



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7172/1
Permit Holder:	Altura Mining Limited
Duration of Permit:	1 January 2017 – 1 January 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road construction or upgrades.

2. Land on which clearing is to be done

Pippingarra Road reserve, PIN 11736616, Indee
Pippingarra Road reserve, PIN 11736617, Indee
Pippingarra Road reserve, PIN 11736619, Marble Bar
Pippingarra Road reserve, PIN 11734393, Marble Bar
Pippingarra Road reserve, PIN 11734390, Marble Bar
Crown Reserve 12804, PIN 1017791, Indee

3. Area of Clearing

The Permit Holder must not clear more than 70 hectares of native vegetation within the combined areas cross-hatched yellow on attached Plan 7172/1a, Plan 7172/1b and Plan 7172/1c.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

6. Avoid, minimise etc. clearing

In determining the amount of native vegetation authorised to be cleared under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

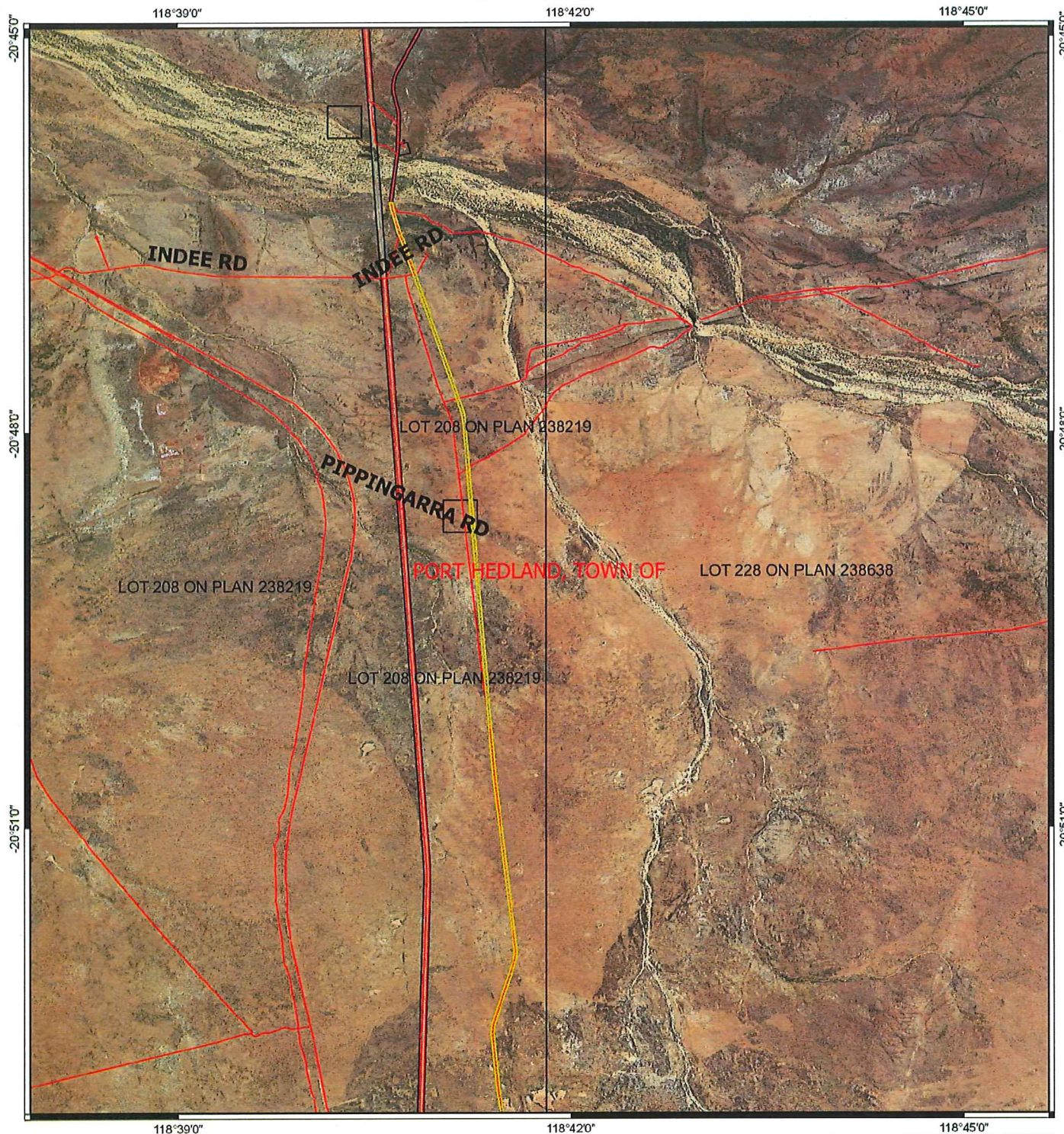
- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

