



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7641/1
Permit Holder:	Hamersley Iron Pty Ltd
Duration of Permit:	6 January 2018 – 6 January 2023

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 access tracks upgrades and water bore maintenance

2. Land on which clearing is to be done

Lot 300 on Deposited Plan 72977, Karijini

3. Area of Clearing

The Permit Holder must not clear more than nine hectares of native vegetation within the area hatched yellow on attached Plan 7641/1.

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.

- 5.** This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Land Administration Act 1997* or any other written law.

PART II – MANAGEMENT CONDITIONS

6. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Flora management

- Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to conduct a *targeted flora survey* of the Permit Area for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice* and *priority flora*.

- (b) Where rare or *priority flora* are identified under condition 7(a) of this Permit, the Permit Holder shall engage a *botanist* to map the critical habitat of the identified rare or *priority flora* within the Permit Area.
- (c) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall provide the results of the *targeted flora survey* in a report to the CEO.
- (d) If rare or *priority flora* are identified within the Permit Area, the *targeted flora survey* report must include the following;
 - (i) the location of each rare or *priority flora*, either as the location of individual plants, or where this is not practical, the areal extent of the population and an estimate of the number of plants, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (ii) the species name of each rare or *priority flora* identified; and
 - (iii) the methodology, used to survey the Permit Area and to establish the *critical habitat* of flora; and
 - (iv) the extent of the *critical habitat* of the identified rare or *priority flora* shown on a map; and
 - (v) a site description of the *critical habitat* of rare or *priority flora* found.
- (e) Where rare or *priority flora* is identified under condition 7(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing within 10 metres of the identified *priority flora* occurs, unless first approved by the CEO.
 - (ii) no clearing within 50 metres of the identified rare flora occurs, unless first approved by the CEO.

8. Vegetation management

- (a) Where practicable the Permit Holder shall avoid clearing riparian vegetation.
- (b) Where a watercourse or wetland is to be impacted by clearing, the Permit Holder shall maintain the existing surface flow by use of culverts.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the clearing of native vegetation authorised under this Permit:

- (a) the species composition, structure and density of the cleared area;
- (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (c) the date that the area was cleared; and
- (d) the size of the area cleared (in hectares).

10. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 8 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) Prior to 6 October 2022, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

botanist means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience in identification and surveys of flora native to the bioregion being inspected or surveyed, or who is approved by the CEO as a suitable botanist for the bioregion;

CEO means the Chief Executive Officer of the Department of Water and Environmental Regulation or an officer with delegated authority under Section 20 of the *Environmental Protection Act 1986*;

critical habitat: means any part of the Permit Area comprising of the habitat of flora or fauna species and its population, that is critical for the health and long term survival of the flora or fauna species and its population;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

priority flora means those plant taxa described as priority flora classes 1, 2, 3, 4 or 5 in the *Department of Parks and Wildlife's Threatened and Priority Flora List for Western Australia* (as amended);

targeted flora survey: means a field-based investigation, including a review of established literature, of the biodiversity of flora and vegetation of the Permit Area, focusing on habitat suitable for flora species that are being targeted and carried out during the optimal time to identify those species. Where target flora are identified in the Permit Area, the survey should also include sufficient surrounding areas to place the Permit Area into local context;

Wildlife Conservation (Rare Flora) Notice means those plant taxa gazetted as rare flora pursuant to section 23F(2) of the *Wildlife Conservation Act 1950* (as amended).

