



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5563/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Apache Energy Ltd

1.3. Property details

Property:
Petroleum Production Licence TL/1
Petroleum Production Licence TL/2
Petroleum Production Licence TL/5
Petroleum Production Licence TL/6
Petroleum Production Licence TL/8
Petroleum Production Licence TL/9
Petroleum Production Licence TL/10
Petroleum Exploration Permit EP 307
Petroleum Exploration Permit EP 358
Petroleum Exploration Permit TP/7
Petroleum Exploration Permit TP/8
Retention Lease TR/1
Local Government Area: Shires of Ashburton and Roebourne
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.5		Mechanical Removal	Petroleum Exploration, Petroleum Appraisal and Production Drilling and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 July 2013

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
<p>The application area is dominated by two major marine habitat types: macroalgae dominated limestone reef, and subtidal reef platform/sand mosaic (DEC, 2006). Other habitat types include high energy coral reefs, sheltered lagoons, sparse seagrass meadows, channels, intertidal areas, shallow limestone platforms, barrier and fringing coral reefs and rocky intertidal shorelines (DEC, 2006).</p> <p>The marine vegetation occurring within the application area is typically dominated by species of brown algae, particularly of the genera <i>Sargassum</i>, <i>Turbinaria</i> and <i>Pandina</i>, while green algae from the genera <i>Caulerpa</i> and <i>Cladophora</i> are also quite common (DEC, 2006).</p> <p>Seven species of seagrass have been recorded within the application area: <i>Cymodocea angustata</i>, <i>Halophila ovalis</i>, <i>Halophila spinulosa</i>, <i>Halodule uninervis</i>, <i>Thalassia hemprichii</i>, <i>Thalassodendron ciliatum</i> and <i>Syringodium isoetifolium</i> (DEC, 2006).</p>	<p>Apache Energy Ltd (Apache) have applied to clear up to 6.5 hectares of marine vegetation within an application area of approximately 104,000 hectares. The application is for the purpose of petroleum exploration activities, petroleum appraisal and production drilling and associated activities.</p> <p>Disturbance to marine vegetation will result from the anchoring of support vessels, positioning and removal of drill legs, physical smothering of vegetation from drill cuttings, geotechnical seabed surveys and biological monitoring (Apache, 2013).</p>	<p>Pristine: No obvious signs of disturbance (Keighery, 1994);</p> <p>to</p> <p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p>	<p>The geomorphology, sediment quality and water quality within the application area and surrounding region are generally in an undisturbed condition, apart from some localised disturbance for pipelines and shipping channels (DEC, 2006).</p>

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 area lies within the Pilbara (offshore) biogeographic region of the Interim Marine and Coastal Regionalisation for Australia (IMCRA) (GIS Database). This region contains fringing coral reefs which are extensive and species rich (Commonwealth of Australia, 2006). The Pilbara (offshore) region also contains a diverse range of burrowing invertebrate fauna and many of the Pilbara islands are important nesting sites for turtles and seabirds (Commonwealth of Australia, 2006).

The Montebello and Barrow Islands region contains a high diversity of marine habitat types, which in turn supports a high diversity of species (DEC, 2006). The subtidal coral reef communities have a high diversity of invertebrates with over 150 species of hard corals recorded from fringing and patch coral reef areas (DEC, 2006). The islands within this region also provide nesting sites for Green, Hawksbill and Flatback turtles.

The application area contains seagrass and macroalgal communities which are important primary producers. These communities provide important habitat for molluscs, sea urchins, sea stars, crabs and fish (DEC, 2006). Seagrasses form important feeding grounds for the protected Green Turtles and Dugongs (DEC, 2006).

The application area includes areas that are recognised as containing a high level of diversity. However, algal beds and seagrass beds are seasonal and mobile and fluctuate in abundance as a result of biological factors and naturally-shifting substrates (Apache, 2013). Fauna species have adapted to follow the shifting resource and the proposed clearing of 6.5 hectares in small scattered areas is not likely to have a lasting impact on the biodiversity of the region.

