



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6732/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Norwest Sand & Gravel Pty Ltd**

### 1.3. Property details

Property: Mining Lease 47/389  
Mining Lease 47/526  
Mining Lease 47/527  
Miscellaneous Licence 47/349  
Local Government Area: City of Karratha  
Colloquial name: Point Samson Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
17.52		Mechanical Removal	Mineral Production and Associated Infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 15 October 2015

## 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>Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area (GIS Database):</p> <p><b>127:</b> Bare areas; mud flats.</p> <p>A survey conducted by West ecology (2012) identified the following five vegetation types within the application area:</p> <p><b>1:</b> <i>Triodia epactia</i> and <i>Triodia angusta</i> closed hummock grassland on islands and sand dunes.  <b>2:</b> <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> high open shrubland of over <i>Cenchrus ciliaris</i> (Buffel Grass) tussock grassland on degraded sand dunes.  <b>3:</b> <i>Tecticornia auriculata</i> and <i>Tecticornia halocnemoides</i> subsp. ?<i>tenuis</i> low open shrubland on mudflats  <b>4:</b> <i>Tecticornia auriculata</i> low shrubland on degraded sand dunes.  <b>5:</b> <i>Avicennia marina</i> shrubland over low shrubland of <i>Tecticornia</i> sp. on mudflats.</p>	<p>Nickol Bay Project. Norwest Sand &amp; Gravel Pty Ltd proposes to clear up to 8.94 hectares of native vegetation within a total boundary of 8.94 hectares for the purpose of mineral production and associated activities. The project is located approximately 10 kilometres east of Karratha, in the City of Karratha.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);</p> <p>To:</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p>	<p>Vegetation condition was determined by West ecology (2012) using the Keighery scale.</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 is not likely to be at variance to this Principle**

The application area occurs within the Roebourne subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by quaternary alluvial and older colluvial coastal and sub-coastal plains with a grass savannah of mixed bunch and hummock grasses (CALM, 2002).

A flora and vegetation survey was conducted by West ecology Pty Ltd over the application area in 2012 (West ecology, 2012). A total of 51 flora taxa (including subspecies and varieties) representing 21 families and 44 genera were recorded from the application area during the flora and vegetation survey (West ecology, 2012).

No Threatened flora or vegetation associations of restricted distribution were recorded within the application area during the flora and vegetation survey (West ecology, 2012). One Priority flora species *Gomphrena leptophylla* (P3) was recorded within the application area during the flora and vegetation survey. This species has previously been recorded within the Karratha region and is not outside its known range or restricted to the application area (West ecology, 2012). It is therefore unlikely that the proposed clearing will have a significant impact on Priority flora.

Three introduced flora species were recorded within the application area; *Cenchrus ciliaris* (Buffel Grass), *Aerva javanica* (Kapok Bush), and *Portulaca oleracea* (Purslane). These introduced flora species are not Declared Pests or listed as weeds of National Significance (West ecology, 2012). Potential impacts on biological diversity from weeds may be minimised by the implementation of a weed management condition.

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

**Methodology** CALM (2002)  
West ecology (2012)  
GIS Database:  
- IBRA WA (Regions - Subregions)  
- Threatened and Priority Flora  
- 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 is not likely to be at variance to this Principle**

The flora and vegetation survey identified three main fauna habitats features within the application area; grasslands on islands, sand dunes and mudflats (West ecology, 2012).

The fauna habitats within the application area were not considered to be unique and extended beyond the proposed application area (West ecology, 2012). Given the relatively small scale of the proposed clearing (8.94 hectares) and that fauna habitats within the application area are similar to the surrounding area, it is considered unlikely that the proposed clearing will have a significant impact on habitat critical for the survival of fauna indigenous to Western Australia.

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

**Methodology** West ecology (2012)

**(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 records of Threatened flora within the application area (GIS Database).

The flora and vegetation assessment conducted by West ecology over the application area did not record any Threatened flora (West ecology, 2012).

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

**Methodology** West ecology (2012)  
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**

The application area is not located within a Threatened Ecological Community (GIS Database).

The flora and vegetation assessment conducted by West ecology over the application area did not record any Threatened Ecological Communities (West ecology, 2012).

