



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3846/1
Permit Holder:	Chevron Australia Pty Ltd
Duration of Permit:	30 January 2012 – 30 January 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 purpose of geotechnical investigations and associated works.

2. Land on which clearing is to be done

Section 91 Licence LIC0095/2008_2_106 within the following lots:

Lot 152 on Plan 220265, Talandji

Lot 150 on Plan 220207, Talandji

Lot 201 on Plan 215509, Talandji

Lot 232 on Plan 220821, Talandji

Lot 266 on Plan 29779, Talandji

Lot 267 on Plan 29779, Talandji

Lot 278 on Plan 219235, Talandji

Lot 280 on Plan 219235, Talandji

Onslow road reserve, Talandji

Lot 149 on Plan 220384, Peedamulla

Lot 281 on Plan 219235, Peedamulla

Onslow road reserve, Peedamulla

3. Area of Clearing

The Permit Holder must not clear more than 1.2 hectares of native vegetation within the area shaded yellow on attached Plan 3846/1.

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 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. 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. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the site shall be inspected by a *flora specialist* for the presence of *priority flora* and *Eleocharis papillosa*.
- (b) Where *priority flora* or *Eleocharis papillosa* are identified in relation to condition 9(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of identified *priority flora* or *Eleocharis papillosa* occurs, unless approved by the CEO; and
 - (ii) no clearing occurs within 10 metres of identified *priority flora* or *Eleocharis papillosa*, unless approved by the CEO.

10. Retain and spread vegetative material

The Permit Holder shall:

- (a) Retain the vegetative material and topsoil removed by clearing authorised under this Permit
- (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;
- (c) Within 12 months following completion of activities under this permit conduct surveys of each of the vegetation communities to be *rehabilitated* to collect adequate information to assist setting completion criteria for *rehabilitation*;
- (d) Prepare the methodology of the survey required in condition 10(c) to be approved by the CEO;
- (e) Within 18 months following completion of activities under this permit develop completion criteria for *rehabilitation* for that area to be approved by the CEO;
- (f) After 5 years of the completion of *rehabilitation*, ensure that the percentage cover and species diversity of living self sustaining native vegetation in *rehabilitation* areas shall be comparable to the completion criteria required by condition 10(c); and
- (g) Ensure that no new species of declared weeds and environmental weeds shall be introduced into the *rehabilitated* areas which are likely to be attributed to the activities under this permit.

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

- (a) The Permit Holder must maintain the following records for activities done 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 flora management pursuant to condition 9 of this Permit:
 - (i) the location of each *priority flora* or *Eleocharis papillosa* 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 species name of each *priority flora* identified; and
 - (iii) a copy of the *flora specialist's* flora inspection report.
- (c) 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 or decimal degrees;
 - (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*.

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 30 October 2018, 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:

fill means material used to increase the ground level, or fill a hollow;

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

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;

optimal time means the period from November to December for undertaking *direct seeding*;

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);

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; and

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*.



