



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4904/1
Permit Holder:	API Management Pty Ltd
Duration of Permit:	25 May 2012 – 25 May 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

- 1. Purpose for which clearing may be done**
Clearing for the purpose of feasibility investigations.
- 2. Land on which clearing is to be done**
Lot 54 on Plan 248913 (Antonymyre)
Lot 138 on Plan 184354 (Antonymyre)
Lot 7900 on Plan 71098 (Dampier Archipelago)
Lot 264 on Plan 220363 (Maitland)
Lot 265 on Plan 71098 (Mount Anketell)
Unallocated Crown Land (PIN 693196, 693245, 693253)
Unnamed Road Reserve (PIN 11636730)
- 3. Area of Clearing**
The Permit Holder must not clear more than 30 hectares of native vegetation within the area cross hatched yellow on attached Plan 4904/1.
- 4. Application**
This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.
- 5. Type of clearing authorised**
This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *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. 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 *priority flora*.
- (b) Where *priority flora* are identified in relation to condition 8(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing occurs within 10 metres of identified *priority flora*, unless approved by the CEO; and
 - (ii) no clearing of identified *priority flora* occurs unless approved by the CEO

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

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) At an optimal time within 12 months following completion of activities under this permit, *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 10(a) on the cleared area(s).
- (c) Within 18 months 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).

12. Reporting

- (a) The Permit Holder must provide to the CEO on or before 31 July 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 July and 30 June of the preceding year.
- (b) Prior to 25 February 2022, the Permit Holder must provide to the CEO a written report of records required under condition 11 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:

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;

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 *revegetation* that can be established from in situ seed banks 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 *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

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

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);

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*.

