



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4919/1
Permit Holder:	Hamersley Iron Pty Ltd
Duration of Permit:	18 May 2012 – 18 May 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 construction of a pipeline and associated lay down areas, car parks, surge tanks, chlorination units, pump stations, booster stations, site offices and storage areas.

2. Land on which clearing is to be done

Lot 32 on Plan 55948, MOUNT SHEILA
Lot 106 on Plan 243222, MOUNT SHEILA
Part Lot 99 on Plan 238653, MOUNT SHEILA
Lot 26 on Plan 241873, TOM PRICE
Lot 9 on Plan 47815, MOUNT SHEILA
Lot 35 on Plan 93088, TOM PRICE
Lot 289 on Plan 188298, TOM PRICE
Lot 277 on Plan 15091, TOM PRICE
Lot 235 on Plan 15091, TOM PRICE
Lot 271 on Plan 15093, TOM PRICE
Lot 10 on Plan 241873, TOM PRICE
Lot 3013 on Plan 44791, TOM PRICE
Lot 3000 on Plan 44791, TOM PRICE
Lot 56 on Plan 216344, TOM PRICE
Lot 36 on Plan 51848, TOM PRICE
Lot 8 on Plan 241372, MOUNT SHEILA
Unallocated Crown Land, (PIN: 1014970), MOUNT SHEILA
Unallocated Crown Land (PIN: 1014967), MOUNT SHEILA
Unallocated Crown Land, (PIN: 1014965), MOUNT SHEILA
Unallocated Crown land (PIN: 1014954), MOUNT SHEILA
Kanberra Drive Road Reserve, MOUNT SHEILA
Killawarra Drive Road Reserve, MOUNT SHEILA
Jabbarup Place Road Reserve, TOM PRICE

3. Area of Clearing

The Permit Holder must not clear more than 82 hectares of native vegetation within the area shaded yellow on attached Plan 4919/1.

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. Type of clearing authorised

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 *Water Agencies (Powers) Act 1984* or any other written law.

6. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 18 May 2017.

7. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

8. Avoid, minimise etc clearing

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

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

9. Weed control

(a) 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*:

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

(b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

10. Watercourse

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

11. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

(a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.

(b) within 3 months following clearing authorised under this permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:

- (i) laying the vegetative material and topsoil retained under condition 11(a) on the cleared area(s) that are no longer required.

(c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this Permit:

- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
- (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 11(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native

vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 11(c)(ii) of this permit, the Permit Holder shall repeat condition 11(c)(i) and 11(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 11(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 11(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 11(c)(ii).

PART III - RECORD KEEPING AND REPORTING

12. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) 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 or decimal degrees;
 - (ii) the date that the area was cleared; and
 - (iii) the size of the area cleared (in hectares).
- (b) In relation to the revegetation and rehabilitation of areas pursuant to condition 11 of this Permit:
 - (i) the location of any areas revegetated and rehabilitated, 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;
 - (ii) a description of the revegetation and rehabilitation activities undertaken; and
 - (iii) the size of the area revegetated and rehabilitated (in hectares).

13. 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 12 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 18 February 2022 the Permit Holder must provide to the CEO a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(a) of this Permit.

DEFINITIONS

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

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

Guidance Statement No 56 means Guidance for the Assessment of Environmental Factors: Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia. Guidance Statement No 56, Environmental Protection Authority (2004).

local provenance means native vegetation seeds and propagating material from natural sources within 10 kilometres of the area cleared.