M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

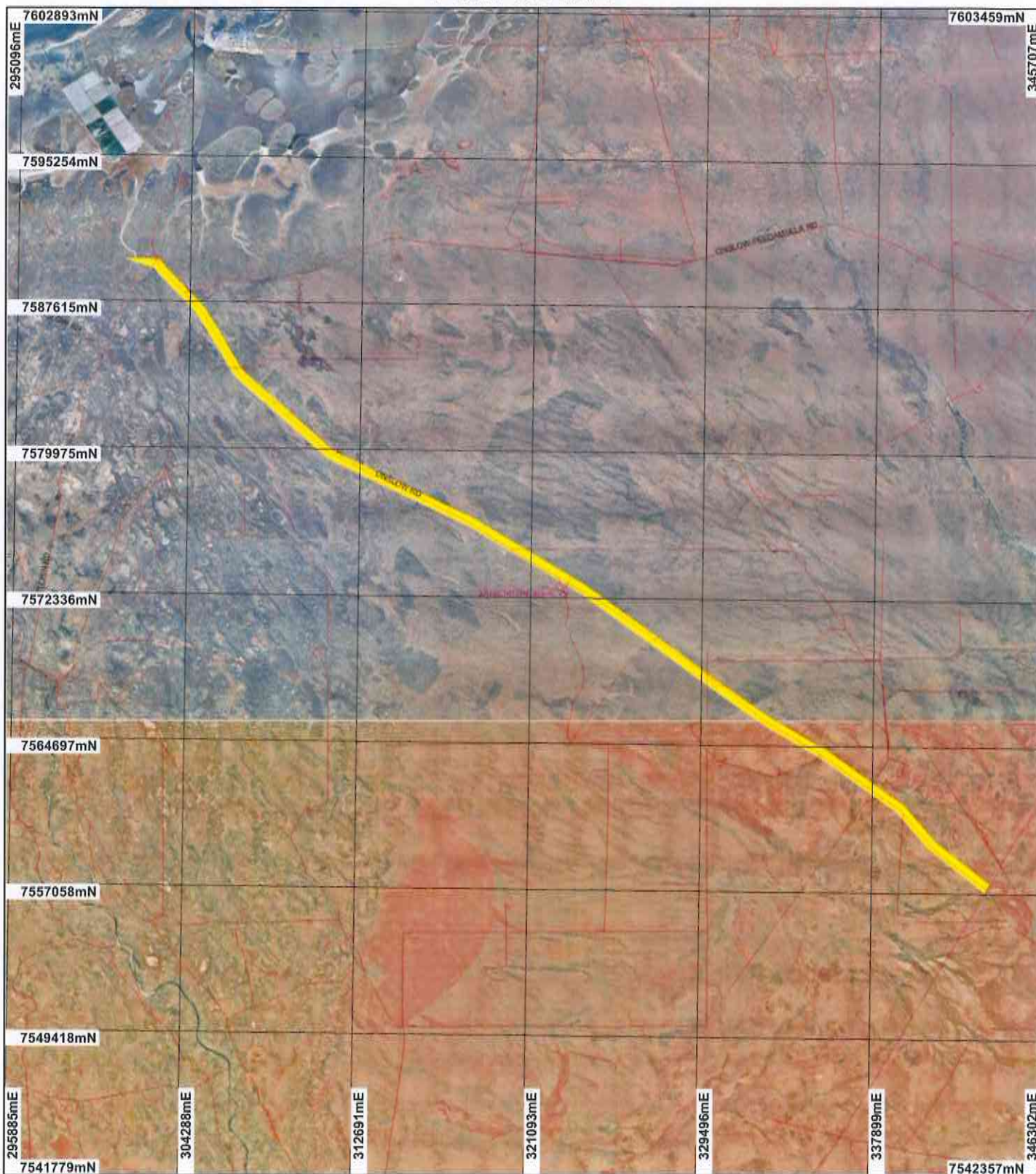
*Officer delegated under Section 20
of the Environmental Protection Act 1986*

5 January 2012

CPS 3846/1, 5 January 2012

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Plan 3846/1



LEGEND

Clearing Instruments
 Areas Approved to Clear
 Road Centrelines
 Cadastre for labelling

Local Government Authorities
Koordarrrie 50cm Orthomosaic - Landgate 2009

Onslow 1.4m Orthomosaic - Landgate 2001



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

M Wamock Date 5/1/12
 M Wamock

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.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3846/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Chevron Australia Pty Ltd

1.3. Property details

Property:
 LOT 152 ON PLAN 220265 (TALANDJI 6710)
 LOT 280 ON PLAN 219235 (TALANDJI 6710)
 ROAD RESERVE (TALANDJI 6710)
 LOT 149 ON PLAN 220384 (PEEDAMULLA 6710)
 LOT 281 ON PLAN 219235 (PEEDAMULLA 6710)
 ROAD RESERVE (PEEDAMULLA 6710)
 LOT 278 ON PLAN 219235 (TALANDJI 6710)
 LOT 149 ON PLAN 220384 (PEEDAMULLA 6710)
 LOT 150 ON PLAN 220207 (TALANDJI 6710)
 LOT 266 ON PLAN 29779 (TALANDJI 6710)
 LOT 232 ON PLAN 220821 (TALANDJI 6710)
 LOT 201 ON PLAN 215509 (TALANDJI 6710)
 LOT 267 ON PLAN 29779 (TALANDJI 6710)

Local Government Area: Shire of Ashburton
 Colloquial name: Wheatstone Domgas Pipeline

