



360  
environmental



Dampier Highway

Preliminary  
Environmental  
Impact Assessment  
Access Roads for  
Dampier Highway  
Extension

Prepared for:  
Main Roads WA

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● people ● planet ● professional

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## Executive Summary

Due to the increased traffic and population from industrial growth in the region, the Dampier Highway is to be duplicated between Balmoral Road East to Burrup Peninsula Road. The works will be completed in two sections, the first being Balmoral Road to Bayly Avenue and then Bayly Avenue through to Burrup Road. The highway construction for Balmoral Road East to Balmoral Road West has been completed for section one of the project.

Main Roads Western Australia (MRWA) will complete the works to benefit local residential areas, minimise conflict between residential and commercial vehicles, improve traffic flow and safety and improve the efficiency of the highway for all users.

Part of the duplication includes the upgrade of existing intersections with the Dampier Highway:

- Carr Civil Access Road
- Two Mile Access Road
- Burrup Road intersection.

A preliminary desktop assessment of the project area and its potential environmental constraints was undertaken by reviewing maps, photographs, state government databases, previous environmental reports and consulting external agencies where necessary to determine the potential for environmental impacts associated with the prescribed road works.

No significant impacts would be expected on native fauna generally as a result of the proposed works. The site is unlikely to form unique habitat vital to maintain populations of conservation significant species. Habitat is well represented.

No DRF have been identified in the project area. Buffer zones intersect the highway - actual populations will not be impacted, however further consultation with DEC will be required if DRF are found near construction works.

There are numerous common weed species occurring throughout the proposed works areas. The risk of spreading these weeds species as part of the proposed work should be minimised.

There have been numerous Aboriginal Heritage surveys undertaken in the area (latest January 2011). Searches of the DIA's database indicated there are known Aboriginal Heritage sites within the area. Ongoing consultation will be required.

A search of the Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool located one endangered, two vulnerable species and 36 listed species within the vicinity of the project. The project activities are unlikely to have a significant impact on these species.

A search of the Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool located three migratory species within the vicinity of the project. The project activities are unlikely to have a significant impact on these species with the vegetation present unlikely to be habitat for these species.

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## 1 Project Summary

Main Roads Western Australia (MRWA) is managing the upgrade of the following existing intersections on the Dampier Highway (Figure 1):

- Carr Civil Access Road
- Two Mile Access Road
- Burrup Road intersection.

The proposed design is a widening and upgrade of the current intersections including retrofitting and upgrading existing culverts at the intersections.



## 2 Background

Due to the increased traffic and population from industrial growth in the region, the Dampier Highway is to be duplicated between Balmoral Road East to Burrup Peninsula Road. The works will be completed in two sections, the first being Balmoral Road to Bayly Avenue and then Bayly Avenue through to Burrup Road. The highway construction for Balmoral Road East to Balmoral Road West has been completed for section one of the project.

MRWA will complete the works to benefit local residential areas, minimise conflict between residential and commercial vehicles, improve traffic flow and safety, and improve the efficiency of the highway for all users.

Part of the duplication includes the upgrade of existing intersections with the Dampier Highway:

- Carr Civil Access Road
- Two Mile Access Road
- Burrup Road intersection.

As per MRWA's Environmental Assessment and Approval process, the Low Impact Environmental Screening Checklist has been completed for the proposal (Appendix A). As the project involves works that are considered to be of low the preparation of a project specific Preliminary Environmental Impact Assessment (PEIA) and an Environmental Management Plan (EMP)(Appendix B) are required. This report fulfils the PEIA and the EMP requirements for the upgrade of the three intersections.

## 3 Description of the Project

The proposed highway is 12.3km long with 12 intersecting roads along its length. The new carriageway is generally located to the south of the existing carriageway, with some areas requiring works on either side. A new bridge will be constructed at Seven Mile creek, parallel to the existing bridge with possible improvements made to the existing bridge. There will be minor improvements to pedestrian links and amenities as well as the possible introduction of a 2m cyclist lane on the shoulders of the highway (dependant on budgeting constraints).

Main Roads Western Australia will complete the works to benefit local residential areas, minimise conflict between residential and commercial vehicles, improve traffic flow and safety and improve the efficiency of the highway for all users. Complementary to the construction will be improvements to access roads and intersections along the new highway. These changes will be made to improve safety and efficiency for those using the highway and access roads. This document will report on material relevant to the new Carr Civil Access Road, the Two Mile Access Road and the Burrup Road Intersection.

The key components to the upgrade of the intersections are:

- modifying the intersection layout by removing the acceleration lane and extending the turning lane
- modifying corner islands to 70-degree type
- upgrading pedestrian ramps and gaps to current standards
- installing sealed shoulders (bicycle lanes)
- re-marking lane lines either side of the intersection to achieve a wider kerbside lane for cyclists
- installing traffic signals.

### 3.1 Project Location

The location of the three intersections is shown in Figure 1.

Key features for each intersection include:

- Carr Civil Access Road (Figure 2)
  - Works footprint – road reserve plus 100m either side
  - Approximate footprint area – 1.43ha.
- Two Mile Access Road (Figure 3)
  - Works footprint – road reserve plus 100m either side
  - Approximate footprint area – 1.69ha.

- Burrup Intersection (Figure 4)
  - Works footprint – road reserve plus 100m either side
  - Approximate footprint area – 2.17ha.

## 4 Methodology

### 4.1 Desktop Assessment

A preliminary desktop assessment of the project area and its potential constraints was undertaken by reviewing maps, photographs, state government databases, previous environmental reports and consulting external agencies where necessary.

#### 4.1.1 Wetlands

While it was not considered likely that wetlands were to be present in the area, due diligence in reporting requires that assumptions not be made on the local environments conditions. Therefore searches of the area for wetlands are still required for the reporting process however unlikely their occurrence. The locations of wetlands within the project area were determined using Esri ArcGIS datasets and Department of Water (DoW) online geographic atlas. Ramsar wetlands were investigated through Department of Sustainability, Environment, Water, Populations and Communities (SEWPAC) "EPBC Act protected matters report" on matters of national environmental significance (NES)(Department of SEWPAC, 2011c).

#### 4.1.2 Threatened Flora, Fauna and Communities, Conservation Reserves and Ecologically Sensitive Areas (ESA's)

DEC's database was searched for known populations of threatened flora, fauna and Threatened Ecological Communities (TECs) and conservation reserves (Appendix C).

#### 4.1.3 Heritage

Non-indigenous heritage was examined utilising the Australian Heritage Places Inventory and Heritage Council of Western Australia databases (Department SEWPAC, 2011a, 2011b).

#### 4.1.4 Aboriginal Heritage

Aboriginal Heritage Surveys were reviewed. A search of the Department of Indigenous Affairs' (DIA's) database (DIA, 2011) was undertaken to determine whether the project area contains any new sites of Aboriginal heritage. Consultation and site monitoring involving Yaburrara & Mardudhunera (Y& M), Ngarluma and Wong-Goo-TT-Oo began in 2003 and have continued until January 2011 (refer Appendix D and Anthropos Australis Pty Ltd & Context Anthropology Pty Ltd (2010), Jo McDonald Cultural Heritage Management Pty Ltd (2010), R. & E.O'Connor Pty Ltd (2010b), R. & E.O'Connor Pty Ltd (2010a), Lafrentz, D. & Fordyce, B. (2009), Lafrentz, D. & Fordyce, B. (2011)).

#### **4.1.5 Sensitive Water Resources**

The Department of Water's (DoW) *Geographic Data Atlas* (Dow, 2011) was searched for information on sensitive water resources including:

- Public Drinking Water Source Areas (PDWSAs) Department of Water (DoW);
- Proclaimed Surface Water Areas (DoW).

#### **4.1.6 Contaminated Sites**

The DEC's *Contaminated Sites* database (DEC, 2011a) was reviewed for contaminated sites.

#### **4.1.7 Acid Sulfate Soils**

The Western Australian Planning Commission's (WAPC) acid sulfate soils (ASS) maps were reviewed (Landgate, 2011) to determine the level of risk for the project area to facilitate a self-assessment.

#### **4.1.8 Weeds**

Previous reports including flora surveys were reviewed to assess the weed species present or likely to be present. Observations from site visits were also reviewed

#### **4.1.9 Dieback**

Data sources on the potential presence of dieback were investigated to determine the potential presence of dieback in the area of the proposed intersection upgrades (DEC, 2011b).

#### **4.1.10 Matters of National Environmental Significance**

A current search using the Protected Matters Search Tool from the SEWPAC website was conducted.

#### **4.1.11 Site Investigation**

MRWA Environmental Officer, Polly Hammond has undertaken numerous site visits to assess current environmental conditions. The information and knowledge obtained during these site visits has been used throughout this report. Examples of photos are included in Appendix E.

## 5 Existing Environment

### 5.1 Climate

The Pilbara region of Western Australia is classified as semi-arid and has great variations in climate for coastal to inland areas. The Karratha/Dampier portion of the Pilbara is typically characterised by very hot (over 32 degrees Celsius) summer from October to April including a more humid monsoon season but it is usually dry and hot for the majority of the year (Appendix F).

Rainfall is very low and falls within the sub-tropical <200 mm per annum zone. The rainfall is very variable, it is infrequent and when it does rain it can be very heavy as it is usually associated with cyclonic activity during monsoon season from November to March (Appendix F).

### 5.2 Soils and Geology

Due to the variation in topography in the study area from low tidal flats to rocky outcrops along the peninsula, the soils and geology also vary greatly with each access road located within a different geological zone (Figure 6). The two main soil types are saline calcareous/siliceous loams and brown/red cracking clays with self-mulching surfaces. The majority of the road will encounter fossil outwash gravels and Aeolian sands with the exception of the tidal flat areas. More detailed descriptions of the soils and geology of the project area is included in GHD's Environmental Impact Assessment (EIA) and Management Plan Report (2003).

### 5.3 Surface Water

The DoW's *Geographic Data Atlas* indicated there are no creeks or other significant surface water features directly impacted by the proposed upgrade to the intersections (DoW, 2011). The nearest features (Figure 7) to each of the intersections are:

- Carr Civil Access Road
  - Minor non-perennial watercourse 2 km to the east.
  - Area subject to inundation approximately 1.5 km to the west.
- Two Mile Access Road
  - Numerous minor non-perennial minor watercourse surrounding proposed access road.
  - Area subject to inundation approximately 1 km to the south.

- Burrup Road intersection
  - Minor non-perennial watercourse intersecting with proposed road works.
  - Area subject to inundation approximately 2.5 km to the south

## 5.4 Groundwater

The location of the intersections is above a proclaimed groundwater area. Any bores required to take water must be licensed in accordance with the *Rights in Water and Irrigation* (RIWI) Act. However, there is not considered to be any major regional groundwater resources within the Pilbara unconfined aquifer, and as the majority of the area of the Dampier Highway where the three intersections are located is overlying low permeability fractured rocks, quantity and quality of water is unreliable. Although in low-lying areas the groundwater may be reached within 5-10 m, it is often brackish and quantity is low.

## 5.5 Wetlands

No wetlands of international (Ramsar), national or local significance occur in the project area (Department of SEWPAC, 2011c).

## 5.6 Flora and Vegetation

### 5.6.1 Flora

A search of the DEC's *Threatened Flora* database (2011) was undertaken to identify the potential for Declared Rare (DRF) or Priority Flora species to exist within 10 km of the site (Appendix G). The search results indicated there are no known occurrences of DRF or Priority Flora on the site; however, there is a number of Priority Flora known to exist within a 10 km radius of the intersections (Figure 5). These are listed in Table 1.

Searches of SEWPAC's (2011c) *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) *Protected Matters Database* were undertaken to identify the potential for flora species considered Matters of National Environmental Significance (NES) to occur within 2 km of each of the intersections (Appendix H). The searches did not identify any Matters of NES likely to be present within the search area.

Previous flora and vegetation surveys undertaken by MRWA have not recorded any DRF or Priority Flora within the areas of the three intersections.

**Table 1: Search results from the DEC's *Threatened Flora* database of a 10 km search radius around the site.**

SPECIES	CONSERVATION CODE
<i>Acacia glaucocaesia</i>	3
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>	3
<i>Eragrostis surreyana</i>	3
<i>Rhynchosia bungarensis</i>	4
<i>Acacia glaucocaesia</i>	3
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>	3
<i>Eragrostis surreyana</i> 3	3
<i>Tephrosia bidwillii</i>	3
<i>Terminalia supranitifolia</i>	3
<i>Themeda</i> sp. Hamersley Station (ME Trudgen 11431)	3
<i>Vigna</i> sp. Rockpiles (R. Butcher et al. RB1400)	3

### 5.6.2 Vegetation Communities

The vegetation of the project area was surveyed by a qualified botanist in mid-Autumn 2003, which is the beginning of the dry season and coincided with two years of drought conditions prior to the survey date. This should be noted as it may have an impact on the species recorded at the site (GHD, 2003)

Previous surveys by Beard 1975 categorised three major vegetation communities. The tidal mud flats have since been designated a vegetation community type, although for the project area the majority of tidal mud flats have been altered to salt evaporation ponds (only a very small proportion of vegetation cover remains). The following four vegetation communities have been derived from Beard 1975 with updates from the botanical survey in 2003 including nomenclature changes.

- Grass steppe on rocky hills and slopes – hummock grasslands, sparse shrub steppe of *Acacia bivenosa* & *A. trachycarpa* dominated by hard Spinifex *T. wiseana*
- Soft grassland on cracking clay pan – dominated by low grasslands including the introduced Buffel grass with some pockets of *Acacia* shrubland in disturbed areas.
- Moderately dense *Acacia* shrubland on creeklines – Taller, denser *Acacia* species (predominantly *A. trachycarpa*, *A. bivenosa* & *A. ancistrocarpa*) including occasional *Eucalypt* species (Coolabah) in damper areas.



- Scattered Salt Marsh Community – only a small pocket near the highway, adjacent to west end of the salt ponds, including sparsely scattered halophytic species such as *Halosarcia*.

All the vegetation communities are well represented throughout the Pilbara region.

Native vegetation mapping on the Natural Resource Management (NRM) Shared Land Information Platform (SLIP) database indicates the area of the Burrup Road and Two Mile Access Track intersections is classified as a mosaic of hummock grasslands, grass steppe and soft Spinifex. The area of the Carr Civil Access Track intersection is classified on the NRM SLIP database as a mosaic of short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe and soft Spinifex.

### 5.6.3 Threatened and Priority Ecological Communities

A search of the DEC's *Threatened Ecological Community* (TEC) database (2011) indicates there is an occurrence of the 'Priority 1' ecological community – 'Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays (Roebourne Plains gilgai grasslands)' within 5 km of the intersections (Figure 5) (Appendix C). Buffers for examples of this Priority Ecological Community (PEC) are located over the Carr Civil Access Track intersection.

Searches of SEWPAC's (2011c) EPBC Act *Protected Matters* database was undertaken and identified there are no TECs listed under the EPBC Act within 2 km of the intersections.

### 5.6.4 Dieback

*Phytophthora cinnamomi* (dieback) and *Armillaria luteobubalina* (Armillaria) are not known to occur in the project area (MRWA, 2009). DEC database search shows *Phytophthora cinnamomi* dieback generally only occurs in the south-west land division (DEC, 2011b) so dieback specific management commitments are unlikely to be required for the Dampier Highway.

### 5.6.5 Weeds

The Department of Agriculture and Food's website database was searched for a list of declared plants known to exist in the area. These search results indicated there are 88 species that are known to exist in the regional area (Appendix I).

SEWPAC's *Protected Matters* database search indicated the following weeds, or their habitat, are known to occur in the area (Appendix H):

- *Cenchrus ciliaris*: Buffel-grass, Black Buffel-grass
- *Parkinsonia aculeate*: Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean

- *Prosopis* spp.: Mesquite, Algaroba.

## 5.7 Fauna

A vertebrate fauna survey was conducted by Dr Mike Bamford in 2003 (in MRWA, 2009). This survey focused on the Burrup Peninsular area which has a greater diversity of habitats than the Dampier Highway Upgrade area, so the following is a summary of potential fauna species which may be encountered in the area and relevant conservation status.

- Amphibians: Four frog species, none with conservation significance
- Reptiles: 65 species, with the notable inclusion of the Pilbara Olive Python which is listed as vulnerable under the WA *Wildlife Conservation Act* 1950 and the EPBC Act.
- Birds: 108 species, excluding marine and most waterbirds intersect the project area. Of these six have conservation significance (although not critical) including; Peregrine Falcon, Australian Bustard, Sooty Oystercatcher, Eastern Curlew, Beach-stone Curlew and Bush-stone Curlew.
- Mammals: 26 native species in the Burrup Peninsular mostly confined to rocky outcrops, caves and creek lines. Notable inclusions are the locally isolated population of Rothschild's Wallaby in the northern sector of the Burrup Peninsular and the Priority 4 Pebble-Mound Mouse which has specific habitat requirements and is unlikely to actually occur in the project area.
- There were five introduced fauna species recorded during the flora survey undertaken in 2003 including; fox, feral cat, black rat, house mouse and rabbit.

### 5.7.1 Threatened Fauna

A search of the DEC's *Threatened Fauna* database (Appendix J) indicates potentially four threatened species have been recorded in the area (Table 2).

**Table 2: Search results from the DEC's *Threatened Fauna* database of a 10 km search radius around the site.**

SPECIES	CONSERVATION CODE
<i>Dasyurus hallucatus</i>	T
<i>Liasis olivaceus subsp. barroni</i>	T
<i>Falco peregrinus</i>	S
<i>Ardeotis australis</i>	4

Searches of SEWPAC's (2011c) *Protected Matters* database was undertaken (Appendix H) and identified the potential for a number of endangered and vulnerable species listed under the EPBC Act as potentially occurring at the location of the three intersections (Table 3).