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

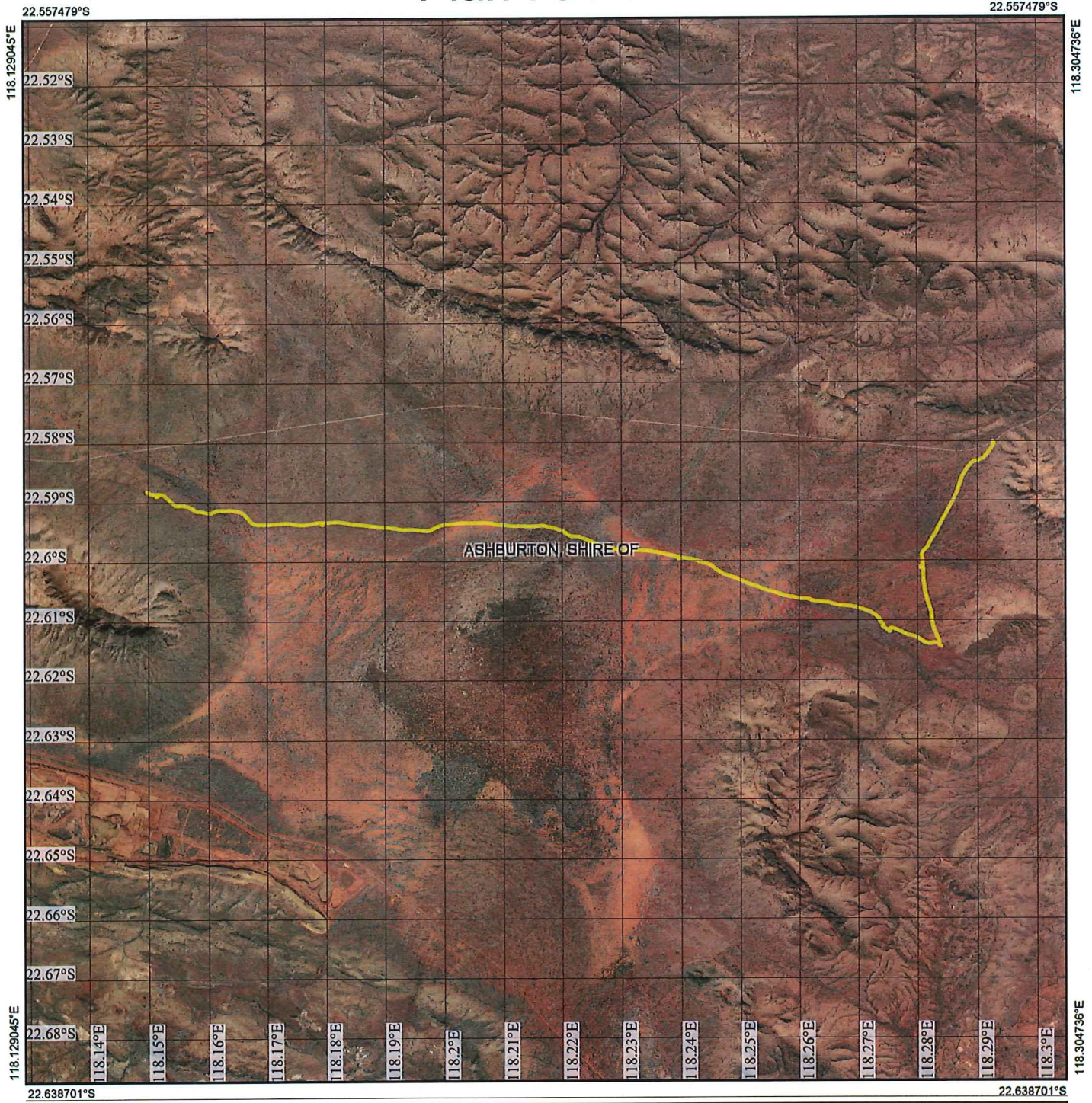


Mathew Gannaway
MANAGER
CLEARING REGULATION

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

7 December 2017

Plan 7641/1




Legend

-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



1:95,697
(Approximate when reproduced at A4)
GDA 94 (Lat/Long)
Geocentric Datum of Australia 1994

 Date 7/12/17

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



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1. Application details

1.1. Permit application details

Permit application No.: 7641/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: Lot 300 on Deposited Plan 72977, Karijini
Local Government Authority: Ashburton, Shire of
Localities: Karijini

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
9		Mechanical Removal	Bore construction and upgrading access tracks

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 7 December 2017

Reasons for Decision: The clearing permit application was received on 13 June 2017 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to principles (f) and (h), may be at variance to principles (a) and (i), and is not likely to be at variance to the remaining clearing principles.