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: GRANT
 Decision Date: 5 January 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
Three Beard vegetation types were mapped within the area proposed to be cleared:	The majority of the vegetation to be cleared is considered to be in very good to excellent (Keighery, 1994) condition (URS, 2010). Only scattered areas were found to be infested with weeds and these were mainly limited to the fringes of Onslow Road (Biota, 2009; URS, 2010).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994)	The description and condition of the vegetation proposed to be cleared was determined via the use of supporting information provided by the applicant, which contained the results of a flora and vegetation survey (Biota, 2009; URS, 2010).
Beard 670: Hummock grasslands, shrub steppe; scattered shrubs over <i>Triodia basedowii</i>		To	
Beard 98: Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>Triodia basedowii</i>		Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994)	
Beard 585: Mosaic: Shrublands; snakewood & <i>Acacia victoriae</i> scrub / Hummock grasslands, shrub-steppe; kanji over soft spinifex & <i>Triodia basedowii</i> (Shepherd, 2009)			
A total of 11 vegetation types with 6 broad landform groups were surveyed within the application area by Biota (2009):			
1) Inland Sand Dunes:			
(a) <i>Grevillea stenobotrya</i> tall open shrubland over <i>Crotalaria cunninghamii</i> , <i>Hibiscus</i>			

brachychlaenus open shrubland over triodia schinzii, (T. epactia) open hummock grassland on red sand dunes.

2) Claypans:

- (a) bare claypan
- (b) Eriachne aff. Benthamii open tussock grassland
- (c) Tecticornia spp. low shrubland

3) Clayey Plains:

- (a) Sporobolus mitchellii, Eriachne aff. Benthamii, E. benthamii, Eulalia aurea tussock grassland.
- (b) Acacia xiphophylla tall shrubland over Triodia epactia open hummock grassland.

4) Inland Sand Plains:

- (a) Corymbia hamersleyana scattered low mallees over Acacia ancistrocarpa, A. bivenosa shrubland over Triodia lanigera hummock grassland.
- (b) Acacia inaequilatera tall open shrubland over A. ancistrocarpa open shrubland over Triodia lanigera open hummock grassland.

5) Stony Hills

- (a) Acacia inaequilatera tall open shrubland over Triodia lanigera, T. brizoides open hummock grassland.

6) Drainage Areas:

- (a) Eucalyptus victrix scattered low trees over Acacia synchronicia, A. bivenosa shrubland over Triodia epactia hummock grassland.
- (b) Corymbia hamersleyana scattered low mallees over Acacia tumida var. pilbarensis, Grevillea wickhamii subsp. hispidula tall open shrubland over A. ancistrocarpa open shrubland over Triodia epactia, T. lanigera open hummock grassland.

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 proposed clearing of 1.2ha of native vegetation within a clearing envelope of approximately 2,678ha (URS, 2010) is required to conduct geotechnical investigations and associated works to influence the domestic gas pipeline (Domgas) alignment, should it be required to be located outside of the area approved by Ministerial Statement 873.

The majority of the vegetation to be cleared is considered to be in very good to excellent (Keighery, 1994) condition (Biota, 2009; URS, 2010). Only scattered areas were found to be infested with weeds and these were mainly limited to the fringes of Onslow Road (Biota, 2009; URS, 2010).

Within the clearing envelope (2,678ha), seventeen 50 x 50 metre quadrats recorded a total of 218 taxa of native vascular plants from 109 genera belonging to 43 families during a flora and vegetation survey conducted in April 2009 (Biota, 2009).

The vegetation type 'Grevillea stenobotrya tall open shrubland over Crotalaria cunninghamii, Hibiscus brachychlaenus open shrubland over triodia schinzii, (T. epactia) open hummock grassland on red sand dunes', is mapped as occurring within parts of the area to be cleared and is considered to be of high conservation significance (Biota 2009; URS, 2010). This vegetation type could potentially support Priority flora such as Eremophila forrestii subsp. viridis (P3) and Triumphetta echinata (P3), and possibly also the undescribed taxon Aenictophyton aff. reconditum (URS, 2010).

