



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6244/1
Permit Holder:	Forge Resources Swan Pty Ltd
Duration of Permit:	20 December 2014 to 20 December 2019

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 purposes of geotechnical, water and other investigations including associated access tracks.

2. Land on which clearing is to be done

The land the subject of section 91 licence 00155-2014_A5244234 under the *Land Administration Act 1997* including portions of the following properties:

LOT 47 ON PLAN 220191 (CHICHESTER 6751)
PART LOT 49 ON PLAN 220711 (SHERLOCK 6714)
LOT 51 ON PLAN 238028 (SHERLOCK 6714)
LOT 52 ON PLAN 238012 (CHICHESTER 6751)
LOT 78 ON PLAN 219351 (SHERLOCK 6714)
LOT 79 ON PLAN 219326 (SHERLOCK 6714)
LOT 83 ON PLAN 238012 (CHICHESTER 6751)
LOT 92 ON PLAN 221146 (SHERLOCK 6714)
CROWN RESERVE 1449 (SHERLOCK 6714)
CROWN RESERVE 12252 (SHERLOCK 6714)
UNALLOCATED CROWN LAND (PIN 1019499) (CHICHESTER 6751)
UNALLOCATED CROWN LAND (PIN 1019500) (CHICHESTER 6751)
UNALLOCATED CROWN LAND (PIN 1019502) (CHICHESTER 6751)
ROAD RESERVE (PIN 11732078) (CHICHESTER 6751)
ROAD RESERVE (PIN 11732085) (CHICHESTER 6751)
ROAD RESERVE (PIN 11732086) (CHICHESTER 6751)
ROAD RESERVE (PIN 11732087) (CHICHESTER 6751)
ROAD RESERVE (PIN 11732108) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732109) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732112) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732138) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732326) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732330) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732331) (SHERLOCK 6714)
ROAD RESERVE (PIN 11732890) (SHERLOCK 6714)

3. Area of Clearing

The Permit Holder must not clear more than 58.5 hectares of native vegetation within the area shaded yellow on attached Plan 6244/1.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 20 December 2017.

5. Application

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

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the purposes described in condition 1 of this Permit 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

7. 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.

8. 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.

9. 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 within the area shaded yellow on attached Plan 6244/1;
- (b) within 6 months following clearing authorised under this permit, revegetate and rehabilitate areas no longer required for the purpose for which they were cleared under this Permit by:
 - (i) backfilling test pits with excavated material
 - (ii) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (iii) laying the vegetative material and topsoil retained under condition 9(a) over the cleared area(s).

10. Records to be kept

- (a) In relation to the clearing of areas of native vegetation authorised under this Permit:
 - (i) the location of any areas cleared, 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(s) that the area was cleared;
 - (iii) the size of the area cleared (in hectares); and
 - (iv) the purpose for which clearing was undertaken.

- (b) In relation to the revegetation and rehabilitation of areas pursuant to condition 9 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) the date(s) that the area was revegetated and rehabilitated;
 - (iii) a description of the revegetation and rehabilitation activities undertaken; and
 - (iv) the size of the area revegetated and rehabilitated (in hectares).

11. 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 10 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) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 20 September 2019, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

DEFINITIONS

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

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;

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 Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