As the application area occurs within the Department of Biodiversity, Conservation and Attractions (DBCA) managed lands, and given the biological diversity of the local and regional area, DBCA have requested the applicant to undertake additional, post-wet season flora surveys to capture, in particular, ephemeral species missed in the initial survey. A flora management condition is included on the permit to address this requirement.

The application area intersects a number of minor non-perennial watercourses and an area subject to inundation. Any impact caused by the proposed clearing involving riparian vegetation, and where it cannot be minimised or avoided where practicable, is likely to be temporary and highly localised. To mitigate impacts to these watercourses the clearing permit is subject to a vegetation management condition.

To mitigate impacts to Hamersley Range National Park, the clearing permit is subject to weed management control actions, which will assist in mitigating the risk of weeds spreading into the adjacent vegetation within this conservation area.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

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
<p>The application area is mapped as Beard vegetation associations:</p> <ul style="list-style-type: none"> - 18, which is described as Low woodland; mulga (<i>Acacia aneura</i>); and - 29, which is described as Sparse low 	<p>The applicant proposes to clear up to nine hectares of native vegetation for the purpose of bore construction and upgrading access tracks.</p>	<p>Good; Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate (Keighery, 1994).</p>	<p>The condition of the vegetation in the application area was determined by a survey undertaken by the applicant on 12 September 2017 (Rio Tinto, 2017a).</p>

woodland; mulga, discontinuous in scattered groups (Shepherd et al., 2001).

to

Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

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 application is to clear 9 hectares of native vegetation within Lot 300 on Deposited Plan 72977, Karijini for the purpose of bore construction and upgrading access tracks.

An initial flora survey of the application area identified the vegetation to be in a predominately Good to Very Good (Keighery, 1994) condition. The survey identified one Priority One (P1) and one Priority Three (P3) listed flora species occurring within the most western part of the application area (Rio Tinto, 2017a). Each priority flora population contained one individual plant.

The detection of the P1 species on the historically cleared access track indicates a seed bank is present within the suitable clay-loam plains which also extend beyond the study area to the north and south. Hence this species is not restricted to the study area. The P3 species is also not restricted to the application area as it was recorded in numbers greater than 1,000 individuals within 5 km of the application area.

As the proposed clearing area falls within the Department of Biodiversity, Conservation and Attractions (DBCA) managed lands, and given the biological diversity of the local and regional area, DBCA have requested the applicant to undertake additional, post-wet season flora surveys to capture, in particular, ephemeral species missed in the initial survey. A flora management condition is included on the permit to address this requirement.

The flora survey did not identify any conservation significant ecological communities or significant habitat for conservation significant fauna (Rio Tinto, 2017a).

The application area is within the Hamersley Range National Park. The flora survey identified two introduced weed species being *Cenchrus ciliaris* and *Bidens bipinnata*. Mechanical clearing may increase the risk of spreading weeds into the adjacent native vegetation of the application area. Weeds can decrease the biodiversity value of an area as they out-compete native vegetation for available resources, contribute to land degradation and increase the frequency and intensity of fires (Department of Environment and Conservation [DEC], 2011). Potential impacts to biodiversity of the Hamersley Range National Park as a result of the proposed clearing may be mitigated through appropriate weed management practices. Given the above, the proposed clearing may be at variance to this Principle.

Methodology References:
DEC (2011)
Keighery (1994)
Rio Tinto (2017a)

GIS Database:
- Aerial imagery
- SAC bio datasets (accessed October 2017)

(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 is not likely to be at variance to this Principle

A flora survey of the application area identified the vegetation to be predominately Good to Very Good (Keighery, 1994) condition (Rio Tinto, 2017a).

According to available databases, six threatened fauna, seven priority fauna species, three species protected under international agreement and one specially protected fauna species have been recorded within 50 kilometres of the application area (Parks and Wildlife, 2007-).

The survey did not identify any significant habitat for conservation significant fauna (Rio Tinto, 2017a).

Given the linear nature of the proposed clearing and considering the application area is part of the larger Hamersley Range National Park, the vegetation within the application area is unlikely to comprise whole or part of, or be necessary for the maintenance of, significant habitat for fauna indigenous to Western Australia.