The 'Tecticornia spp. low shrubland on claypans' vegetation type is also considered to be of high conservation significance, as it may support a number of poorly recognised species and *Eleocharis papillosa* (Vulnerable; Environment Protection and Biodiversity Conservation Act 1999), which was recorded within the applied area (Biota, 2009). *Eleocharis papillosa*, which is small in stature (growing to under 10cm in height), was recorded from a single location within the application area in samphire shrubland vegetation within a tidally influenced creek (Biota, 2009), however it is considered likely to occur throughout this particular creek habitat (URS, 2010). This record represents a considerable range extension for this species within Western Australia (Biota, 2009).

Additionally, the *Tecticornia* spp. mapped as occurring within the area proposed to be cleared may be of significance as there are several potentially new *Tecticornia* species along the Pilbara coast, of which one may occur in the Onslow area. Additional information on the *Tecticornia* species likely to be impacted by the proposed clearing is required.

The vegetation types 'Grevillea stenobotrya tall open shrubland over *Crotalaria cunninghamii*, *Hibiscus brachychlaenus* open shrubland over *Triodia schinzii*, (*T. epactia*) open hummock grassland on red sand dunes' and '*Sporobolus mitchellii*, *Eriachne* aff. *Benthamii*, *E. benthamii*, *Eulalia aurea* tussock grassland' are considered to be of Moderate conservation significance, supporting a wide variety of flora species specific to this substrate and are generally in excellent (Keighery, 1994) condition (Biota, 2009).

The remaining 8 vegetation types surveyed over the area to be cleared are considered to be of low conservation significance (Biota, 2009).

In addition to the species found during the flora and vegetation survey, a number of priority flora species were recorded within the local area (50km radius), four of which were recorded on the same soil and vegetation type to that of the proposed clearing area and two were mapped as occurring on the same soil only. These include:

- *Eremophila forrestii* subsp. *viridis* (P3) recorded 1.7km east of northern end of area to be cleared
- *Triumfetta echinata* (P3) recorded within northern end of application area and 1.4km east. A further record is 1.4km west of the central section of the area to be cleared.
- *Abutilon uncinatum* (P1) was recorded 18km NE of the central section of the area to be cleared
- *Helichrysum oligochaetum* (P1) recorded 21km SW of southern most point of area to be cleared.
- *Vigna* sp. Central (M.E. Trudgen 1626) (P2) recorded 12.5km NNW of the northern section of the area to be cleared (Mapped on same soil only)
- *Acacia ryaniana* (P2) recorded 27km SW of area to be cleared (northern third) (Mapped on same soil only).

The proponent has advised that prior to clearing the potential sites will be surveyed by a botanist and will be located so as to avoid the current known locations of *E. papillosa*, *A. uncinatum*, *E. forrestii* subsp. *viridis* and *T. echinata* as well as any further locations of threatened or priority species that are recorded and clearing in sand dune and creekline areas will be avoided where practicable (URS, 2010).

Five weed species were identified within the area proposed to be cleared, *Mimosa* Bush (*Vachellia farnesiana*), *Cenchrus setiger* (Birdwood Grass), *Cenchrus ciliaris* (Buffel Grass), *Aerva javanica* (Kapok Bush) and *Portulaca oleracea* (Purslane) and large infestations of the declared weed species Mesquite have been recorded close to the area proposed to be cleared (Biota, 2009).

Given the vegetation under application may support priority flora and vegetation types considered to be of high conservation significance, the proposed clearing may be at variance to this Principle. Flora management, revegetation and weed control conditions will mitigate the impacts of the proposed clearing.

- Methodology** References:
Biota (2009)
Keighery (1994)
URS (2010)
GIS Databases:
- SAC Biodatasets 11/11
- Pre European Vegetation (DA 2001)
- Soils, Statewide DA 11/99

(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**
Up to 10 species of rare or threatened fauna have been identified as potentially occurring within the area proposed to be cleared (Biota, 2009). The northern quoll (*Dasyurus hallucatus*) and night parrot (*Pezoporus occidentalis*), listed as Endangered under the Western Australian Wildlife Conservation Act 1950 (WC Act) and under the federal Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), are two species identified as potentially occurring within the application area. However, given that the last recorded sighting of the night parrot was over 40 years ago and the density of feral cat and fox populations in the area; it is considered very unlikely that this species still remains in the area (Biota, 2009). No core habitat for the northern quoll is found within the proposed clearing area; however, this species has a large home range and may periodically occur in the area proposed for clearing (Biota 2009; URS, 2010).