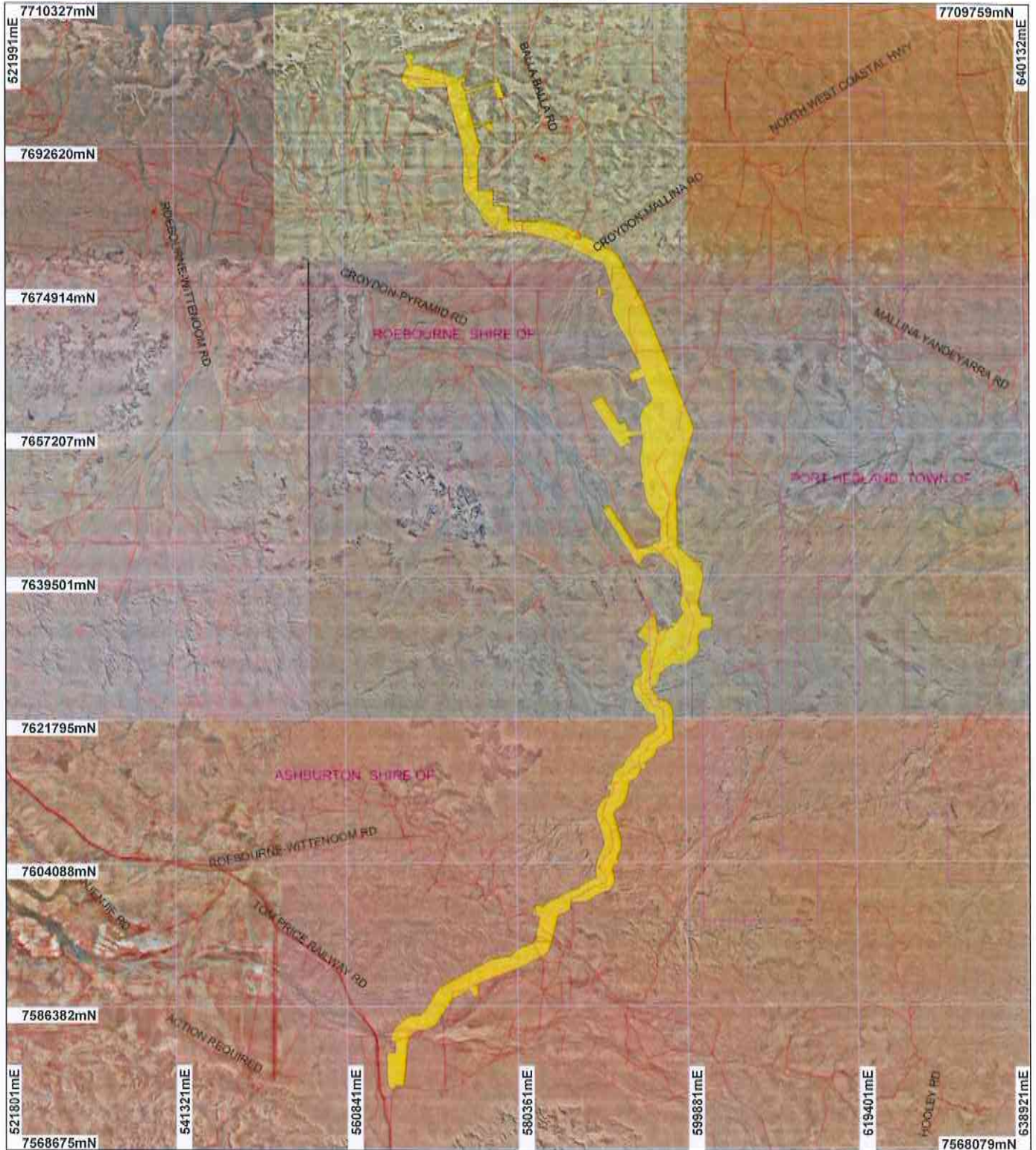


M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

20 November 2014

Plan 6244/1



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Local Government Authorities
- Road Centralines

Mount Billroth 1.4m
Orthomosaic - Landgate 2000

Mount Walter 1.4m
Orthomosaic - Landgate
2001

Millstream 80cm Orthomosaic



0 15 km

Scale 1:650000

(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 20/11/14

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.



Government of Western Australia
Department of Environment Regulation

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Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 6244/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Forge Resources Swan Pty Ltd

1.3. Property details

Property: PART LOT 49 ON PLAN 220711 (SHERLOCK 6714)
LOT 92 ON PLAN 221146 (SHERLOCK 6714)
LOT 51 ON PLAN 238028 (SHERLOCK 6714)
CROWN RESERVE 1449 (SHERLOCK 6714)
ROAD RESERVES (SHERLOCK 6714)
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LOT 52 ON PLAN 238012 (CHICHESTER 6751)
LOT 83 ON PLAN 238012 (CHICHESTER 6751)
LOT 47 ON PLAN 220191 (CHICHESTER 6751)

Local Government Area: Shire of Ashburton and City of Karratha

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 20 November 2014

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
Beard Vegetation Association (Shepherd et al. 2001):	The application is to clear up to 58.5 hectares of native vegetation within various properties for the purpose of investigations for a proposed new ore transport link (rail and conveyor).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The vegetation condition of the application area is expected to range from completely degraded (e.g. in areas where the application area is intersected by existing infrastructure corridors) to excellent (e.g. areas of unallocated crown land).
93 - Hummock grasslands, shrub steppe; kanji over soft spinifex		To	
173 - Hummock grasslands, shrub steppe; kanji over soft spinifex & Triodia wiseana on basalt			
175 - Short bunch grassland - savanna/grass plain (Pilbara)		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	
569 - Hummock grasslands, low tree steppe; bloodwood over soft spinifex & Triodia wiseana			
587 - Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over Triodia wiseana / Hummock grasslands, shrub-steppe; kanji over Triodia pungens			
589 - Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex			
607 - Hummock grasslands, low tree steppe; snappy gum & bloodwood over soft spinifex & Triodia wiseana			