Kelly Faulkner
EXECUTIVE DIRECTOR
LICENSING AND APPROVALS





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

2 December 2016

Plan 7172/1a



Legend

-  Areas approved to clear
-  Roads
-  LGA
-  Cadastre
- Virtual Mosaic (LGATE-V001)



1:60,000
MGA94

Geocentric Datum of Australia 1994

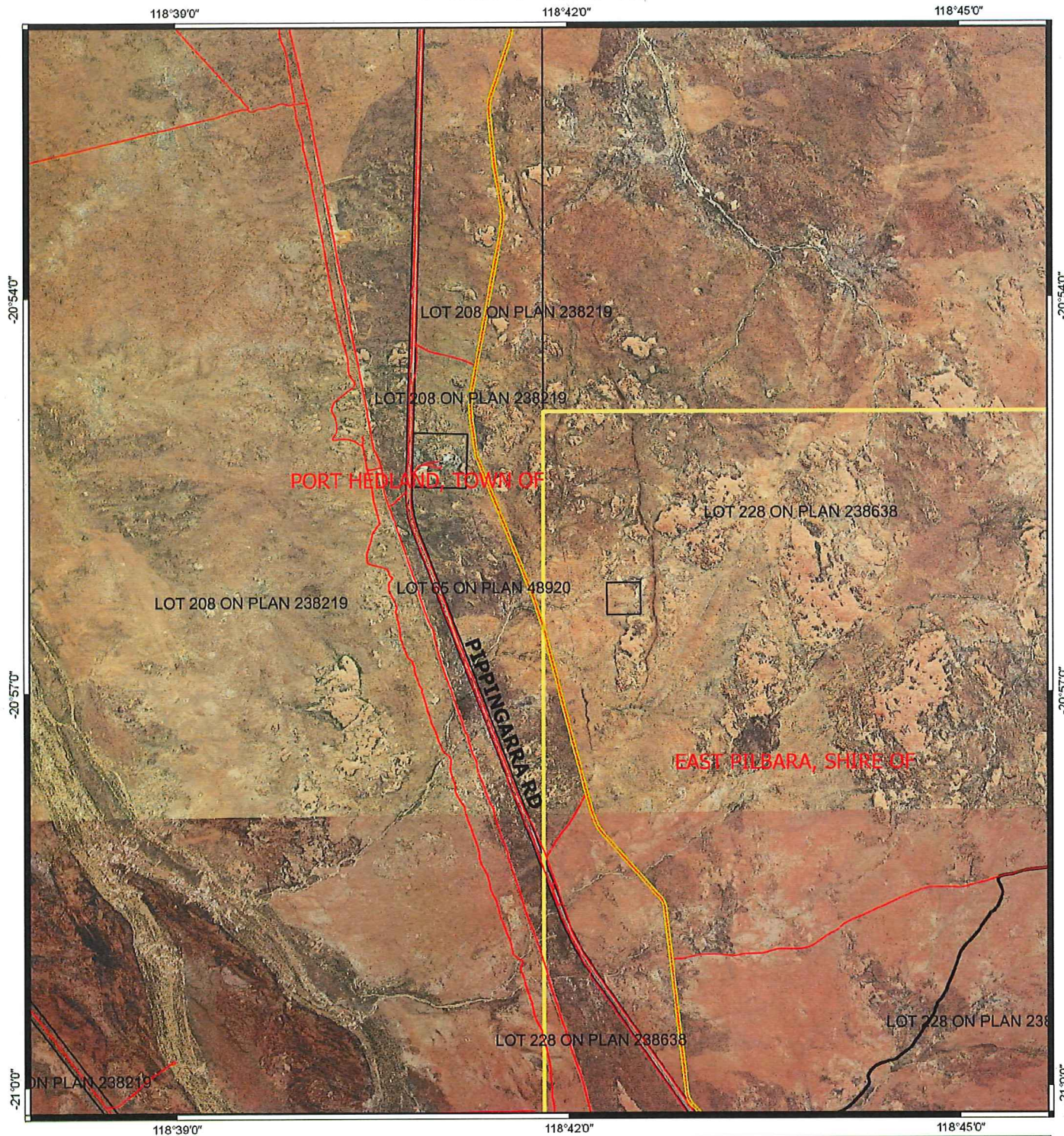
 Date 2/12/16
Kelly Faulkner

Officer with delegated authority under Section 20
of the Environmental Protection Act 1986







GOVERNMENT OF
WESTERN AUSTRALIA

Plan 7172/1b



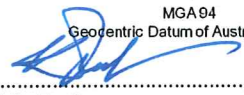
Legend

-  Areas approved to clear
-  Roads
-  LGA
-  Cadastre
- Virtual Mosaic (LGATE-V001)