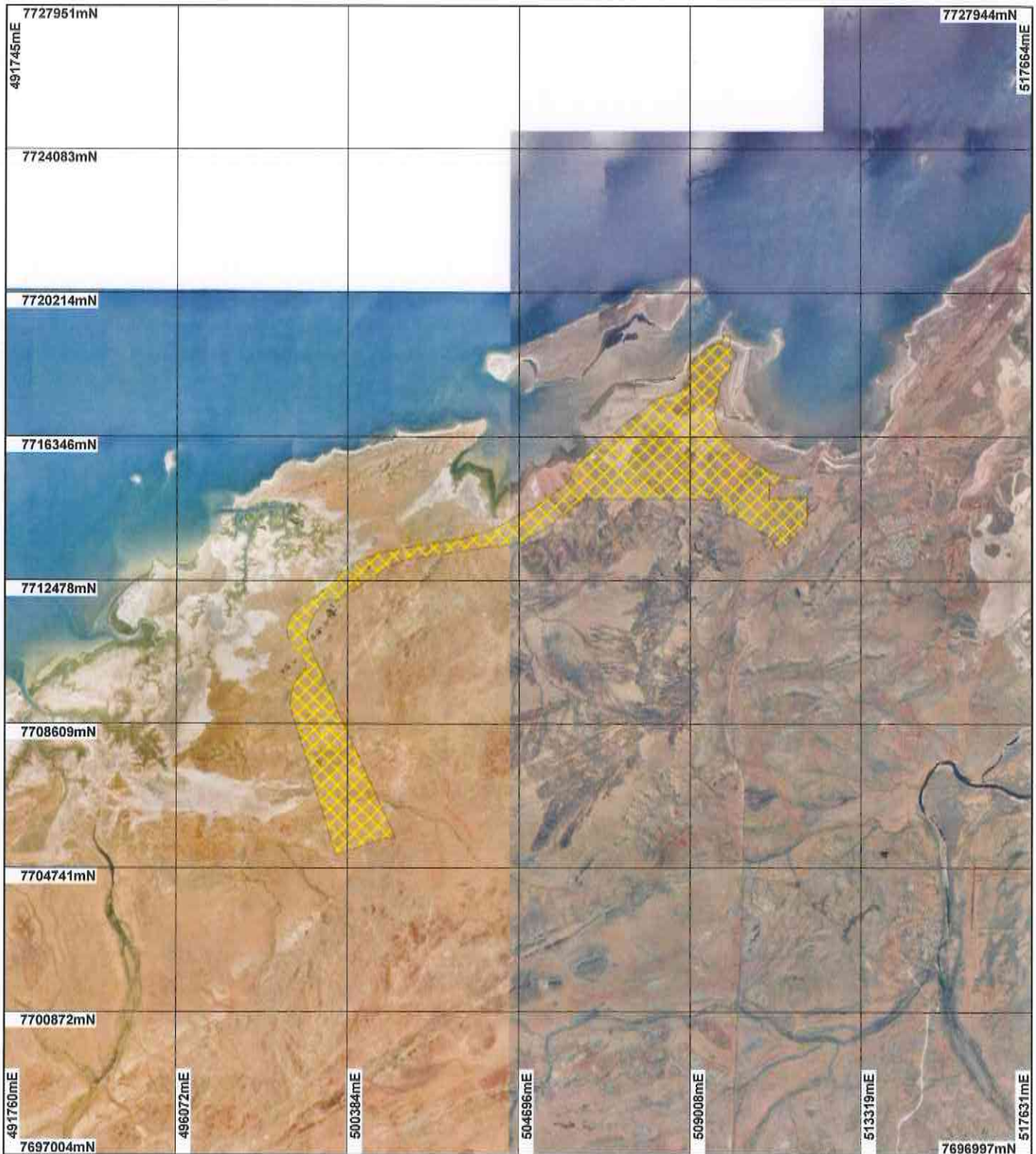


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

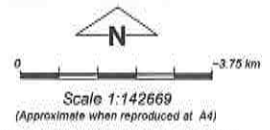
3 May 2012

Plan 4904/1



LEGEND

- | | |
|---|--|
| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Roebeurne 50cm Orthomosaic - Landgate 2007</p> | <p>Umpier and Extensions 50cm Orthomosaic - Landgate 2008</p> |
|---|--|



Geocentric Datum Australia 1994

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

[Signature] Date 3/5/12
K. Faulkner

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.: 4904/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: API Management Pty Ltd

1.3. Property details

Property: LOT 54 ON PLAN 248913 (ANTONYMYRE 6714)
LOT 138 ON PLAN 184354 (ANTONYMYRE 6714)
PART LOT 265 ON PLAN 220920 (MOUNT ANKETELL 6714)
UNALLOCATED CROWN LAND (CLEAVERVILLE 6714)
LOT 7900 ON PLAN 71098 (DAMPIER ARCHIPELAGO 6713)
UNALLOCATED CROWN LAND (MOUNT ANKETELL 6714)
PART LOT 264 ON PLAN 220363 (Lot No. 264 NORTH WEST COASTAL MAITLAND 6714)
LOT 54 ON PLAN 248913 (ANTONYMYRE 6714)
LOT 138 ON PLAN 184354 (ANTONYMYRE 6714)
PART LOT 265 ON PLAN 220920 (MOUNT ANKETELL 6714)
UNALLOCATED CROWN LAND (CLEAVERVILLE 6714)

Local Government Area: Shire of Roebourne
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 3 May 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 157: Hummock grasslands, grass steppe; hard spinifex, <i>Triodia wiseana</i>	The application is to clear 30 hectares of native vegetation within a 2310 hectare footprint. A vegetation and flora survey conducted within and around the area under application recorded 262 flora taxa within 25 vegetation communities.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The condition of the native vegetation under application was sourced from a flora and vegetation survey conducted by AECON in 2009, 2012 and 2011 (AECON, 2011).
Mapped Beard vegetation association 589 (less than 10 percent of the application area) Mosaic short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex	The vegetation under application is in a completely degraded to excellent (Keighery, 1994) condition (AECON, 2011), with majority being in a good to very good (Keighery, 1994) condition (AECON, 2011).	To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	
Mapped Beard vegetation association 43 (less than 5 percent of the application area): Low forest; mangroves (Kimberley) or thicket; mangroves (Pilbara)			
Mapped Beard vegetation association 127 (less than 5 percent of the application area): Bare areas; mud flats (Shepherd, 2009).			

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 may be at variance to this Principle

The application is to clear 30 hectares of native vegetation within a 2310 hectare footprint for the purpose of feasibility investigations. The area under application is approximately 15 km east from the townsite of Karratha.

Flora and vegetation surveys have been undertaken by AECON in 2009, 2010 and 2011 of the Anketell Point and Dixon Island Proposed Port Development Area. It should be noted that Dixon Island area is not in the current footprint of this application. All other survey areas appear to be within or in close proximity of the application area.

A collective total of 262 flora taxa within 25 vegetation communities were recorded within the survey areas. Of the recorded taxa 258 were native (AECON, 2011). The vegetation within the survey area ranged from completely degraded to excellent (Keighery, 1994) condition (AECON, 2011).

No declared rare flora or threatened ecological communities have been recorded within the survey areas. The 2009 survey identified a population of priority flora species, *Acacia glaucocaesia* (P3) within the southern section of the application area (AECON, 2011). *Frankenia pauciflora* var. *Pauciflora*, flora taxa of significance, identified by the surveys (2010), is considered to be outside of its previously recorded range.

Priority flora species *Vigna* sp. rockpiles has been mapped within and just outside the application footprint. This species was not identified within the flora and vegetation survey undertaken by AECON (2011).