626 - Hummock grasslands, shrub-steppe; kanji over soft spinifex & *Triodia brizoides*

641 - Medium woodland; coolabah & river gum

644 - Hummock grasslands, open low tree steppe; mulga & snakewood over soft spinifex & *Triodia basedowii*

647 - Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex

649 - Sedgeland; Various sedges with very sparse snakewood

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

Forge Resources Swan Pty Ltd proposes to clear up to 58.5 hectares of native vegetation for the purpose of investigations for a proposed new ore transport link (rail and conveyor). The investigations may include:

- geotechnical drilling;
- test pits and other investigations;
- water supply investigation drilling; and
- access routes.

The applicant has advised that any disturbance to vegetation will be incidental being disturbance caused by vehicles driving over vegetation to access areas that are not connected by existing tracks. Drilling and test pits will target areas with little to no vegetation present (Preston Consulting, 2014).

The application area contains a total of 12 different mapped vegetation associations. The local area (20 kilometre radius) is estimated to retain approximately 100 per cent of its pre-European extent of native vegetation.

No records of rare flora are mapped within the application area. The closest mapped record of rare flora is located approximately 80 kilometres southeast of the application area. One record of priority flora is mapped within the application area. This species has a priority 1 (P1) conservation status.

A reconnaissance survey of the application area recorded one priority 4 (P4) flora species and potentially a new population of a priority 3 (P3) flora species (Ecoscape, 2014). The applicant has advised that the majority of the application area has not been subject to environmental surveys, but flora surveys are due to be completed prior to the commencement of investigation activities and any conservation significant flora found will be logged and avoided (Preston Consulting, 2014).

A recent fauna survey recorded the presence of the northern quoll (*Dasyurus hallucatus*) within the application area. Potential habitat was also recorded for the Pilbara olive python (*Liasis olivaceus barroni*), greater bilby (*Macrotis lagotis*), northern marsupial mole (*Notorcyctes caurinus*) and grey falcon (*Falco hypoleucos*). A small area of sandy dune habitat in the central section of the application area appears to be less well represented than other habitat types in the area and may provide suitable habitat for the northern marsupial mole and greater bilby (Preston Consulting, 2014).

No mapped occurrences of threatened ecological communities (TECs) occur within the application area. The closest mapped occurrence of a TEC is the 'Themeda grasslands on cracking clays (Hamersley Station, Pilbara)' TEC (Vulnerable) located approximately 40 kilometres south of the application area.

Two priority ecological communities (PECs) are intersected by the application area; the priority 3 (P3) 'Horseflat Land System of the Roebourne Plains' and the priority 1 (P1) 'Four plant assemblages of the Wona Land System'.

Two conservation areas occur within 20 kilometres of the application area; the Millstream Chichester National Park and the Mungaroona Range Nature Reserve. At the closest points, the application area occurs approximately seven kilometres from each conservation area.

The application area is known to support priority flora, two PECs and habitat for significant fauna. The application area extends across a distance of approximately 200 kilometres and the local area (20 kilometre radius) retains approximately 100 per cent of its pre-European extent of native vegetation. The proposed clearing will be spread out across a large area and will likely involve minimal disturbance that is temporary in nature. Rehabilitation of disturbed areas will help to ensure that no permanent loss of biodiversity occurs. Therefore the proposed clearing is not considered likely to result in significant impacts to areas of high biodiversity.

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

Methodology References:
-Ecoscape 2014
-Preston Consulting 2014

GIS Database:
-SAC Bio Datasets (accessed November 2014)
-Pre-European Vegetation
-DPaW Tenure

(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 in the local area (20 kilometre radius) including eight species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950*. This includes records of the northern quoll (*Dasyurus hallucatus*), greater bilby (*Macrotis lagotis*), northern marsupial mole (*Notoryctes caurinus*), Australian painted snipe (*Rostratula benghalensis australis*), grey falcon (*Falco hypoleucos*), Pilbara olive python (*Liasis olivaceus barroni*), Airlie Island ctenotus (*Ctenotus angusticeps*) and orange leaf-nosed bat (*Rhinonictes aurantia*) (Preston Consulting, 2014).

The application area is considered to contain three broad habitat types (Phoenix Environmental Sciences, 2014):

- Plain and plateau (grasslands, shrublands, woodlands, drainage lines, minor creek lines, washdown flood plain);
- Slopes (hill, mesa, outcrop); and
- River, large creek and associated vegetation.

