



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4614/2
Permit Holder:	Hamersley Iron Pty Ltd
Duration of Permit:	26 December 2011 – 30 September 2021

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 geotechnical investigations, sterilisation drilling, access roads and associated activities.

2. Land on which clearing is to be done

Section 91 Licence – 00295-2011_1_105
Lot 1563 on Deposited Plan 67603 (Juna Downs)
Unallocated Crown land (PIN 1018274, Juna Downs)
Lot 302 on Deposited Plan 41097 (Newman)

3. Area of Clearing

The Permit Holder must not clear more than 275 hectares of native vegetation within the area hatched yellow on attached Plan 4614/2.

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. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 26 December 2016.

6. 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 power to clear native vegetation for those activities under the, *Land Administration Act 1997* or any other written law.

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

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*:

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

10. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect that area for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice* and *priority flora*.
- (b) Where rare flora or *priority flora* are identified in relation to condition 10(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing occurs within 50 metres of identified rare flora, unless approved by the CEO; and
 - (ii) no clearing of identified rare flora occurs unless approved under section 23F(2) of the *Wildlife Conservation Act 1950*.
 - (iii) no clearing of identified *priority flora* occurs, unless approved by the CEO; and
 - (iv) no clearing occurs within 10 metres of identified *priority flora*, unless approved by the CEO.

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) At an optimal time within 12 months following completion of geotechnical investigations, *revegetate* and *rehabilitate* areas not required for future scheduled and approved development, by:
 - (i) ripping the ground on the contour to remove soil compaction; and
 - (ii) laying the vegetative material and topsoil retained under condition 11(a) on the cleared area(s).
- (c) Within 24 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 species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to flora management pursuant to condition 10 of this Permit:
 - (i) the location of each rare and *priority flora* species 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 species name of each rare or priority flora species identified; and
 - (iii) a copy of the botanists flora survey report.
- (c) 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;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

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) of activities done by the Permit Holder under this Permit between 1 January and 31 December of the previous calendar year; and
- (b) Prior to 30 June 2021, 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:

botanist means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

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;

impacts means any impact of clearing on environmental values;

local provenance means native vegetation seeds and propagating material from natural sources within 100 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;

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

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 *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

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*.

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).

