia pruinocarpa</i>, <i>Acacia ayersiana</i> and <i>Acacia pteraneura</i> and High Open Shrubland of <i>Acacia incurvaneura</i> and <i>Acacia ramulosa</i> var. <i>linophylla</i> on brown loamy sand on sandy/stony plains</td> </tr> </table>	SS Tb AanAiAap EffEd	Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia incurvaneura</i> and <i>Acacia pruinocarpa</i> (<i>Grevillea berryana</i> , <i>Acacia ayersiana</i>) and High Open Shrubland of <i>Acacia rhodophloia</i> (<i>Acacia ramulosa</i> var. <i>linophylla</i> , <i>Acacia thoma</i>) and Low Open Shrubland of <i>Eremophila</i> cf. <i>citrina</i> and <i>Eremophila spathulata</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) on brown/orange sandy loam on sandy/stony plains and low rises	SS EffEsEc Tb ApAaApt	Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>Eremophila spathulata</i> and <i>Eremophila</i> cf. <i>citrina</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) over Open Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia pruinocarpa</i> , <i>Acacia ayersiana</i> and <i>Acacia pteraneura</i> and High Open Shrubland of <i>Acacia incurvaneura</i> and <i>Acacia ramulosa</i> var. <i>linophylla</i> on brown loamy sand on sandy/stony plains
SS Tb AanAiAap EffEd	Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia incurvaneura</i> and <i>Acacia pruinocarpa</i> (<i>Grevillea berryana</i> , <i>Acacia ayersiana</i>) and High Open Shrubland of <i>Acacia rhodophloia</i> (<i>Acacia ramulosa</i> var. <i>linophylla</i> , <i>Acacia thoma</i>) and Low Open Shrubland of <i>Eremophila</i> cf. <i>citrina</i> and <i>Eremophila spathulata</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) on brown/orange sandy loam on sandy/stony plains and low rises				
SS EffEsEc Tb ApAaApt	Shrubland of <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>Eremophila spathulata</i> and <i>Eremophila</i> cf. <i>citrina</i> (<i>Eremophila latrobei</i> subsp. <i>latrobei</i>) over Open Hummock Grassland of <i>Triodia basedowii</i> with Low Open Woodland of <i>Acacia pruinocarpa</i> , <i>Acacia ayersiana</i> and <i>Acacia pteraneura</i> and High Open Shrubland of <i>Acacia incurvaneura</i> and <i>Acacia ramulosa</i> var. <i>linophylla</i> on brown loamy sand on sandy/stony plains				
Vegetation and Substrate Association	<p>A fauna survey was conducted over the application area by Bamford Environmental Consultants during November, 2018 and August, 2019. The following vegetation and substrate associations were recorded within the application area (Bamford, 2019):</p> <ul style="list-style-type: none"> • Acacia shrubland over spinifex on slightly gravelly rises; • Mulga thickets often interspersed with open shrubland on gravelly soils; and • Drainage lines with tall and often dense Mulga. 				
Vegetation condition	<p>The vegetation survey (Onshore, 2019) and aerial imagery indicate the vegetation within the proposed clearing area is in Good to Very Good (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>				
Climate and landform	The application area is located in an arid zone with an annual average rainfall (Three Rivers station) of 234 millimetres (BoM, 2023).				
Soil description	<p>The soil within the application area is mapped as soil units AB14, BE6, and Oc49 (GIS Database). These soil units are described below (Northcote et al., 1960-68).</p> <p>AB14: Upland sand plains with occasional dunes and minor inclusions of associated plains units: chief soils are red earthy sands with red sands on the dunes.</p> <p>BE6: Extensive flat and gently sloping plains, which sometimes have a surface cover of gravels and on which redbrown hardpan frequently outcrops: chief soils are shallow earthy loams.</p> <p>Oc49: Partially dissected pediments with some low stony hills on fine-grained sedimentary rocks and basic dykes, hard alkaline red soils are dominant. Shallow stony soils occur on the steeper slopes, red-brown hardpan occur on the lower slopes and on small areas of valley plains.</p>				
Land degradation risk	The application area falls within the Thomas land system (DPIRD, 2023). The Thomas land system is described as lateritised mesas among hills of granite and gneiss, with stony footslopes above short, gently sloping interfluvial plains, supporting sparse acacia-dominated shrublands. Drainage tracks and creeklines in this land system are susceptible to erosion when degraded; other areas are not normally susceptible to accelerated erosion (Curry et al., 1994).				
Waterbodies	The desktop assessment and aerial imagery indicated that four minor, non-perennial watercourses transect the area proposed to be cleared (GIS Database).				
Hydrogeography	The application area falls within the East Murchison Groundwater Area which is legislated by the RIWI Act 1914. The mapped groundwater salinity is 500-1,000 milligrams per litre total dissolved solids which is described as marginal (GIS Database).				
Flora	<p>There were 8 Priority flora species recorded within the application area (RPM Global, 2023). There are no records of Threatened flora species in the application area (RPM Global, 2023; GIS Database).</p> <p>Map showing the location of the Priority species in the application area can be found in Appendix D.</p>				
Ecological communities	The application area is not located within any known or mapped Threatened or Priority Ecological Communities (RPM Global, 2023; GIS Database).				
Fauna	There are no records of conservation significant fauna within the application area (RPM Global, 2023; GIS Database).				