**Table 3: Search results from SEWPAC's *Protected Matters* database of a 2 km search radius around each site.**

SPECIES	CONSERVATION CODE
<i>Dasyurus hallucatus</i> (Northern Quoll)	Endangered
<i>Rhinonicteris aurantia</i> (Pilbara Leaf-nosed Bat)	Vulnerable
<i>Liasis olivaceus barroni</i> (Olive Python, Pilbara Subspecies)	Vulnerable

## 5.8 Air Quality

In accordance with MRWA *Environmental Guideline Air Quality* (2004) an air quality assessment is required if:

- Traffic flow is to be greater than 10,000 vehicles p/day in urban areas & 15,000 vehicles p/day in rural areas.
- Residential receivers exist within 200m of the centreline

No air quality assessment is required for the Dampier Highway Upgrade Project as the traffic volume is currently well under the above limit (MRWA 2009).

## 5.9 Cultural Heritage

### 5.9.1 Non-indigenous

There are no World Heritage Sites or sites of national heritage significance in relation to non-indigenous culture in the vicinity of the proposed upgrade to the three intersections (in MRWA 2009).

### 5.9.2 Aboriginal Heritage

A search of the Department of Indigenous Affairs' (DIA's) database was undertaken (DIA, 2011) to determine whether the project area contains any sites of Aboriginal Heritage Significance (Appendix D). The searches indicates there are 163 sites of known Aboriginal Heritage within the searched area surrounding the Burrup Intersection and Two Mile Access Road. The search area covering the Carr Civil Access Road contained no sites of Aboriginal Heritage.

Previous Aboriginal Heritage reports commissioned by MRWA (in MRWA 2009) have been conducted in regards to the aboriginal heritage rich areas surround the Burrup Road Intersection and the Two Mile Access Road. Both intersection areas have been surveyed and consultation has been carried out with the Yuburara and Mardudhunera people as well as the Wong-Goo-Tt-Oo Aboriginal group which is ongoing. The same detail of work was undertaken at the Carr Civil Access Road in the initial EIA of the highway duplication (GHD, 2003).

Both archaeological and ethnographic consultant reports showed that there were areas of Aboriginal Heritage Significance within the areas of the Two Mile and Burrup Intersection projects. Management of potential impacts to Aboriginal Heritage sites will be undertaken in accordance with a Section 18 and the Aboriginal Heritage Management Plan (refer Appendix D and Anthropos Australis Pty Ltd & Context Anthropology Pty Ltd (2010), Jo McDonald Cultural Heritage Management Pty Ltd (2010), R. & E.O'Connor Pty Ltd (2010b), R. & E.O'Connor Pty Ltd (2010a), Lafrentz, D. & Fordyce, B. (2009), Lafrentz, D. & Fordyce, B. (2011)). Consultation has been undertaken with Rio Tinto undertake consultations with Aboriginal people and utilise their own Aboriginal Heritage management systems.

## 5.10 Sensitive Water Resources

There are no rivers, creeks or streams or other sensitive water sources directly adjacent to the intersections to be upgraded (Appendix K).

## 5.11 Contaminated Sites

A search of the DEC's *Contaminated Sites* database was undertaken to determine whether the project area contains, or is adjacent to, any contaminated sites.

None of the intersections are listed as contaminated, or potentially contaminated, sites. There are no adjacent or nearby sites listed as contaminated, or potentially contaminated (Appendix L).

## 5.12 Acid Sulfate Soils

A search of the DEC's *Geographic Data Atlas* showed no records of potential or existing ASS in the project area. The WAPC guidelines regarding ASS also showed low risk of Acid Sulfate Soil potential for the proposed works. The related self-assessment form (Appendix M) showed no further investigations are required.

## 6 Clearing of Native Vegetation

Native vegetation describes all indigenous aquatic and terrestrial vegetation (living or dead). The term does not include vegetation that was intentionally sown, planted or propagated unless it was required under a statutory condition.

Apart from activities that are exempt under the clearing regulations, such as clearing vegetation that is less than 10 years old for maintenance, typically all MRWA clearing will be undertaken using a permit.

As per Main Roads' Environmental Assessment and Approval process, a project specific Preliminary Environmental Impact Assessment (PEIA) and Environmental Management Plan (EMP) have been developed. This included assessing the level of clearing against DEC's 10 principles of clearing (Appendix N).

It is proposed that clearing of native vegetation for this project will be undertaken using Purpose Permit CPS818/5.

## 7 Assessment of Aspects and Impacts

### 7.1 Introduction

Table 4 provides a summary of the potential environmental impacts that may occur as a result of road constructions activities at the three intersections. Aspects that are likely to have a significant detrimental environmental impact are discussed in more detail following

**Table 4: Aspects and Impacts – Project Title**

ASPECT	EVALUATION OF POTENTIAL IMPACTS
Fauna	<p>No significant fauna issues associated with any of the proposed upgrade works. With no significant habitat and the relatively small area proposed to be cleared (5.29 ha), significant impacts would not be expected on native fauna as a result of the proposed works.</p> <p>Although DEC and SEWPAC database searches indicate the potential presence of conservation significant species, the site is unlikely to form unique habitat vital to maintain populations of these species. Habitat is well represented.</p>
Vegetation - clearing	<p>5.29 ha of native vegetation is proposed to be cleared.</p> <p>Native vegetation mapping on the Natural Resource Management (NRM) Shared Land Information Platform (SLIP) database indicates the area of the Burrup Road and Two Mile Access Track intersections is classified as a mosaic of hummock grasslands, grass steppe and soft Spinifex. The area of the Carr Civil Access Track intersection is classified on the NRM SLIP database as a mosaic of short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe and soft Spinifex. Both vegetation types are well represented in the Pilbara.</p> <p>Based on available desktop information the condition of the vegetation is unable to be determined.</p>
Vegetation – TECs/DRF	<p>No DRF have been identified in the project area. Buffer zones intersect the highway - actual populations will not be impacted, however further consultation with DEC will be required if DRF found near construction works.</p>
Vegetation – weeds	<p>Searches of the Department of Agriculture and Food’s and SEWPAC’s databases indicate the potential for declared weeds to be present in the area.</p>

ASPECT	EVALUATION OF POTENTIAL IMPACTS
	There are numerous common weed species occurring throughout the proposed works areas.
Vegetation - dieback	There is no evidence of dieback in the area.
Reserves / Conservation areas	There are no conservation areas or reserves adjacent to the project area.
Heritage (non-indigenous)	No national heritage listed or Heritage Council of WA listed sites present in the currently proposed works areas.
Aboriginal heritage	There have been numerous Aboriginal Heritage surveys undertaken in the area (latest January 2011). Searches of the DIA's database indicated there are known Aboriginal Heritage sites within the area.
Groundwater	No dewatering nor drainage modifications are required, hence no change to groundwater level or quality.
Surface water/ drainage	A search of DoW's database or Consultation with Department of Water has confirmed that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns. As a result there are unlikely to be any impacts to surface water quality
Wetlands	Available information indicates there are no wetlands within the vicinity of the three intersection areas.
Air quality	Local air quality assessment is not required for the project since: <ul style="list-style-type: none"> <li>• the predicted traffic flow is less than 10,000 vehicles per day (in urban areas) or 15,000 vehicles per day in rural areas;</li> <li>• residential and other sensitive receptors are not within 200 meters of the road centre.</li> </ul>
Dust	No major sensitive receivers adjacent to the proposed works. Excessive dust can impact vegetation.
Noise and vibration	No major sensitive local receivers. Construction work is not expected to significantly contribute to noise levels at the nearest sensitive receivers, provided works are limited to normal working hours.

ASPECT	EVALUATION OF POTENTIAL IMPACTS
Visual amenity	The proposed works will result in minor and short-term visual impacts during construction.
Public safety and risk	Provided traffic management and signage to MRWA standards is employed, none of the proposed works present any significant hazards to public safety. The proposed works will serve to enhance public safety by improving local road and pedestrian conditions.
Hazardous substances	The project does not require hazardous substances to be used. If any hazardous substances are required, these will be used and stored in accordance with manufactures instructions and product MSDS.
Contamination	The works are within the road reserve and no known previous land use activities on or adjacent to the project area have had the potential to create contamination.
Salinity	Given the nature and scale of the project the impact is considered not relevant.
Acid sulphate soils	No further investigations are necessary as there is no dewatering or excavation below the water table planned.
Statutory Land Use Planning	If proposed works are to fall outside existing road reserves, the appropriate access agreement or consultation with local government and landholder will be undertaken
World Heritage properties	The project will not impact any World Heritage properties.
National Heritage places	A search of the Australian Heritage Places Inventory Database located no site within the vicinity of the intersection areas.
Wetlands of international importance (Ramsar)	A search of the Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool located no Ramsar Wetland(s) within the vicinity of the project.



ASPECT	EVALUATION OF POTENTIAL IMPACTS
Nationally threatened species or ecological communities	A search of the Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool located one endangered, two vulnerable species and 36 listed marine species within the vicinity of the project. The project activities are unlikely to have a significant impact on these species and the marine species are listed as “over fly” with the vegetation present unlikely to be habitat for these species.
Migratory species protected under international agreements	A search of the Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool located three migratory species within the vicinity of the project. The project activities are unlikely to have a significant impact on these species with the vegetation present unlikely to be habitat for these species.
Commonwealth marine areas	The project will not impact any Commonwealth marine area or marine protected area
Nuclear actions	Not relevant to the proposed works.

## 8 Decision to Refer

### 8.1 Referral to the Department of Sustainability, Environment, Water, Population and Communities

As the project will not impact on Matters of NES or impact Commonwealth land, the project does not require referral to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities.

### 8.2 Referral to the Environmental Protection Authority

Due to the scale of the project, the low significance of its impacts to the surrounding environment and the environmental management measures proposed, the project does not require referral to the WA Environmental Protection Authority.

## 9 Stakeholder Consultation

No specific consultation has been undertaken for this PEIA.

## 10 References

- Anthropos Australis Pty Ltd & Context Anthropology Pty Ltd (2010) *The Report of an Aboriginal Heritage Survey of the Proposed Upgraded Intersection of the Burrup Peninsula Road and Dampier Highway, Burrup Peninsula, West Pilbara Region, Western Australia*. Western Australia
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- Department of Environment and Conservation (2011a) *Contaminated Site Database* <https://secure.dec.wa.gov.au/idelve/css/>. Accessed September 2011.
- Department of Environment and Conservation (2011b) *Managing Dieback: Impacts in WA* <http://www.dec.wa.gov.au/content/view/213/2051/1/2/>. Accessed September 2011.
- Department of Indigenous Affairs (2011) *Aboriginal Heritage Inquiry System* <http://www.dia.wa.gov.au/AHIS/default.aspx>. Accessed September 2011.
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- Department of Sustainability, Environment, Water, Population and Communities (2011b) *Quick Search- Places Database* <http://www.register.heritage.wa.gov.au/>. Accessed September 2011.
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- Department of Water (2011) *Geographic Data Atlas* <http://www.water.wa.gov.au/Tools/Maps+and+atlases/Geographic+data+atlas/default.aspx> Accessed September 2011.
- GHD (2003) *Environmental Impact Assessment and Management Plan; Dampier Highway- Dual Carriageway; SLK 7.0-25.84*. Main Roads Western Australia.
- Jo McDonald Cultural Heritage Management Pty Ltd (2010) *Statement of Significant Impacts: Dampier Highway through Dampier Archipelago (included Burrup Peninsula) National Heritage Place*. Western Australia.
- Lafrentz, D. & Fordyce, B. (2009) *Ethnographic and Archaeological Site Identification Survey Report of the Main Roads WA Dampier Highway Duplication and Burrup*

*Peninsula Intersection Upgrade near Dampier, Western Australia*. Australian Interaction Consultants (AIC), Western Australia

Lafrentz, D. & Fordyce, B. (2011) *Ethnographic and Archaeological Site Identification Survey Report of Main Roads WA Dampier Highway Duplication and Burrup Peninsula Intersection Upgrade near Dampier, Western Australia*. Prepared for Yaburara & Mardudhunera Aboriginal Corporation (YACMA). Western Australia.

Landgate (2011) *SLIP Enabler* <https://www2.landgate.wa.gov.au/web/guest>. Accessed September 2011.

Main Roads Western Australia (MRWA) (2009) *Environmental Impact Assessment: Dampier Highway Duplication*. Western Australia.

R. & E.O'Connor Pty Ltd (2010a) *Wong-Goo-Tt-Oo Heritage Survey of Proposed Dampier Highway Extension: Option 3*. East Perth, Western Australia.

R. & E.O'Connor Pty Ltd (2010b) *Aboriginal Heritage Surveys of Proposed Two Mile Access Road Relocation Project Burrup Peninsula*. East Perth, Western Australia.

## 1 1 Limitations

This report is produced strictly in accordance with the scope of services set out in the contract or otherwise agreed in accordance with the contract. 360 Environmental makes no representations or warranties in relation to the nature and quality of soil and water other than the visual observation and analytical data in this report.

In the preparation of this report, 360 Environmental has relied upon documents, information, data and analyses (“client’s information”) provided by the client and other individuals and entities. In most cases where client’s information has been relied upon, such reliance has been indicated in this report. Unless expressly set out in this report, 360 Environmental has not verified that the client’s information is accurate, exhaustive or current and the validity and accuracy of any aspect of the report including, or based upon, any part of the client’s information is contingent upon the accuracy, exhaustiveness and currency of the client’s information. 360 Environmental shall not be liable to the client or any other person in connection with any invalid or inaccurate aspect of this report where that invalidity or inaccuracy arose because the client’s information was not accurate, exhaustive and current or arose because of any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to 360 Environmental.

Aspects of this report, including the opinions, conclusions and recommendations it contains, are based on the results of the investigation, sampling and testing set out in the contract and otherwise in accordance with normal practices and standards. The investigation, sampling and testing are designed to produce results that represent a reasonable interpretation of the general conditions of the site that is the subject of this report. However, due to the characteristics of the site, including natural variations in site conditions, the results of the investigation, sampling and testing may not accurately represent the actual state of the whole site at all points.

It is important to recognise that site conditions, including the extent and concentration of contaminants, can change with time. This is particularly relevant if this report, including the data, opinions, conclusions and recommendations it contains, are to be used a considerable time after it was prepared. In these circumstances, further investigation of the site may be necessary.

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# FIGURES

- Figure 1 – Project Location and Study Area
- Figure 2 – Carr Civil Access Road
- Figure 3 – Two Mile Access Road
- Figure 4 – Burrup Road Intersection
- Figure 5- Flora Conservation Significance
- Figure 6- Geological Zones
- Figure 7- Surface Water Features



# APPENDICES

# APPENDIX A

## Low Impact Environmental Screening Checklist

# APPENDIX A

## Low Impact Environmental Screening Checklist

## Checklist - Low Impact Environmental Screening

The Low Impact Environmental Screening Checklist is part of the environmental assessment and approval process and procedures. It should be noted that the checklist does not address Aboriginal heritage issues. Please refer to Main Roads guideline Aboriginal Heritage for the heritage assessment process.

All projects are to be screened to identify those that are Low Impact, ie that will have a low impact on the environment and that can be adequately managed through standard contract clauses.

Projects that have “No” to all items are classed as Low Impact and should be implemented using standard contract clauses in the Tender Document Process. Projects that have “Yes” to any item will require further environmental assessment and will be implemented using an Environmental Management Plan.

Tick “Yes” or “No” for every item. Circle the relevant part of the item.

Project Name: MRWA Access Roads Report (Dampier Highway Expansion)

ITEM NO.	ITEM	Y	N
1	New road or road reserve to be created or expansion of existing road reserve.	✓	
2	Works require ground disturbance or clearing of native vegetation.	✓	
3	New, or expansion of existing, pits or quarries. (non-commercial sources)		✓
4	Adjoining sensitive land use. eg residential or hospital or education centre		✓
5	Passes over, adjoins or drains directly into a wetland or sensitive watercourse.		✓
6	Local natural drainage regime / hydrology will be changed.		✓
7	Within/immediately adjacent to surface/underground Public Drinking Water Source Area.		✓
8	Dewatering, or a new water bore.		✓
9	Known potential source of hazardous materials within or adjoining the road reserve. e.g. Acid Sulphate Soils, existing petrol station, industrial site or waste disposal site (landfill)		✓
10	Buildings will require demolition.		✓

Completed By:

Signature:

Date:

Name:

Title:

To be reviewed by a Main Roads Environment Officer:

Signature:

Date:

Name:

Title:

Comments:

Copies of all completed (reviewed) forms must be forwarded to the Manager Environment

# APPENDIX B

## Environmental Management Plan

# Environmental Management Plan

Carr Civil Access Track, Two Mile Access Track and Burrup Road Intersection, Dampier Highway Intersections Upgrade

## Introduction

This Environmental Management Plan (EMP) has been developed for the project area following the completion of the Preliminary Environmental Impact Assessment (PEIA) report. The aim of this EMP is to minimise the environmental impacts associated with the proposed works as well as to identify areas of responsibilities required for the implementation of management strategies.

This EMP addresses specific issues that were identified during the PEIA. The project management measures identified within this EMP are in addition to the standard environmental management contract specifications used for Category 2 projects. Main Roads' standard environmental contract specifications (Specifications 203, 204, 301, 302 and 304) are to be adhered to where appropriate.

It is critical that all clearing works are carried out in accordance with the management measures prescribed in Specifications 301 (Clearing) and 302 (Earthworks). Also note that all revegetation works should be carried out in accordance with the Main Roads Environmental Guideline Revegetation Planning and Techniques.

The areas that require special management will be addressed in terms of:

- the timing of the various management actions;
- the topic (e.g. vegetation);
- the objectives for each area;
- the actions that are necessary to minimise the impact;
- the responsible party for implementing the action; and
- whether the action arose from external advice or is a Main Roads requirement.

