



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5503/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Epic Energy (Pilbara Pipeline) Pty Ltd**

1.3. Property details

Property: Pipeline Licence PL22
Local Government Area: Town of Port Hedland
Colloquial name: Pilbara Energy Pipeline Relocation Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
22.341		Mechanical Removal	PELP Gas Pipeline Variation Construction

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 May 2013

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. Two Beard vegetation associations have been mapped within the application area (GIS Database):

589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex soft spinifex; and

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

A flora and vegetation survey of the application area has been conducted by Woodman Environmental (Epic Energy, 2013). This survey identified the following two vegetation communities within the application area (Epic Energy, 2013; Woodman Environmental, 2011):

6a: Occasional Mid Isolated Shrubs of *Acacia tumida* var. *pilbarensis* over Low Isolated Shrubs of *Acacia stellaticeps* over Low Hummock Grassland dominated by *Triodia epactia* with other dominant species including *Aristida* spp., *Chrysopogon fallax*, *Eriachne obtusa*, *Eragrostis eriopoda*, red sand to sandy loam on dunes, and midslope – plain areas; and

6d: Mid Isolated Shrubs of *Grevillea pyramidalis* and *Acacia* spp. over Low Hummock Grassland of *Triodia epactia* on red sandy loam on flat.

Clearing Description Epic Energy (Pilbara Pipeline) Pty Ltd has applied to clear up to 22.341 hectares of native vegetation, within an application area of approximately 53.3 hectares. The purpose of the proposed clearing is to relocate an existing pipeline to a depth of approximately 9 metres to ensure the safety and integrity of the pipeline after the installation of proposed rail infrastructure by the Roy Hill Iron Ore project.

Vegetation Condition Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);

To

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment The application area is located within the Pilbara region of Western Australia and is situated approximately 18 kilometres south west of Port Hedland.

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

The application area occurs within the Roebourne (PIL4) subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *Acacia pyrifolia* and *Acacia inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands (CALM, 2002). Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands (CALM, 2002). Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

A flora and vegetation survey of the Roy Hill Rail Corridor, which includes the application area, was conducted by Woodman Environmental (2011). No Threatened or Priority Flora species were identified within the application area during this survey (Woodman Environmental (2011)).

The flora and vegetation survey identified two vegetation communities, 6a and 6d (Woodman Environmental, 2011) within the application area. Community 6a was recorded as being very common and was the dominant vegetation type within the application area (Woodman Environmental, 2011). Community 6d, however was only recorded in one area and was therefore rated as having a higher conservation significance (Woodman Environmental, 2011). A total of 25.67 hectares of this community was recorded during the Woodman Environmental (2011) survey. Only part of this community occurs within the application area and it is considered unlikely that the proposed clearing will significantly impact on biodiversity within the 6d vegetation community.

According to available databases there are no Threatened or Priority Ecological Communities within the application area (GIS Database).

Woodman Environmental (2011) identified two weed species, *Aerva javanica* and *Cenchrus ciliaris* within the application area. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. It is therefore important to ensure that weed species are not introduced to the application area as a result of the proposed activities. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey of the broader application area conducted by Terrestrial Ecosystems (2011) identified the potential for three conservation significant fauna species, Crest-tailed Mulgara, Brush-tailed Mulgara and Bilby, to occur within the application area.

The vegetation within the application area was common locally and regionally, therefore the proposed clearing is not considered likely to impact upon the floral or faunal diversity of the area.

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

Methodology CALM (2002)
Terrestrial Ecosystems (2011)
Woodman Environmental (2011)
GIS Database:
- IBRA WA (regions – subregions)
- Threatened Ecological Sites Buffered

(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 may be at variance to this Principle**

A vertebrate fauna survey of the broader application area was conducted by Terrestrial Ecosystems (2011). This survey identified the potential for the following three conservation significant fauna species to occur within the application area (Terrestrial Ecosystems, 2011):

- Brush-tailed Mulgara (*Dasyercus blythi*) Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and Schedule 1 under the *Wildlife Conservation Act 1950*;

- Crest-tailed Mulgara (*Dasyercus cristicauda*) Vulnerable under the EPBC Act and Schedule 1 under the *Wildlife Conservation Act 1950*; and

- Bilby (*Macrotis lagotis*) Vulnerable under the EPBC Act and Schedule 1 under the *Wildlife Conservation Act 1950*.

A further targeted survey over part of the application area conducted by Terrestrial Ecosystems (2013) identified five Mulgara holes and scats within the area. Due to lack of diggings, scats and burrows belonging to

the Bilby, Terrestrial Ecosystems (2013) has determined that this species is unlikely to occur within the area.

The Terrestrial Ecosystems (2013) survey has also identified the Peregrine Falcon (*Falco peregrinus*) – Schedule 4 and the Australian Bustard (*Ardeotis australis*) – Priority 4 as present in the general area. Terrestrial Ecosystems (2013) advise that any bird species of conservation significance that frequent the area will move into adjacent areas when clearing commences.

Epic Energy (Pilbara Pipeline) Pty Ltd has advised that they plan to utilise a Regulation 17 licence under the *Wildlife Conservation Regulations 1970*, issued for trapping and translocating conservation significant fauna within the Roy Hill Rail Corridor, to translocate conservation significant fauna species within the application area (B Jayatilaka, pers comm., 24 April 2013). The Department of Environment and Conservation has advised that the proposed Mulgara translocation activities are within the scope of the relevant Regulation 17 licence (K Atkins 2013, pers comm., 2 May 2013).