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

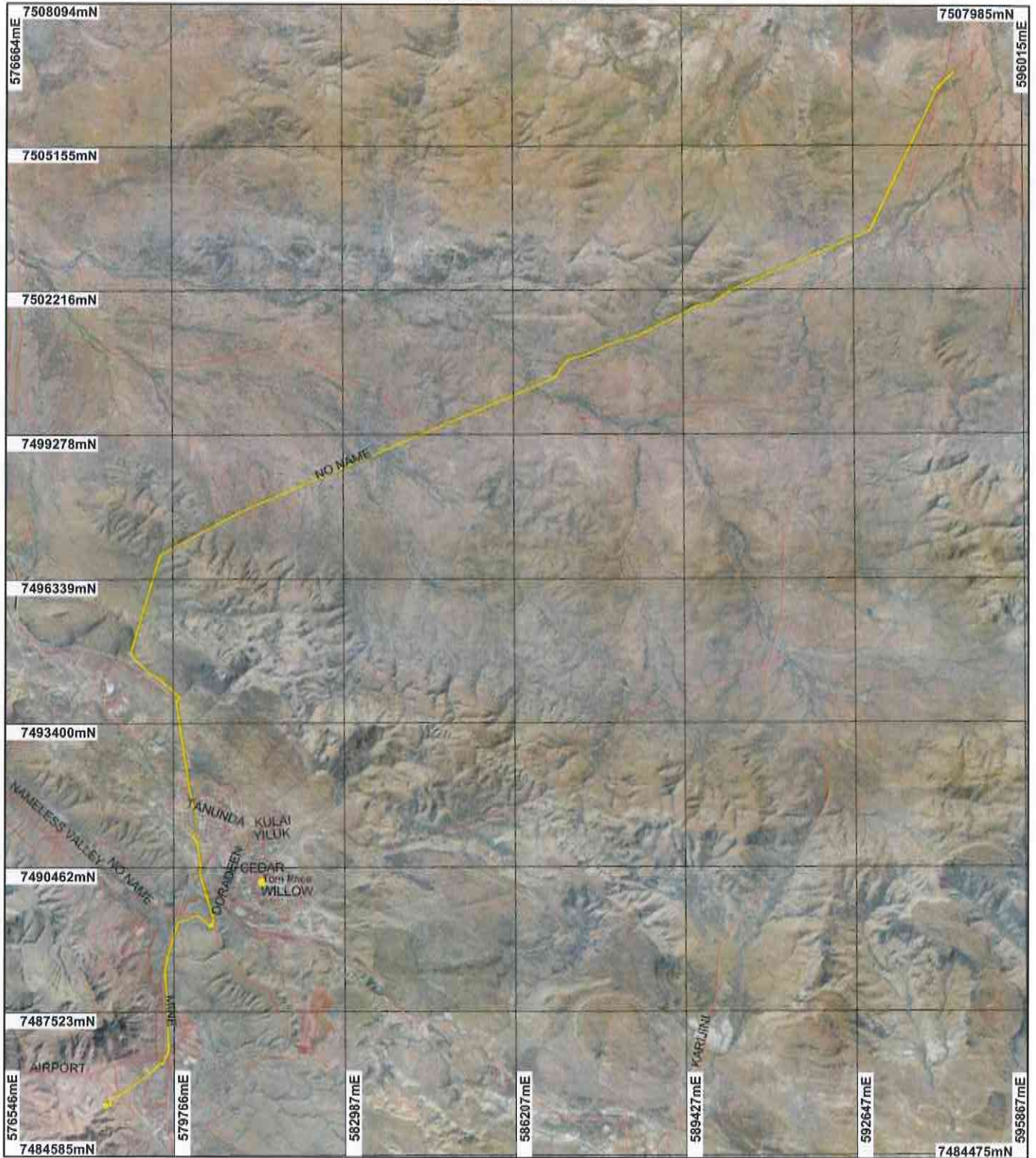


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

26 April 2012

Plan 4919/1



LEGEND

- Road Centrelines
- Cadastral for labelling**
- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park (cont)

- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water
- Clearing Instruments**
- Areas Approved to Clear

- Mount Lionel 50cm Orthomosaic - Landgate 2004**
- Towns**
- A
 - B
 - C



0 ————— 3 km

Scale 1:107472
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Date 20/4/12
K. Faulkner

Officer with delegated authority under Section 20 of the Environmental Protection Act 1988

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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1. Application details

1.1. Permit application details

Permit application No.: 4919/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property:

UNALLOCATED CROWN LAND (MOUNT SHEILA 6751)
 UNALLOCATED CROWN LAND (MOUNT SHEILA 6751)
 LOT 26 ON PLAN 241873 (TOM PRICE 6751)
 UNALLOCATED CROWN LAND (MOUNT SHEILA 6751)
 UNALLOCATED CROWN LAND (MOUNT SHEILA 6751)
 LOT 8 ON PLAN 241372 (MOUNT SHEILA 6751)
 LOT 3007 ON PLAN 58290 (MOUNT SHEILA 6751)
 LOT 9 ON PLAN 47815 (MOUNT SHEILA 6751)
 LOT 36 ON PLAN 51845 (TOM PRICE 6751)
 LOT 56 ON PLAN 216344 (TOM PRICE 6751)
 LOT 10 ON PLAN 241873 (TOM PRICE 6751)
 LOT 3000 ON PLAN 44791 (TOM PRICE 6751)
 LOT 3013 ON PLAN 44791 (TOM PRICE 6751)
 ROAD RESERVE (TOM PRICE 6751)
 LOT 271 ON PLAN 15093 (Lot No. 271 JABBARUP TOM PRICE 6751)
 ROAD RESERVE (TOM PRICE 6751)
 LOT 277 ON PLAN 15091 (Lot No. 277 JABBARUP TOM PRICE 6751)
 LOT 35 ON PLAN 93088 (House No. 35 KANBERRA TOM PRICE 6751)
 ROAD RESERVE (TOM PRICE 6751)
 LOT 289 ON PLAN 188298 (Lot No. 289 KANBERRA TOM PRICE 6751)
 LOT 32 ON PLAN 55948 (MOUNT SHEILA 6751)
 PART LOT 99 ON PLAN 238653 (MOUNT SHEILA 6751)
 LOT 106 ON PLAN 243222 (MOUNT SHEILA 6751)
 Shire of Ashburton

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)
82

No. Trees

Method of Clearing
Mechanical Removal

For the purpose of:
Water/gas/cable/pipeline/power installation

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 26 April 2012

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
Mapped Beard vegetation association 82 is described as Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i>	The proposed clearing of 82 hectares within a 163 hectare area is for the purpose of pipeline construction and associated activities including surge tanks, chlorination units, pump stations, booster station, site offices, equipment laydown areas, car parks and storage areas.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Condition of the vegetation was established from flora survey undertaken in September 2008 (Mattiske Consulting Pty Ltd 2008) and November 2010 (Pilbara Flora 2011).
Mapped Beard vegetation association 29 is described as Sparse low woodland; mulga, discontinuous in scattered groups	The vegetation under application consists of 10 vegetation associations: Open woodland of <i>Eucalyptus victrix</i> , <i>Eucalyptus</i>	To Degraded: Structure severely disturbed; regeneration to good condition requires intensive	