## Communication Plan

Environmental issues specific to the project will be communicated as follows:

**Table B1: Project communication program.**

METHOD	FREQUENCY	PARTICIPANTS	REFERENCE	RECORD
Project Site				
Induction	Prior to Work	All personnel and subcontractors	EMP and Contractor Environmental	Induction Meeting

			Policy	
Toolbox Meetings	Weekly	Project Personnel	Contractor Safety Plan	Minutes of Meeting
Contract Meetings	Monthly	Main Roads' Project Manager and Contractor Project Manager	EMP	Minutes of Meeting
Authority Consultation				
Department of Environment and Conservation	As required	Main Roads' Project Manager and Contractor Project Manager	-	Minutes of meeting

## External Communication and Complaints

A complaints register shall be maintained by the contractor. All complaints received shall be forwarded to the Main Roads' Project Manager for action. Serious complaints shall be investigated within 24 hours of the complaint being received.



**Table B2: Project phase objectives, actions and responsibilities.**

TIMING	TOPIC	OBJECTIVE	ACTION	RESPONSIBLE PARTY	ADVICE
All phases of Construction	Vegetation Clearing - Record-keeping	All projects should maintain the required records relating to clearing native vegetation under the purpose permit.	Clearing: <ul style="list-style-type: none"> <li>• a copy of the PEIA &amp; EMP for small projects;</li> <li>• a map showing the location where the clearing occurred, recorded in an ESRI Shapefile;</li> <li>• the size of the area cleared (in hectares); and</li> <li>• the dates on which the clearing was done.</li> </ul>	Project Manager	DEC
			Revegetation and rehabilitation of areas: <ul style="list-style-type: none"> <li>• a copy of each Revegetation Plan;</li> <li>• a map showing the location of any area revegetated and rehabilitated recorded in an ESRI Shapefile;</li> <li>• a description of the revegetation and rehabilitation activities undertaken; and</li> <li>• the size of the area revegetated and rehabilitated (in hectares).</li> </ul>	Project Manager	DEC
			Each offset implemented: <ul style="list-style-type: none"> <li>• a copy of each offset proposal;</li> <li>• a map showing the location of any offset implemented recorded in an ESRI Shapefile;</li> <li>• a description of the offset implemented; and</li> <li>• the size of the area of the offset (in hectares).</li> </ul>	Project Manager	DEC
			Each management strategy implemented: <ul style="list-style-type: none"> <li>• a map showing the location of any area to which a management strategy has been applied recorded in an ESRI Shapefile;</li> <li>• a description of the management strategy implemented; and</li> </ul>	Project Manager	Project Manager

			<ul style="list-style-type: none"> <li>the size of the area to which the management strategy was applied (in hectares).</li> </ul>		
All phases of Construction	Vegetation Clearing - Record-keeping	All projects should maintain the required records relating to clearing native vegetation under the purpose permit.	Control of weeds, dieback and other pathogens.	All phases of Construction	Vegetation Clearing - Record-keeping
Pre - Construction	Visual Amenity	Ensure that road blends into environment.	Develop design documentation to meet project requirements as identified in the visual impact assessment.	Project Manager	Main Roads
Pre - Construction	Revegetation and Landscape planning	To revegetation site.	Prepare a Project Revegetation Plan to meet project requirements as identified.	Project Manager	Main Roads
Pre - Construction	Vegetation Clearing – Submissions to DEC	All projects comply with requirements of the purpose permit in relation to submission of documentation to DEC and where relevant obtain DEC approval of these documents prior to clearing of native vegetation.	Management Strategy	Pre - Construction	Vegetation Clearing – Submissions to DEC
Pre-Construction	Vegetation Clearing	Ensure that the overall objectives of	Selection of designs/locations that minimise adverse impacts on the biological environment.	Project Manager	Main Roads

		the alignment and construction works are compatible with maintaining and, where possible, enhancing the biological integrity of the surrounding environment and minimising vegetation loss and degradation; and Ensure the retention of as many habitat trees, shrubs and vegetated corridors for fauna as possible, particularly where associated with riparian zones.	<p>Construction works to be undertaken in summer to reduce the potential for soil erosion and drainage line siltation due to vegetation removal and heavy rains.</p> <p>Control/spray weeds species within the project area prior to construction to limit the amount of propagative material that may be spread during disturbance.</p> <p>Any stockpiled vegetation from clearing works shall not be burnt. This vegetation shall be used during any rehabilitation works and either mulched or respread according to the TDP/Revegetation Plan.</p>	<p>Project Manager</p> <p>Contractor</p> <p>Contractor</p>	<p>Main Roads</p> <p>Main Roads</p> <p>Main Roads</p>
Pre - Construction	Vegetation Clearing - CPS 818/4 management requirements	Compliance with management conditions of purpose permit.	If clearing is pursuant to Main Purpose Permit (CPS818) ensure compliance with Section 14 of the permit relating to Dieback, other pathogen and weed control.	Contractor/Project Manager	DEC
Pre-Construction	Surface Drainage	Maintain the hydrological regime	Stormwater drainage shall be treated and disposed of in accordance with DEC requirements.	Project Manager	DEC

		that exists prior to the construction of the proposal.			
Construction	Noise, Vibration and Dust	Ensure that the construction of the proposal does not become a nuisance to the public.	Access to private property and appropriate traffic management measures should be planned and implemented prior to the construction of works.	Contractor	Main Roads
			Pedestrian public access should be should be planned and implemented prior to the construction of works.	Contractor	Main Roads
			Any complaints regarding dust will be attended to as soon as possible.	Contractor/Project Manager	Main Roads
			Where it is found that trucks leaving the site are carrying excessive material onto sealed surfaces, these areas will be swept to reduce dust generation and maintain traffic safety.	Contractor	Main Roads
			Watering, the use of hydromulch or other forms of mulching to protect loose surfaces shall be used as mitigation measures.	Contractor	Main Roads
Construction	Pollution and litter	Ensure that the construction of the proposal is managed to a standard that minimises any adverse impacts on the environment.	The designated servicing area will be bunded to contain any spills or leaks and shall not be located in an area adjacent to any drainage areas or watercourses or will drain into a temporary sump.	Contractor	Main Roads
			Temporary storage of bitumen, asphalt, concrete or aggregate should only occur at designated depots or controlled hardstands. Precoating of aggregate will only occur in approved areas.	Contractor	Main Roads
			Emergency cleanup procedures shall be implemented in the case of any spillage. These will include control of spilled material and removal of contaminated soil to an	Contractor	Main Roads

			approved site. The contractor shall ensure appropriate equipment is available at all times and shall notify the Superintendent's Representative of a spill.		
			All waste oil will be collected for recycling and any empty fuel/oil containers, used filters and waste hydraulic parts to be collected and stored in an allocated area then removed to an approved site	Contractor	Main Roads
			The project areas, including hardstand areas, will be kept in a tidy manner at all times.	Contractor	Main Roads
Construction	Fire	Ensure that the fire risk associated with the construction of the proposal is minimised.	No fires shall be lit within the project area.	Contractor	Main Roads
			Machinery will be fitted with approved spark arresting mufflers.	Contractor	Main Roads
			A water tanker/fire fighter unit will be on site at all times.	Contractor	Main Roads
Construction	Fauna	Avoid unnecessary impacts to fauna and damage to fauna habitat.	Fauna are not to be fed or intentionally harmed.	Contractor	Main Roads
			No pets or firearms permitted on site.	Contractor	Main Roads
			The WILDCARE Helpline is to be contacted, 9474 9055, in the event of sick, injured or orphaned native wildlife.	Contractor	Main Roads
Construction	Site Management	Ensure that the site is managed to ensure that construction of the proposal will have minimal impact upon the surrounding environment.	Site office and materials storage areas will be located on previously disturbed/ designated area.	Contractor	Main Roads
Construction	Rehabilitation	Rehabilitate the	Implement the contract specifications for rehabilitation	Contractor	Main Roads

		project area to meet project commitments.	of the site. All waste materials from the development are to be completely removed from the site upon completion of the project. Final clean-up shall be to the satisfaction of the Project Manager and the Site Superintendent.	Contractor	Main Roads
Construction	Revegetation	Meet project commitments for revegetating and landscaping.	Implement the Project Revegetation Plan.	Contractor	Main Roads
Construction	Revegetation and rehabilitation requirements	Compliance with revegetation and rehabilitation requirement of purpose permit.	If revegetation and rehabilitation is pursuant to Purpose Permit (CPS 818/4) ensure compliance with Condition 13 (Revegetation and Rehabilitation) and Condition 14 (Dieback, other pathogen and weed control) of the permit.	Contractor/Project Manager	Main Roads
Construction	Any other aspect (Add extra rows)	State objective.	List management actions including any contingency measures.	Delegate responsibility	Advice received during PEIA
Post - Construction	Monitoring	Meet project revegetation commitments.	Monitor effectiveness of revegetation works and weed control.	Contractor/ Project Manager	Main Roads

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## Monitoring

After project completion and project handover, the Asset manager should develop a monitoring program to monitor for those aspects that have been identified as requiring monitoring.

## Contingency Measures

Due to the scale and nature of the project, no contingency measures are identified as the inherent environmental risks are small.

## Auditing

The implementation of the EMP will be audited six weeks after the contractor takes possession of site. This audit will be carried out by a Main Roads staff member/External party. Audits will be repeated every four weeks until the project reaches practical completion.

# APPENDIX C

## TEC/PEC Database Search results



# Threatened and Priority Ecological Community buffers in WA

---

UNDER NO CIRCUMSTANCES IS THIS DATA TO BE PROVIDED TO ANY THIRD PARTIES, for more details see conditions for the supply of this information.

## **Citation**

Title: **Threatened and Priority Ecological Community buffers in WA**  
Custodian: **Department of Environment & Conservation**

---

## **Description**

Abstract: **Ecological communities throughout WA that are "Presumed Totally Destroyed", "Critically Endangered", "Endangered", "Vulnerable", "Priority 1-5", "Lower Risk" and "Not evaluated". Communities are based on various life-forms including plants, invertebrates and micro-organisms.**

## **Geographical Bounding Box**

North: **-14.788854**  
South: **-35.005719**  
East: **128.870214**  
West: **113.765525**

---

## **Data Currency and Status**

Beginning Date: **1/1/94**  
Ending Date: **current**  
Maintenance/Update: **As requested**

---

## **Access**

Stored Data **ESRI shapefile**  
Format:  
Coordinate **GCS\_GDA\_1994**  
System:

Access Constraints: Digital data is only available with written permission of the custodian. In addition, some occurrence data eg. location of sites on private land, is password restricted.

---

## **Data Quality**

Positional Accuracy: Point location data within occurrences usually from GPS fix, usually within 100 metres. Some digitized from hard copy.

Attribute Accuracy: Not documented.

Logical Consistency: Not documented.

Completeness: Information on specific communities was obtained from regional, subregional or specific habitat surveys of floristic communities, invertebrate communities, wetland assemblages and communities of micro-organisms.

---

## **Attributes List:**

<b><u>Name</u></b>	<b><u>Description</u></b>
BDY_ID	Associated boundary polygon unique identifier
OCC_UNIQUE	Unique occurrence identifier
COM_ID	Shortened community name identifier
COM_NAME	Community name
CT_DESC	State listed Category of Threat
S_ID_COUNT	Number of Site IDs within a buffer
FIRST_S_ID	First site identifier
LAST_S_ID	Last site identifier
BUFFER	Buffer radius from site ID or boundary in metres

## **General Information:**

Priority Ecological Communities

- There are 284 known PECs and subtypes , 271 (~95%) of these on the TEC/PEC database
- The location of priority communities is good, but not complete across the state
- There is a formal list of PECs at <http://www.dec.wa.gov.au/content/view/849/2017/>
- Many PECs are awaiting endorsement as TECs

buffers

- The buffer radius around each occurrence of a TEC or PEC is included to help ensure that developments with potential to impact groundwater or surface water are picked up.
- For wetland TEC or PECs we seek to include an area within the buffer zone that is intended to help protect groundwater and surface water. The area required to protect different types of wetlands from a variety of hydrological impacts will, of course, differ.

- For upland TEC or PECs that are believed not to be groundwater dependent, the buffer area radius encompasses the TEC or PEC site location recorded in the TEC database, and extends at least to the furthest point in the occurrence. This is to ensure that the 'buffer' area encompasses at least the entire TEC or PEC. This means that some linear occurrences may need a larger buffer radius to encompass the entire occurrence.
- Occurrences with a buffer distance of 0 are no longer extant.

---

## **Contact Information**

**Contact Organisation:** Department of Environment & Conservation  
**Contact Position:** TEC Database Administrator - Species and Communities Branch  
**Mail Address:** Locked Bag 104, Bentley Delivery Centre  
**Suburb/Locality:** Kensington  
**Country/State:** WA  
**Postcode:** 6983  
**Telephone:** (08) 9334 0116  
**Fax:** (08) 9334 0300  
**Email:** [communities.data@dec.wa.gov.au](mailto:communities.data@dec.wa.gov.au)

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## **Metadata Information**

**Metadata Date:** current

# APPENDIX D

## Aboriginal Heritage Database Results



## Search Criteria

163 sites in a search box. The box is formed by these diagonally opposed corner points:

MGA Zone 50	
Northing	Easting
7712331	471184
7715360	473173

## Disclaimer

Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

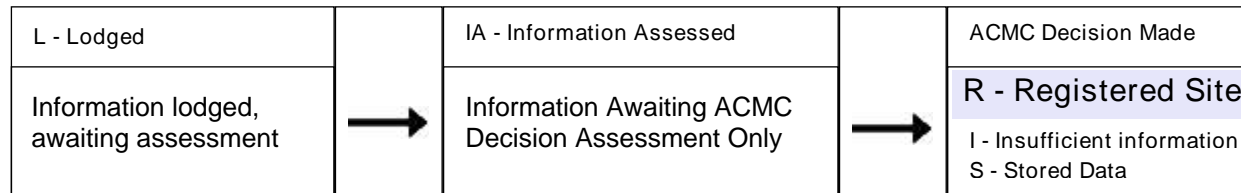
## Copyright

Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register of Aboriginal Sites established and maintained under the Aboriginal Heritage Act 1972 (AHA).

## Legend

Restriction	Access	Coordinate Accuracy
N No restriction	C Closed	Accuracy is shown as a code in brackets following the site coordinates.
M Male access only	O Open	[Reliable] The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
F Female access	V Vulnerable	[Unreliable] The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

## Status



### \*Explanation of Assessment

Sites lodged with the Department are assessed under the direction of the Registrar of Aboriginal Sites. These are not the final assessment.

Final assessment and decisions will be determined by the Aboriginal Cultural Material Committee (ACMC).

## Spatial Accuracy

Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:Z50' means Easting=5000000, Zone=50.

## Sites Shown on Maps

Site boundaries may not appear on maps at low zoom levels

## List of 70 Registered Aboriginal Sites with Map

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
111	R	O	N	Gas Pipeline 116	Engraving			471788mE 7713816mN Zone 50 [Reliable]	P07603
112	R	O	N	Gas Pipeline 117	Engraving			471769mE 7713808mN Zone 50 [Reliable]	P07604
113	R	O	N	Gas Pipeline 118	Engraving			471765mE 7713799mN Zone 50 [Reliable]	P07605
114	R	O	N	Gas Pipeline 119	Engraving			471739mE 7713752mN Zone 50 [Reliable]	P07606
115	R	O	N	Gas Pipeline 120	Artefacts / Scatter			472765mE 7715456mN Zone 50 [Reliable]	P07607
116	R	O	N	Gas Pipeline 121	Engraving			472738mE 7715421mN Zone 50 [Reliable]	P07608
117	R	O	N	Gas Pipeline 122	Artefacts / Scatter			472294mE 7714941mN Zone 50 [Reliable]	P07609
118	R	O	N	Gas Pipeline 123	Engraving			472310mE 7714947mN Zone 50 [Reliable]	P07610
412	R	C	N	Gas Pipeline 102	Engraving, Midden / Scatter		*Registered Informant names available from DIA.	Not available for closed sites	P07534
417	R	O	N	Gas Pipeline 107	Engraving			471739mE 7713752mN Zone 50 [Reliable]	P07539



Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
8858	R	O	N	Natgas 158	Artefacts / Scatter			472710mE 7714216mN Zone 50 [Reliable]	P03612
8859	R	O	N	Natgas 159	Man-Made Structure, Engraving			473136mE 7714725mN Zone 50 [Unreliable]	P03613
8861	R	O	N	Natgas 161	Engraving			473639mE 7714656mN Zone 50 [Unreliable]	P03615
9021	R	O	N	Granite Rest	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03447
9022	R	O	N	Light Rocks	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03448
9025	R	O	N	Clump Scatter	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03451
9405	R	O	N	Joeys Knoll	Man-Made Structure, Engraving			472814mE 7714486mN Zone 50 [Reliable]	P02780
9406	R	O	N	Stairway To Heaven	Man-Made Structure, Engraving			473139mE 7715305mN Zone 50 [Reliable]	P02782
9434	R	O	N	Dampier	Man-Made Structure, Engraving, Quarry, Artefacts / Scatter, Grinding patches / grooves			472939mE 7715605mN Zone 50 [Reliable]	P02752
9454	R	O	N	Incised Knoll	Engraving			471969mE 7714528mN Zone 50 [Reliable]	P02717





Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
9455	R	O	N	Stray Site	Engraving			472305mE 7714562mN Zone 50 [Reliable]	P02718
9456	R	O	N	Linear Ridge	Engraving			472286mE 7714748mN Zone 50 [Reliable]	P02719
9457	R	O	N	Pipeline Terraces	Man-Made Structure, Engraving			472617mE 7714814mN Zone 50 [Reliable]	P02720
9458	R	O	N	Small Ridge Site	Man-Made Structure, Engraving			472530mE 7714885mN Zone 50 [Reliable]	P02721
9459	R	O	N	Granophyre Outcrop	Engraving			472763mE 7714855mN Zone 50 [Reliable]	P02722
9460	R	O	N	Hidden Hide	Engraving			472793mE 7714935mN Zone 50 [Reliable]	P02723
9461	R	O	N	Median Strip	Engraving			472177mE 7714923mN Zone 50 [Reliable]	P02724
9463	R	O	N	Mystic Eyes	Engraving			472366mE 7714942mN Zone 50 [Reliable]	P02726
9464	R	O	N	Fig Tree Knolls	Engraving			472314mE 7714975mN Zone 50 [Reliable]	P02727
9465	R	O	N	Spinifex Knoll	Engraving			472418mE 7714992mN Zone 50 [Reliable]	P02728
9466	R	O	N	Core Site	Engraving, Artefacts / Scatter			472556mE 7715072mN Zone 50 [Reliable]	P02729



