



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

| | |
|-------------------------------|------------------------------|
| Purpose Permit number: | CPS 3131/1 |
| Permit Holder: | Bauxite Resources Limited |
| Duration of Permit: | 25 July 2009 to 25 July 2014 |

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 extractive industry.
- 2. Land on which clearing is to be done**
LOT 3 ON PLAN 13002 (GREAT NORTHERN HIGHWAY, BINDOON 6502)
LOT 64 ON DIAGRAM 6462 (STEPHENS ROAD, BINDOON 6502)
- 3. Area of Clearing**
The Permit Holder must not clear more than one hectare of native vegetation within the area hatched yellow on attached Plan 3131/1.
- 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. 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

- 6. 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.

7. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify tree(s) that contain hollows suitable to be utilised as habitat by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2008(2)*.
- (b) Prior to clearing, any *habitat tree(s)* identified by condition 7(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2008(2)*.
- (c) Prior to clearing, the Permit Holder shall ensure that any fauna identified by condition 7(b) shall be removed and relocated by a *fauna clearing person*, in accordance with a licence issued by the Department.

PART III - RECORD KEEPING AND REPORTING

8. 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 fauna management pursuant to condition 7 of this Permit:
 - (i) the location of each tree that contains hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) the species of fauna reasonably likely to utilise, or that have been observed utilising, the trees that contain hollows;
 - (iii) the location of surrogate trees for relocation with vacant hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; and
 - (iv) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings.

9. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 8 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 25 April 2014, the Permit Holder must provide to the CEO a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(a) of this Permit.

Definitions

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

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts.