The peregrine falcon (*Falco peregrinus*) may frequent the area proposed to be cleared, as suitable habitat is likely to be available (Biota, 2009) and the brush-tailed mulgara (*Dasyercus blythi*), listed as endangered under the WC Act and Vulnerable under the EPBC Act, may potentially occur where undisturbed spinifex hummock grassland is found (Biota, 2009).

Two priority fauna species were recorded within or within close proximity to the proposed clearing area, namely the Australian bustard (*Ardeotis australis*) (P4) and the western pebble-mound mouse (*Pseudomys chapmani*) (P4). The Australian bustard may frequent the proposed clearing area, however there are large amounts of similar suitable habitat found in the wider area (Biota, 2009) and the western pebble-mound mouse was only recorded from one inactive mound, south east of the area to be cleared (Biota, 2009).

A further 4 priority species were identified as potentially occurring within the area proposed for clearing, namely *Lerista planiventralis maryani* (P1), grey falcon (*Falco hypoleucos*) (P4), flock bronzewing (*Phaps histrionica*) (P4) and the short-tailed mouse (*Leggadina lakedownensis*) (P4) (Biota, 2009).

In addition to these species, the following fauna species were recorded within the local area (50km radius):

- lakeland downs mouse, Kerakenga (*Leggadina lakedownensis*) (P4) - historic record
- star finch (western) (*Neochmia ruficauda subclarescens*), recorded 17km N of northern end
- bush stonecurlew (*Burhinus grallarius*) (P4) recorded 14.1km E of southern end
- Pilbara olive python (*Liasis olivaceus barroni*) (VU) recorded 49.5km S of southern end

Of these, the Pilbara olive python is the most likely to utilise parts of the area proposed for clearing, as this species prefers spinifex grasslands and individuals occupy a large home range (DEWHA, 2010).

Given that the area proposed to be cleared is small (1.2ha) and large amounts of suitable similar habitat remain in the wider area (URS, 2010), impacts to fauna species are likely to be minimal. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Biota (2009)
DEWHA (2010)
Keighery (1994)
URS (2010)
GIS Databases:
- SAC Biodatasets 11/11

(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 rare flora within the local area (50km radius) and the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- SAC Biodatasets 11/11

(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**
There are no known threatened ecological communities within the local area (50km radius) and the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
- SAC Biodatasets 11/11

(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**
There are six Beard vegetation associations mapped as occurring over the length of the application area which extends for approximately 54km (URS, 2010). None of these vegetation types are poorly represented (Shepherd, 2009), with remaining percentages of pre-European vegetation exceeding the recommended 30 per cent threshold as per the national objectives and targets for biodiversity (Commonwealth of Australia, 2001).

Considering the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:

Commonwealth of Australia (2001)
Shepherd (2009)
URS (2010)
GIS Databases:
- Pre European Vegetation (DA 2001)

(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

The northern end of the vegetation to be cleared is intersected by a Tidal Flat (estuarine). There are also several non-perennial lakes mapped within the area proposed for clearing, occurring at the northern end and near vicinity. There is another non - perennial lake which is within the central section of the proposed clearing area and two minor non-perennial watercourses dissect the area at the southern end.

At the closest points, the Cane and Ashburton Rivers are situated 14km East and 16.4km south west of the application area, respectively.

The proposed clearing will be positioned to avoid clearing in all watercourses, including the tidal creek where significant flora was located (URS, 2010).

As parts of the area to be cleared are mapped as being drainage areas (Biota, 2009), the proposed clearing may be at variance to this Principle.

Methodology References:
Biota (2009)
URS (2010)
GIS Databases:
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 are five soil types mapped over the length of the proposed area of clearing (54km long, with average width of 500 metres) (Northcote et al., 1960-68) and the local area (50km radius) has approximately 90 per cent vegetation remaining. The dune areas will be the most susceptible to erosion and these areas will be avoided where practicable (URS, 2010). The Pilbara region is known to experience high rainfall events and rainfall distribution, occurrence and intensity varies across the region (URS, 2010), which may lead to water erosion.