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
9467	R	O	N	Rough Sketch	Engraving			472571mE 7715126mN Zone 50 [Reliable]	P02730
9468	R	O	N	Pipe Dream Lookout	Engraving			472606mE 7715085mN Zone 50 [Reliable]	P02731
9469	R	O	N	Faint Line	Engraving			472624mE 7715112mN Zone 50 [Reliable]	P02732
9470	R	O	N	Isolated Scree Site	Engraving			472662mE 7715130mN Zone 50 [Reliable]	P02733
9471	R	O	N	Mandarin Knoll	Man-Made Structure, Engraving			472796mE 7715124mN Zone 50 [Reliable]	P02734
9472	R	O	N	Old Man Site	Engraving			472697mE 7715199mN Zone 50 [Reliable]	P02735
9473	R	O	N	Rocky Outlook	Man-Made Structure, Engraving			472764mE 7715230mN Zone 50 [Reliable]	P02736
9474	R	O	N	Thoughtful Man Site	Engraving			472963mE 7715270mN Zone 50 [Reliable]	P02737
9475	R	O	N	Low Outcrop Site	Engraving			472875mE 7715335mN Zone 50 [Unreliable]	P02738
9633	R	O	N	Borrow Pit 1	Artefacts / Scatter			472800mE 7714701mN Zone 50 [Reliable]	P02566
9634	R	O	N	The Return	Engraving			472379mE 7714500mN Zone 50 [Reliable]	P02567



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
10250	R	O	N	Dampier	Man-Made Structure, Engraving, Artefacts / Scatter			473200mE 7715287mN Zone 50 [Reliable]	P01946
10251	R	O	N	Dampier	Man-Made Structure, Engraving, Artefacts / Scatter			472789mE 7715105mN Zone 50 [Unreliable]	P01947
10255	R	O	N	Dampier	Man-Made Structure, Engraving			473639mE 7715655mN Zone 50 [Unreliable]	P01951
10357	R	O	N	Gas Pipeline 95	Engraving, Artefacts / Scatter, Midden / Scatter			471505mE 7713356mN Zone 50 [Reliable]	P01829
10358	R	O	N	Gas Pipeline 96	Engraving, Quarry, Artefacts / Scatter			471505mE 7713356mN Zone 50 [Reliable]	P01830
10359	R	O	N	Gas Pipeline 97	Engraving, Artefacts / Scatter			471639mE 7713655mN Zone 50 [Unreliable]	P01831
10571	R	O	N	Gas Pipeline 21	Engraving			472592mE 7715361mN Zone 50 [Reliable]	P01623
10572	R	O	N	Gas Pipeline 22	Engraving			472620mE 7714173mN Zone 50 [Reliable]	P01624
16754	R	O	N	Burrup Pipeline Project Site 1	Engraving			472723mE 7715325mN Zone 50 [Reliable]	
16756	R	O	N	Burrup Pipeline Project Site 3	Engraving, Grinding patches / grooves			472504mE 7715062mN Zone 50 [Reliable]	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
16757	R	O	N	Burrup Pipeline Project Site 4	Engraving			472546mE 7715098mN Zone 50 [Reliable]	
16758	R	O	N	Burrup Pipeline Project Site 5	Engraving			472861mE 7715530mN Zone 50 [Reliable]	
16771	R	O	N	Burrup Pipeline Project Site 18	Engraving			472189mE 7714890mN Zone 50 [Reliable]	
16772	R	O	N	Burrup Pipeline Project Site 19	Engraving			472357mE 7715036mN Zone 50 [Reliable]	
16779	R	O	N	Burrup Pipeline Project Site 27	Engraving			472756mE 7715478mN Zone 50 [Reliable]	
16780	R	O	N	Burrup Pipeline Project Site 28	Engraving			472322mE 7714952mN Zone 50 [Reliable]	
16781	R	O	N	Burrup Pipeline Project Site 29	Engraving			472449mE 7715061mN Zone 50 [Reliable]	
20367	R	C	N	Dp-285	Engraving, Grinding patches / grooves		*Registered Informant names available from DIA.	Not available for closed sites	
20368	R	C	N	Dp-286	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
20369	R	C	N	Dp-287	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
20373	R	C	N	Pp-20	Mythological, Man-Made Structure		*Registered Informant names available from DIA.	Not available for closed sites	

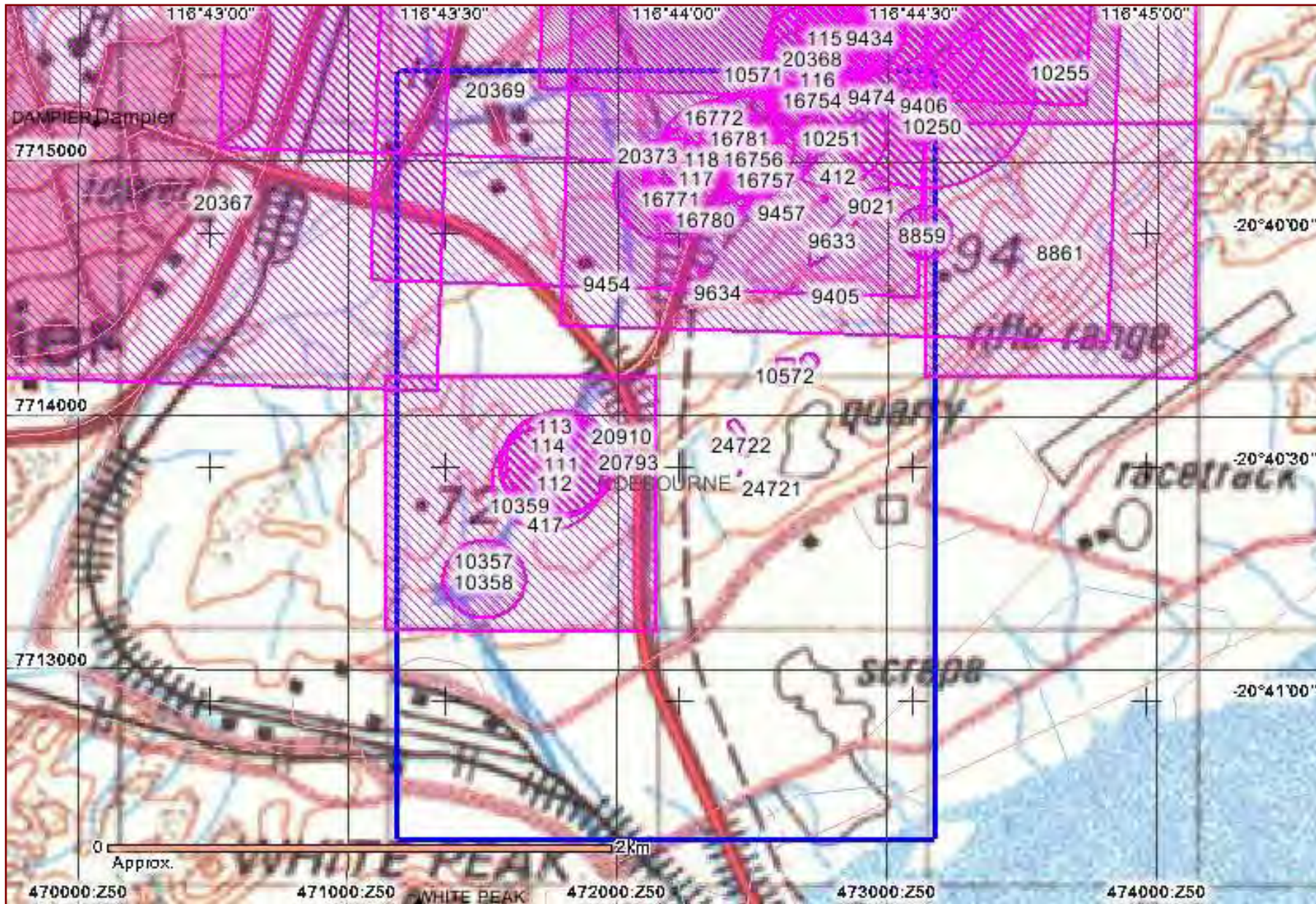


# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
20793	R	O	N	Aic/03 - Standing Stone		Natural Feature, [Other: Standing Stone]	*Registered Informant names available from DIA.	472049mE 7713825mN Zone 50 [Unreliable]	
20794	R	O	N	Aic/04 - Humanoid Figure	Engraving		*Registered Informant names available from DIA.	472063mE 7713801mN Zone 50 [Unreliable]	
20909	R	O	N	Kdr / Efs 11	Engraving			472027mE 7713854mN Zone 50 [Reliable]	
20910	R	O	N	Kdr / Efs12	Engraving			472023mE 7713932mN Zone 50 [Reliable]	
24721	R	O	N	Readymix Ecas001	Artefacts / Scatter	Archeological Deposit	*Registered Informant names available from DIA.	472574mE 7713723mN Zone 50 [Reliable]	
24722	R	O	N	Readymix Isas001	Man-Made Structure, Quarry, Artefacts / Scatter, Midden / Scatter, Grinding patches / grooves	Archeological Deposit, Hunting Place	*Registered Informant names available from DIA.	472458mE 7713911mN Zone 50 [Reliable]	
28462	R	O	N	Cem-09-Qu-001	Quarry, Artefacts / Scatter	Archeological Deposit	*Registered Informant names available from DIA.	472453mE 7713774mN Zone 50 [Reliable]	





### Legend

- Selected Heritage Sites
- Registered Sites
- Town
- Map Area
- Search Area

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## List of 93 Other Heritage Places with Map

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
8864	I	O	N	Natgas 164	Artefacts / Scatter	[Other: reduction floor]	*Registered Informant names available from DIA.	472311mE 7713487mN Zone 50 [Reliable]	P03618
9020	I	O	N	Creek Scatter/ Borrow Pit 1	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03446
9023	S	O	N	Twin Flakes	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03449
9024	S	O	N	Spotted Core	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03450
9026	I	O	N	Flake Scatter	Artefacts / Scatter			472936mE 7714836mN Zone 50 [Reliable]	P03452
9074	I	O	N	Lonely Core	Artefacts / Scatter			473639mE 7714656mN Zone 50 [Unreliable]	P03445
9462	S	O	N	Broken Wall	Man-Made Structure, Engraving			472282mE 7714884mN Zone 50 [Reliable]	P02725
16782	I	O	N	Burrup Pipeline Project Site 30	Grinding patches / grooves			472315mE 7715030mN Zone 50 [Reliable]	
16783	I	O	N	Burrup Pipeline Project Site 31	Grinding patches / grooves			472187mE 7714894mN Zone 50 [Reliable]	
20397	L	C	N	Pr-2	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
20398	L	O	N	Pr-3	Mythological, Historical	Camp, Water Source	*Registered Informant names available from DIA.	470094mE 7713805mN Zone 50 [Unreliable]	
20588	L	O	N	Dampier Artefact Scatter - Fs2	Artefacts / Scatter	[Other: Artefact Scatter]		472004mE 7713260mN Zone 50 [Reliable]	
20589	L	O	N	Dampier Artefact Scatter - Fs3	Artefacts / Scatter	[Other: Artefact Scatter]		471819mE 7713235mN Zone 50 [Reliable]	
20711	L	O	N	Nickol Bay Motif (W3)	Engraving		*Registered Informant names available from DIA.	472497mE 7713643mN Zone 50 [Reliable]	
20712	L	O	N	Nickol Bay Motif (W4)	Engraving		*Registered Informant names available from DIA.	472485mE 7713662mN Zone 50 [Reliable]	
20714	L	O	N	Nickol Bay Motif (W6)	Engraving		*Registered Informant names available from DIA.	472598mE 7713691mN Zone 50 [Reliable]	
20716	IA	O	N	Nickol Bay Structure (W8)	Man-Made Structure		*Registered Informant names available from DIA.	472292mE 7713580mN Zone 50 [Reliable]	
20717	L	O	N	Nickol Bay Quarry (W9)	Quarry, Artefacts / Scatter		*Registered Informant names available from DIA.	472276mE 7713624mN Zone 50 [Reliable]	
20795	L	O	N	Aic/05 - Engraving	Engraving		*Registered Informant names available from DIA.	471953mE 7713932mN Zone 50 [Unreliable]	
20796	L	O	N	Aic/06 - Engraving	Engraving		*Registered Informant names available from DIA.	471775mE 7714356mN Zone 50 [Unreliable]	
20797	IA	O	N	Aic/07 - Sharpening Scratches	Engraving		*Registered Informant names available from DIA.	472095mE 7714002mN Zone 50 [Reliable]	





# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
20798	IA	C	M	Aic/08 - Engravings	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
20799	L	O	N	Aic/02 - Natural Formation		Natural Feature	*Registered Informant names available from DIA.	472028mE 7713624mN Zone 50 [Unreliable]	
20800	IA	O	N	Aic01 - Stone Arrangement		Natural Feature, [Other: Stone Arrangement]	*Registered Informant names available from DIA.	471869mE 7714260mN Zone 50 [Reliable]	
20838	L	C	M	Pp-06/21	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
20902	L	O	N	Kdr / Efs 2	Engraving			471797mE 7714318mN Zone 50 [Reliable]	
20903	L	O	N	Kdr / Efs 3	Man-Made Structure			471791mE 7714294mN Zone 50 [Reliable]	
20904	IA	O	N	Kdr / Efs 10	Engraving			472023mE 7713813mN Zone 50 [Reliable]	
20905	L	O	N	Kdr / Efs 1	Man-Made Structure			471817mE 7714220mN Zone 50 [Reliable]	
20911	IA	O	N	Kdr / Efs 4	Man-Made Structure		*Registered Informant names available from DIA.	472076mE 7714074mN Zone 50 [Reliable]	
20912	IA	O	N	Kdr / Efs 5	Engraving		*Registered Informant names available from DIA.	472095mE 7713725mN Zone 50 [Reliable]	
20914	IA	C	M	Kdr / Efs 7	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
20915	L	O	N	Kdr / Efs 8	Man-Made Structure			472037mE 7713516mN Zone 50 [Reliable]	
20916	IA	O	N	Kdr / Efs 9	Engraving			472008mE 7713796mN Zone 50 [Reliable]	
21276	L	O	N	Field Site 8	Engraving			472669mE 7715455mN Zone 50 [Reliable]	
21947	L	O	N	Dp-001	Engraving		*Registered Informant names available from DIA.	472295mE 7714979mN Zone 50 [Reliable]	
21974	L	C	M	Parker Point 57 (Pp-57)	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
21998	L	C	N	Dp-285 (Relocated 01/02/2004)	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
22000	L	C	M	Pp-03 (Partially Relocated 01/02/2004)	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
22008	L	C	N	Pp-19 (Relocated 01/02/2004)	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
22122	L	C	N	Realignment Site 2	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
22123	L	C	N	Realignment Site 3	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
22920	L	O	N	Engraved Boulder Faces	Engraving			473142mE 7714462mN Zone 50 [Unreliable]	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
23323	I	C	N	Burrup Peninsula, Murujuga	Ceremonial, Mythological, Skeletal material/Burial, Man-Made Structure, Fish Trap, Modified Tree, Engraving, Quarry, Artefacts / Scatter, Midden / Scatter, Historical, Grinding patches / grooves	Archeological Deposit, Massacre, Meeting Place, Plant Resource, Camp, Shell, Hunting Place, Named Place, Rockshelter, Natural Feature, Water Source	*Registered Informant names available from DIA.	Not available for closed sites	
24723	IA	O	N	Readymix Ece002	Engraving		*Registered Informant names available from DIA.	472501mE 7713976mN Zone 50 [Reliable]	
24725	IA	O	N	Readymix Ece003	Engraving		*Registered Informant names available from DIA.	472489mE 7713993mN Zone 50 [Reliable]	
24726	IA	O	N	Readymix Ece004	Engraving		*Registered Informant names available from DIA.	472488mE 7713997mN Zone 50 [Reliable]	
24727	IA	O	N	Readymix Ece005	Engraving		*Registered Informant names available from DIA.	472460mE 7714037mN Zone 50 [Reliable]	
24728	IA	O	N	Readymix Ece006	Engraving		*Registered Informant names available from DIA.	472459mE 7714040mN Zone 50 [Reliable]	
26711	IA	O	N	Cemex Quarry Complex	Engraving, Quarry, Artefacts / Scatter		*Registered Informant names available from DIA.	473071mE 7714298mN Zone 50 [Reliable]	
26712	IA	O	N	Cemex Engraving (Cesle001)	Engraving		*Registered Informant names available from DIA.	473169mE 7714306mN Zone 50 [Reliable]	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
27770	IA	O	N	Burr Nhp1	Engraving			472526mE 7714129mN Zone 50 [Reliable]	
27776	IA	O	N	Burr Nhp2	Engraving			472556mE 7714172mN Zone 50 [Reliable]	
27786	IA	O	N	Burr Nhp3	Engraving			472605mE 7714272mN Zone 50 [Reliable]	
27792	IA	O	N	Burr Nhps5	Engraving			472723mE 7714302mN Zone 50 [Reliable]	
28308	IA	O	N	Main Roads Standing Stone 01	Man-Made Structure		*Registered Informant names available from DIA.	471909mE 7713750mN Zone 50 [Reliable]	
28309	IA	O	N	Main Roads Engraving 01	Engraving		*Registered Informant names available from DIA.	471988mE 7713872mN Zone 50 [Reliable]	
28310	IA	O	N	Main Roads Engraving 02	Engraving		*Registered Informant names available from DIA.	471989mE 7713863mN Zone 50 [Reliable]	
28311	IA	O	N	Main Roads Engraving 03	Engraving		*Registered Informant names available from DIA.	472006mE 7713848mN Zone 50 [Reliable]	
28312	IA	O	N	Main Roads Engraving 04	Engraving		*Registered Informant names available from DIA.	472006mE 7713843mN Zone 50 [Reliable]	
28313	IA	O	N	Main Roads Engraving 07	Engraving		*Registered Informant names available from DIA.	472024mE 7713803mN Zone 50 [Reliable]	
28314	IA	O	N	Main Roads Engraving 08	Engraving		*Registered Informant names available from DIA.	472017mE 7713804mN Zone 50 [Reliable]	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
28315	IA	O	N	Main Roads Engraving 10	Engraving		*Registered Informant names available from DIA.	472014mE 7713794mN Zone 50 [Reliable]	
28316	IA	O	N	Main Roads Engraving 11	Engraving		*Registered Informant names available from DIA.	471962mE 7713704mN Zone 50 [Reliable]	
28317	IA	O	N	Main Roads Engraving 12	Engraving		*Registered Informant names available from DIA.	471960mE 7713700mN Zone 50 [Reliable]	
28318	IA	O	N	Main Roads Engraving 13	Engraving		*Registered Informant names available from DIA.	471947mE 7713698mN Zone 50 [Reliable]	
28319	IA	O	N	Main Roads Engraving 14	Engraving		*Registered Informant names available from DIA.	472017mE 7713879mN Zone 50 [Reliable]	
28320	IA	O	N	Main Roads Engraving 15	Engraving		*Registered Informant names available from DIA.	471958mE 7713700mN Zone 50 [Reliable]	
28322	IA	O	N	Main Roads Dampier Isolated Finds		[Other: 2 Isolated artefacts]	*Registered Informant names available from DIA.	472113mE 7713989mN Zone 50 [Reliable]	
28323	IA	C	M	Main Roads Engravings 16	Engraving		*Registered Informant names available from DIA.	Not available for closed sites	
28456	IA	O	N	Cem-09-Sa-001	Man-Made Structure	Archeological Deposit	*Registered Informant names available from DIA.	472636mE 7714066mN Zone 50 [Reliable]	
28457	IA	O	N	Cem-09-Sa-002	Man-Made Structure	Archeological Deposit	*Registered Informant names available from DIA.	472170mE 7713948mN Zone 50 [Reliable]	
28458	IA	O	N	Cem-09-Sa-003	Man-Made Structure	Archeological Deposit	*Registered Informant names available from DIA.	472444mE 7713515mN Zone 50 [Reliable]	



# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
28459	IA	O	N	Cem-09-Sa-004	Man-Made Structure	Archeological Deposit	*Registered Informant names available from DIA.	472329mE 7713909mN Zone 50 [Reliable]	
28460	IA	O	N	Cem-09-Eng-001	Engraving	Archeological Deposit	*Registered Informant names available from DIA.	472594mE 7714005mN Zone 50 [Reliable]	
28461	IA	O	N	Cem-09-Eng-002	Engraving	Archeological Deposit	*Registered Informant names available from DIA.	472161mE 7713865mN Zone 50 [Reliable]	
28463	IA	O	N	Cem-09-Sc-002	Engraving, Artefacts / Scatter	Archeological Deposit	*Registered Informant names available from DIA.	472170mE 7713948mN Zone 50 [Reliable]	
28614	L	O	N	Cem-09-Gs-01	Grinding patches / grooves	Archeological Deposit	*Registered Informant names available from DIA.	472475mE 7713654mN Zone 50 [Reliable]	
28934	IA	O	N	Mrw-09-Pit-01	Man-Made Structure		*Registered Informant names available from DIA.	472096mE 7714022mN Zone 50 [Reliable]	
28935	IA	O	N	Mrw-09-Pit-02-03-04	Man-Made Structure		*Registered Informant names available from DIA.	472109mE 7714004mN Zone 50 [Reliable]	
28936	IA	O	N	Mrw-09-Pit-05	Man-Made Structure		*Registered Informant names available from DIA.	472022mE 7713883mN Zone 50 [Reliable]	
28937	IA	O	N	Mrw-09-Pit-06	Man-Made Structure		*Registered Informant names available from DIA.	472039mE 7713927mN Zone 50 [Reliable]	
28938	IA	O	N	Mrw-09-Eng-01	Engraving	Archeological Deposit	*Registered Informant names available from DIA.	472090mE 7714036mN Zone 50 [Reliable]	
28939	IA	O	N	Mrw-09-Eng-03	Engraving	Archeological Deposit	*Registered Informant names available from DIA.	472112mE 7713837mN Zone 50 [Reliable]	

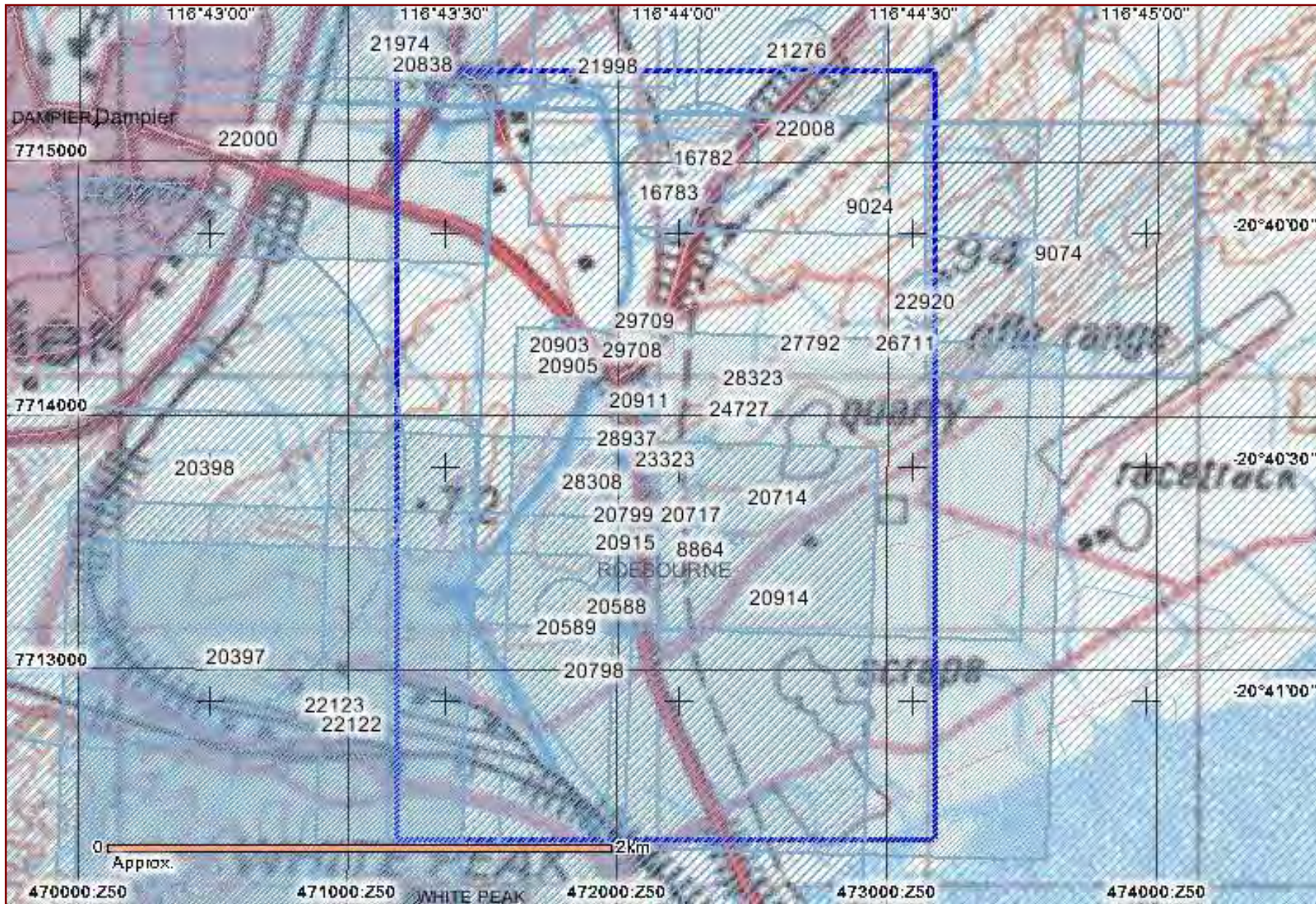


# Aboriginal Heritage Inquiry System

Aboriginal Sites Database

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
28941	IA	O	N	Dampier Road Concentric Stone Arrangement	Man-Made Structure			472124mE 7713765mN Zone 50 [Reliable]	
28942	IA	O	N	Dampier Road Isolated Artefacts		[Other: 3 Isolated Artefacts]		472108mE 7714022mN Zone 50 [Reliable]	
28943	IA	O	N	Dampier Road Engraving 1	Man-Made Structure, Engraving		*Registered Informant names available from DIA.	472138mE 7714038mN Zone 50 [Reliable]	
28944	IA	O	N	Dampier Road Engraving 2	Engraving		*Registered Informant names available from DIA.	472113mE 7713828mN Zone 50 [Reliable]	
28945	IA	O	N	Dampier Road Engraving 3	Engraving		*Registered Informant names available from DIA.	472146mE 7713807mN Zone 50 [Reliable]	
28946	IA	O	N	Dampier Road Engraving 4	Engraving		*Registered Informant names available from DIA.	472136mE 7713854mN Zone 50 [Reliable]	
29163	IA	O	N	Readymix Ece 003	Engraving		*Registered Informant names available from DIA.	472489mE 7713992mN Zone 50 [Reliable]	
29708	IA	O	N	Dampier Highway Stone Pit	Man-Made Structure			472018mE 7714271mN Zone 50 [Reliable]	
29709	IA	O	N	Dampier Highway Engraving	Engraving			472103mE 7714386mN Zone 50 [Reliable]	





### Legend

- Selected Heritage Sites
- Other Heritage Places
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- Search Area

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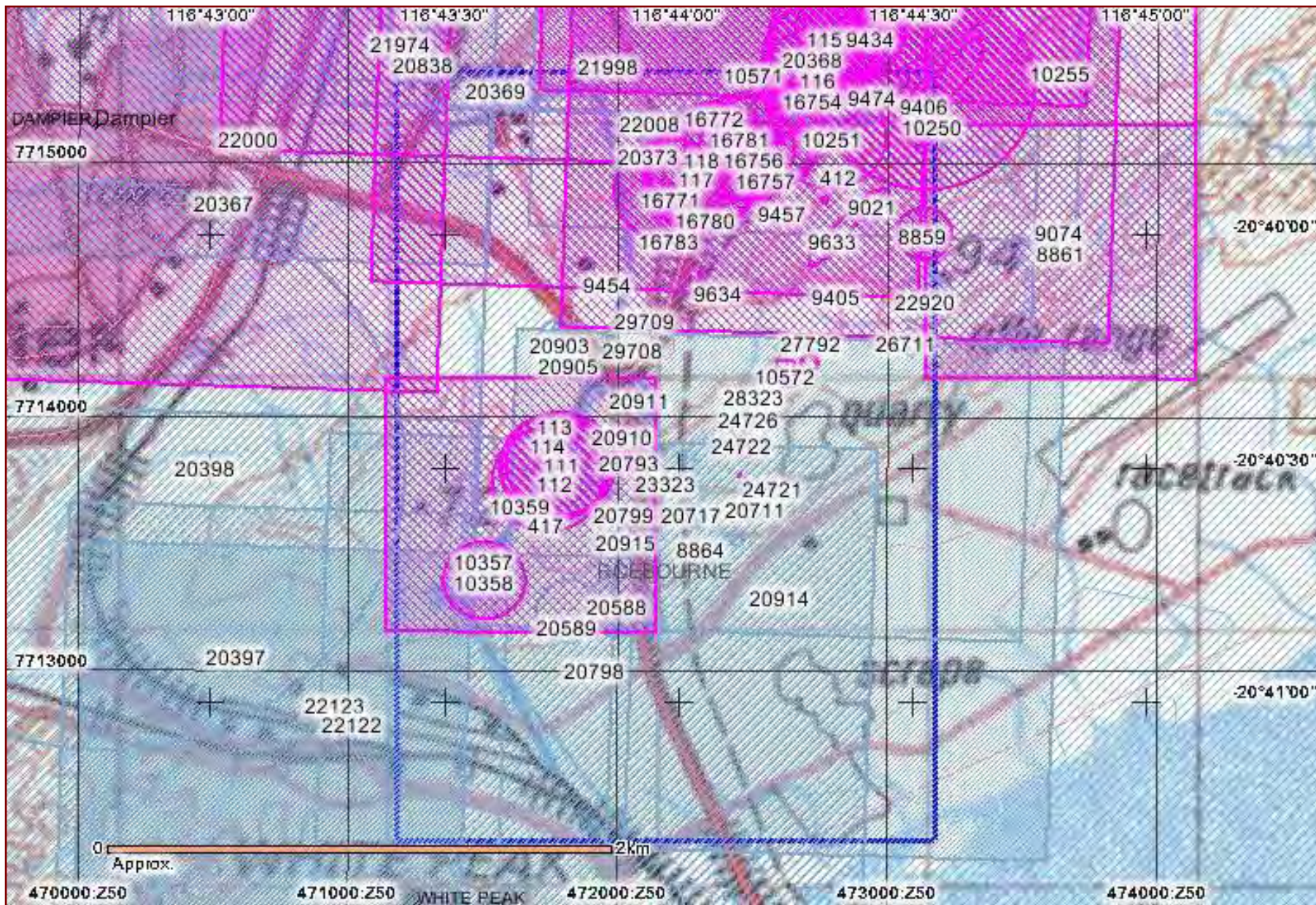
For further important information on using this information please see the Department of Indigenous Affairs' Terms of Use statement at <http://www.dia.wa.gov.au/Terms-Of-Use/>





## Map Showing Registered Aboriginal Sites and Other Heritage Places





### Legend

- Selected Heritage Sites
- Registered Sites
- Other Heritage Places
- Town
- Map Area
- Search Area

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## Search Criteria

0 sites in a search box. The box is formed by these diagonally opposed corner points:

MGA Zone 50	
Northing	Easting
7707491	475116
7708532	475850

## Disclaimer

Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

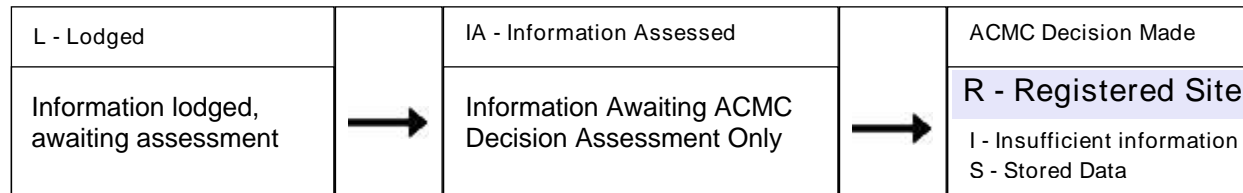
## Copyright

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## Legend

Restriction	Access	Coordinate Accuracy
N No restriction	C Closed	Accuracy is shown as a code in brackets following the site coordinates.
M Male access only	O Open	[Reliable] The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
F Female access	V Vulnerable	[Unreliable] The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

## Status



### \*Explanation of Assessment

Sites lodged with the Department are assessed under the direction of the Registrar of Aboriginal Sites. These are not the final assessment.

Final assessment and decisions will be determined by the Aboriginal Cultural Material Committee (ACMC).

## Spatial Accuracy

Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:Z50' means Easting=5000000, Zone=50.