1:60,000
MGA 94

Geocentric Datum of Australia 1994

 Date 2/12/16

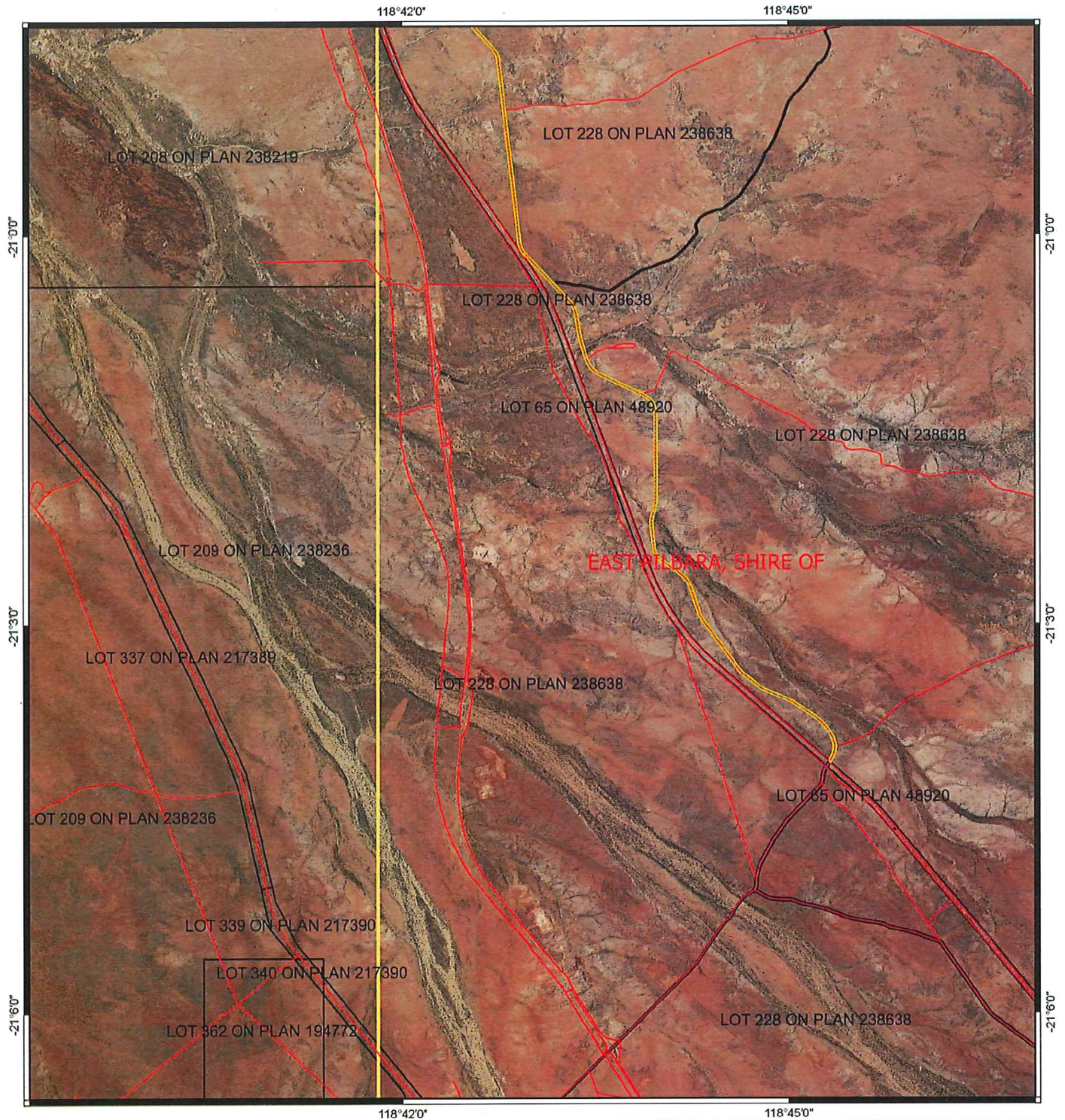
Kelly Faulkner

Officer with delegated authority under Section 20
of the Environmental Protection Act 1986







GOVERNMENT OF
WESTERN AUSTRALIA

Plan 7172/1c




Legend

-  Areas approved to clear
-  Roads
-  LGA
-  Cadastre
- Virtual Mosaic (LGATE-V001)



1:60,000
MGA94

Geocentric Datum of Australia 1994

 Date 2/12/16
Kelly Faulkner

Officer with delegated authority under Section 20
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GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 7172/1
Permit type: Purpose Permit

1.1. Proponent details

Proponent's name: Altura Mining Limited

1.2. Property details

Property: Pippingarra Road reserve (PINs 11734390, 11734393, 11736619, 11736617, 11736616), Marble Bar and Indee
Local Government Authority: EAST PILBARA, SHIRE OF and PORT HEDLAND, TOWN OF
DER Region: North West
Localities: MARBLE BAR and INDEE

1.3. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70	0	Mechanical Removal	Road construction or upgrades

1.4. Decision on application

Decision on Permit Application: Grant
Decision Date: 2 December 2016

Reasons for Decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and the Delegated Officer determined that the proposed clearing is unlikely to have an unacceptable risk to the environment. The clearing was found to be at variance to principle (f) (watercourse) however, noting the linear extent of the proposed clearing, this impact is unlikely to be significant.