Given the small amount of clearing proposed (1.2ha), land degradation concerns are likely to be minimal and the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Northcote et al. (1960-68)
URS (2010)
GIS Databases:
- Soils, Statewide DA 11/99

(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 at variance to this Principle

The closest gazetted conservation area is the Cane River Conservation Park, situated 4.5km east of the southern section of the area proposed to be cleared. The majority of the proposed clearing area (except northern end) is within a DEC managed conservation area (formerly Mt Minnie Pastoral Lease). This area is proposed to be included in the Cane River Conservation Park (URS, 2010). Given the above, the proposed clearing is considered to be at variance to this principle.

Five weed species were identified within the area proposed to be cleared, Mimosa Bush (*Vachellia farnesiana*), *Cenchrus setiger* (Birdwood Grass), *Cenchrus ciliaris* (Buffel Grass), *Aerva javanica* (Kapok Bush) and *Portulaca oleracea* (Purslane) and large infestations of the declared weed species Mesquite, have been recorded close to the area proposed to be cleared.

Revegetation of temporarily cleared areas and weed control measures will minimise impacts to conservation areas. Overall ground disturbance needs to be minimised by using existing tracks, cleared areas and appropriate clearing strategies (eg raised blade); any revegetation or rehabilitation works, within the proposed conservation area, should be done in consultation with the Department of Environment and Conservation's

(DEC) Pilbara region; and weed hygiene and control measures should be developed in consultation with DEC, the Department of Agriculture and Food, and the Pilbara Mesquite Management Committee.

Methodology References:
URS (2010)
GIS Databases:
- DEC Tenure (DEC 2010)

(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**

Groundwater salinity ranges from 1000 - 3000 mg/L in the southern half of the area proposed to be cleared to 7000 - 14000 mg/L in the north. It is considered unlikely that the proposed clearing of 8 hectares of native vegetation, within a landscape where 90 per cent of vegetation remains in the local area (50km radius), will result in the deterioration of groundwater quality.

There are several minor watercourses scattered throughout the proposed clearing area. The removal of native vegetation from these areas may increase sediment loads, thereby effecting surface water quality. However, given the small amount of clearing proposed (1.2ha) and that it will be positioned to avoid clearing in watercourses, including the tidal creek where significant flora was located (URS, 2010), impacts to surface water quality are likely to be minimal. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology References:
URS (2010)
GIS Databases:
- Current Extent of Native Vegetation - DEC 09/11
- Groundwater Salinity Statewide DoW 07/06
- Hydrography linear - DOW 07/06
- Hydrography linear (hierarchy) - DoW 07/06

(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 proposed clearing of 1.2ha of native vegetation, in an area (50km radius) where 90 per cent of vegetation remains, is not likely to exacerbate flooding.

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

Methodology GIS Databases:
- NLWRA, Current Extent of Native Vegetation - DEC 09/11

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

Comments

The application is for the purpose of geotechnical investigations and site preparations as part of an investigative works programme linked to the proposed Wheatstone Development - Gas processing, export facilities and infrastructure project. The EPA's assessment (Report 1404) was released 15 June 2011 and the Office of the Appeals Convenor granted approval for the project in Statement 873, published 30 August 2011.

The proponent has decided to continue with the application for a clearing permit, as clearing for additional geotechnical works may be required if a section of the pipeline needs to be situated outside of the 60 metre wide dedicated pipeline corridor. The proponent reduced the hectares under application within the same footprint from 8 hectares to 1.2 hectares to reflect the amount of clearing required for the ten test pits and associated works that may be required.

The applicant holds a section 91 licence (Licence Number: Lic 00951/2008_2_106) over a 500 metre wide corridor footprint and any clearing required will be contained within this area. This licence is valid until 29 May 2012.

The proposed area lies within the Pilbara Ground Water and Surface Water Areas proclaimed under the Rights in Water and Irrigation Act 1914. Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water (DoW) and any interference with the bed or banks of a watercourse in this area may also require DoW approval. The proponent is advised to contact the DoW for further information.

There are numerous records of Aboriginal Sites of Significance within the application area. The proponent is advised to contact the Department of Indigenous Affairs for information regarding their obligations under

- Methodology** GIS Databases:
- Aboriginal Sites of Significance - DIA 02/10
- RIWI Act, Areas - DoW 03/08

4. References

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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)