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

**Methodology** West ecology (2012)  
GIS Database:

**(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 falls within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99% of the Pre-European vegetation remains (see table) (GIS Database; Government of Western Australia, 2013).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

**127:** Bare areas; mud flats.

Approximately 99% of Beard vegetation association 127 remains at state level (Government of Western Australia, 2013). Therefore, the area proposed to be cleared is unlikely to represent a significant remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion - Pilbara	17,808,657.06	17,733,583.95	~99.58	Least Concern	8.43
Beard vegetation associations - State					
127	737,724.05	697,871.39	~94.60	Least Concern	9.16
Beard vegetation associations - Bioregion					
127	177,749.75	159,595.04	~89.79	Least Concern	0.11

\* Government of Western Australia (2013)

\*\* Department of Natural Resources and Environment (2002)

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 (2013)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- 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 likely to be at variance to this Principle**

There are no permanent or ephemeral water bodies or watercourses within the application area (GIS Database).

No vegetation associated with a permanent or ephemeral watercourse or wetland was recorded within the application area during the flora and vegetation survey (West ecology, 2012).

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

**Methodology** West ecology (2012)  
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 is not likely to be at variance to this Principle**

The application area is located within the Littoral land system which is described as 'Bare coastal mudflats with mangroves on seaward fringes, samphire flats, sandy islands, coastal dunes and beaches' (GIS Database; Van Vreeswyk et al, 2004).

About 70% of the Littoral system is tidal flat which supports no vegetation, coastal dunes are highly susceptible to wind erosion if plant cover is lost by fire or other disturbance; mangrove communities are significant habitats

(Van Vreeswyk et al, 2004). Potential impacts caused by soil erosion may be minimised by the implementation of a staged clearing condition.

Given the small scale and the relatively low impact of the proposed clearing activities it is unlikely that the associated clearing will cause appreciable land degradation.

Based on the above, the proposed clearing is not likely to 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 likely to be at variance to this Principle**  
The application area does not lie within any conservation areas (GIS Database).

The nearest conservation area is Chichester National Park which lies approximately 48 kilometres south of the application area (GIS Database). Given the distance between the application area and the National Park, the proposed clearing is not likely to impact the environmental values of this conservation area.

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

**Methodology** GIS Database:  
- DPaW 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**  
The application area is not located within a Public Drinking Water Source Area and there are no permanent or ephemeral water bodies or watercourses within the application area (GIS Database).

Groundwater salinity within the application area is between 7,000 and 14,000 milligrams/Litre Total Dissolved Solids (TDS) which is considered to be relatively saline (GIS Database). The proposed clearing is not likely to cause groundwater or surface water quality within the application area to alter significantly.

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

**Methodology** GIS Database:  
- Groundwater Salinity, Statewide  
- Hydrography, linear

**(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 climate of the Pilbara region is mostly hot and dry, with highly variable rainfall throughout the year (BoM, 2015). The Pilbara has an arid-tropical climate with two distinct seasons, a hot and wet summer from October to April; and a mild, drier season from May to September (BoM, 2015).

Natural flood events do occur in the Pilbara region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of such events given the size of the area to be cleared (8.94 hectares) in relation to the catchment area (GIS Database).

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

**Methodology** BoM (2015)  
GIS Database:  
- Hydrography, linear

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

**Comments**  
There is one Native Title Claim (WC1999/014) over the application area (DAA, 2015). This claim has been filed at the federal court on behalf of the claimant groups. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no 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 Regulation, the Department of Water, and the Department of Parks and Wildlife, 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 14 September 2015 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received raising concerns in relation to the proximity of esuarine vegetation associated with a tidal creek to the application area. This area is not expected to be impacted by the proposed clearing activities.

**Methodology** DAA (2015)  
GIS Database:  
- Aboriginal Sites Register System

#### 4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, Western Australia.
- DAA (2015) Department of Aboriginal Affairs (WWW Search – Aboriginal Heritage Inquiry System). Retrieved from <http://maps.dia.wa.gov.au/AHIS2/> on 16 September 2015.
- 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, Victoria.
- Government of Western Australia (2013) 2013 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.
- 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, Perth, Western Australia.
- West ecology (2012) Flora and Vegetation Survey of Norwest Sand and Gravel Tenements M47/249 and M47/805. Unpublished report prepared by West ecology Pty Ltd for Norwest Sand and Gravel Pty Ltd, Perth, Western Australia.

#### 5. Glossary

##### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>s.17</b>	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

##### Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

**T** **Threatened species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.

Rankings:

CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.

EN: Endangered - considered to be facing a very high risk of extinction in the wild.

VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

**X**

**Presumed Extinct species:**

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

**IA**

**Migratory birds protected under an international agreement:**

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

**S**

**Other specially protected fauna:**

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

**P1**

**Priority One - Poorly-known species:**

Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

**P2**

**Priority Two - Poorly-known species:**

Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

**P3**

**Priority Three - Poorly-known species:**

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

**P4**

**Priority Four - Rare, Near Threatened and other species in need of monitoring:**

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**P5**

**Priority Five - Conservation Dependent species:**

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.