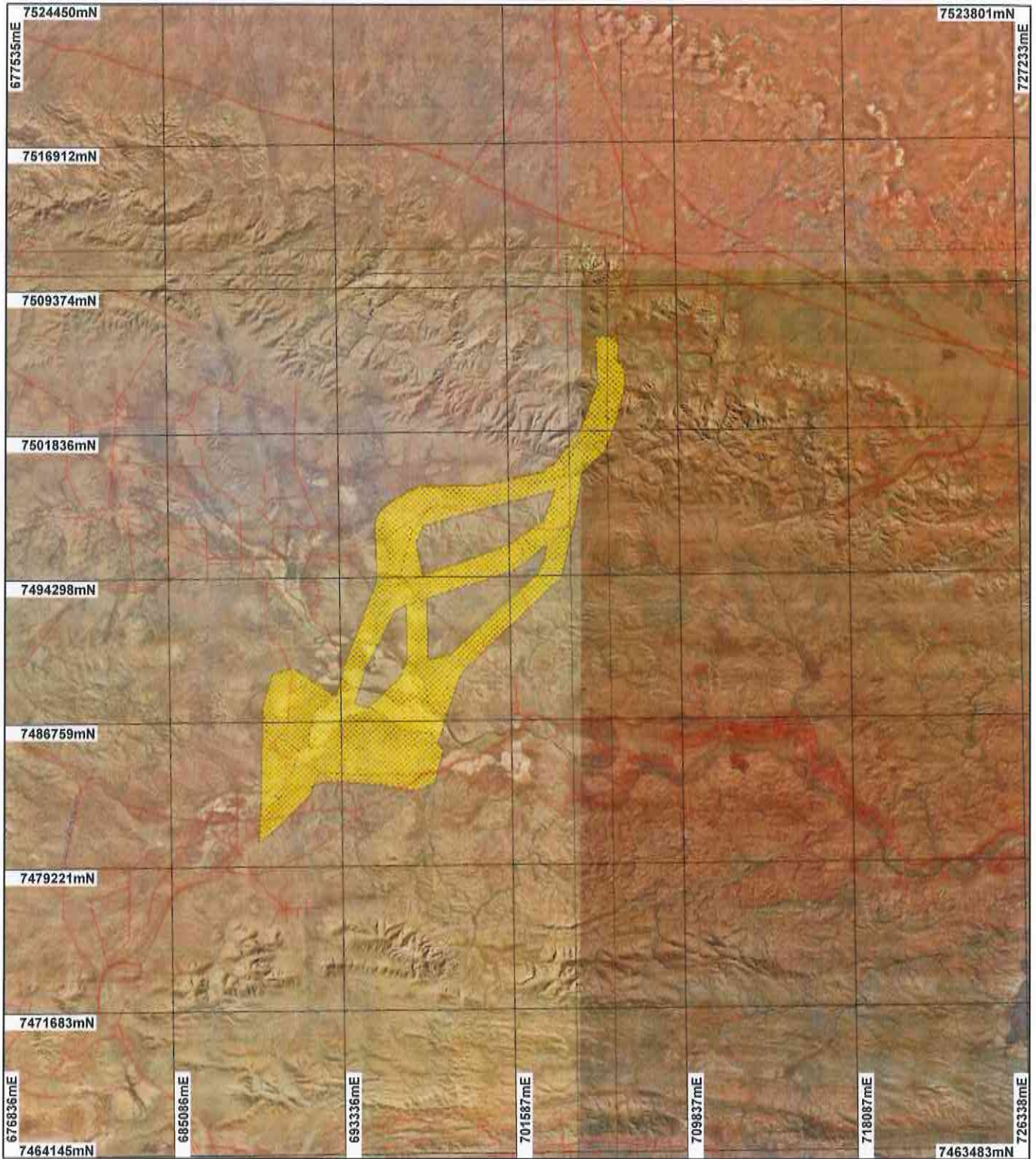


M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

22 November 2012

Plan 4614/2



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Road Centrelines
- Cadastre
- Image Index (cont)

- Recently added
- Coverage

Munjina 50cm Orthomosaic - Landgate 2004
 Weeli Wooli 50cm Orthomosaic - Landgate 2004

Mount George 50cm Orthomosaic - Landgate 2004
 Mount Marsh 50cm Orthomosaic - Landgate 2008



Scale 1:276417

(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.

M Warnock Date *22/11/12*
 M Warnock

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

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



Department of Environment and Conservation

Our environment, our future
 WA Crown Copyright 2002

* Project Data. This data has not been quality assured. Please contact map author for details.



1. Application details

1.1. Permit application details

Permit application No.: 4614/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: UNALLOCATED CROWN LAND (JUNA DOWNS 6751)
LOT 1563 ON PLAN 67603 (House No. 95 GREAT NORTHERN JUNA DOWNS 6751)
UNALLOCATED CROWN LAND (JUNA DOWNS 6751)

Local Government Area: Shire of Ashburton
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
275		Mechanical Removal	Geotechnical investigations

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 November 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
Two Beard vegetation types are mapped within the applied area:	The amended application proposes to clear 275 ha of native vegetation for the purpose of geotechnical investigation and sterilization drilling.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The description and condition of the vegetation under application was determined via the use of aerial imagery and a flora and vegetation survey conducted by Biota Environmental Sciences (Biota, 2012).
Mapped Beard vegetation association 18 is described as 'Low woodland; mulga (Acacia aneura)' (Shepherd et al, 2001).	Within the 11 478 hectare footprint area 49 vegetation sub-associations were identified, associated with three broad landscape categories: foothills, hill slopes and hill crests; plains and floodplains; and drainage lines, gullies and gorges (Biota, 2012).		
Mapped Beard vegetation association 82 is described as 'Hummock grasslands, low tree steppe; snappy gum over Triodia wiseana' (Shepherd et al, 2001).			

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 at variance to this Principle

This amendment has been made to increase the clearing footprint area by 3 550 hectares (total footprint area 11 478 hectares). The proposed clearing area of 275 hectares remains the same. The proposed clearing is for the purpose of geotechnical investigation, sterilization drilling and access roads and associated activities.

The applicant is exploring two different routes for the Koodaideri Southern Infrastructure Corridor. The initial area assessed under CPS 4614/1 was Option A and the additional 3 550 hectare area currently under application is for Option B.

Biota Environmental Sciences (Biota) was commissioned by Rio Tinto to carry out a vegetation and flora survey for the 11 478 hectares area. This survey identified a total of 577 native vascular flora species from 190 genera and 58 families (Biota, 2012). Biota (2012) has advised that this is considered to be high species richness for an area of this size in this locality, and is likely to be due to the large variety of habitats and vegetation types intersected by the study area.

Ten priority flora species were identified within the survey area. This included two Priority 2 species, six Priority 3 species and two Priority 4 species (Biota, 2012). Flora management practices will ensure that no priority flora is removed without CEO approval.