The priority ecological community (PEC), Horse Flat Land System, has been recorded within the application footprint. The mapped PEC covers an area of approximately 892 hectares, with approximately a quarter of the PEC located within the application footprint. It has 53 current locations mapped within the DEC database, covering an area of approximately 174249 ha. The PEC is particularly sensitive to weed invasion, and measures should be put in place to mitigate this potential impact. The applicant has advised that approximately 0.4 hectares of the PEC will be impacted for the construction of an access track (API Management, 2012a).

Given that the application footprint comprises of known populations of priority flora and a PEC and suitable habitat for priority flora, the application area may contain a high level of biodiversity. However due the relatively small size of the clearing within a larger footprint, it is unlikely that proposal will significantly impact on biodiversity in the local area.

The application may be at variance to this principle. Revegetation of temporary use areas, avoidance of known conservation flora species and weed conditions will assist in mitigating identified impacts. Any removal or impacts to priority flora is to be avoided unless approved by the CEO.

Methodology

References

References

AECON (2011)

Keighery (1994)

GIS Database:

- SAC Bio Datasets March 2012

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

Eleven terrestrial fauna species of conservation significance have been recorded within 40 km radius of the proposed clearing, including the Pilbara Olive Python (*Liasis olivaceus* subsp. *barroni*), Flock bronzewing (*Phaps histrionica*), Western Pebble-mound Mouse (*Pseudomys chapmani*), Short-tailed Mouse (*Leggadina lakedownensis*) and the Northern Quoll (*Dasyurus hallucatus*).

A fauna survey undertaken by Phoenix Environmental Sciences Pty Ltd in June 2009 identified 204 vertebrate fauna species. This comprised three amphibians, 111 birds, 27 mammals and 63 reptiles. Of the identified fauna species recorded six priority species were recorded during the fauna surveys.

The area under application is represented by four Beard vegetation associations, which are all highly representative in the IBRA region. The local area (40km) has approximately 95 percent of its pre-European vegetation remaining.

Lerista neviniae, listed under the Wildlife Conservation Act 1950 as vulnerable is known to occur on the coastal dune habitat within the clearing footprint. Coastal dunes are the preferred habitat for *Lerista neviniae* and clearing should be avoided from these areas. Furthermore other conservation significant habitat, especially for

the Northern Quoll, Pilbara Olive Python and the Western Pebble-mound Mouse are known to occur within the area and clearing their habitat should also be avoided.

Given the relatively small amount of the vegetation proposed to be cleared within a larger footprint, along with the large amount of vegetation remaining in the local area, the application is unlikely to significantly impact on the fauna habitat, nor on the conservation status of fauna.

Methodology References
Phoenix Environmental Services Pty Ltd (2009)

(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**

There are no known records of declared rare flora (DRF) within a 40km radius of the application area. The closest known DRF species is approximately 211km from the area under application.

Flora surveys of the area undertaken at the appropriate time of year by AECON in 2009, 2010 and 2011 did not record any DRF species within the application footprint (AECON, 2011). It is noted that due to poor rains, the 2010 survey resulted in a poor flowering season, with many of the species within the project area were observed in poor condition, not in flower or absent.

Given the above the application is not likely to be at variance to this principle.

Methodology References
AECON (2011)
GIS Database:
- SAC Bio Datasets March 2012

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not at variance to this Principle**

There are no known records of threatened ecological communities (TEC) within a 40km radius of the application area. The closest known TEC is approximately 460km away from the area under application.

Given the above the application is not at a variance to this principle.

Methodology GIS Database:
- SAC Bio Datasets March 2012

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal is not likely to be at variance to this Principle**

The application area has been mapped as occurring within four Beard vegetation associations. The four mapped vegetation associations retain vegetation above the 30 percent threshold level as recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The application and surrounding areas are extensively vegetated with approximately 95 percent of its pre-European vegetation remaining. Both the Pilbara IBRA region and the Shire of Roebourne contain a large amount of vegetation within their boundaries, with approximately 100 and 98 percent of their pre-European vegetation remaining respectively (Shepherd, 2009).

The application area does not occur within an extensively cleared landscape and is not at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion Pilbara	17,804,193	17,785,001	100	8
Shire of Roebourne	1,535,628	1,502,081	98	0
Beard Vegetation Association in Bioregion				
157	198,634	198,519	100	6
589	730,718	730,683	100	2
127	180,401	177,739	99	0
43	15,059	12,714	84	0

Methodology References
Commonwealth of Australia (2001)
Shepherd (2009)
GIS Databases:
- Interim Biogeographic Regionalisation of Australia

(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 may be at variance to this Principle**
Numerous watercourses intersect the application area. Three drainage and creek line vegetation communities have been recorded within the application area (AECON, 2011). It is likely that the application may remove vegetation that is associated with the known watercourses. Therefore the application may be at variance to this principle.

Giving consideration to the relatively small amount of vegetation to be removed within the larger footprint, it is unlikely that the impacts from the removal of native vegetation will significantly impact upon the known watercourses within the application area.