Noting that the proposed clearing is within an existing road reserve over a 36 kilometre length, and that clearing is unlikely to result in a significant environmental impact, the Delegated Officer has determined to grant a clearing permit.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The application area has been mapped within Beard vegetation associations (Shepherd et al., 2001): <ul style="list-style-type: none"> 93 which is described as hummock grasslands, shrub steppe; kanji over soft spinifex; and 619 which is described as medium woodland, river gum (<i>Eucalyptus camaldulensis</i>). 	The applicant proposes to clear up to 70 hectares of native vegetation along a 36 kilometre stretch of road for the purpose of road construction and upgrades.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).	Indicative vegetation condition was determined from review of aerial imagery.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposed clearing may be at variance to this Principle**
The applicant proposes to clear up to 70 hectares of native vegetation along a 36 kilometre stretch of road reserve for the purpose of road construction and upgrades. The applicant has stated that the road is disused and the application is predominantly to clear regrowth.

Based on aerial imagery, the local area (defined as a 50 kilometre radius around the application area) retains an estimated 99 per cent of the pre-European extent of native vegetation cover. Rangeland soil mapping indicates that the application area contains the following habitat types:

- Macroy Land System; Stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands;
- Boolaloo Land System; Granite hills, domes and tor fields and sandy plains with shrubby spinifex grasslands;
- Uaroo Land System; Broad sandy plains supporting shrubby hard and soft spinifex grasslands;

- Mallina Land System; Sandy surfaced alluvial plains supporting soft spinifex (and occasionally hard spinifex) grasslands; and
- River Land System; Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands.