No rare flora species, threatened ecological communities or priority ecological communities were identified within the study area (Biota, 2012).

Numerous fauna species have been recorded within the local area (40 km radius), including *Ardeotis australia* (Australian Bustard), *Burhinus grallarius* (Bush-Stone-curlew), *Falco hypoleucos* (Grey Falcon) and *Leggadina lakedownensis* (Short-tailed Mouse) (DEC, 2007-). The majority of the fauna habitats within the area 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 local area (40 km radius) is well vegetated containing approximately 90 per cent vegetation cover.

The vegetation under application is in an excellent condition, contains priority flora and a high level of species richness, therefore the application area is considered to contain a high level of biodiversity.

The clearing as proposed is at variance to this principle.

Methodology References:
Biota (2012)
DEC (2007 -)

GIS Databases:
- SAC Biodatasets - Accessed 7 October 2011
- Pre European Vegetation

(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 classified as 'rare or likely to become extinct' under the Wildlife Conservation Act 1950 have been recorded within the local area (40 km radius), including *Dasyurus hallucatus* (Northern Quoll), *Liasis olicaceus* subsp. *Barroni*, *Malurus leucopterus* subsp. *Leucopterus*, *Pogona minor* subsp. *Minima* (Dwarf Bearded Dragon) and *Rhinonicteris aurantius* (Orange Leafnosed-bat) (DEC 2007-)

The fauna habitats within the area 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 proposed clearing will not sever any wildlife corridors 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 is not likely to be at variance to this Principle.

Methodology Reference:
DEC (2007-)

GIS Databases:
- Munjina 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation
- SAC Biodatasets - accessed 7 October 2011

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

Comments Proposal may be at variance to this Principle

No records of rare flora have been identified within a 20km radius of the application area.

Biota conducted a flora and vegetation survey over the area under application and did not identify any records of rare flora (Biota, 2012). It is noted however, that the slopes and crests of the moderate to tall stoney hills in the northern section of the study area could provide potential habitat for the rare flora species *Lepidium* sp.

Given the potential for *Lepidium* sp. to occur within the application area, the application may be at variance to this principle.

Methodology References:
Biota (2012)

- GIS Databases:
- Munjina 50cm Orthomosaic - Landgate 2004
 - Pre-European vegetation
 - SAC Biodatasets - accessed 7 October 2011

(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 known threatened ecological communities (TECs) have been recorded within the local area (20km radius).

 A flora and vegetation survey has been carried out over the application area and no TECs were observed (Biota, 2012).

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

Methodology References:
 Biota (2012)

 GIS Databases:

- Munjina 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation
- SAC Biodatasets - accessed 7 October 2011

(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 likely to be at variance to this Principle**
 The area under application is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 100 per cent of its Pre European vegetation extent remaining (Government of Western Australia, 2011).

 The vegetation under application is mapped as Beard Vegetation Associations 18 and 82, both of which have approximately 100 per cent of their Pre European extent remaining in the Pilbara bioregion (Government of Western Australia, 2011).

 Digital imagery (Munjina 50cm Orthomosaic - Landgate 2004) indicates that the local area (20km radius) surrounding the area under application retains approximately 90 per cent vegetation cover.

 Given the vegetation representation within the local area it is unlikely that the vegetation under application is significant as a remnant in an extensively cleared landscape.

 Therefore, the clearing as proposed is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,804,193	17,785,000	99.89	8.32
Shire*				
Shire of Ashburton	10,086,658	10,050,099	99.64	15.54
Shire of East Pilbara	37,183,293	37,182,808	100	4.04
Beard Vegetation Association in Bioregion*				
18	676,556	676,556	100	17.18
82	2,563,583	2,563,583	100	10.5

* Government of Western Australia, 2011

Methodology References:
 Government of Western Australia (2011)

 GIS Database:

- Local Government Authority
- Munjina 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation
- SAC Biodatasets - accessed 7 October 2011

(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

There are numerous non-perennial watercourses mapped within the application area.

A flora survey undertaken by Biota Environmental Services (2011) recorded numerous watercourses within the application area. A gorge system is located in the northernmost section of the application area which is considered seasonal, subject to periodic flooding and rapid inflow and discharge. The other creek lines and drainage features recorded within the application area only flow during seasonal flood events.

One known major watercourse, Marillana Creek, is mapped within the application area. Project planning should ensure that the project layout is designed to avoid and minimise disturbance to creek line vegetation where possible.