<p>Mapped Beard vegetation association 567 is described as Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & <i>Triodia basedowii</i></p>	<p>camaldulensis var. obtusa over <i>Acacia citrinoviridis</i> over <i>Petalostylis labicheoides</i>, <i>Acacia pyrifolia</i> over <i>Tephrosia rosea</i> var. <i>clementii</i>, <i>Themeda triandra</i> and <i>Cleome viscosa</i> within major creeklines with sandy soils.</p> <p>Low woodland of <i>Eucalyptus xerothermica</i> and <i>Corymbia hamersleyana</i> over <i>Acacia maitlandii</i>, <i>Acacia bivenosa</i>, <i>Petalostylis labicheoides</i>, <i>Rulingia luteiflora</i> over <i>Themeda triandra</i> and <i>Triodia pungens</i> in minor creeklines.</p>	<p>management (Keighery 1994)</p>
<p>Mapped Beard vegetation association 157 is described as Hummock grasslands, grass steppe; hard spinifex, <i>Triodia wiseana</i></p>	<p>Tall shrubland of <i>Acacia bivenosa</i>, <i>Acacia ancistrocarpa</i>, <i>Acacia maitlandii</i>, <i>Acacia monticola</i> with occasional emergent <i>Corymbia deserticola</i> subsp. <i>deserticola</i> and <i>Eucalyptus leucophloia</i> over <i>Gompholobium polyzyga</i>, <i>Rulingia luteiflora</i> and <i>Triodia pungens</i> on sandy loam in minor gullies.</p>	
<p>Mapped Beard vegetation association 18 is described as Low woodland; mulga (<i>Acacia aneura</i>) (Shepherd 2009)</p>	<p>Low woodland to low open forest of <i>Acacia aneura</i> var. <i>aneura</i>, <i>Acacia pruinocarpa</i>, <i>Grevillea berryana</i> over <i>Eremophila galeata</i>, <i>Acacia tetragonophylla</i>, <i>Eremophila forrestii</i> over <i>Triodia pungens</i> on sandy loam flats and broad plains.</p>	
	<p>Low woodland of <i>Acacia aneura</i> var. <i>aneura</i>, <i>Acacia pruinocarpa</i> over <i>Acacia tetragonophylla</i> over <i>Triodia pungens</i> on snay flats and broad plains.</p>	
	<p>Low woodland of <i>Acacia aneura</i> var. <i>aneura</i>, <i>Corymbia hamersleyana</i> and <i>Acacia pruinocarpa</i> on mid upper slopes on edges of hills and ranges</p>	
	<p>Hummock grassland of <i>Triodia pungens</i> and <i>Triodia wiseana</i> with <i>Eucalyptus gamophylla</i>, <i>Eucalyptus leucophloia</i>, <i>Acacia aneura</i> var. <i>aneura</i>, <i>Acacia pruinocarpa</i> on gravelly soil on lower and mid slopes.</p>	
	<p>Hummock grassland of <i>Triodia wiseana</i> with emergent <i>Eucalyptus leucophloia</i>, <i>Corymbia deserticola</i> subsp. <i>deserticola</i> on gravelly soils on mid o upper slopes of small ranges.</p>	
	<p>Hummock grassland of <i>Triodia wiseana</i> with emergent <i>Acacia leucophloia</i>, <i>Corymbia deserticola</i> subsp. <i>deserticola</i> over <i>Acacia bivenosa</i>, <i>Themeda triandra</i> on gravelly sols on upper slopes of ranges and;</p>	
	<p>Hummock grassland of <i>Triodia wiseana</i> with <i>Acacia inaequilatera</i>, <i>Eucalyptus leucophloia</i>, <i>Acacia bivenosa</i> and mixed <i>Senna glutinosa</i> subsp. <i>glutinosa</i> on gravelly soils on mid and upper slopes of basalt ranges (Mattiske Consulting Pty Ltd 2008).</p>	

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The vegetation under application consist of 10 vegetation associations occurring in a degraded (Keighery 1994) to Excellent (Keighery 1994) condition (Mattiske Consulting 2008 and Pilbara Flora 2011).

The fauna habitats within the areas proposed to be cleared are well represented elsewhere within the local and regional area, and no significant loss of habitat for fauna indigenous to Western Australia is expected.

There is approximately 85% of vegetation remaining in the local area (10 km radius) and the area under application does not contain vegetation communities that have been highly cleared.

A total of 139 flora taxa were identified and recorded within the application area during a flora survey carried out in September 2008 (Mattiske Consulting Pty Ltd 2008) and 174 flora taxa identified within the southern end of the application area in November 2010 (Pilbara Flora 2011). No rare or priority flora was recorded within the application area.

The proposed clearing is not likely to be at variance to this Principle.

- Methodology** References
- RioTinto (2012)
 - Pilbara Flora (2011)
 - DEC (2007)
 - Keighrey (1994)
 - GIS Databases
 - Mount Lionel 50cm Orthomosaic - Landgate 2004
 - Sac Bio datasets (9 March 2012)

(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 **Proposal is not likely to be at variance to this Principle**
Numerous fauna species of conservation significance have been recorded within the local area (10 km radius) (DEC 2007-). Approximately 85 per cent of Pre-European vegetation remains within a 10 km radius of the proposed clearing area.

Three habitat types were identified within the application area including:

- Creeklines and drainage lines supporting Eucalyptus woodlands
- Flats and broad plains supporting Acacia aneura var. aneura woodland and;
- Ranges, hills and hill slopes supporting Hummock grassland with Eucalyptus leucophloia, Eucalyptus gamophylla and Acacia bivenosa (Rio Tinto 2012).

A desktop fauna survey of the southern section of the area under application and surrounding location identified 14 conservation significant fauna species likely to occur, including the Western Pebble Mound Mouse (*Pseudomys chapmani*) (P4). The remaining species were migratory bird species (Pilbara Flora 2011).