Methodology References
AECON (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 have been three different soil types mapped within the clearing area. The mapped soil types consist of Salt flats, tidal swamps, and coastal dune sands, steep stony hills and ranges on metamorphosed basic and ultrabasic rocks, with some iron ore formations and alluvial plains with occasional stony residuals of basic and ultrabasic rocks with chief soils being deep cracking clays (Northcote et al, 1960 - 1968).

Considering the relatively small amount of clearing within a larger footprint, it is unlikely the proposed clearing will cause appreciable land degradation.

The application is not likely to be at variance to this principle.

Methodology References
Northcote et al (1960-1968)

(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 at variance to this Principle**
The closest conservation area to the application footprint is a Miscellaneous Reserve for the purpose of an Arboretum. The reserve is located approximately 12km west of the southern section of the clearing footprint. Given the distance between the clearing footprint and the conservation reserve, it is unlikely that any impacts will occur to the reserve from the clearing.

The application is not at variance to this principle.

Methodology GIS database
- DEC 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**
Several minor watercourses have been mapped as occurring within the clearing footprint. The known watercourses consist mainly of seasonal creeks and drainage lines. It is possible the clearing as proposed may cause deterioration to the water quality to the known watercourses during seasonal rains. However these impacts are likely to be short term with minimal impacts.

The application is not likely to be at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Numerous minor watercourses intersect the 2310ha footprint of the application area, including areas that are subject to inundation during the wet season. However, given the small amount of clearing within a large footprint, the proposed clearing is not likely to cause or exacerbate flooding in the local area.

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

Methodology GIS Databases:
- Hydrography, linear

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

Comments

The Shire of Roebourne (2012) does not oppose the issue of a permit to clear native vegetation for the listed purposes. However, have advised where possible areas of tidal influences should not be impeded by the creation of vehicle tracks for the purpose of clearing vegetation. Additionally, measures to prevent erosion at natural lines (creek beds) should be implemented where vegetation is to be cleared in or adjacent to these.

The application is a part of the Anketell Port proposal which is currently being assessed by the Western Australian Environmental Protection Authority (EPA), under Part IV of the Environmental Protection Act 1986. The proposed clearing for feasibility investigations is not included within the EPA's assessment of the Anketell Port proposal, thus the applicant requires a clearing permit to maintain the port development schedule. The feasibility investigations will require clearing of native vegetation for drill pads, access tracks and other minor infrastructure associated with such investigations (API Management, 2012). The proposed clearing is for;

- 70 Geotechnical test holes (20 m x 30 m bore hole drill pads)
- 50 Test Pit holes (in track)
- 10 Hydrological bore holes (50 m x 50 m bore hole drill pads)
- 50 Acid Sulphate Soil test holes (20 m x 30 m bore hole drill pads)
- 15 Quarry Test Holes
- 15 Cone Penetrometer Test holes (20 m x 30 m bore hole drill pads)
- 15 km access tracks (between 3 and 6 m width, not exceeding 6 m width) for vehicles and machinery wherever access cannot be obtained via existing roads and tracks.

The applicant has yet to obtain access to the land to undertake the feasibility investigations. The Department of State Development (DSD) are the responsible agency for coordinating the land acquisition. The DSD will arrange for the required Ministerial authorisation for the applicant to undertake feasibility works within the proposal area, pursuant to the provision of the Public Works Act 1902 and Land Administration Act 1997 (API Management, 2012).

Application area falls within the Surface Water and Groundwater "Pilbara" area covered by the Rights in Water and Irrigation Act 1914. If the use of water is required, a water licence may need to be obtained from the Department of Water.

The area under application is subject to native title claims. Both the claimants and their representing body have been notified of the application. To date no response has been received.

Methodology References
API Management (2012)
Shire of Roebourne (2012)
GIS Database
- Native Title Claims
- RIWI Act, Groundwater areas
- RIWI Act, Surface water areas, Irrigation districts

4. References

- AECOM (2011) Anketell Port Proposal - Level 2 Flora and Vegetation Assessment. Prepared for API Management Pty Ltd (DEC Ref DOC:A477496)
- AIP Management (2012a) Additional information provided within clearing permit application CPS 4904/1 API Management Pty Ltd (DEC Ref:A497281)
- AIP Management (2012) Supporting information provided within clearing permit application CPS 4904/1 API Management Pty Ltd (DEC Ref:A477496)
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- 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.
- Phoenix Environmental Sciences (2010) Terrestrial Vertebrate Fauna Survey for Anketell Point Rail Alignment and Port Projects. Prepared for Australian Premium Iron Management Pty Ltd ((DEC Ref DOC:A477496).
- 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.
- Shire of Roebourne (2012) Direct Interest Submission (DEC Ref:A489436)

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)