A.2. Flora analysis table

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

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Calytrix praecipua</i>	P3	Y	Y	Y	0 km	28	Y
<i>Eremophila demissa</i>	P1	Y	Y	Y	0 km	5	Y
<i>Eremophila lanata</i>	P3	Y	Y	Y	0 km	1	Y
<i>Goodenia virgata</i>	P2	Y	Y	Y	0 km	7	Y
<i>Maireana prosthocochaeta</i>	P3	Y	Y	Y	0 km	24	Y
<i>Sauropus</i> sp. Woolgorong (M. Officer s.n. 10/8/94)	P3	Y	Y	Y	0 km	35	Y
<i>Sporobolus blakei</i>	P3	Y	Y	Y	0 km	11	Y
<i>Thryptomene</i> sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	P3	Y	Y	Y	0 km	25	Y

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

(RPM Global, 2023; Western Australian Herbarium, 1998-)

A.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information, impacts to the following conservation significant flora required further consideration. Only records within 50 kilometres were considered.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Expected occurrence
Australian bustard	LS	Y	Y	Unknown	Unknown	Resident
Brush-tailed mulgara	P4	Y	Y	1.8 km	1,166	Resident
Kultarr	LS	Y	Y	Unknown	Unknown	Resident

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

(Bamford, 2019; GIS Database)

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>There are three conservation significant fauna species within 50 kilometres of the application area that are expected to be residents of the application area (see section A.3). The application area contains eight Priority flora species (see section A.2). Impacts to Priority flora species within the application area can be managed by placing a flora management condition to avoid clearing within 10 metres of recorded Priority flora.</p> <p>The application area does not intersect any known or mapped Priority Ecological Communities (GIS Database). Only one weed species was identified within the application area (Onshore, 2019). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.</p>	At variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u></p> <p>The application area contains three fauna habitats that are considered to be common and widespread in the local area and that extend well beyond the clearing boundary (RPM Global, 2023). The proposed clearing may impact conservation significant fauna that occur in the application area as residents or visitors (see section A.3). These impacts can be managed by placing fauna management condition to conduct slow one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.</p>	May be at variance	No
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>There are no records of threatened flora within the application area (GIS Database) and no threatened flora species were recorded during the vegetation and flora survey (Onshore, 2019; RPM Global, 2023).</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u></p> <p>There were no Threatened Ecological Communities recorded within the application area (Onshore, 2019; RPM Global, 2023; GIS Database).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area falls within the Gascoyne Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). Over 99 per cent of the pre-European vegetation still exists in the Gascoyne Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 18, 29, and 111 (GIS Database). These vegetation associations have not been extensively cleared as over 99 per cent of the pre-European vegetation extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019).</p>	Not at variance	No
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any conservation areas (GIS Database).</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given four ephemeral drainage lines are recorded within the application area (GIS Database), the proposed clearing is likely to impact vegetation growing in, or in association with, an environment associated with a watercourse or wetland. This impact can be managed by placing a vegetation management condition on the clearing permit to avoid clearing riparian vegetation where possible and maintain water flows.</p>	At variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p>	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The mapped soils are not generally susceptible to erosion, except for drainage lines (Curry et al., 1994). Noting the location of the application area and the drainage lined present in the application area (GIS Database), the proposed clearing may cause appreciable land degradation. This impact can be managed by placing a staged clearing condition on the clearing permit to avoid leaving cleared areas exposed for long periods of time.		
<p><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."</p> <p><u>Assessment:</u></p> <p>Given no permanent water courses, wetlands, or Public Drinking Water Source Areas are recorded within the application area (GIS Database), the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.</p>	Not likely to be at variance	No
<p><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."</p> <p><u>Assessment:</u></p> <p>Given no permanent water courses or wetlands are recorded within the application area (GIS Database), the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Biological survey information excerpts