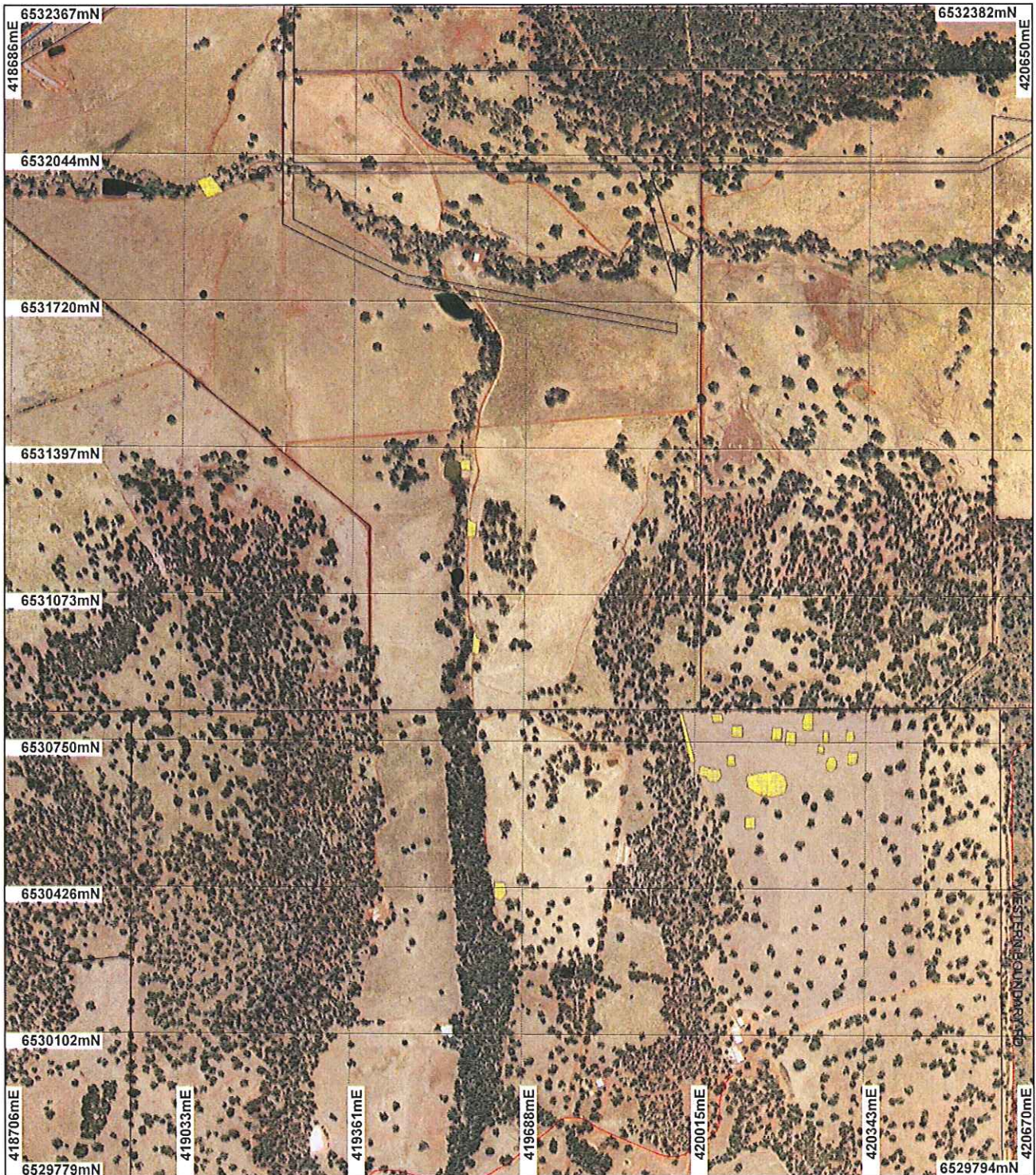


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

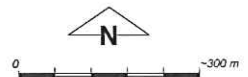
25 June 2009

Plan 3131/1



LEGEND

- | | |
|-----------------------------|------------------------|
| Clearing Instruments | Towns |
| Areas Approved to Clear | Chitterling 50cm |
| Road Centrelines | Orthomosaic - Landgate |
| Cadastre | 2006 |



Scale 1:12000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

Date 25/6/09

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.: 3131/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Bauxite Resources Limited

1.3. Property details

Property: LOT 3 ON PLAN 13002 (Lot No. 1327 GREAT NORTHERN BINDOON 6502)
LOT 64 ON DIAGRAM 6462 (House No. 347 STEPHENS BINDOON 6502)
Local Government Area: Shire Of Chittering
Colloquial name:

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 1 | | Mechanical Removal | Extractive Industry |

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 Association: 4 - Medium woodland; marri & wandoo. 968 - Medium woodland; jarrah, marri & wandoo (Shepherd 2007; SAC Bio datasets 11/06/2009). Mattiske Complex: Bindoon - Woodland of Eucalyptus loxophleba on the slopes, flanked by woodlands of Eucalyptus wandoo-Eucalyptus accedens on the breakaways and upper slopes in the perarid zone. Yalanbee - Woodland of Eucalyptus wandoo- Eucalyptus accedens, less consistently open forest of Eucalyptus marginata fs24 subsp. thalassica- Corymbia calophylla on lateritic uplands and breakaway landscapes in arid and perarid zones. | The original proposal was to clear 2.2 hectare of native vegetation for the purpose of bauxite quarry operations and construction of a haul road. Bauxite Resources Limited have modified their clearing application down to 1 hectare to reflect the changes made to the location of the haul road and crusher pad which has reduced the number of trees needed to be cleared. The vegetation under application has previously been parkland cleared and comprises isolated Eucalyptus wandoo, E. marginata and Corymbia calophylla trees over pasture; and individual E. rudis trees in association with a creek line. The vegetation under application is in completely degraded condition. | Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) | Vegetation clearing description is based on DEC site inspection conducted on 8 June 2009. |

3. Assessment of application against clearing principles

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Comments

The vegetation under application comprises individual Eucalyptus trees over pasture. Given the completely degraded condition of the vegetation and the lack of understorey species, the applied area is not considered likely to comprise a high level of biological diversity or to provide significant habitat for ground dwelling fauna

species. However, a couple of mature trees identified on site contain hollows which are considered to provide nesting opportunities for a number of species ranging from small insectivorous bird species through to the larger parrot species, including the Endangered Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*). Given this, Fauna Management conditions will be imposed on the permit.

Although there are 2 species of rare flora and 21 species of priority flora found within the local area (10km radius), there are no known occurrences of Threatened Ecological Communities (TEC) within this area. Two priority flora species have been identified within the Eucalyptus Wandoo woodland located on the lateritic breakaway. Given the completely degraded and modified nature of the vegetation on site and that the haul road follows an existing track across the breakaway, the vegetation to be cleared is not considered likely to include or be necessary for the continued existence of rare or priority flora; or to represent a Threatened Ecological Community or be considered significant as a remnant of native vegetation.

There are no wetlands mapped within the area under application, however the proposed haul road will be constructed across a tributary of the Brockman River and has fringing riparian vegetation comprising *Eucalyptus rudis*, which is directly associated with this watercourse. The proposed clearing for the road works may cause some short term water quality issues in terms of localised surface water sedimentation and surface water run-off during works. The clearing of individual trees as proposed is not considered likely to result in the deterioration in the quality of underground water, or impact on peak flood height or duration as these issues should be minimised as road works will include roadside infrastructure to prevent water quality issues and flooding with roads (ie table drains and culverts).