Potential impacts to conservation significant fauna species may be minimised by the implementation of a fauna management condition.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Terrestrial Ecosystems (2011)
Terrestrial Ecosystems (2013)

(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

According to available databases, there are no Threatened Flora within the application area (GIS Database). A flora and vegetation survey encompassing the application area was conducted by Woodman Environmental (2011). This survey did not identify any Threatened Flora within the application area.

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

Methodology Woodman Environmental (2011)
GIS Database:
- Threatened and Priority 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.

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

There are no Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is located approximately 192 kilometres south south-west of the application area (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(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 at variance to this Principle

The application area is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 99.58% of the pre-European vegetation remains within the Pilbara bioregion (Government of Western Australia, 2011).

The vegetation within the application area has been broadly mapped as Beard vegetation associations:

589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex soft spinifex; and

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

More than 97% of these two Beard vegetation associations remain within the Pilbara bioregion (see table below) (Government of Western Australia, 2011).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Extent in DEC Managed Lands %*
IBRA Bioregion - Pilbara	17,804,427	17,729,352	~99.58	Least Concern	~8.39
Beard vegetation associations - State					
589	809,603	804,022	~99.31	Least Concern	~1.61
647	195,861	191,711	~97.88	Least Concern	~0.00
Beard vegetation associations - Bioregion					
589	730,567	725,994	~99.37	Least Concern	~1.78
647	195,860	191,711	~97.88	Least Concern	~0.00

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be a remnant of vegetation in an area that has been extensively cleared.

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (regions – subregions)
- Pre-European Vegetation

(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 is not at variance to this Principle**
According to available databases there are no perennial or non-perennial surface water features within the application area (GIS Database).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology GIS Database:
- Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal may be at variance to this Principle**
The application area intersects the following two land systems (GIS Database):

The River land system is characterised by active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands (Van Vreeswyk et al., 2004). This land system is largely stabilised by buffel grass and spinifex and accelerated erosion is uncommon, however, susceptibility to erosion is high or very high if vegetation is removed (Van Vreeswyk et al., 2004).

The Uaroo land system is characterised by broad sandy plains supporting shrubby hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). This land system is generally not susceptible to erosion, however some erosion is present on drainage tracts (Van Vreeswyk et al., 2004).

As the River land system can be highly susceptible to erosion when vegetation is removed, it is important to ensure that the time that the area is left open without vegetation cover is minimised. Potential erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

(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 proposed clearing is not located within a conservation area (GIS Database). The nearest onshore conservation area is Mungaroona Range Nature Reserve, located approximately 100 kilometres south of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

Based on the above, the proposed clearing 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

According to available databases the application area is not located within a Public Drinking Water Source Area (GIS Database). There are no permanent wetlands or water bodies within the application area (GIS Database).

The application area experiences a semi-desert tropical climate with an average annual rainfall of approximately 315 millimetres (CALM, 2002; BoM, 2013). The annual evaporation within the application area is approximately 3,400 millimetres (GIS Database). Therefore any water pooling on the surface is likely to be short lived.

Groundwater within the application area is 'brackish' with average salinity ranging from 1,000-3,000 milligrams per Litre Total Dissolved Solids (GIS Database). The proposed clearing of 22.341 hectares of native vegetation is considered unlikely to increase groundwater salinity levels within the local area.

Based on the above the proposed clearing is not likely to be at variance to this Principle.

Methodology BoM (2013)
CALM (2002)
GIS Database:
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(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 application area experiences a semi-desert tropical climate with an average annual rainfall of approximately 315 millimetres (CALM, 2002; BoM, 2013). The annual evaporation within the application area is approximately 3,400 millimetres (GIS Database). Therefore any water pooling on the surface is likely to be short lived.

The Turner River is located approximately 500 metres west of the application area. Worley Parsons (as cited in Epic Energy (2013)) has identified that there is a natural ridge separating the application area from the Turner River, which would constrain floodwaters to the Turner River floodplain and therefore not impact upon the application area.

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

Methodology BoM (2013)
CALM (2002)
Epic Energy (2013)
GIS Database:
- Evaporation Isopleths

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

Comments

There is one native title claim over the area under application: WC99/3 (GIS Database). This claim was registered with the NNTT on behalf of the claimant group on 22 April 1999. 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*.

According to available databases, there are no registered Aboriginal Sites 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 and Conservation 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 application was advertised on 18 March 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

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

4. References

- BoM (2013) Climate Statistics for Australian Locations. A Search for Climate Statistics for Port Hedland Airport, Australian Government Bureau of Meteorology, Viewed 12 April 2013, <<http://www.bom.gov.au/climate/data/>>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Epic Energy (2013) Application for a Clearing Permit (Purpose Permit) Pilbara Pipeline System PELP Relocation Project Supporting Documentation. Unpublished Report dated February 2013.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Terrestrial Ecosystems (2011) Conservation Significant Vertebrate Fauna Species Habitat Assessment Roy Hill Infrastructure Rail Corridor from Port Hedland to Chainage 262. Unpublished report prepared for Roy Hill Infrastructure dated May 2011.
- Terrestrial Ecosystems (2013) Vertebrate Fauna Risk Assessment and Targeted Search of the Proposed Pipeline Laydown Area and Access Track. Letter to APA Group dated April 2013.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, Western Australia.
- Woodman Environmental Consulting (2011) Roy Hill Iron Ore Ltd. RH1 Railway Project. Flora and Vegetation Survey. Floristic Type Analysis and Survey for Conservation Significant Flora Taxa. 0-93 km Survey Area. Unpublished report prepared for Roy Hill Ltd dated September 2011.

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 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.