



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4034/5
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Dumpna Pty Ltd

1.3. Property details

Property: Mining Lease 45/1173
Mining Lease 45/1193
Miscellaneous Licence 45/234
Miscellaneous Licence 45/256
Local Government Area: Town of Port Hedland
Colloquial name: Turner River Sand Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
106.5		Mechanical Removal	Sand Extraction, Borrow Pits and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 24 April 2014

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia. Three Beard vegetation associations are located within the application area (GIS Database):

Beard vegetation association 619: Medium woodland; river gum (*Eucalyptus camaldulensis*).

Beard vegetation association 589: Short bunch grassland - savannah / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft Spinifex.

Beard Vegetation Association 647: Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex.

A flora and vegetation survey covering the vast majority of the application area was conducted in February 2012 by botanists from Animal Plant Mineral (APM). The vegetation of Miscellaneous Licences 45/234 and 45/256 that was not surveyed was extrapolated from the nearby mapped vegetation types. In July 2010 Astron undertook a flora and vegetation survey over part of the application and the results from this survey were also incorporated into the vegetation mapping. Six vegetation communities were identified within the application area (APM, 2012):

MaAtTe – *Melaleuca argentea* low woodland over *Acacia tumida* var. *pilbarensis* scattered tall shrubs over *Triodia epactia* very open hummock grassland;

AsTe – *Acacia stellaticeps* low shrubland over *Triodia epactia* hummock grassland;
Te – *Triodia epactia* open hummock grassland;

MgTe – *Melaleuca glomerata* scattered shrubs over *Triodia epactia* open hummock grassland;

AtCpTe – *Acacia tumida*, *Acacia trachycarpa* tall shrubland over mixed *Cajanus pubescens*, *Triumfetta ramosa*, *Corchorus incanus* subsp. *incanus* low open shrubland over *Triodia epactia* open hummock grassland; and

MaAc – *Melaleuca argentea* open low woodland over *Acacia trachycarpa*, *Melaleuca glomerata* shrubland over *Triodia* sp. sterile open hummock grasses.

From the APM (2014) survey for the amended area (CPS 4034/5):

Fp1 – *Corymbia candida* emergent trees over *Acacia tumida* var. *pilbarensis*, very sparse shrubs over *Acacia stellaticeps* sparse or open shrubs over *Triodia lanigera* and *Triodia wiseana* mid-dense hummock grass. This vegetation community occurs along the northern floodplain of the upper reaches of the Turner River, on loamy sands;

Rb1 – *Eucalyptus cameldalensis* subsp. *obtusata*, *Melaleuca argentea* very sparse trees over *Melaleuca glomerata*,

Acacia ampliceps very sparse shrubs over *Cenchrus ciliaris* mid-dense tussock grass. This vegetation community occurs throughout rapidly darning areas of the river bed often surrounding sandbars;

Rb2 – *Eucalyptus camaldulensis* subsp. *obtusa* sparse open trees over sparse or open *Corchorus incanus* subsp. *incanus*, *Cullen martini* (*Abutilon pritzelianum* P1) over *Aristida contorta* sparse or open tussock grass, *Triodia lanigera* / *Triodia basedowii* hummock grass. This vegetation community occurs along areas of the river bed most frequently impacted by flooding and alluvial erosion;

Sb1 – *Corchorus incanus* subsp. *incanus* sparse or open heath over *Cullen martini* (*Abutilon pritzelianum* P1) open heath, over *Aristida holathera* var. *holathera* sparse or open Tussock grass and *Triodia* sp? hummock grass. This vegetation community is associated with sandbars within the main river channel;

Sb2 – *Eucalyptus camaldulensis* subsp. *obtusa* sparse open trees over sparse or open *Corchorus incanus* subsp. *incanus*, *Cullen martinii*, (*Abutilon pritzelianum* P1), over *Aristida contorta* sparse or open tussock grass, *Triodia lanigera* / *Triodia basedowii* hummock grass. This vegetation community is associated with sandbars within the main river channel;

Sb3 – *Eucalyptus camaldulensis* subsp. *obtusa* (*Melaleuca argentea*) mid-dense trees, over sparse or open *Acacia tumida*, *Melaleuca glomerata* shrubs, over *Cenchrus ciliaris* mid-dense tussock grass. This vegetation community is associated with sandbars within the main river channel;

Sb4 – *Eucalyptus camaldulensis* subsp. *obtusa* emergent trees, over *Melaleuca argentea*, mid-dense trees over *Melaleuca glomerata* (*Acacia ampliceps*), sparse or open shrubs, over *Cenchrus ciliaris* mid-dense tussock grass and *Triodia epactia* very sparse hummock grass. This vegetation community is associate with sandbars within the main river channel; and

Tow1 – *Eucalyptus victrix* emergent trees, over *Acacia tumida* mid-dense shrubs, over *Abutilon pritzelianum* P1 isolated plants, over *Triodia wiseana* mid-dense hummock grass and mid-dense *Cenchrus ciliaris* tussock grass. This vegetation community occurs in association with sandbars that have stabilised enough to enable the growth of tall open woodland.

