



1. Application details

1.1. Permit application details

Permit application No.: 2098/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Town of Port Hedland

1.3. Property details

Property: LOT 5551 ON PLAN 240246 (Lot No. 5178 THE ESPLANADE PORT HEDLAND 6721)
Local Government Area: Town Of Port Hedland
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.2		Mechanical Removal	Miscellaneous

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
Beard vegetation association 43: Low forest; mangroves (Kimberley) or thicket; mangroves (Pilbara)	Vegetation to be cleared consists of coastal sand dune vegetation. Small shrubs and grasses cover the dunes which have been degraded in places due to the invasion of buffel grass and trampling by human access.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Comments made from DEC site visit observation and photos taken on 05/06/2007.

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 vegetation under application consists of coastal dune vegetation in 'very good' condition (Keighery 1994).

The beach and dune area approx 25m to the north of the proposed clearing is noted as a significant nesting site for the Vulnerable Flatback turtle (*Natator depressus*) (DEC 2007), and all efforts should be made to retain the biodiversity and natural environment of the coastal fringe.

The proposed clearing may lead to some degradation of the area via the introduction and/or spread of weeds. Machinery and vehicles used in the clearing have the potential to carry seed propagules from weed infested areas in the region and introduce them onto the site applied to be cleared. Clearing of vegetation will lead to bare areas which are more vulnerable to weed invasion.

It is recommended that if a clearing permit is granted a condition relating to weed management be imposed.

Methodology DEC (2007)
Site Visit 05/06/2007

(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

The beach west of the proposed clearing area is known to be a commonly used nesting area for Flatback turtles (*Natator depressus*). DEC advice (2008) states that nesting habitat for this species is generally found lower in the dunes where there is less vegetation and clearing of vegetation in the higher dune area is unlikely to cause significant impact.

Machinery used in the clearing of native vegetation may disturb the hatchlings due to noise and vibration and it is recommended that if a clearing permit be granted clearing should only occur outside of turtle nesting season.

Methodology DEC 2008 TRIM Ref: DOC 48565
DEC 2007 TRIM Ref: DOC 39371
SAC Biodataset (Fauna) 24/09/07
GIS Databases:
- Port Hedland Townsite 20cm Orthomosaic - DLI 02

(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 two records of a priority flora species within a 10km radius of the application area. *Gomphrena pusilla*, a priority 2 (P2) species, was recorded approximately 1.8km and again at 4.7km west of the application area.

Three other priority species have been recorded within a 30km radius from the area applied to clear. These include; *Ptilotus appendiculatus* (Priority 1), *Goodenia pascua* (Priority 3), and *Gymnanthera cunninghamii* (Priority 3).

The closest record of a Declared Rare Flora (DRF) species (*Terminalia supranitfolia*) is located approximately 200km to the east of the application area on the Burrup Peninsula.

Due to the large distance between any recorded DRF and the location of the vegetation to be cleared, and the different land types and vegetation associations present, the proposed clearing is unlikely to have an impact on any known DRF.

Methodology SAC Biodatasets (24/09/07)
GIS Database:
- Port Hedland Townsite 20cm Orthomosaic - DLI 02
- Pre-European Vegetation

(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 (TECs) within a 50km radius of the proposed clearing area (GIS Database). The nearest TEC's are the Themeda Grassland Communities, located approximately 230 kilometres south from the clearing permit application area.

Given that it is unlikely the vegetation under application would support a similar threatened ecological community due to the various differences in habitat type, it is unlikely that the proposal is at variance to this principle.

Methodology SAC Biodataset 24/09/07
GIS Database:
- Threatened Ecological Communities - CALM.

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

Comments **Proposal is not likely to be at variance to this Principle**
The area to be cleared is characterised by sand dunes which host a number of coastal shrubs and grass species. The area is mapped as vegetation association 43 of which there is approximately 95.6% vegetation remaining. Given the small area (0.20 ha) of clearing and large representation of vegetation the proposed clearing is not likely to be at variance to this principle.