One rare flora species listed under the *Wildlife Conservation Act 1950* (WC Act), five Priority 1 and one Priority 2 flora species listed by the Department of Parks and Wildlife (Parks and Wildlife) have been recorded within the local area (50 kilometre radius). As all records of the rare flora species are from a single ridge, and noting that the application area is predominantly flat, it is considered that this species is unlikely to be present within the application area (Western Australian Herbarium, 1998-). Given the mapped soil and vegetation type, five of the Priority flora species have the potential to be present within the application area. Records of these species occur within 10 metres of the application area, and a large number of known records of these species occur within the local area (Western Australian Herbarium, 1998-).

Five fauna species listed as rare or likely to become extinct under the WC Act have been recorded within the local area (Parks and Wildlife, 2007-). Given the mapped habitat types, three of these have the potential to be present within the application area; northern quoll (*Dasyurus hallucatus*), Pilbara olive python (*Liasis olivaceus* subsp. *barroni*) and greater bilby (*Macrotis lagotis*). Records of these species occur within the application area. A further fauna species listed as Priority 1 by Parks and Wildlife may be present within the application area.

As the application area may contain priority flora and provides habitat for rare indigenous fauna, the proposed clearing may be at variance to this Principle. Noting that the application area is linear and located within a designated road reserve that has previously been cleared, it is considered that the impacts are unlikely to be significant.

Methodology References:
Parks and Wildlife (2007-)
Western Australian Herbarium (1998-)

GIS Database:
SAC bio datasets (Accessed October 2016)
Rangeland Soil Mapping

(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 indigenous to Western Australia.

Comments Proposed clearing may be at variance to this Principle

Based on aerial imagery, the local area (defined as a 50 kilometre radius around the application area) retains an estimated 99 per cent of the pre-European extent of native vegetation cover. Rangeland soil mapping indicates that the application area contains the following fauna habitat types:

- Macroy Land System; Stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands;
- Boolaloo Land System; Granite hills, domes and tor fields and sandy plains with shrubby spinifex grasslands;
- Uaroo Land System; Broad sandy plains supporting shrubby hard and soft spinifex grasslands.
- Mallina Land System; Sandy surfaced alluvial plains supporting soft spinifex (and occasionally hard spinifex) grasslands; and
- River Land System; Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands.

Five fauna species listed as rare or likely to become extinct under the WC Act have been recorded within the local area (Parks and Wildlife, 2007-). Given the mapped habitat types, three of these have the potential to be present within the application area; northern quoll (*Dasyurus hallucatus*), Pilbara olive python (*Liasis olivaceus* subsp. *barroni*) and greater bilby (*Macrotis lagotis*).

The greater bilby is listed as vulnerable under the WC Act and *Environmental Protection and Biodiversity Conservation Act, 1999*. Habitat preferences for this species are present within the application area and the species has been recorded within metres of the application area (Parks and Wildlife, 2007-). On this basis it is considered that the proposed clearing may impact on this species. The greater bilby no longer inhabits up to 90 per cent of its historical range and occurs in fragmented populations in south-western Queensland, drier areas of the Northern Territory and northern Western Australia. The distribution of the greater bilby is contracting northwards with significant contraction into the Kimberley from the Northern Territory in the past 20 years (Pavey, 2006; Narayan et al., 2014).

The northern quoll is listed as endangered under the WC Act and EPBC Act. There are several records of the species within the application area as well as populations within the local area (Parks and Wildlife, 2007-). Given this, it is considered that the proposed clearing may impact on this species. Given the biological lifecycle of this species as described in Hill and Ward (2010), it is considered that a localised impact to this species may have a significant impact on a population (Hill and Ward, 2010).

The Pilbara olive python inhabits rocky outcrops, waterholes and has a large home range (DotE, 2006). This species has been recorded approximately five kilometres from the application area. Given this, the Boolaloo Land System as well as, surrounding vegetation may provide suitable habitat for the species. It is considered that the proposed clearing may impact on the species if present at the time of clearing and may have an indirect impact of increased road mortalities (DotE, 2006).