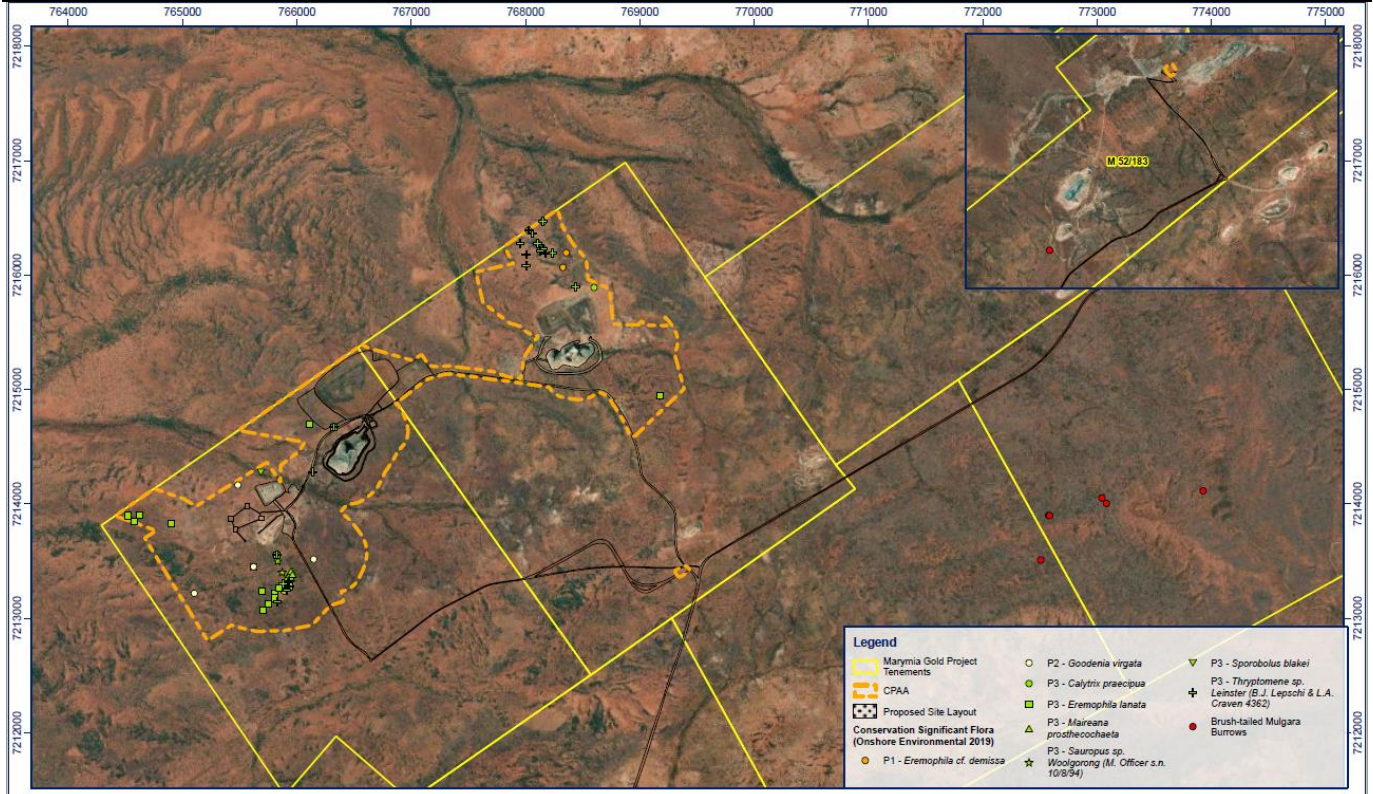


Figure 1. Location of Priority flora (green symbols) within the application area (dotted orange line).

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)
- 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
- Pre-European Vegetation Statistics
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

E.2. References

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- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 19 October 2023).
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- 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>
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- Onshore Environmental (Onshore) (2019) Marymia Gold Project Detailed Flora and Vegetation Survey. Report prepared for Vango Mining by Onshore Environmental Consultants Pty Ltd, July 2019.
- RPM Global (2023) Purpose Permit Application Supporting Document. Report prepared for Catalyst Metals Limited by RPM Advisory Services Pty Ltd, September 2023.
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- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 23 October 2023).

4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , 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
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 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
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

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.