



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4219/1
Permit Holder:	Roy Hill Infrastructure Pty Ltd
Duration of Permit:	2 May 2011– 2 May 2016

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 and hydrological investigation*.

2. Land on which clearing is to be done

Licence number 00727/22009_4_24 Located within the following properties:

PART LOT 251 ON PLAN 238654

LOT 109 ON PLAN 238654 (NULLAGINE 6758)

LOT 93 ON PLAN 220468 (NULLAGINE 6758)

CROWN RESERVE 9700 (NULLAGINE 6758)

CROWN RESERVE 18938 (NULLAGINE 6758)

LOT 87 ON PLAN 30401 (NEWMAN 6753)

LOT 1500 ON PLAN 68275 (NULLAGINE 6758)

3. Area of Clearing

The Permit Holder must not clear more than 57.5 hectares of native vegetation within the area hatched yellow on attached Plan 4219/1.

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

6. 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

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

- (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. 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 six 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 by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s).
- (c) within 24 month of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(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 10(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 10(c)(ii) of this permit, the Permit Holder shall repeat condition 10(c)(i) and 10(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 10(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 10(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 10(c)(ii).

PART III - RECORD KEEPING AND REPORTING

11. 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 the *revegetation* and *rehabilitation* of areas pursuant to condition 10 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;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.
 - (v) a copy of the environmental specialist's report.

12. 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 11 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 2 February 2016, the Permit Holder must provide to the CEO a written report of records required under condition 14 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

Definitions

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

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;

Geotechnical and hydrogeological investigations means activities that include drill pad construction and drilling, test pitting, temporary laydown areas for equipment (drill casings and supplies, sample storage), park up areas for equipment (trucks and excavators) and construction of access tracks;

local provenance means native vegetation seeds and propagating material from natural sources within 50 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*

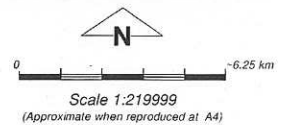
7 April 2011

Plan 4219/1




LEGEND

-  Road Centrelines
-  Local Government Authorities
- Clearing Instruments**
-  Areas Approved to Clear
-  Cadastre for labelling
-  Western Australia Landsat Mosaic 25m - AGO 2006



Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

 Date 7/6/11
 K Faulkner

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.



1. Application details

1.1. Permit application details

Permit application No.: 4219/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Roy Hill Infrastructure Pty Ltd

1.3. Property details

Property:
LOT 87 ON PLAN 30401 (NEWMAN 6753)
LOT 93 ON PLAN 220468 (NULLAGINE 6758)
PART LOT 251 ON PLAN 238654 (NULLAGINE 6758)
LOT 93 ON PLAN 220468 (NULLAGINE 6758)
LOT 109 ON PLAN 238654 (NULLAGINE 6758)
DE GREY LOCATION 8 (NULLAGINE 6758)
CROWN RESERVE 9700 (NULLAGINE 6758)
ROAD RESERVE (NULLAGINE 6758)
DE GREY LOCATION 8 (NEWMAN 6753)

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 7 April 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The following Beard vegetation associations were mapped as persisting within the applied area: Beard 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & Triodia wiseana on basalt Beard 562: Mosaic: Low woodland; mulga in valleys / Hummock grasslands, open low tree-steppe; snappy gum over Triodia wiseana (Shepherd, 2009)	The majority of the vegetation is in a very good to excellent (Keighery 1994) condition (Environ 2011), with some areas showing minor signs of disturbance such as grazing and weed invasion (Environ 2011). The proposed works are to occur over the length of the application area, which is over 2.5km long.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition and description of the vegetation under application was determined via the use of supporting information provided by the applicant (Environ 2011).

3. Assessment of application against clearing principles

Comments

The proposed clearing relates to the geotechnical and hydrogeological investigations from the Bonney Downs Hill Alignment (BDRA). The BDRA has been proposed as a partial alternative to the original rail alignment of the Roy Hill railway as it reduces the impact of crossing Fortescue Metals Group Ltd (FMG) mining leases.