One priority-listed fauna is known from the local area (Parks and Wildlife, 2007-). The black-lined ctenotus is listed as Priority 1 by Parks and Wildlife, and has been recorded within the application area. Given this, it is considered that the species may be present within the application area and may be impacted by the proposed clearing.

The application area contains suitable habitat for conservation significant avian species, however noting that the fauna habitat recorded within the application area is well represented within the local area, it is considered that the application area is unlikely to constitute significant habitat for these species. Migratory bird species may utilise habitat within the application area for opportunistic foraging, however are unlikely to be specifically reliant on habitat within the application area.

Noting the extent and linear alignment of the proposed clearing, it is considered that the proposed clearing is unlikely to cause habitat fragmentation on a local scale.

Given the above, the proposed clearing may be at variance to this Principle.

Methodology References:
DotE (2006)
Hill and Ward (2010)
Narayan et al. (2014)
Parks and Wildlife (2007-)
Pavey (2006)

GIS Databases:
SAC bio datasets (Accessed October 2016)
Rangeland Soil Mapping

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposed clearing is not likely to be at variance to this Principle**
One rare flora species, listed as threatened under the WC Act has been recorded within the local area (50 kilometre radius). This species is known from a range of 42 kilometres and has been recorded 25 kilometres from the application area (Western Australian Herbarium, 1998-). As all records of this species are located on a single ridge, the species is likely to be restricted to steep habitat types and potentially, only occurs within the known location. Given this and noting that the application area is predominantly flat, it is considered that this species is unlikely to be present within the application area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Western Australian Herbarium (1998-)

GIS Databases:
SAC bio datasets (Accessed October 2016)

(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.

Comments **Proposed clearing is not likely to be at variance to this Principle**
According to available databases, there are no known threatened ecological communities (TECs) within the local area (50 kilometre radius). The nearest TEC is the 'Assemblages of the organic springs and mound springs of Mandora Marsh area', located approximately 320 kilometres east of the application area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
SAC bio datasets (Accessed October 2016)

(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.

Comments

Proposed clearing is not at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The application area is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, which retains approximately 99 per cent of the pre-European extent of native vegetation cover (Government of Western Australia, 2015). The application area is mapped as Beard vegetation associations 93 and 619, which retain approximately 99 per cent pre-European extents at a bioregional level (Government of Western Australia, 2015).

The application area is located within the Shire of East Pilbara and Town of Port Headland, which retain approximately 99 and 98 per cent of their pre-European vegetation extents, respectively (Government of Western Australia, 2015).

Based on aerial imagery, the local area (50 kilometre radius) retains an estimated 99 per cent of the pre-European extent of native vegetation cover.

On the basis that the native vegetation extents present within the application area, the Shire, the bioregion and the local area retain considerably greater than 30 per cent representation; it is considered that the application area is not significant as a remnant of native vegetation within an area that has been extensively cleared.

Given the above, the proposed clearing is not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,808,657	17,733,584	99	10
Local government*				
Shire of East Pilbara	37,183,060	37,155,265	99	5
Town of Port Headland	1,847,394	1,818,662	98	-
Beard vegetation association in Bioregion*				
93	3,042,114	3,038,472	99	2
619	118,920	118,117	99	0.2

Methodology

References:

Commonwealth of Australia (2001)

*Government of Western Australia (2015)

GIS Database:

IBRA WA (Regions - Sub Regions)

Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposed clearing is at variance to this Principle

The application area crosses Chinnamon Creek, a tributary of Turner River, and mapped as a major tributary and a minor non-perennial watercourse. Given this, it is considered that vegetation associated with a watercourse or wetland is present within the application area and will be impacted by the proposed clearing.

Given the above, the proposed clearing is at variance to this Principle. Although the application area includes riparian vegetation, given the long linear shape of the application area and the extent of vegetation within the local area, it is considered that impacts to riparian vegetation are unlikely to be significant.