A recent survey recorded the presence of the northern quoll within the application area. Potential habitat was also recorded for the Pilbara olive python, greater bilby, northern marsupial mole and grey falcon. A small area of sandy dune habitat in the central section of the application area appears to be less well represented than other habitat types in the area and may provide suitable habitat for the northern marsupial mole and greater bilby (Preston Consulting, 2014).

The applicant has advised that the railway will be designed to avoid areas of difficult terrain where possible and therefore areas of potentially unique or restricted habitat (e.g. rocky outcrops, caves, steep rocky slopes, gorges etc.) will generally not need to be investigated (Preston Consulting, 2014).

The local area (20 kilometre radius) is estimated to retain approximately 100 per cent of its pre-European extent of native vegetation.

Given the proposed method of clearing will likely involve limited disturbance to vegetation, the clearing is not considered likely to result in significant impacts to fauna habitat.

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

Methodology References:
-Phoenix Environmental Sciences 2014
-Preston Consulting 2014

(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**

No records of rare flora are mapped within the application area. The closest mapped record of rare flora is located approximately 80 kilometres southeast of the application area.

Given the proposed method of clearing will likely involve limited disturbance to vegetation, the clearing is not considered likely to impact rare flora.

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

Methodology GIS Database:
-SAC Bio Datasets (accessed November 2014)

(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 mapped occurrences of TECs occur within the application area. The closest mapped occurrence of a TEC is the 'Themeda grasslands on cracking clays (Hamersley Station, Pilbara)' TEC (Vulnerable) located

approximately 40 kilometres south of the application area. Apart from a stygobiont community associated with the Ether Gorge aquifer, this is the only TEC endorsed by the Minister for Environment in the Pilbara bioregion.

No vegetation similar to the Themeda grasslands TEC was observed during an initial reconnaissance survey undertaken for the application (Preston Consulting, 2014).

Given the proposed method of clearing will likely involve limited disturbance to vegetation, no impacts to TECs are expected.

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

Methodology References:
-Preston Consulting 2014

GIS Database:
-SAC Bio Datasets (accessed November 2014)

(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 National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia 2001).

The application area is located within the Pilbara bioregion, as identified in the Interim Biogeographic Regionalisation for Australia (IBRA), and the Shires of Ashburton and Roebourne. All retain at least 98 per cent of their pre-European extent of native vegetation. The application area is mapped as containing 12 different Beard Vegetation Associations. All of these associations retain at least 97 per cent of their pre-European extent of native vegetation. The local area (20 kilometre radius) is also estimated to retain approximately 100 per cent of its pre-European extent of native vegetation.

Given that the application area does not occur in an area that has been extensively cleared, the proposed clearing is not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,808,657	17,733,584	99.58	8.43
Shire*				
Shire of Ashburton	3,687,023	3,686,886	100	10.69
Shire of Roebourne	1,848,168	1,811,161	98.00	6.97
Beard Vegetation Association in Bioregion*				
93	3,042,114	3,038,472	99.88	1.96
173	1,752,521	1,747,678	99.72	13.66
175	507,860	507,467	99.92	4.83
569	59,338	59,338	100	0
587	580,729	580,697	99.99	20.98
589	728,768	724,696	99.44	1.78
607	120,789	120,600	99.84	12.86
626	117,724	117,198	99.55	15.66
641	18,328	18,328	100	6.02
644	27,200	27,069	99.52	0
647	195,860	191,711	97.88	0
649	40,364	40,178	99.54	0

* Government of Western Australia 2013

Methodology References:
-Commonwealth of Australia 2001
-Government of Western Australia 2013

GIS Database:
-IBRA Australia
-Local Government Authorities
-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 Proposal is at variance to this Principle

The application area traverses the catchments of the Peawah, Sherlock and Fortescue Rivers. The application area intersects numerous watercourses including both the Sherlock and Fortescue Rivers. The applicant has advised that some geotechnical investigations are required within the boundaries of surface water systems, to inform the design of bridges and culvert crossings (Preston Consulting, 2014).

It is expected that the proposed clearing will include clearing of native vegetation growing in, or in association with, environments associated with watercourses. Any clearing of riparian vegetation is expected to be minimal in the context of the surrounding environment and therefore no significant residual impacts are expected.

The proposed clearing is at variance to this Principle.

Methodology References:
-Preston Consulting 2014

GIS Database:
-Hydrography, linear
-Catchments

(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 applicant has advised that any disturbance to vegetation will be incidental being disturbance caused by vehicles driving over vegetation to access areas that are not connected by existing tracks. Drilling and test pits will target areas with little to no vegetation present (Preston Consulting, 2014).

The local area (20 kilometre radius) remains almost entirely intact with remnant native vegetation.