The chief soils mapped within the areas under application ranged from ironstone gravels comprising sandy and earthy matrices in the east through to yellow mottled soils and hard red soils of the central and northern applied areas (Northcote et al, 1968). There is a low salinity risk within the applied areas except for a small pocket in association with the tributary of the Brockman River, which has a high salinity risk. Given that the vegetation under application is in completely degraded condition and the area of salinity risk is small, it is not considered likely that the removal of two individual trees within this portion of the proposed clearing area would result in any significant increase in salinity on or off site.

The closest conservation areas to the area under application are Julimar State Forest which is listed on the Register of National Estate; and Mt. Byroomanning Nature Reserve which are respectively located approximately 300m east and 2.4km west of the applied area. Given the distance and fragmentation to the nearest conservation area, it is not considered likely that the proposed clearing would have an impact on the environmental values of the conservation areas.

Methodology

References:

- Brown et al (1998)
- Burbidge (2004)
- DEC (2009)
- EnviroWorks Consulting (2009)

GIS Databases:

- Bushforever
- CALM Managed Lands and Waters
- Geomorphic Wetlands (Classification) Swan Coastal Plain
- Hydrography, linear
- Hydrography, linear (hierarchy)
- Register of National Estate
- Soils, Statewide
- SAC BIO Datasets - accessed 12/06/2009
- Topographic Contours, Statewide

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

Comments

Lot 3 on Plan 13002 is freehold land and is zoned rural 3 Chittering valley under the local Town Planning Scheme. The property owner Barbara Hare has given permission for the applicant (Bauxite Resources Limited) to clear the vegetation and to conduct activities within the bed and banks of watercourses on the identified property, subject to the appropriate regulatory approvals. (TRIM ref: DOC84590)

Lot 64 on Diagram 6462 is freehold land and is zoned rural 2 general farming under the local Town Planning Scheme. The property owner Hare Holdings Pty Ltd has given permission for the applicant (Bauxite Resources Limited) to clear the vegetation and to conduct activities within the bed and banks of watercourses on the identified property, subject to the appropriate regulatory approvals. (TRIM ref: DOC84590)

The Department of Water (DoW 2009a) advise that a permit to interfere with Bed and Banks is required under the RIWI Act (1914). (TRIM ref: DOC88002). The applicant has lodged an application for a permit, but this has not been obtained at this stage.

The Department of Water (DoW 2009b) advise that a 'Water Management Plan' is required to address the

issue of storm water management, protection of surface water areas and groundwater. (TRIM ref: DOC88051).

The Shire of Chittering (2009) has not yet granted planning consent for the proposed extractive activity. An Extractive Industries Licence (EIL) is required for the proposed extractive activity. The Shire advice that the applicant's EIL will be considered once the requirements of a 'Water Management Plan' have been approved by the Department of Water. Therefore, a current EIL and planning consent for this proposal have not yet been obtained at this stage. (TRIM ref: DOC88057).

In a submission, a recommendation was made that the crusher pad could be moved to a less vegetated position to lessen the impact of clearing. It was further recommend that the haul road be relocated to prevent the removal of any riparian vegetation and that revegetation of the mine site should include some deep rooted perennials. TRIM ref: DOC87088.

The applicant (Bauxite Resources Limited) has reassessed their original clearing application for 2.2 hectares and modified the area down to 1 hectare by relocating the crusher pad and haul road route to reduce the amount of clearing.

- Methodology** References:
- DoW (2009a)
 - DoW (2009b)
 - Shire of Chittering (2009)
 - Submission (2009)
- GIS Databases:
- Town Planning Scheme Zones

4. Assessor's comments

Comment

The assessable criteria have been addressed and the proposed clearing is at variance to Principle (b) and not likely to be at variance to the other remaining clearing principles.

5. References

- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.
- Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- DEC (2009) Site Inspection Report for Clearing Permit Application CPS 3131/1, Lot 3 & Lot 64 Great Northern Hwy, Bindoon. Site inspection undertaken 08/06/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC88323).
- EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.
- Heddl, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- 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. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124
- Submission, Direct Interest Submission, Public Submission, 5 June 2009, TRIM DOC 87088.
- Submission, Direct Interest Submission, Shire of Chittering, 19 June 2009, TRIM DOC 88057.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 05/06/2009).

6. 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) |