Methodology Shepherd et al. (2006).
GIS Database:
- Interim Biogeographic Regionalisation of Australia (subregions) - EA 18/10/00.
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
- Port Hedland Townsite 20cm Orthomosaic - DLI 02.

(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 likely to be at variance to this Principle**
The vegetation to be cleared does not form part of a water course or wetland. Clearing of this vegetation will not

affect a wetland community and therefore this proposal is not at variance to this principle.

Methodology Site visit observations 05/06/2007
GIS Databases;
~ ANCA, Wetlands - CALM 08/01.
~ Hydrography, linear (medium scale, 250k GA).
~ Hydrography, linear - DOE 1/2/04.
~ Hydrography, linear (hierarchy) - DOW.

(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**
Vegetation to be cleared under this proposal consists of coastal sand dune species. This vegetation aids in providing stability to the sand sheet which would otherwise shift via wind and water erosion. Clearing of this vegetation may increase the likelihood of degradation of the sand dunes. However, given the application area is small (0.2ha) clearing is unlikely to cause appreciable land degradation.

Methodology Site visit observation, 05/06/2007
GIS Database;
- WA Coastline - DoE
- Port Hedland Townsite 20cm Orthomosaic - DLI 02

(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 likely to be at variance to this Principle**
The area proposed to be cleared does not lie nearby to any lands known as being managed for conservation. It is therefore not likely that the clearing as proposed is at variance to this principle.

Methodology DEC 2007 Regional advice TRIM Ref: DOC39371
SAC Biodatasets, accessed 10 Mar 08
GIS Database:
- ANCA, Wetlands - CALM 08/01.
- CALM Managed Lands and Waters - CALM 1/07/05.
- CALM proposed 2015 pastoral lease exclusions.
- Proposed National Parks, FMP - CALM 19/03/03.

(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**
The area to be cleared is mapped as having a medium to low risk of Acid Sulphate Soils (GIS Database). Provided the clearing and earthworks do not involve excavation of 3 meters or more, the clearing is unlikely to result in impacts to surface or underground water quality. Therefore this proposal is unlikely to be at variance to this principle.

Methodology GIS Database;
Acid Sulphate Soil Risk Map; Pilbara Coastline - DEC (Riskclass)

(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 vegetation to be cleared consists of shallow rooted grass and shrub species. Clearing of this vegetation will not alter the risk of flooding or its intensity and therefore this proposal is not at variance to this principle.

Methodology Site visit observation 05/06/2007

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

Comments
Concerns have been raised by DEC as to the building materials to be used to construct the platform. Steel may affect the magnetic field and hence magnetic imprinting of turtle hatchlings (DEC 2007a). Treated timber has a high risk of leaching contaminated metals such as arsenic, copper and cadmium into the nearby turtle nesting habitats (DEC 2007a)

Due to the significance of the site as a turtle nesting beach, appropriate management procedures would be required to avoid unnecessary disturbance. The town of Port Hedland advise that there is no lighting planned for the boardwalk however it is likely that lighting will be required. Dependent on the lighting style used this may

impact upon turtle nesting. Certain styles of lighting will be less invasive than others and it is recommended that the Town of Port Hedland work with DEC to develop lighting plans.

The area under application lies within one Native Title Claim. The Kariyarra claim was registered on 30/05/1997. There are several sites of significance located nearby however the clearing will not impact these sites. No objections have been raised by the claimants regarding this application for clearing.

Methodology

GIS Themes:

- ~ Register of Heritage Places - DPI 14/7/03;
- ~ Register of National Estate - EA 28/01/03;
- ~ Aboriginal Sites of Significance - DIA 28/02/03;
- ~ Native Title Claims - DLI 7/11/05

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Miscellaneous	Mechanical Removal	0.2	Construction of raised boardwalk for viewing turtles

5. References

- Department of Environment and Conservation advice to assessing officer for Native Vegetation Conservation 2007. DEC TRIM Ref; DOC39371
- Department of Environment and Conservation advice to assessing officer for Native Vegetation Conservation 2008. DEC TRIM Ref: DOC 48565
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

6. 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)