Methodology

GIS Databases:

Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposed clearing is not likely to be at variance to this Principle

The application area has been mapped within the following land systems:

- Macroy Land System; Stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands;
- Boolaloo Land System; Granite hills, domes and tor fields and sandy plains with shrubby spinifex grasslands;
- Uaroo Land System; Broad sandy plains supporting shrubby hard and soft spinifex grasslands;
- Mallina Land System; Sandy surfaced alluvial plains supporting soft spinifex (and occasionally hard spinifex) grasslands; and
- River Land System; Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands.

The application area crosses Chinnamon Creek, a tributary of Turner River, and mapped as a major tributary and a minor non-perennial watercourse.

Although the application area includes riparian vegetation, given the long linear shape of the application area and the extent of vegetation within the local area, it is considered that the proposed clearing is unlikely to cause appreciable land degradation through salinity, water erosion, wind erosion, eutrophication or soil acidification.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
Remnant vegetation
Rangeland Soil Mapping

(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.

Comments Proposed clearing is not likely to be at variance to this Principle

The local area (50 kilometre radius) does not include any Parks and Wildlife managed lands. Given this, the proposed clearing is unlikely to impact on the environmental values of Parks and Wildlife conservation estate.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
Parks and Wildlife tenure
RAMSAR, Wetlands

(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.

Comments Proposed clearing is not likely to be at variance to this Principle

The application area crosses Chinnamon Creek, a tributary of Turner River, and mapped as a major tributary and a minor non-perennial watercourse.

Given the long linear shape of the application area and the extent of vegetation within the local area (50 kilometre radius), it is considered that the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
Remnant vegetation
Hydrography, linear

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposed clearing is not likely to be at variance to this Principle

The application area crosses Chinnamon Creek, a tributary of Turner River, and mapped as a major tributary and a minor non-perennial watercourse.

Given the long linear shape of the application area and the extent of vegetation within the local area (50 kilometre radius), it is considered that the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
Remnant vegetation
Hydrography, linear

Planning instruments and other relevant matters.

Comments The Department of Mines and Petroleum is assessing a clearing permit application (CPS 7246/1) that adjoins the current application and is a continuation of the same project. Application CPS 7246/1 is located within a mining tenement and is therefore subject to assessment by DMP, whereas the current application is located within a road reserve. Application CPS 7246/1 contains a road to the proposed mining infrastructure. Flora and fauna surveys undertaken for application CPS 7246/1 recorded Priority flora within the application area however no threatened flora or significant fauna habitat were recorded (Natural Area Consulting, 2016).

This application area is located approximately parallel to mining transport infrastructure. The proposed road upgrades tie into this infrastructure at the northern end. The application area is located within a gazetted road reserve.

On 8 August 2016 the application was advertised in *The West Australian* newspaper for a 21 day submission period. No public submissions have been received in relation to this application.

Methodology References:
Natural Area Consulting (2016)

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Parks and Wildlife (Parks and Wildlife) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. <http://naturemap.dpaw.wa.gov.au/>. (Accessed October 2016)
- Department of the Environment (DotE) (2006) Approved Conservation Advice for *Liasis olivaceus barroni* (Olive Python – Pilbara subspecies). Approved by the Minister / Delegate of the Minister on: 3/7/2008.
- Government of Western Australia (2015) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Hill, B.M. and Ward, S.J. (2010) National Recovery Plan for the Northern Quoll *Dasyurus hallucatus*. Department of Natural Resources, Environment, The Arts and Sport, Darwin.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Narayan, E.J., Evans, N., & Hero, J.M. (2014) Monitoring physiological stress in semi-free ranging populations of an endangered Australian marsupial, the Greater Bilby (*Macrotis lagotis*). *European Journal of Wildlife Research*, 60(5), 727-735.
- Natural Area Consulting (2016) Flora, Vegetation and Fauna Survey Report, Pilgangoora Lithium Project, V1 – 01 June 2016. Natural Area Holdings Pty Ltd.
- Pavey, C. (2006) National Recovery Plan for the Greater Bilby *Macrotis lagotis*. Northern Territory Department of Natural Resources, Environment and the Arts.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed October 2016).