The fauna habitats within the areas proposed to be cleared are well represented elsewhere within the local and regional area, and no significant loss of habitat for fauna indigenous to Western Australia is expected. The areas to be cleared do not represent a fauna corridor and therefore the clearing will not remove an ecological linkage that is necessary for the maintenance of fauna.

Based on the above, the proposed clearing of 82ha over a long and linear area is not considered to contain significant fauna habitat and the proposed clearing is not likely to be at variance to this Principle.

- Methodology** References
- RioTinto (2012)
 - Pilbara Flora (2011)
 - DEC (2007)
 - GIS Databases
 - Mount Lionel 50cm Orthomosaic - Landgate 2004

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

Comments **Proposal is not likely to be at variance to this Principle**
Twelve rare flora species have been recorded within the local area (10 km radius). The closest known recorded of rare flora is *Lepidium catapycnon*, located 1.6 km from the application area. This species occurs on the same soil and vegetation type as the application area.

Mattiske Consulting Pty Ltd (2008) undertook a flora survey of application area within September 2008 and Pilbara Flora (2011) undertook flora survey of the southern end of the application area in November 2010. Both flora surveys were undertaken at appropriate time of year. No rare flora were recorded within the application area (Mattiske Consulting Pty Ltd 2008, Pilbara Flora 2011).

Therefore, it is not considered for the proposed clearing to be at variance to this Principle.

- Methodology** References
- Pilbara Flora (2011)
 - Mattiske Consulting Pty Ltd (2008)
 - GIS Databases
 - Sac Bio datasets (9 March 2012)

(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 Proposal is not likely to be at variance to this Principle

No Threatened Ecological Communities (TECs) have been recorded within the local area (10 km radius). The nearest TEC is Themeda grasslands on cracking clays on Hamersley station, Pilbara occurring 10 km north of the application area.

The flora surveys of the application area did not identify TECs within the area proposed to be cleared (Mattiske Consulting Pty Ltd 2008 and Pilbara Flora 2011).

The proposed clearing is therefore, not at variance to this Principle.

Methodology

References

- Mattiske Consulting Pty Ltd (2008)
- Pilbara Flora (2011)
- GIS Databases:
 - Mount Lionel 50cm Orthomosaic - Landgate 2004
 - Pre-European vegetation - DA 01/01
 - SAC Biodatasets - 9 March 2012

(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 Proposal is not at variance to this Principle

The Beard vegetation associations occurring within the application area retain more than the threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

The application area does not occur within an extensively cleared landscape as approximately 85% remains in the local area (10 km radius) and 100% remains in the Shire of Ashburton. Therefore, the proposal is not at variance to this principle

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	DEC Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,804,193	17,785,001	100	8
Shire*				
Shire of Ashburton	10,086,659	10,050,099	100	16
Beard Vegetation Association in Bioregion*				
82	2,565,901	2,565,901	100	10
567	777,507	777,507	100	22
157	501,450	501,335	100	18
18	19,890,663	19,889,916	100	6
29	7,903,991	7,903,991	100	5

Shepherd (2009)*

Methodology

References:

- Commonwealth of Australia (2001)
- Shepherd (2009)
- GIS Databases:
 - Mount Lionel 50cm Orthomosaic - Landgate 2004
 - Pre-European vegetation
 - SAC Biodatasets - 9 March 2012

(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 Proposal is at variance to this Principle

A number of seasonal creeklines and drainage lines cross through the application area. Mattiske Consulting Pty Ltd (2008) identified three vegetation types occur within creeklines and drainage lines within the application area, they being open woodland of Eucalyptus victrix, Eucalyptus camaldulensis var. obtusa over Acacia citrinoviridis over Petalostylis labicheoides, Acacia pyrifolia within major creeklines with sandy soils, low woodland of Eucalyptus xerothermica and Corymbia hamersleyana over Acacia maitlandii, Acacia bivenosa in

minor creeklines and tall shrubland of *Acacia bivenosa*, *Acacia ancistrocarpa*, *Acacia maitlandii*, *Acacia monticola* with occasional emergent *Corymbia deserticola* subsp. *deserticola* and *Eucalyptus leucophloia* on sandy loam in minor gullies.

No wetlands were identified within the local area (10km radius).