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

Methodology References:
CPS 7641/1, 7 December 2017

Keighery (1994)
Parks and Wildlife (2007-)
Rio Tinto (2017a)

GIS Databases:
- Imagery

(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**
According to available databases, one rare flora species has been recorded within 50 kilometres of the application area.

A flora survey did not observe any rare flora within the application area (Rio Tinto, 2017a).

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

Methodology References:
Rio Tinto (2017a)

GIS Databases:
SAC bio datasets (accessed October 2017)

(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 not likely to be at variance to this Principle**
According to available databases, one threatened ecological community has been recorded within 50 kilometres of the application area.

A flora survey did not observe any vegetation communities consistent with any known threatened ecological community within the application area (Rio Tinto, 2017a).

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

Methodology References:
Rio Tinto (2017a)

GIS Databases:
SAC bio datasets (accessed October 2017)

(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 likely to be at variance to this Principle**
The application area is within the extensively vegetated Hamersley Range National Park.

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

In addition, the application area is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2016). Similarly, the Shire of Ashburton and the mapped Beard vegetation associations all retain approximately 99 per cent of their pre-European vegetation extent.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*: Pilbara	17,808,657	17,733,583	99	10
Shire*: Shire of Ashburton	10,087,789	10,061,093	99	17
Beard Vegetation Association in Bioregion*				
18	676,556	672,424	99	25
29	1,133,219	1,132,939	99	9

Given the extent of remnant native vegetation remaining in the local area (99 percent) and more broadly within

the Shire of Ashburton and the Pilbara IBRA region, the proposed clearing is not likely to be significant as a remnant within an extensively cleared area.

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

Methodology References:
Commonwealth of Australia (2001)
Government of Western Australia (2016)*

GIS Databases:
- Imagery
- 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 is within the extensively vegetated Hamersley Range National Park. The clearing boundary is linear, is between 4.5 and 15 metres wide (where deemed necessary) over a distance of approximately 19 kilometres, and intersects a number of minor non-perennial watercourses and an area subject to inundation.

Any impact caused by the proposed clearing involving riparian vegetation, and where it cannot be minimised or avoided where practicable, is likely to be temporary and highly localised. It is not likely to cause any significant environmental impacts.

As the proposed clearing includes riparian vegetation, the proposed clearing is at variance to this Principle.

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

Three mapped soil types are identified within the application area:

- Ja2: This unit occupies the central position within the high-level valley plains represented by unit Fb3: chief soils are earthy clays (Uf6.71) along with extensive areas of (Ug5.38) soils;
- Fb3: High-level valley plains set in extensive areas of unit Fa13. There are extensive areas of pisolitic limonite deposits: principal soils are deep earthy loams (Um5.52) along with small areas of (Gn2.12) soils; and
- Fa13: Ranges of banded jaspilite and chert along with shales, dolomites, and iron ore formations; some areas of ferruginous duricrust as well as occasional narrow winding valley plains and steeply dissected pediments. This unit is largely associated with the Hamersley and Ophthalmia Ranges. The soils are frequently stony and shallow and there are extensive areas without soil cover: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5.11) soils on the steeper slopes. Associated are (Dr2.33 and Dr2.32) soils on the limited areas of dissected pediments, while (Um5.52) and (Uf6.71) soils occur on the valley plains (Northcote et al., 1960-1968).

A flora survey further identified that the application area comprised of these soil units:

- colluvial foot-slopes at the western end; and
- drainage flats, lower colluvial stony flats, internally draining clay-loam flats and clay flats transitioning between the middle zones to the eastern end of the application area (Rio Tinto, 2017a).

The application area is within the extensively vegetated Hamersley Range National Park. The clearing boundary for the access track is linear, being 4.5 metres wide (but may extend to 15 metres wide where deemed necessary) over a distance of approximately 19 kilometres with native vegetation remaining adjacent to the application area.

Given the above, the proposed clearing is not likely to cause appreciable land degradation and is therefore not likely to be at variance to this Principle.

Methodology References:
Northcote et al. (1960-68)
Rio Tinto (2017a)

GIS Database:
- Hydrography, linear
- Soils, statewide

(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 at variance to this Principle

The application area is within the Hamersley Range National Park and therefore includes vegetation directly associated with a conservation area.