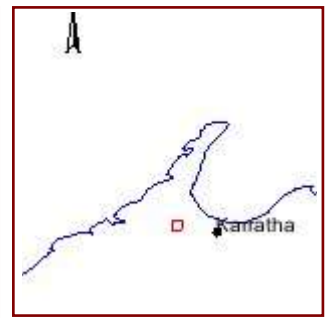
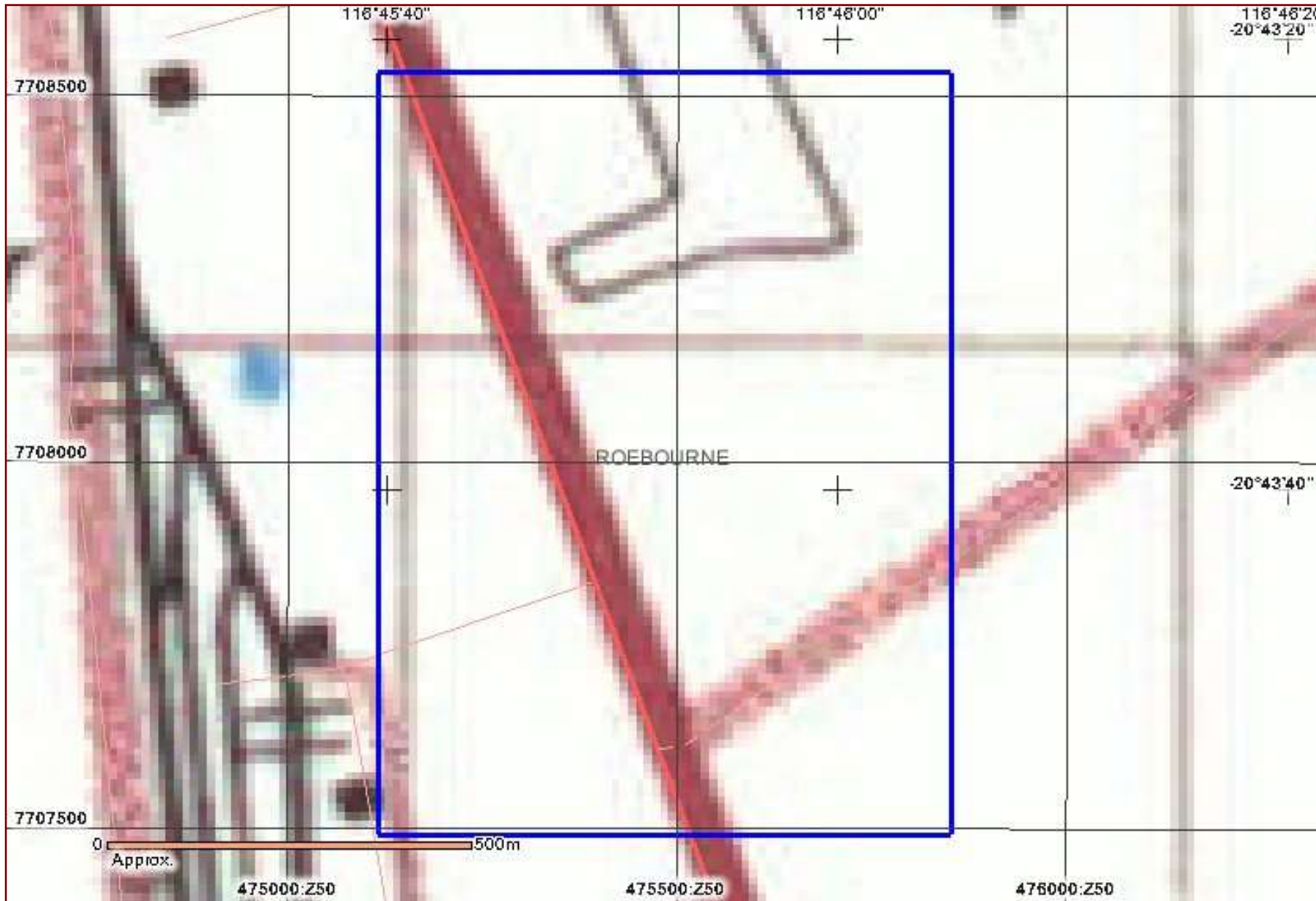
## Sites Shown on Maps

Site boundaries may not appear on maps at low zoom levels



## List of Registered Aboriginal Sites with Map

No results



### Legend

- Selected Heritage Sites
  - Registered Sites
  - Town
  - Map Area
  - Search Area

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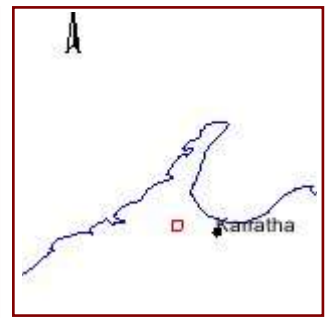
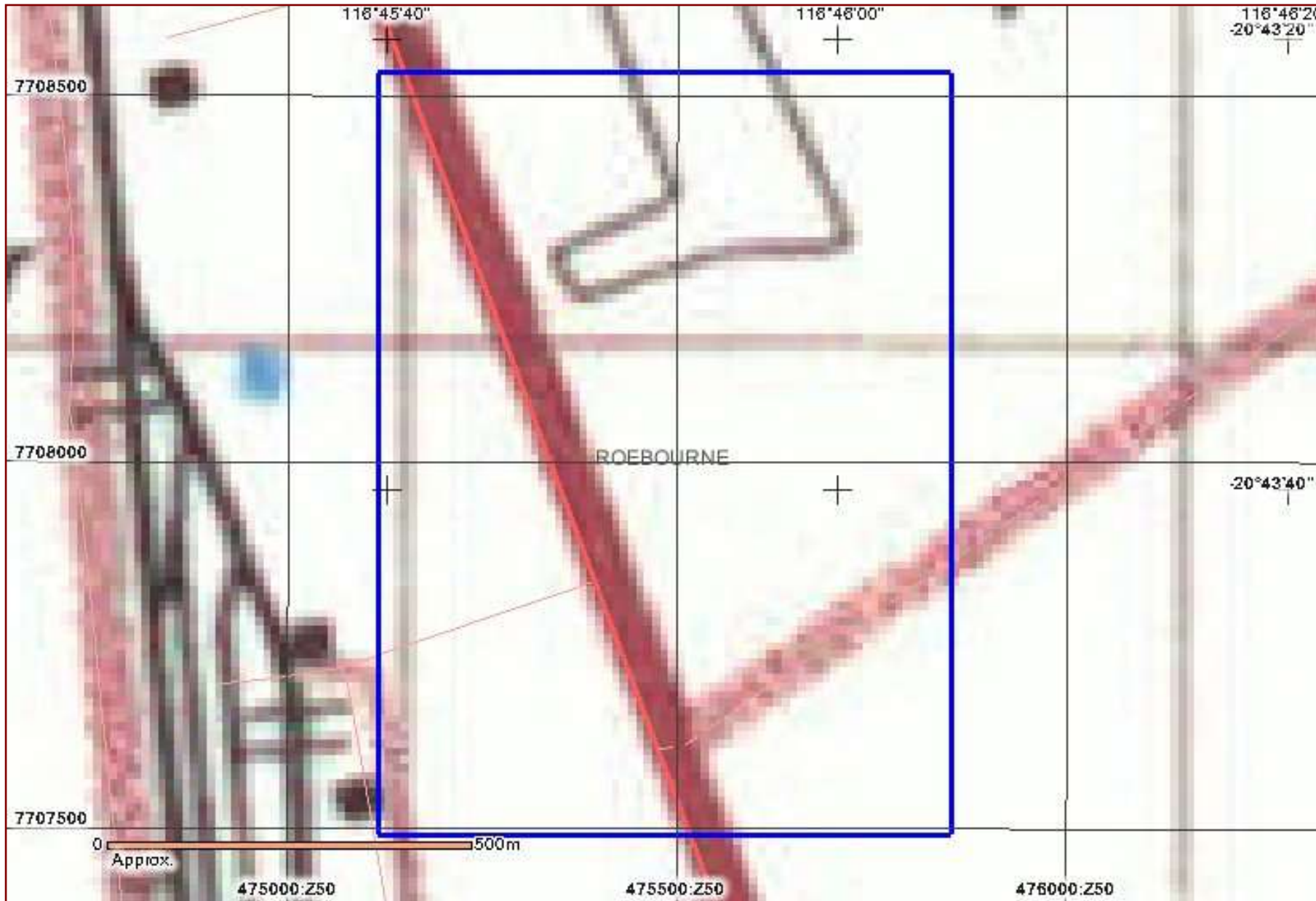
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## List of Other Heritage Places with Map

No results



### Legend

- Selected Heritage Sites
- Other Heritage Places
- Town
- Map Area
- Search Area

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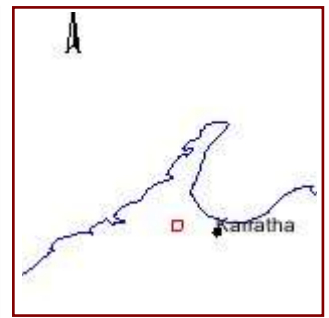
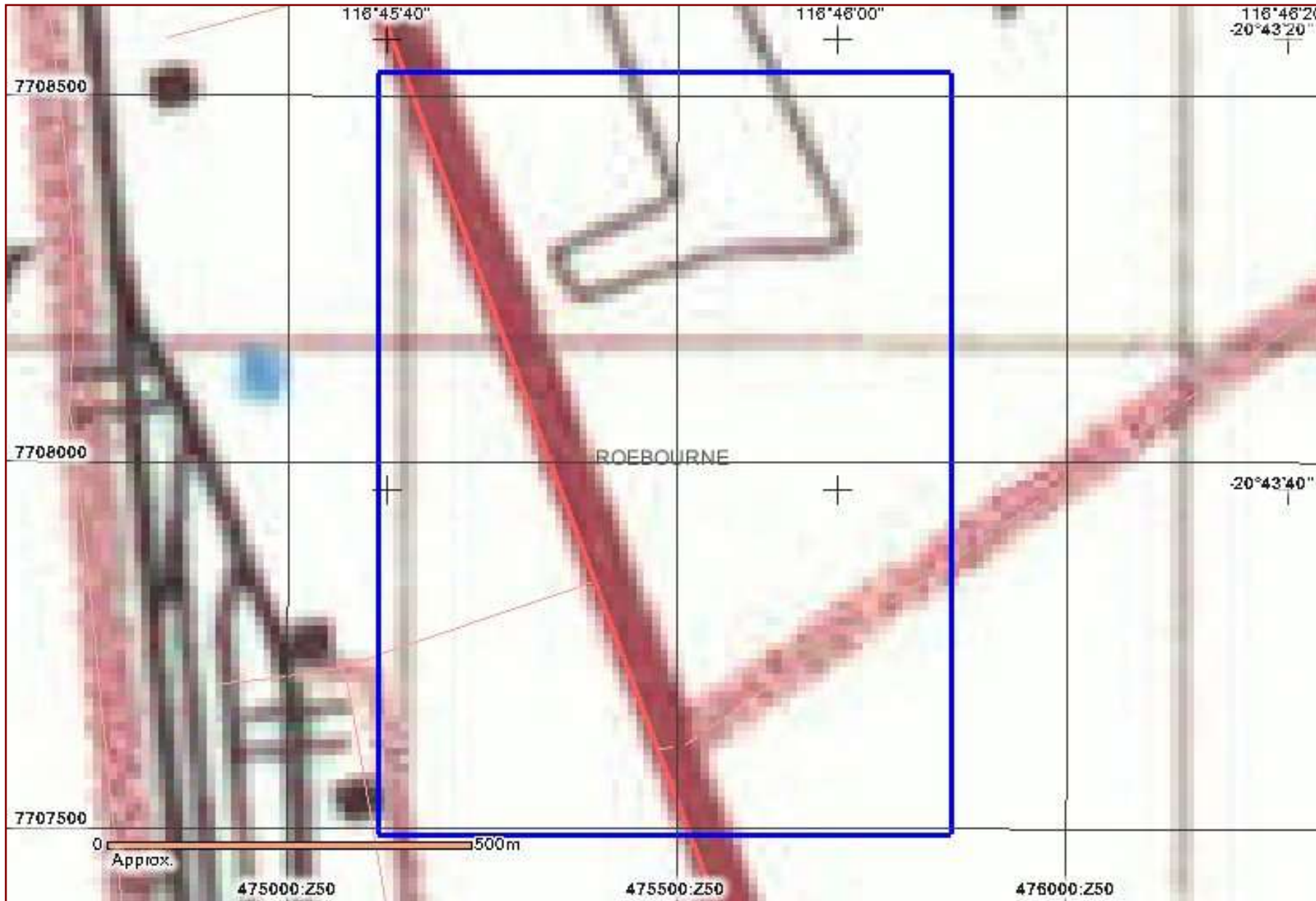
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## Map Showing Registered Aboriginal Sites and Other Heritage Places



### Legend

- Selected Heritage Sites
  - Registered Sites
  - Other Heritage Places
- Town
- Map Area
- Search Area

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## Search Criteria

4 surveys in a search box. The box is formed by these diagonally opposed corner points:

MGA Zone 50	
Northing	Easting
7707480	475123
7708522	475868

## Disclaimer

Heritage Surveys have been mapped using information from the reports and / or other relevant data sources. Heritage Surveys consisting of small discrete areas may not be visible except at large scales. Reports shown may not be held at DIA. Please consult report holder for more information. Refer to [www.dia.wa.gov.au/heritage](http://www.dia.wa.gov.au/heritage) for information on requesting reports held by DIA.

## Copyright

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## Legend

### Access

Some reports are restricted. The type of restriction is shown as a code in brackets following the catalogue number. No code indicates an unrestricted report.

[CLOSED]	Closed
[OWE]	Open with exception
[TBD]	To be determined
[RESTRICTED PENDING]	Restricted pending

## Survey 1236

Project Dampier Highway Carriageway Upgrade Project  
 Start Date 21 Jul 2003  
 Proponents GHD Pty Ltd  
 Main Roads Western Australia  
 Consultants Australian Interaction Consultants  
 Survey Types Ethnographic  
 Aboriginal People Consulted? Yes  
 Related Reports

Report ID	Catalogue Number	Title	Recorders	Held At
20582	HSR P 2003 PAR	Ethnographic Site Identification Upgrade Project at Dampier/Karratha, Pilbara	Ronald T. Parker	DIA

## Survey 3653

Project Dampier Highway Upgrade, Dampier/Karratha  
 Start Date 21 Jul 2003  
 Proponents GHD Pty Ltd  
 Main Roads Western Australia  
 Consultants Australian Interaction Consultants  
 Survey Types Ethnographic  
 Aboriginal People Consulted? Yes  
 Related Reports

Report ID	Catalogue Number	Title	Recorders	Held At
21751	HSR P 2003 PAR [OWE]	Ethnographic site identification survey under the Aboriginal Heritage Act (1972) of Proposed Dampier Highway Carriageway Upgrade Project at Dampier / Karratha, Western Australia	Ron Parker	



## Survey 3604

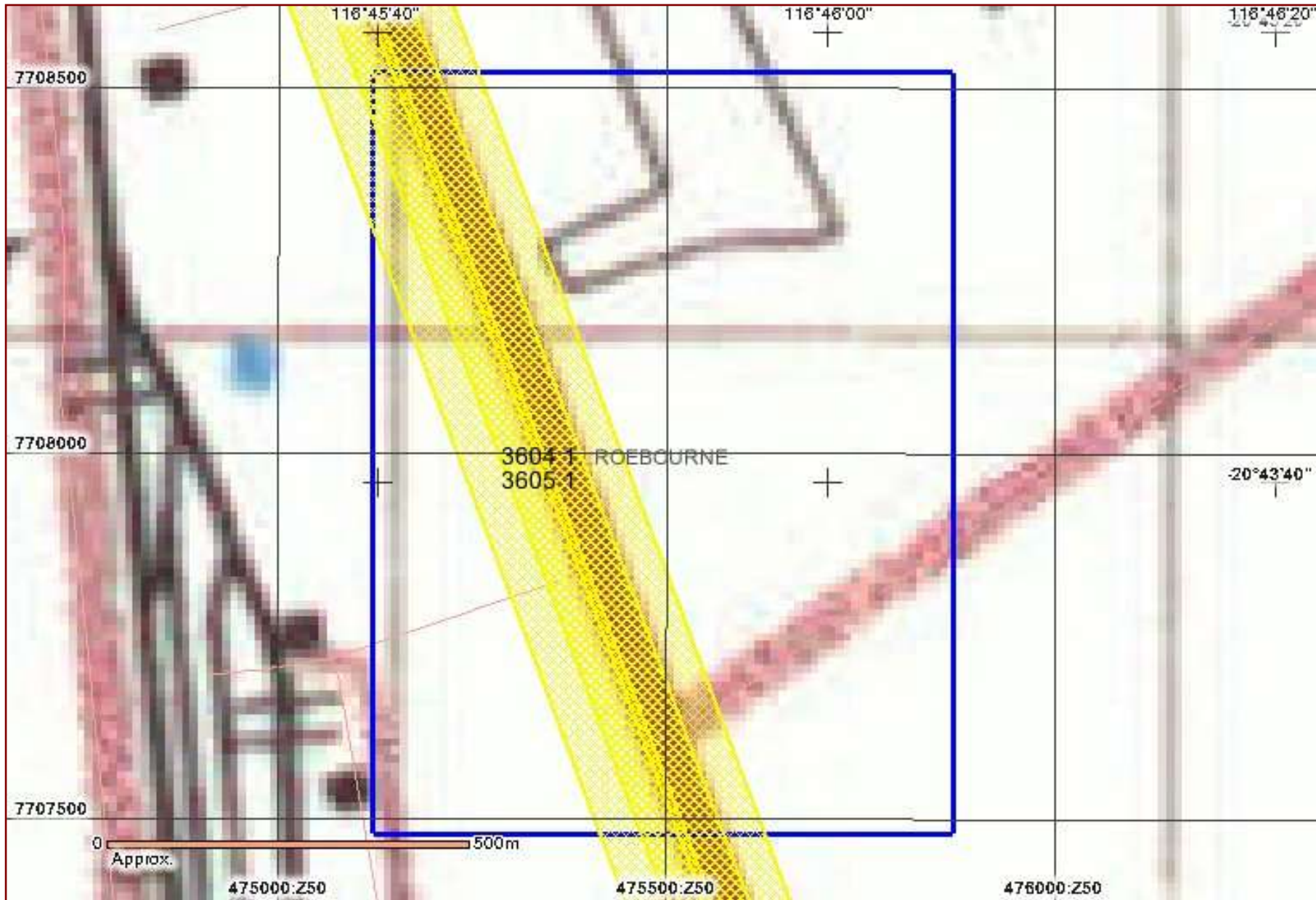
Project Dampier-Karratha Duel Carriageway Project  
 Start Date 09 Jun 2003  
 Proponents Gutteridge, Haskins and Davey Pty Ltd  
 Main Roads Western Australia  
 Consultants R. O'Connor  
 Survey Types Ethnographic  
 Aboriginal People Consulted? Yes  
 Related Reports

Report ID	Catalogue Number	Title	Recorders	Held At
21752	HSR P 2003 OCO	Report on an ethnographic survey of the Proposed Dampier Highway Duel Carriageway Project	Rory O'Connor	

## Survey 3605

Project Karratha to Dampier Highway  
 Start Date 01 Apr 2003  
 Proponents GHD Pty Ltd  
 Consultants Gary Quartermaine  
 Survey Types Archaeological  
 Aboriginal People Consulted? Yes  
 Related Reports

Report ID	Catalogue Number	Title	Recorders	Held At
21750	HSR P 2003 QUA	Report on Archaeological Survey for Aboriginal Sites - Karratha to Dampier	Gary Quartermaine Caroline Heine	