Considering the above the proposed clearing includes vegetation which is growing in association with a watercourse. Therefore, the proposal is at variance to this principle. Permit conditions will assist in preventing riparian vegetation being cleared.

Methodology References
-Mattiske Consulting Pty Ltd (2008)
GIS Database:
- Hydrography, linear

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

Comments **Proposal is not likely to be at variance to this Principle**
The area under application is mapped as soil types FA14, Fa15, Ja2 and Oc68 which Northcote (1960-68) describes as;

Fa14 -steep hills and steeply dissected pediments on areas of banded jaspilite and chert along with shales, dolomite, and iron ore formations; some narrow winding valley plains: chief soils are shallow stony earthy loams.

Fa15- Ranges of basalt along with shale, chert, jaspilite, and dolomite; some narrow winding valley plains. The soils are frequently shallow and there are extensive areas without soil cover: chief soils are shallow stony loams.

Ja2 -This unit occupies the central position within the high-level valley plains. Chief soils are earthy clays.

Oc68- Dissected stony pediments with some steep stony hills: chief soils are hard alkaline red soils but quite large areas of hard neutral red soils occur too.

It is considered for these soils to be resistant to erosion (RioTinto 2012)

Given the long linear nature of the proposed clearing area and the fact that it is surrounded by a large intact remnant appreciable land degradation is not likely to occur. This proposal is not likely to be at variance to this clearing principle.

Methodology References:
Northcote et al. (1960 - 1968)
GIS Database:
- 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 **Proposal is not likely to be at variance to this Principle**
The nearest conservation area is Karijini National Park which is located 5 km west of the application area.

Based on the distance between the proposed clearing and the nearest conservation area, the proposal is not likely to impact on the environmental values of Karijini National Park.

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

Methodology GIS Databases:
- DEC Managed Lands
- Mount Lionel 50cm Orthomosaic - Landgate 2004

(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 **Proposal may be at variance to this Principle**
The area under application is intersected by several un-named, non perennial watercourses. The proposed clearing may cause an increase in sediment levels in surface water run off.

The existing vegetation consists mainly of shallow rooted grasses and shrubs with minimal tree root systems,

thus the proposed clearing of vegetation is unlikely to significantly affect the level of the ground water table.

Considering the above, surface water quality may be compromised, therefore the proposed clearing may be at variance to this principle.

Methodology GIS Database:
- 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 Proposal is not at variance to this Principle

The area under application is intersected by several un-named, non perennial watercourses.

As the proposed clearing is for 82 hectares over a very long and linear area, is not considered to increase the occurrence of flooding.

The application is not at variance to this Principle.

Methodology GIS Database:
- Hydrography, linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The proposed clearing of 82 hectares within a 163 hectare area is for the purpose of pipeline construction and associated activities including surge tanks, chlorination units, pump stations, booster station, site offices, equipment laydown areas, car parks and storage areas. The pipeline is for the supply of water to Tom Price mine operations and will tie into the existing Southern Fortescue pipeline.

The applicant has advised that authority to access the land will be granted to Hamersley Iron Pty Ltd under Sections 83(1) and 83(2)(b)(ii) of the Water Agencies (Powers) Act 1970. An application for approval from Department of Water has not yet been applied for.

Native Title: The applied area is within the boundaries of the Eastern Gurrma Native Title Claimants area of interest. The claimants and their representatives have been notified of this proposal. No comments have been received.

The area under application falls within the Pilbara groundwater area which is an area proclaimed under the Rights in Water and Irrigation Act 1914. The Department of Water (2012) has advised that any diversion of surface water or interference of a bed or bank of a watercourse will require a permit from Department of Water.

The Shire of Ashburton (2012) has no objections to the proposed clearing.

There are four aboriginal sites of significance occurring within the application area therefore the applicant has responsibilities under the Aboriginal Heritage Act 1972.

A submission (2012) has been received raising concerns about the amount of clearing proposed for the pipeline and impacts on priority flora species. Priority and threatened flora has been discussed in principle (a).

Methodology References
-Shire of Ashburton (2012)
-Department of Water (2012)
-Submission (2012)
GIS Databases
-Aboriginal sites of significance
-RIWI Act areas

4. References

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Submission (2012)CPS 4919/1, Hamersley Iron Pty Ltd. DEC ref A486418

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)