A flora survey of the application area identified two introduced weed species being *Cenchrus ciliaris* and *Bidens bipinnata* (Rio Tinto, 2017a). Mechanical clearing increases the risk of spreading weeds into native vegetation adjacent to the application area. Potential impacts to biodiversity of the Hamersley Range National Park as a result of the proposed clearing may be mitigated through appropriate weed management practices.

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

Methodology References:
Rio Tinto (2017a)

GIS Databases:
- Parks and Wildlife tenure

(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 may be at variance to this Principle

As discussed in Principle (f), the application area intersects a number of minor non-perennial watercourses and an area subject to inundation.

Clearing activities within watercourses are likely to increase the level of sedimentation during periods of inundation, and may alter the flow of watercourses.

Groundwater salinity within the application area is mapped as 500-1000 milligrams per litre total dissolved solids, which is considered to be low. The proposed clearing of nine hectares within an area that is extensively vegetated is not likely to impact on the quality of groundwater.

Impacts to surface water may be minimised by avoiding the clearing of riparian vegetation where practicable, and maintaining the existing surface flow where watercourses are impacted by clearing. A vegetation management condition will assist in mitigating this risk.

Given the potential impacts to surface water, the proposed clearing may be at variance to this Principle.

Methodology GIS Databases:
- Groundwater salinity, statewide
- 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

As the application area intersects a number of minor non-perennial watercourses and an area subject to inundation, the proposed clearing may cause a minor increase in the intensity of flooding, however these effects are likely to be temporary and highly localised. Any increase in localised flooding that occurs is not likely to cause any significant environmental impacts.

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

Methodology GIS Databases:
- Hydrography, linear

Planning instruments and other relevant matters.

Comments The application is to clear nine hectares of native vegetation within Lot 300 on Deposited Plan 72977, Karijini for the purpose of bore construction and upgrading access tracks.

The clearing permit application was advertised on 30 June 2017 with a 21 day submission period. No public submissions have been received in relation to this application.

The application area is zoned Conservation, recreation and nature landscape under the town planning scheme.

The application area falls within the Pilbara groundwater and surface water area, proclaimed under the *Rights in Water Irrigation Act 1914*. A beds and banks permit may be required if the proposed clearing activities includes actions that will interfere with the watercourses present within the northern and southern extents of the application area.

The proposed clearing is within the *Bimbulungu and Nyannaguna* registered Aboriginal heritage sites. It is the applicants' responsibility to obtain any approvals relating to clearing native vegetation within these heritage areas.

Applicants Submissions

As the clearing application is within DBCA managed lands, to gain access and undertake clearing activities Rio Tinto were asked by DBCA to meet specific entry and flora survey conditions. After discussions, and in agreeance with DBCA, Rio Tinto have advised,:

- Access to Hamersley Range National Park will be as per conditions of CALM Act s101 licence granted on 17 October 2017;
- Rio Tinto has made a commitment to undertake further post-wet season flora surveys to address concerns regarding risk management of impacts to ephemeral species, prior to any clearing activities. These surveys are tentatively scheduled for January-February 2018 depending on rainfall;
- The final plan for clearing (involves reinstating a 4.5 metre wide historical track within the 15 metre wide clearing area, and an explanation of disturbance on the historic track verses previously undisturbed areas) will be discussed with DBCA following review of the survey results; and
- Rio Tinto and DBCA are agreeable to a clearing permit being in place in order to take advantage of post-wet season flora surveys; that such a permit includes a condition that requires further surveys to occur prior to any clearing activities, and that where any rare or priority flora are identified then CEO approval is required for any disturbance within 10 metres of priority flora (or 50m for rare flora) (Rio Tinto, 2017b).

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Environment and Conservation (DEC) (2011) Invasive Plant Prioritisation, Department of Environment and Conservation, Perth.
- Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Department of Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed 24/02/2017
- Rio Tinto (2017a) Targeted Flora Survey report regarding clearing permit application CPS 7641/1. DWER Ref A1536237.
- Rio Tinto (2017b) Supporting documentation concerning land access and flora survey reporting for clearing permit application CPS 7641/1. DWER Ref A1560635.
- 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.