Clearing Description	Turner River Sand Project. Dumpna Pty Ltd proposes to clear up to 106.9 hectares of native vegetation within a total boundary of approximately 495 hectares for the purpose of sand extraction, borrow pits and associated activities. The project is located approximately 25 kilometres south of Port Hedland, in the Town of Port Hedland.
Vegetation Condition	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994); To: Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
Comment	The vegetation condition was derived from vegetation surveys conducted by Astron Environmental Services (2010), Animal Plant Mineral (2012) and APM (2014). This permit has previously been amended to requested a change to the clearing permit boundary, to increase the amount of clearing authorised (from 20 hecatres to 31.9 hectares), increase the clearing permit boundary (from 61.2 hectares to 127 hectares) and change the purpose of the permit to include borrow pits. On 27 February 2014, Dumpna Pty Ltd applied to amend CPS 4034/4 for the purpose of increasing the amount of clearing authorised from 31.9 hectares to 106.9 hectares, to increase the permit boundary by from 127 hectares to 495 hectares, include Mining Lease 45/1173 on the permit, and to extend the duration of the permit by 5 years.

3. Assessment of application against clearing principles

Comments

Dumpna Pty Ltd has applied to increase the amount of clearing approved from 31.9 hectares to 106.9 hectares, increase the clearing permit boundary, include a new mining tenement and increase the duration of the permit by 5 years.

A biological survey was undertaken over Mining Leases 45/1193 and 45/1173 during July 2013 by APM (2014) to cover the additional areas requested in the amendment. The survey identified eight vegetation associations within the amended application area. The vegetation of the application area is typical of the region (APM, 2014). No vegetation associations recorded are considered to be Threatened or Priority Ecological Communities and no Threatened Flora were recorded within the additional area (APM, 2014). Therefore, the proposed clearing is not likely to be at variance to Principles (c) and (d) and is not at variance to Principle (e).

The Priority 1 flora species *Abutilon* sp. *Pritzelianum* was recorded in several locations during the biological survey with 576 individuals located during the survey (APM, 2014). This species is known only from the floodplains of the Turner and Yule Rivers and from disjunct populations that occur in the Carnarvon district (APM, 2014). Based on density calculations from the targeted search for *Abutilon* sp. *Pritzelianum* (445 individuals per hectare), 179,045 individuals may occur within the amended application area (APM, 2014; Smith, 2014). Smith (2014) states that the upper most estimate of the number of individuals likely to be impacted by proposed clearing is 47,570 individuals. The actual number of individuals to be impacted is likely to be significantly lower as the clearing will be undertaken preferentially for mining on Open Sand Beds (OsB) vegetation community (approximately 64 hectares within the amended application area). The OsB vegetation

community does not contain the *Abutilon* sp. Pritzelianum. Potential impacts to *Abutilon* sp. Pritzelianum as a result of the proposed clearing may be minimised by the implementation of a flora management condition. Therefore the proposed clearing may be at variance to Principle (a).

Fauna habitats and the assemblages of species that occupy them are expected to be consistent with other riverine areas in the region (APM, 2014) and are described in further detail in Clearing Permit Decision Report CPS 4034/4. Therefore, the proposed clearing is not likely to be at variance to Principle (b).

The biological survey by APM (2014) identified several vegetation communities associated with floodplains, river banks and the river bed. These landforms are subject to natural alluvial erosion during intermittent flooding of the Turner River caused by high inland rainfall during periods of cyclonic activity (APM, 2014). The movement of water during flooding events can be extreme causing undercutting of the banks and subsequent uprooting of vegetation and significant movement of sand and silts. The clearing of established trees, shrubs and grasslands along the river banks could cause erosion (APM, 2014). Provided disturbance to riparian habitats is avoided or minimised where possible, and strict weed hygiene procedures are followed, the proposed works are not expected to substantially impact these vegetation units. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition. Therefore, the proposed clearing is at variance to Principle (f).

Current environmental information has been reviewed and the assessment of clearing principles (g), (h), (i) and (j) is consistent with the assessment in Clearing Permit Decision Report CPS 4034/4 (GIS Database).

Methodology APM (2014)
Smith (2014)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- IBRA WA (regions – subregions)
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Rainfall, Mean Annual
- Rangeland Land System Mapping
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora

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

Comments

There is one Native Title Claim (WC99/3) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is one registered Aboriginal Site of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, Department of Parks and Wildlife and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit amendment application was advertised on 31 March 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received to the proposed clearing.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT

4. References

- Animal Plant Mineral (APM) (2012) Level One Biological Survey Mining Lease M45/1193 Pilbara Western Australia. Report Prepared by Animal Plant Mineral for Dumpna Pty Ltd, May 2012.
- Animal Plant Mineral (APM) (2014) Level One Biological Survey – Turner River Mining Leases M45/1193 and M45/1173, Pilbara Western Australia. Prepared for Dumpna Pty Ltd, January 2014.
- Astron Environmental Services (2010) Turner River M45/1193 Level 1 Vegetation and Flora Survey. Report Prepared by Astron Environmental Services for Dumpna Pty Ltd, August 2010.

Smith, T (2014) Additional information regarding CPS 4304/5 Dumpna Pty Ltd by Animal Plant Mineral. Internal document, April 2014.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.

- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is in need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
 (a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
 (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
 (a) is not critically endangered; and
 (b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
 (a) is not critically endangered or endangered; and
 (b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (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.
- (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.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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