The proposed clearing of 57.5ha is required for the purpose of geotechnical and hydrogeological investigations at various points along the length of the area under application, which is over 2.5km long. The investigation areas required to complete studies are related to the construction of the RHI Railway, which will connect the Roy Hill 1 Iron Ore Project (located near Newman) to a proposed port facility in Port Hedland (Environ 2011).

The majority of the vegetation ranges is in a very good to excellent (Keighery, 1994) condition (Environ 2011), with some areas showing signs of disturbance from minor grazing and weed invasion (Environ 2011).

The proponent has advised that works and management will be undertaken to avoid and minimize impacts from clearing. All access tracks, drill sites, sumps and test pits will be rehabilitated after investigations are complete (Environ 2011).

There is approximately 95 to 100% of pre-European vegetation remaining for all recorded vegetation associations within the application area and 99.89% of vegetation extent remaining within the Pilbara bioregion (Shepherd 2009).

The area has been surveyed and no flora of conservation significant, priority or threatened ecological communities are likely to be impacted (Mattiske Consulting Pty Ltd, 2011).

No fauna species of conservation significance have been recorded within the applied area, however the application area may potentially contain habitat for multiple significant fauna. The proposed works within the clearing area may impact on Mulgara (*Dasyurus blythi*) and short range endemic habitats and is known to contain habitat suitable for the Bilby (*Macrotis lagotis*) and Northern Quoll (*Dasyurus hallucatus*). However, given the large amount of suitable habitat remaining in the local area, the vegetation under application is not likely to represent significant habitat for local fauna.

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

Weed management conditions will minimise and mitigate the risk of introduction of invasive species into the surrounding vegetation.

Methodology Environ (2011)
Keighery (1994)
Shepherd (2009)
Mattiske Consulting Pty Ltd (2011)
GIS Databases:
- DEC Tenure - 03/2011
- Pre-European vegetation - 03/2011
- Hydrogeology, statewide - 03/2011
- Hydrography, linear - 03/2011
- SAC Biodatasets - 03/2011
- Soils, Statewide 03/2011

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

Comments

The proposed clearing is complementary to CPS 3794/1 and CPS 3870/2 which is related to the Roy Hill 1 Iron Ore Mining Project stage 1 and 2. Both stages have been assessed by the Environmental Protection Authority (EPA) Bulletin Number 1342 and 1345 respectively and both stages have been approved under Ministerial Statements 824 and 829 respectively (EPA, 2009).

The EPA is currently assessing the Bonney Downs Rail Alignment under Section 45C and is proposed to amend conditions under 46(ii).

Roy Hill Infrastructure have Licences to Occupy Crown Land in accordance with Section 91 of the Land Administration Act 1997 (WA), Licence Number Lic 00727/2009_4_24 the licence commences on 16 March 2011 and expire on 20 March 2012.

The area under application is within the Pilbara Groundwater Area as proclaimed under the Rights in Water and Irrigation Act 1914, any groundwater abstraction within this proclaimed area is subject to licensing by DoW .

Aboriginal Sites of Significance are mapped within the area under assessment. The proponent will be advised of their obligations under the Aboriginal Heritage Act 1972.

Methodology References
EPA (2009)
Environ (2011)
GIS Databases
Aboriginal Sites of significance ? 03/2011
RIWI Act, Groundwater Areas

4. References

- Environ (2011) Roy Hill 1 Iron Ore Project Bonney Downs Rail Alignment. Supporting Information for the Clearing permit application for the Bonney Downs Rail Alignment Hydrogeological and GEotechnical Drilling Programme. Environ Australia Pty Ltd. February 2011, DEC ref: A367714
- EPA (2009a) Roy Hill 1 Iron Ore Mining Project Stage 2 - Report and recommendations of the Environmental Protection Authority, Perth, Western Australia, Report 1345, December 2009
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske Consulting Pty Ltd (2011) Flora and Vegetation Survey of Roy Hill Infrastructure Railway - Bonney Downs alignment.

DEC ref: A386060

RHIO (2010) Roy Hill Infrastructure Pty Ltd, Clearing permit application - supporting information - CPS 3870/1. DEC Ref: A322373

Shepherd, D.P. (2009) Adapted from: 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)