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

Methodology Apache (2013)
Commonwealth of Australia (2006)
DEC (2006)
GIS Database:
- Interim Marine and Coastal Regionalisation for Australia

(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**

The waters surrounding Montebello and Barrow Islands contain a diverse mix of habitats which support a rich diversity of marine fauna. The application areas are dominated by two major marine habitat types; macroalgae dominated limestone reef and subtidal reef platform/sand mosaic (DEC, 2006).

The most common macroalgal assemblage of the application area is comprised of the genus *Sargassum* and makes up 70% of the mapped marine habitat of the Barrow-Lowendal-Montebello Island complex (Apache, 2013). Macroalgal communities are ecologically important as they are productive and provide habitat for numerous fauna species, such as invertebrates, juvenile fish and Green Turtles (Apache, 2013).

The application area also supports areas of seagrass. There has been seven species of seagrass recorded within the Montebello/Barrow Island marine conservation areas (DEC, 2006). Seagrass beds form important feeding grounds for Green Turtles and Dugongs and are important nurseries for many fish and crustacean species (Apache, 2013; DEC, 2006).

Macroalgae and seagrass beds are mobile and seasonal and fluctuate in abundance as a result of biological factors and naturally-shifting substrates (Apache, 2013). The Environmental Protection Authority has published assessment guidelines for the protection of benthic primary producer habitat in marine environments. This guideline has set out cumulative loss guidelines for benthic primary producer habitat depending on the protection category of the area (EPA, 2009). The application area is covered by several different categories, therefore, the cumulative impact targets are not universal across the application area. Provided the clearing undertaken by Apache is below the relevant cumulative impact targets, the proposed clearing of 6.5 hectares within the application area is not expected to have a significant impact on these habitats.

Coral reefs are found through the Montebello and Barrow Island region and occur within the application area as patch coral reef, fringing reefs and individual coral bombooras (Apache, 2013). Areas of coral cover approximately 1% of the mapped marine habitat in the Barrow-Lowendal-Montebello Island complex (Apache, 2013). The proposed clearing is not anticipated to have a significant impact on coral communities.

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

Methodology Apache (2013)
DEC (2006)
EPA (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

According to available databases, there are no records of Threatened Flora within the application area (DEC, 2013; GIS Database). None of the species recorded within the Barrow Island Marine Management Area and Montebello Islands Marine Park have been identified as Threatened Flora (DEC, 2013).

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

Methodology DEC (2013)
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

According to available databases, there are no records of any Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is located approximately 160 kilometres 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

Macroalgae, seagrass and coral communities are extensive throughout the Barrow and Montebello Islands area, and remain largely intact except for localised areas of disturbance surrounding petroleum drilling platforms, pipelines and associated activities (Apache, 2013). The marine vegetation of the area has not been extensively cleared and the proposed areas of clearing are not remnants of vegetation.

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

Methodology Apache (2013)

(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

The *Environmental Protection Act 1986* defines a wetland as an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary. As the proposed offshore clearing area occurs in marine rather than terrestrial habitat, this clearing principle is not considered applicable to the assessment of the proposal.

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

Methodology

(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

The proposed clearing is located entirely within a marine environment. The threat of degradation will be restricted to that caused by the anchoring of vessels, positioning of drill rig legs and physical smothering of vegetation by drill cuttings (Apache, 2013). The shallow furrows created by anchor drag or rig positioning are generally quickly filled in with mobile sediments and colonised by benthic organisms (Apache, 2013).

Although some localised sea-bed degradation may occur, the overall impact of the proposed clearing of up to 6.5 hectares of marine vegetation within a boundary of 104,000 hectares is likely to be minimal.