### Legend

- Selected Heritage Surveys
  - Heritage Survey
- Town
- Map Area
- Search Area

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# APPENDIX E

## P. Hammond site visit photos



Plate E1: Burrup Intersection (MRWA, 2009)





Plate E2: Burrup Intersection (MRWA, 2009)





Plate E3: Burrup Intersection (MRWA, 2009)



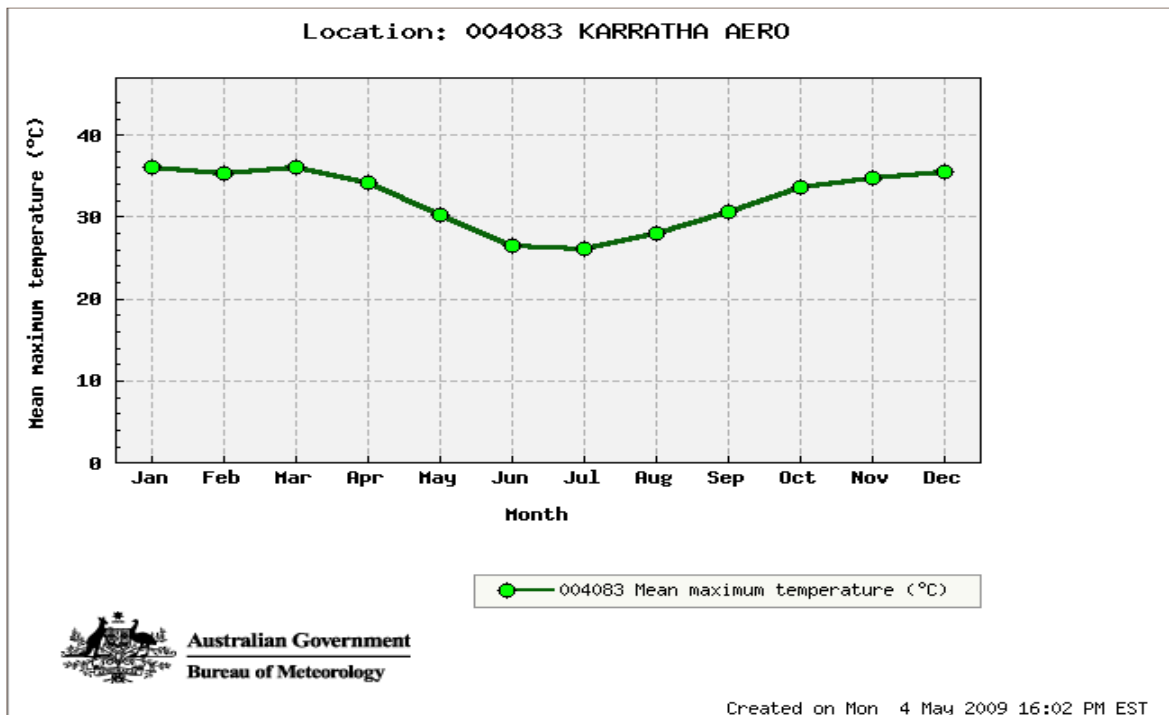
Plate E4: Burrup Intersection (MRWA, 2009)



# APPENDIX F

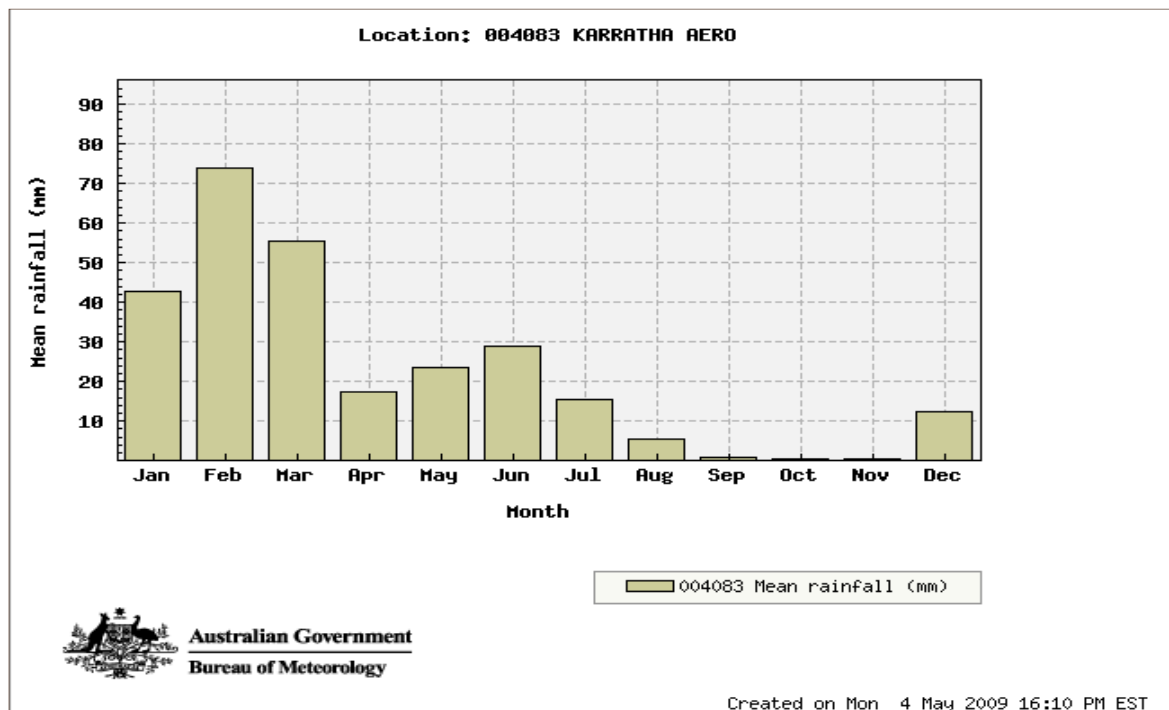
## Climate Data

Figure F1: Average Maximum Temperatures at Karratha Aero site



Source: BoM 2009

Figure F2: Average Rainfall at Karratha Aero site



Source: BoM 2009



# APPENDIX G

## Flora Database Search

**DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DECLARED RARE AND PRIORITY FLORA LIST  
16 September 2010**

SPECIES / TAXON	CONS CODE	DEC REGION	DISTRIBUTION	FLOWER PERIOD
<i>Acacia glaucocaesia</i>	3	P	Karratha, Port Hedland, Mardie, Roebourne, De Grey	Jul-Sep
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>	3	P, GLD, MW, SC	Credo Stn, Norseman, Karratha Stn, Balfour Downs Stn Aug	
<i>Eragrostis lanicaulis</i>	3	P, GLD	Gibson Desert, Karratha	Mar-May/Aug-Oct
<i>Eragrostis surreyana</i>	3	P	Chichester Range, Burrup Peinsula	May-Sep
<i>Gymnanthera cunninghamii</i>	3	MW, P, *	Minilya, Dampier Archipelago, Boodarie, 80 Mile Beach, NT, Qld	Apr, Dec
<i>Rhynchosia bungarensis</i>	4	P	Hamersley Ranges, Chichester Ranges, Yardie Creek, Robe River, Tom Price, Ashburton, East Lewis Island, Burrup Peninsula, Dampier Archipelago	May-Dec
<i>Stackhousia clementii</i>	3	GLD, P	Warburton, Wiluna, Karratha, Little Sandy Desert, NT, SA, Gnaraloo Stn, Burrup Peninsula	
<i>Tephrosia bidwillii</i>	3	P, MW	Yarrie Stn, Yarraloola Stn, Karratha, Callawa Stn, Mt Edgar Stn, Carnarvon	May, Aug
<i>Terminalia supranitifolia</i>	3	P	Robe River, Burrup Peninsula, Dolphin Is., Bungaroo Creek, Yannery River, Harding Dam	Nov-Dec
<i>Themeda</i> sp. Hamersley Station (ME Trudgen 11431)	3	P	Karratha, Millstream, Hamersley Stn, West Angelas, Coondewanna Flats	
<i>Vigna</i> sp. Rockpiles (R. Butcher et al. RB 1400)	3	P	Karratha, Roebourne	May

# APPENDIX H

## EPBC Matters of National Significance Report





Australian Government

Department of Sustainability, Environment,  
Water, Population and Communities

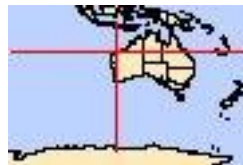
# EPBC Act Protected Matters Report: Coordinates

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

Report created: 07/09/11 16:40:41



## [Summary](#)

## [Details](#)

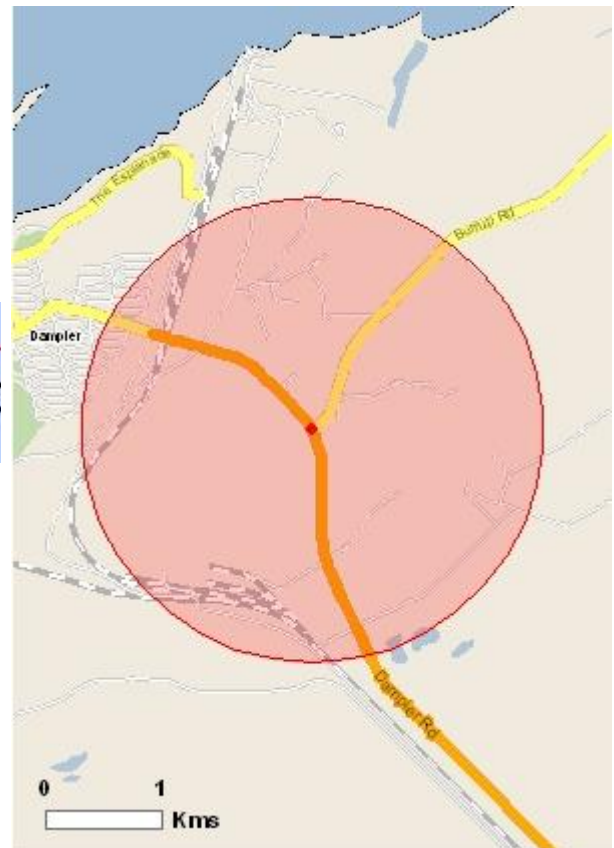
[Matters of NES](#)

[Other matters protected by  
the EPBC Act](#)

[Extra Information](#)

## [Caveat](#)

## [Acknowledgements](#)



This map may contain data which are  
©Commonwealth of Australia (Geoscience  
Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 2.0Km

# Summary

## Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	1
<a href="#">Wetlands of International Significance (Ramsar Wetlands):</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Areas:</a>	None
<a href="#">Threatened Ecological Communities:</a>	None
<a href="#">Threatened Species:</a>	3
<a href="#">Migratory Species:</a>	31

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.environment.gov.au/epbc/permits/index.html>.

<a href="#">Commonwealth Lands:</a>	1
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	36
<a href="#">Whales and Other Cetaceans:</a>	None

<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves:</a>	None

## Report Summary for Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">Place on the RNE:</a>	1
<a href="#">State and Territory Reserves:</a>	None
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	6
<a href="#">Nationally Important Wetlands:</a>	None

## Details

### Matters of National Environmental Significance

#### National Heritage Places [\[ Resource Information \]](#)

Name	Status
<b>Indigenous</b>	
<a href="#">Dampier Archipelago (including Burrup)</a>	Listed place

#### Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>MAMMALS</b>		
<a href="#">Dasyurus hallucatus</a>		
Northern Quoll [331]	Endangered	Species or species habitat likely to occur within area
<a href="#">Rhinonicteris aurantia (Pilbara form)</a>		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat likely to occur within area

#### REPTILES

<a href="#">Liasis olivaceus barroni</a>		
Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species habitat may occur within area

#### Migratory Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a>		
Fork-tailed Swift [678]		Species or species habitat may occur within area
<a href="#">Ardea alba</a>		
Great Egret, White Egret [59541]		Species or species habitat may occur within area
<a href="#">Ardea ibis</a>		
Cattle Egret [59542]		Species or species habitat may occur within area

#### Migratory Terrestrial Species

<a href="#">Haliaeetus leucogaster</a>		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

<a href="#">Hirundo rustica</a> Barn Swallow [662]	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]	Species or species habitat may occur within area
<b>Migratory Wetlands Species</b>	
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]	Species or species habitat known to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]	Species or species habitat may occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]	Species or species habitat may occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Species or species habitat known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Species or species habitat known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a> Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]	Species or species habitat known to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]	Species or species habitat known to occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]	Species or species habitat known to occur within area

[Limosa lapponica](#)

Bar-tailed Godwit [844]

Species or species habitat known to occur within area

[Limosa limosa](#)

Black-tailed Godwit [845]

Species or species habitat known to occur within area

[Numenius madagascariensis](#)

Eastern Curlew [847]

Species or species habitat known to occur within area

[Numenius phaeopus](#)

Whimbrel [849]

Species or species habitat known to occur within area

[Pluvialis fulva](#)

Pacific Golden Plover [25545]

Species or species habitat known to occur within area

[Pluvialis squatarola](#)

Grey Plover [865]

Species or species habitat known to occur within area

[Tringa nebularia](#)

Common Greenshank,  
Greenshank [832]

Species or species habitat known to occur within area

[Tringa stagnatilis](#)

Marsh Sandpiper, Little  
Greenshank [833]

Species or species habitat known to occur within area

[Xenus cinereus](#)

Terek Sandpiper [59300]

Species or species habitat known to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Lands

[\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land -

### Listed Marine Species

[\[ Resource Information \]](#)

Name	Status	Type of Presence
------	--------	------------------

#### Birds

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat known to occur within area

[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species habitat may occur within area

[Ardea alba](#)

Great Egret, White Egret  
[59541]

Species or species habitat may occur within area

[Ardea ibis](#)

Cattle Egret [59542]

Species or species habitat may occur within area

[Arenaria interpres](#)

Ruddy Turnstone [872]

Species or species habitat known to occur within area

<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Species or species habitat known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris subminuta</a> Long-toed Stint [861]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a> Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]	Species or species habitat known to occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]	Species or species habitat likely to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]	Species or species habitat known to occur within area
<a href="#">Himantopus himantopus</a> Black-winged Stilt [870]	Species or species habitat known to occur within area
<a href="#">Hirundo rustica</a> Barn Swallow [662]	Species or species habitat may occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]	Species or species habitat known to occur within area

[Limosa lapponica](#)

Bar-tailed Godwit [844]

Species or species habitat known to occur within area

[Limosa limosa](#)

Black-tailed Godwit [845]

Species or species habitat known to occur within area

[Merops ornatus](#)

Rainbow Bee-eater [670]

Species or species habitat may occur within area

[Numenius madagascariensis](#)

Eastern Curlew [847]

Species or species habitat known to occur within area

[Numenius phaeopus](#)

Whimbrel [849]

Species or species habitat known to occur within area

[Phalaropus lobatus](#)

Red-necked Phalarope [838]

Species or species habitat known to occur within area

[Pluvialis fulva](#)

Pacific Golden Plover [25545]

Species or species habitat known to occur within area

[Pluvialis squatarola](#)

Grey Plover [865]

Species or species habitat known to occur within area

[Recurvirostra novaehollandiae](#)

Red-necked Avocet [871]

Species or species habitat known to occur within area

[Stiltia isabella](#)

Australian Pratincole [818]

Species or species habitat known to occur within area

[Tringa nebularia](#)

Common Greenshank,  
Greenshank [832]

Species or species habitat known to occur within area

[Tringa stagnatilis](#)

Marsh Sandpiper, Little  
Greenshank [833]

Species or species habitat known to occur within area

[Tringa totanus](#)

Common Redshank, Redshank  
[835]

Species or species habitat known to occur within area

[Xenus cinereus](#)

Terek Sandpiper [59300]

Species or species habitat known to occur within area

## Extra Information

### Places on the RNE

[ [Resource Information](#) ]

Note that not all Indigenous sites may be listed.