Given the above, the clearing is not considered likely to cause appreciable land degradation.

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

Methodology References:
-Preston Consulting 2014

(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

Two conservation areas occur within 20 kilometres of the application area; the Millstream Chichester National Park and the Mungaroo Range Nature Reserve. At the closest points, the application area occurs approximately seven kilometres from each conservation area.

The application area is not considered to form part of a significant linkage with any nearby conservation area. The areas surrounding the aforementioned conservation areas remain intact with native vegetation. The proposed clearing is not likely to be at variance to this Principle.

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

The southern portion of the application area is located adjacent to the Millstream Water Reserve which is a Priority 2 (P2) Public Drinking Water Source Area (PDWSA).

Given the local area (20 kilometre radius) retains approximately 100 per cent of its pre-European extent of native vegetation, the clearing is not considered likely to result in significant deterioration of groundwater quality.

The application area intersects numerous watercourses including both the Sherlock and Fortescue Rivers. The applicant has advised that some geotechnical investigations are required within the boundaries of surface water systems, to inform the design of bridges and culvert crossings (Preston Consulting, 2014).

If disturbance of riparian vegetation is required there may be some localised sedimentation. Potential impacts may be minimised through the rehabilitation of areas of disturbance. Given this, any additional sediment

contribution to surface water flows would likely be temporary in nature. The clearing is unlikely to result in significant deterioration in the quality of surface water.

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

Methodology GIS Database:
-Hydrography, linear
-RIWI Groundwater Areas
-PDWSAs

(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

The application area extends across a distance of approximately 200 kilometres. The local area (20 kilometre radius) retains approximately 100 per cent of its pre-European extent of native vegetation. The proposed clearing will be spread out across a large area and will likely involve minimal disturbance.

Given the above, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding. The proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
-Hydrography, linear

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

Comments

The applicant intends to seek approval under Part IV of the *Environmental Protection Act 1986* for the Central Pilbara Infrastructure Project (CPIP). The CPIP involves the expansion of the Balla Balla Port (BBP) and a new ore transport link (rail and conveyor) from the Flinders proposed mine (the Pilbara Iron Ore Project) to the stockyard area at the BBP. This application is for investigations for informing the detailed design of the rail corridor. The rail corridor will include the following key components (Preston Consulting, 2014):

- rail line from rail stockyard to port;
- rail loop, car unloader and conveyor at the port;
- rail loop, stockyard, rail loading area and associated facilities at the rail stockyard;
- borrow pits;
- access roads;
- communications;
- water bores and pipelines;
- accommodation camps;
- workshop areas; and
- crossing of North West Coastal Highway.

A section 91 licence under the *Land Administration Act 1997* is required from the Minister for Lands for land access to the application area.

The Department of Water (DoW) has advised that the application area intersects proclaimed surface and groundwater areas under the *Rights in Water and Irrigation Act 1914*. DoW advises that any taking or diversion of surface water, or interference with the bed and banks of a watercourse is subject to approval by DoW. DoW advises that groundwater abstraction is also subject to approval. In relation to the Millstream Water Reserve, the DoW advises that the Millstream aquifer is unconfined and highly transmissive making it vulnerable to contamination from inappropriate land uses (DoW 2014).

The application area intersects a Redbook area. The Redbook area is located adjacent to the Millstream Chichester National Park and is an area recommended for conservation by the Environmental Protection Authority as an extension to the National Park. Given the clearing will be temporary and the proposed clearing methodology will likely involve limited disturbance, the clearing is not considered likely to have a significant impact on the viability of the Redbook area as a future conservation area.

Methodology References:
-DoW 2014
-Preston Consulting 2014

GIS Database:
-EPA Redbook

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Water (DoW) (2014) Direct Interest Comment for Clearing Permit Application CPS 6244/1, Dated 6/10/2014, Department of Water, Western Australia. DER Ref A816071.
- Ecoscape (2014) Rutila Resources Railway Corridor Flora and Vegetation Assessment, 10 June 2014, Preston Consulting and Ecoscape (Australia) Pty Ltd, Western Australia. DER Ref A802854.
- Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report), Current as of June 2013. 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.
- Phoenix Environmental Sciences (2014) Rutila Rail terrestrial fauna gap analysis, 21 May 2014, Phoenix Environmental Sciences Pty Ltd, Western Australia. DER Ref A802854.
- Preston Consulting (2014) Rutila Resources Native Vegetation Clearing Permit Application Central Pilbara Infrastructure Project, 19 August 2014, Preston Consulting Pty Ltd, Western Australia. DER Ref A802854.
- 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.