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

Methodology Apache (2013)

(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 may be at variance to this Principle

The application area is located within the Barrow Island Marine Management Area and the Montebello Islands Marine Park (GIS Database). The waters surrounding Barrow and Montebello Islands contain a high diversity of habitats and species (DEC, 2006). The coral reefs of the Montebello Islands are an intermediate between coastal and oceanic reefs and represent an important ecological link between the fringing reefs of the North West Cape and the true oceanic reefs associated with Rowley Shoals (Department of Sustainability, Environment, Water, Populations and Communities, 2013).

The Barrow Island Marine Management Area is an A Class Marine Management Area, covering an area of approximately 114,400 ha (GIS Database). The majority of the Marine Management Area is zoned as Multiple Use, with a small area within Bandicoot Bay on the southwestern coast of Barrow Island, zoned as a Conservation Area for the protection of benthic fauna and seabirds. The clearing permit application areas is located only within the Multiple Use Zone of the Marine Management Area (GIS database).

The Montebello Islands Marine Park is an A Class Marine Park which covers an area of approximately 57,000 hectares. The Marine Park has been divided into several zones within which various restrictions apply. These zones include: Sanctuary Zone, Recreation Zone, Special Purpose Zone (benthic protection), Special Purpose Zone (pearling) and General Use Zones. The application area is located within the Sanctuary, Special Purpose (pearling), Recreation, and General Use Zones (GIS Database). Petroleum exploration and production drilling are not compatible activities within Sanctuary, Special Purpose (pearling) and Recreation Zones. Apache (2013) has advised that the only disturbance proposed within these zones will be as result of ongoing biological monitoring programs. Impacts on the environmental values of these areas will be minimised by the implementation of a condition restricting the purpose for which clearing may be undertaken in these zones.

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

Methodology Apache (2013)
DEC (2006)
Department of Sustainability, Environment, Water, Populations and Communities (2013)
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 at variance to this Principle

The proposed offshore clearing is located on the sea bed in a marine environment. The vegetation will not be actively cleared, but will be disturbed by the drill rigs, support vessels and biological monitoring (Apache, 2013). These activities may stir up sediments from the sea bed, creating a temporary localised deterioration in the quality of the seawater.

Given the relatively small area of clearing proposed (6.5 hectares), within an application area of approximately 104,000 hectares, the proposed clearing will not cause a significant deterioration in the quality of the sea water in which it occurs.

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

Methodology Apache (2013)

(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 at variance to this Principle

The application area is located within a marine environment that is permanently inundated by water, therefore, this Principle is not considered applicable to the assessment of this proposal.

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

Methodology

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

Comments

There are no native title claims over the area under application (GIS Database). However, the petroleum 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 29 April 2013 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received stating that contaminated soils should not be brought ashore during the clearing process.

Methodology GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims – Determined by the Federal Court
- Native Title Claims – Filed with the Federal Court
- Native Title Claims – Registered with the NNTT

4. References

- Apache (2013) Supporting documentation for a Native Vegetation Clearing (Purpose) Permit. Unpublished report by Apache Energy Ltd.
- Commonwealth of Australia (2006) A Guide to the Integrated Marine and Coastal Regionalisation of Australia Version 4.0. Department of the Environment and Heritage, Canberra, Australia.
- DEC (2006) Management Plan for the Montebello/Barrow Islands Marine Conservation Reserves 2007-2017, Management Plan No. 55. Prepared by the Department of Environment and Conservation, Western Australia.
- DEC (2013) NatureMap: Mapping Western Australia's Biodiversity - Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au/default.aspx> (Accessed 20 June 2013).
- Department of Sustainability, Environment, Water, Populations and Communities (2013) Australian Heritage Database - Montebello Islands Marine Area. http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=place_name%3Dmontebello%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=17565 (Accessed on 20 June 2013).
- EPA (2009) Environmental Assessment Guideline No. 3 Protection of Benthic Primary Producer Habitats in Western Australia's Marine Environment. Prepared by Environmental Protection Authority, Western Australia, December 2009.
- 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 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.