Considering the above, the proposed clearing is at variance to this principle.

Methodology Reference:
Biota Environmental Services (2011)

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 Proposal is not likely to be at variance to this Principle

There are four types of soils within the application area which Northcote (1960-68) describes as:

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.

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.

Ja2: This unit occupies the central position within the high-level valley plains represented by unit Fb3: chief soils are earthy clays.

My55: Gently sloping outwash plains generally flanking the northern face of the Hamersley Range; coarse surface gravels are extensive: chief soils are neutral red earths.

Given that the proposal to clear 275 ha is spread over a larger footprint area of 11 478 ha and that rainfall is relatively low (400mm), water erosion is not likely to be an issue, as the vegetation surrounding the individual drill sites will act as a buffer.

The proposed clearing is not likely to cause appreciable land degradation and is therefore not likely to be at variance to this clearing principle.

Methodology References:
Northcote et al. (1960 - 1968)

GIS Database:
- Rainfall, Mean Annual
- 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 closest recorded conservation reserve is Karajini National park which is located approximately 22km west of the area under application.

A large proportion of the vegetation in the Pilbara bioregion remains uncleared, approximately 100 per cent (Government of Western Australia, 2011). Therefore, it is unlikely that the application area provides an important buffer or ecological linkage to Karajini National Park.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Databases:
- DEC Tenure
- Pre-European vegetation

(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 is not likely to be at variance to this Principle**
The groundwater salinity within the application area is approximately 500 - 1,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). Given the size of the area to be cleared (275 hectares) compared to the size of the Hamersley Groundwater Province (10 166 833 hectares), the proposed clearing is not likely to cause salinity levels to alter.

Clearing of riparian vegetation around the major drainage lines may pose problems to surface water from increased sedimentation and runoff. One known major watercourse, Marillana Creek, is mapped within the application area. The applicant has advised that project planning will be undertaken to ensure the project layout is designed to avoid clearing creek line vegetation and therefore minimise impacts from increased sedimentation and runoff.

Department of Water (DOW 2011) is satisfied that the proposed clearing of 275 ha for the purpose of geotechnical investigations and sterilization drilling is unlikely to have a significant impact on the quality or quantity of ground water

The proposal to clear up to 275 hectares within a much larger footprint area where vegetation is largely intact is not likely to cause deterioration in the quality of surface or groundwater.

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

Methodology Reference:
DOW (2011)

GIS Databases:
-Soils, Statewide
-Pre-European vegetation
-Rainfall, Mean Annual

(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 likely to be at variance to this Principle**
Natural flood events do occur in the Pilbara region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of such events.

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

Methodology GIS Database:
- Rainfall, Mean Annual

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

Comments
A Section 91 Licence (Lic 00295-2011_1_105) has been granted over the initial application area (CPS 4614/1). A second Section 91 Licence (Section 91 Licence - 00295-2011_A2494466) is currently being processed for the additional area under application (CPS 4614/2).

Department of Water (DOW 2011) is satisfied that the proposed clearing of 275 ha for the purpose of geotechnical investigations and sterilization drilling is unlikely to have a significant impact on the quality or quantity of ground water provided the following advice is followed:

-Surface Water - the application area lies within a proclaimed area under the Rights in Water and Irrigation Act 1914. Therefore, any taking or diversion of surface water for purposes other than domestic and/or stock watering is subject to licence DOW. Any interference with the bed or banks of a watercourse in the proclaimed area will require a permit from DOW.

-Groundwater - the application area is located within the Pilbara Groundwater Area as proclaimed under the Rights in Water and Irrigation Act 1914. Any groundwater abstraction in this proclaimed area is subject to licensing by DOW.

The application area is within the Banjima Native Title Claimants native title claim area. Notification of the proposed clearing has occurred and no comment has been received.

Methodology **References:**
-DoW (2011)

GIS Database:
- Native Title Claims
- RIWI Act, Groundwater Areas
- RIWI Act, Surface Water Areas

4. References

- Biota (2012) Koodaideri Southern Infrastructure Corridor Vegetation and Flora Survey. Prepared for Rio Tinto Pty Ltd by Biota Environmental Sciences, September 2012 (DEC Ref: A559169).
- Biota Environmental Services (2011) Koodaideri Southern Infrastructure Corridor: NVCP Report. Unpublished Report prepared for Rio Tinto Iron Ore (DEC Ref: A430873)
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed October 2011.
- DOW (2011) Advice for clearing permit application CPS 4614/1. Department of Water, Pilbara Region, Western Australia. (DEC Ref: A441185)
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, 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.
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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)