Name

Status

#### Natural

[Coastal Margin Cape Preston to Cape Keraudren](#) Indicative Place

[WA](#)

### Invasive Species

[ [Resource Information](#) ]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#"><u>Felis catus</u></a>		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<a href="#"><u>Oryctolagus cuniculus</u></a>		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<a href="#"><u>Vulpes vulpes</u></a>		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
<a href="#"><u>Cenchrus ciliaris</u></a>		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area
<a href="#"><u>Parkinsonia aculeata</u></a>		
Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
<a href="#"><u>Prosopis spp.</u></a>		
Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area

## Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

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- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

## Coordinates

-20.67184 116.73111

## Acknowledgements

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- [-Environmental and Resource Management, Queensland](#)
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- [-Birds Australia](#)
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[Department of Sustainability, Environment, Water, Population and Communities](#)

GPO Box 787

Canberra ACT 2601 Australia

+61 2 6274 1111 [ABN](#)

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Department of Sustainability, Environment,  
Water, Population and Communities

# EPBC Act Protected Matters Report: Coordinates

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

**Report created: 07/09/11 16:46:10**



## [Summary](#)

## [Details](#)

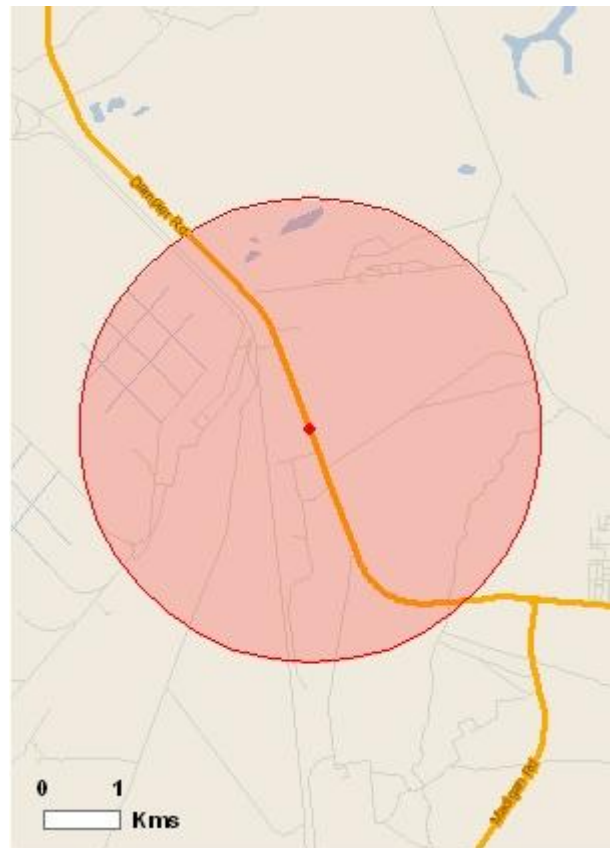
[Matters of NES](#)

[Other matters protected by  
the EPBC Act](#)

[Extra Information](#)

## [Caveat](#)

## [Acknowledgements](#)



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[Coordinates](#)

Buffer: 3.0Km

# Summary

## Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Significance (Ramsar Wetlands):</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Areas:</a>	None
<a href="#">Threatened Ecological Communities:</a>	None
<a href="#">Threatened Species:</a>	3
<a href="#">Migratory Species:</a>	31

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>

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<a href="#">Commonwealth Lands:</a>	None
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	36
<a href="#">Whales and Other Cetaceans:</a>	None

<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves:</a>	None

## Report Summary for Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">Place on the RNE:</a>	1
<a href="#">State and Territory Reserves:</a>	None
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	6
<a href="#">Nationally Important Wetlands:</a>	None

## Details

### Matters of National Environmental Significance

#### Threatened Species [ [Resource Information](#) ]

Name	Status	Type of Presence
------	--------	------------------

#### MAMMALS

##### [Dasyurus hallucatus](#)

Northern Quoll [331]	Endangered	Species or species habitat likely to occur within area
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##### [Rhinonicteris aurantia \(Pilbara form\)](#)

Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat likely to occur within area
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#### REPTILES

##### [Liasis olivaceus barroni](#)

Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species habitat may occur within area
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#### Migratory Species [ [Resource Information](#) ]

Name	Status	Type of Presence
------	--------	------------------

#### Migratory Marine Birds

##### [Apus pacificus](#)

Fork-tailed Swift [678]		Species or species habitat may occur within area
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##### [Ardea alba](#)

Great Egret, White Egret [59541]		Species or species habitat may occur within area
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##### [Ardea ibis](#)

Cattle Egret [59542]		Species or species habitat may occur within area
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#### Migratory Terrestrial Species

##### [Haliaeetus leucogaster](#)

White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
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##### [Hirundo rustica](#)

Barn Swallow [662]		Species or species habitat may occur within area
--------------------	--	--

##### [Merops ornatus](#)

Rainbow Bee-eater [670]		Species or species habitat may occur within area
-------------------------	--	--

#### Migratory Wetlands Species

<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]	Species or species habitat known to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]	Species or species habitat may occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]	Species or species habitat may occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Species or species habitat known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Species or species habitat known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a> Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]	Species or species habitat known to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]	Species or species habitat known to occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]	Species or species habitat known to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]	Species or species habitat known to occur within area
<a href="#">Limosa limosa</a>	

Black-tailed Godwit [845]	Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew [847]	Species or species habitat known to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]	Species or species habitat known to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]	Species or species habitat known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]	Species or species habitat known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]	Species or species habitat known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]	Species or species habitat known to occur within area

## Other Matters Protected by the EPBC Act

### Listed Marine Species [ [Resource Information](#) ]

Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat may occur within area
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Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a>	
Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris subminuta</a>	
Long-toed Stint [861]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a>	
Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a>	
Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a>	
Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius ruficapillus</a>	
Red-capped Plover [881]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a>	
Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
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<a href="#">Hirundo rustica</a>	
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Species or species habitat known to occur within area

[Recurvirostra novaehollandiae](#)

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Species or species habitat known to occur within area

[Stiltia isabella](#)

Australian Pratincole [818]

Species or species habitat known to occur within area

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Name

Status

Type of Presence

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[Felis catus](#)

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[Department of Sustainability, Environment, Water, Population and Communities](#)

GPO Box 787

Canberra ACT 2601 Australia

+61 2 6274 1111 [ABN](#)

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**Report created: 07/09/11 16:42:40**



## [Summary](#)

## [Details](#)

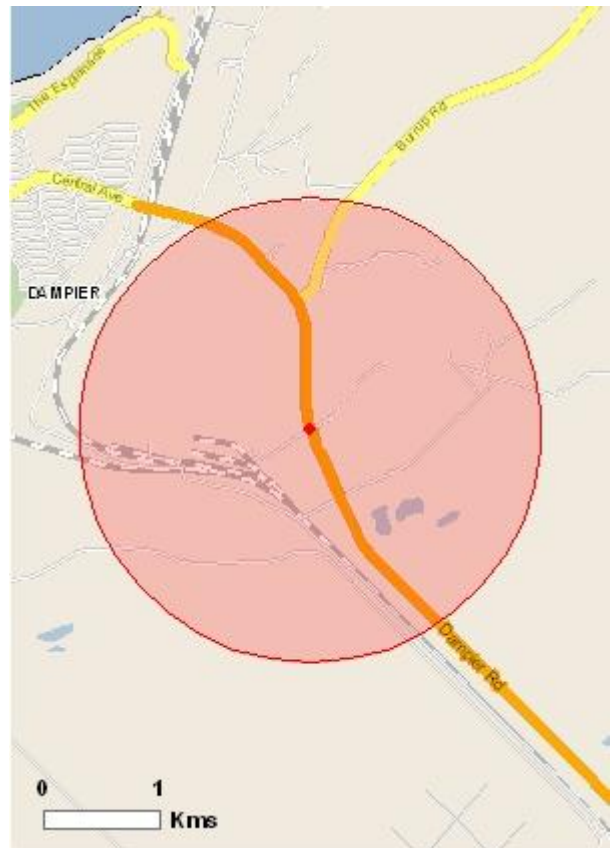
[Matters of NES](#)

[Other matters protected by  
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[Extra Information](#)

## [Caveat](#)

## [Acknowledgements](#)



This map may contain data which are  
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[Coordinates](#)

Buffer: 2.0Km

# Summary

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<a href="#">Commonwealth Marine Areas:</a>	None
<a href="#">Threatened Ecological Communities:</a>	None
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<a href="#">Migratory Species:</a>	31

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<a href="#">Listed Marine Species:</a>	36
<a href="#">Whales and Other Cetaceans:</a>	None



<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves:</a>	None

## Report Summary for Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">Place on the RNE:</a>	1
<a href="#">State and Territory Reserves:</a>	None
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	6
<a href="#">Nationally Important Wetlands:</a>	None

## Details

### Matters of National Environmental Significance

#### National Heritage Places [\[ Resource Information \]](#)

Name	Status
<b>Indigenous</b>	
<a href="#">Dampier Archipelago (including Burrup)</a>	Listed place

#### Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>MAMMALS</b>		
<a href="#">Dasyurus hallucatus</a>		
Northern Quoll [331]	Endangered	Species or species habitat likely to occur within area
<a href="#">Rhinonicteris aurantia (Pilbara form)</a>		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat likely to occur within area

#### REPTILES

<a href="#">Liasis olivaceus barroni</a>		
Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species habitat may occur within area

#### Migratory Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a>		
Fork-tailed Swift [678]		Species or species habitat may occur within area
<a href="#">Ardea alba</a>		
Great Egret, White Egret [59541]		Species or species habitat may occur within area
<a href="#">Ardea ibis</a>		
Cattle Egret [59542]		Species or species habitat may occur within area

#### Migratory Terrestrial Species

<a href="#">Haliaeetus leucogaster</a>		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

<a href="#">Hirundo rustica</a> Barn Swallow [662]	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]	Species or species habitat may occur within area
<b>Migratory Wetlands Species</b>	
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]	Species or species habitat known to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]	Species or species habitat may occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]	Species or species habitat may occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Species or species habitat known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Species or species habitat known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a> Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]	Species or species habitat known to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]	Species or species habitat known to occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]	Species or species habitat known to occur within area

[Limosa lapponica](#)

Bar-tailed Godwit [844]

Species or species habitat known to occur within area

[Limosa limosa](#)

Black-tailed Godwit [845]

Species or species habitat known to occur within area

[Numenius madagascariensis](#)

Eastern Curlew [847]

Species or species habitat known to occur within area

[Numenius phaeopus](#)

Whimbrel [849]

Species or species habitat known to occur within area

[Pluvialis fulva](#)

Pacific Golden Plover [25545]

Species or species habitat known to occur within area

[Pluvialis squatarola](#)

Grey Plover [865]

Species or species habitat known to occur within area

[Tringa nebularia](#)

Common Greenshank,  
Greenshank [832]

Species or species habitat known to occur within area

[Tringa stagnatilis](#)

Marsh Sandpiper, Little  
Greenshank [833]

Species or species habitat known to occur within area

[Xenus cinereus](#)

Terek Sandpiper [59300]

Species or species habitat known to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Lands

[\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land -

### Listed Marine Species

[\[ Resource Information \]](#)

Name	Status	Type of Presence
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#### Birds

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat known to occur within area

[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species habitat may occur within area

[Ardea alba](#)

Great Egret, White Egret  
[59541]

Species or species habitat may occur within area

[Ardea ibis](#)

Cattle Egret [59542]

Species or species habitat may occur within area

[Arenaria interpres](#)

Ruddy Turnstone [872]

Species or species habitat known to occur within area

<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Species or species habitat known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]	Species or species habitat known to occur within area
<a href="#">Calidris subminuta</a> Long-toed Stint [861]	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Species or species habitat known to occur within area
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]	Species or species habitat known to occur within area
<a href="#">Charadrius veredus</a> Oriental Plover, Oriental Dotterel [882]	Species or species habitat known to occur within area
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]	Species or species habitat known to occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]	Species or species habitat likely to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]	Species or species habitat known to occur within area
<a href="#">Himantopus himantopus</a> Black-winged Stilt [870]	Species or species habitat known to occur within area
<a href="#">Hirundo rustica</a> Barn Swallow [662]	Species or species habitat may occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]	Species or species habitat known to occur within area

[Limosa lapponica](#)

Bar-tailed Godwit [844]

Species or species habitat known to occur within area

[Limosa limosa](#)

Black-tailed Godwit [845]

Species or species habitat known to occur within area

[Merops ornatus](#)

Rainbow Bee-eater [670]

Species or species habitat may occur within area

[Numenius madagascariensis](#)

Eastern Curlew [847]

Species or species habitat known to occur within area

[Numenius phaeopus](#)

Whimbrel [849]

Species or species habitat known to occur within area

[Phalaropus lobatus](#)

Red-necked Phalarope [838]

Species or species habitat known to occur within area

[Pluvialis fulva](#)

Pacific Golden Plover [25545]

Species or species habitat known to occur within area

[Pluvialis squatarola](#)

Grey Plover [865]

Species or species habitat known to occur within area

[Recurvirostra novaehollandiae](#)

Red-necked Avocet [871]

Species or species habitat known to occur within area

[Stiltia isabella](#)

Australian Pratincole [818]

Species or species habitat known to occur within area

[Tringa nebularia](#)

Common Greenshank,  
Greenshank [832]

Species or species habitat known to occur within area

[Tringa stagnatilis](#)

Marsh Sandpiper, Little  
Greenshank [833]

Species or species habitat known to occur within area

[Tringa totanus](#)

Common Redshank, Redshank  
[835]

Species or species habitat known to occur within area

[Xenus cinereus](#)

Terek Sandpiper [59300]

Species or species habitat known to occur within area

## Extra Information

### Places on the RNE

[ [Resource Information](#) ]

Note that not all Indigenous sites may be listed.

Name

Status

#### Natural

[Coastal Margin Cape Preston to Cape Keraudren](#) Indicative Place

[WA](#)

### Invasive Species

[ [Resource Information](#) ]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#"><u>Felis catus</u></a>		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<a href="#"><u>Oryctolagus cuniculus</u></a>		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<a href="#"><u>Vulpes vulpes</u></a>		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
<a href="#"><u>Cenchrus ciliaris</u></a>		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area
<a href="#"><u>Parkinsonia aculeata</u></a>		
Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
<a href="#"><u>Prosopis spp.</u></a>		
Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area

## Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are

collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

## Coordinates

-20.68199 116.73215

## Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)



- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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[Department of Sustainability, Environment, Water, Population and Communities](#)

GPO Box 787

Canberra ACT 2601 Australia

+61 2 6274 1111 [ABN](#)

| [Australian Government](#) |

# APPENDIX I

## Department of Food and Agriculture- Declared Weeds Database



## Declared Plants Report

Acacias (*Acacia spp.*, all species not native to Australia (except *Acacia farnesiana*)  
P1, P2; for the whole of the State . All species not native to Australia (except  
*Acacia farnesiana*)

African rue (*Peganum harmala*)  
P1, P2; for the whole of the State

African thistle (*Berkheya rigida*)  
P1, P3; for the whole of the State

Alligator weed (*Alternanthera philoxeroides*)  
P1, P2; for the whole of the State

Aquarium Plants (*all types*)  
P1; for the whole of the State

Arrowhead (*Sagittaria montevidensis*)  
P1, P3; for the whole of the State

Artichoke thistle (*Cynara cardunculus*)  
P1, P3; for the whole of the State

Arum lily (*Zantedeschia aethiopica*)  
P1, P4; for the whole of the State

Athel pine (*Tamarix aphylla*)  
P1; for the whole of the State

Bathurst burr (*Xanthium spinosum*)  
P1;  
P3; For the municipal districts of Coolgardie (S), Kalgoorlie/Boulder (C).  
P2; For the municipal districts of Albany (C), Armadale (C), Ashburton (S),  
Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont  
(C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-  
Greenbushes (S), Brookton (S), Broome (S), Broomehill (S), Bruce Rock  
(S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S),  
Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S),  
Claremont (T), Cockburn (C), Collie (S), Coorow (S), Corrigin (S),  
Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S),  
Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Derby-West  
Kimberley (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S),  
Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth  
(S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S),  
Goomalling (S), Gosnells (C), Greenough (S), Halls Creek (S), Harvey  
(S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S),  
Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S),  
Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S),  
Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C),  
Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S),  
Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin  
(S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S),  
Narembeen (S), Narrogin (S), Narrogin (T), Nedlands (C),  
Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S),  
Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly  
(S), Plantagenet (S), Port Hedland (T), Quairading (S), Ravensthorpe (S),  
Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale

(S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Wyndham-East Kimberley (S), Yalgoo (S), Yilgarn (S), York (S).

Bellyache bush (*Jatropha gossypifolia*)

P2; For the municipal districts of Albany (C), Armadale (C), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), Esperance (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narembeen (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Plantagenet (S), Quairading (S), Ravensthorpe (S), Rockingham (C), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Yalgoo (S), Yilgarn (S), York (S).

P1; for the whole of the State

P4; For the municipal districts of Ashburton (S), Broome (S), Carnarvon (S), Derby-West Kimberley (S), East Pilbara (S), Exmouth (S), Halls Creek (S), Port Hedland (T), Roebourne (S), Wyndham-East Kimberley (S).

Blackberry (*Rubus laudatus*, and *R. fruticosus* agg.- including *R. anglocandicans*, *R. rugosus*, *R. ulmifolius*)

P1; for the whole of the State

P2; For the municipal districts of Boddington (S).

P4; For the municipal districts of Albany (C), Augusta-Margaret River (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Bunbury (C), Busselton (S), Capel (S), Collie (S), Cranbrook (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Harvey (S), Mandurah (C), Manjimup (S), Murray (S), Nannup (S), Plantagenet (S), Serpentine-Jarrahdale (S), Waroona (S).

Boneseed, bitou bush (*Chrysanthemoides monilifera*)

P1, P2; for the whole of the State

Bridal creeper (*Asparagus asparagoides*)

P1; for the whole of the State

Broomrape; branched broomrape (*Orobancha ramosa*; *Orobancha* spp. except *O. minor*)

P1, P2; for the whole of the State

- Cabomba (*Cabomba caroliniana*)  
P1, P2; for the whole of the State
- Calotropis (*Calotropis procera*)  
P1; For the municipal districts of East Pilbara (S), Exmouth (S), Port Hedland (T).  
P3; For the municipal districts of Ashburton (S), East Pilbara (S), Port Hedland (T), Roebourne (S).
- Camelthorn (*Alhagi maurorum*)  
P1, P3; for the whole of the State
- Canadian Pond weed (*Elodea canadensis*)  
P1, P3; for the whole of the State
- Candle bush (*Senna alata*)  
P1, P3; for the whole of the State
- Cape Tulip, one leaf; two leaf Cape tulip (*Moraea flaccida*, *Moraea miniata*)  
P4; For the municipal districts of Albany (C), Augusta-Margaret River (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broomehill (S), Bunbury (C), Busselton (S), Capel (S), Collie (S), Corrigin (S), Cuballing (S), Dardanup (S), Donnybrook-Balingup (S), Dumbleyung (S), Esperance (S), Gnowangerup (S), Harvey (S), Jerramungup (S), Katanning (S), Kojonup (S), Mandurah (C), Manjimup (S), Murray (S), Nannup (S), Narrogin (S), Pingelly (S), Plantagenet (S), Ravensthorpe (S), Serpentine-Jarrahdale (S), Tambellup (S), Wagin (S), Wandering (S), Waroona (S), West Arthur (S), Wickepin (S), Williams (S), Woodanilling (S), Yilgarn (S). and that area of the Cranbrook Shire bordered by Albany Highway, Weir Road, Boyup-Cranbrook Road, Shamrock and Yeriminup Roads and Frankland-Cranbrook Road  
P3; For the municipal districts of Cranbrook (S), Denmark (S), Kent (S). except that area bordered by Albany Highway, Weir Road, Boyup-Cranbrook Road, Shamrock and Yeriminup Roads and Frankland-Cranbrook Road.
- P1; for the whole of the State
- Chilean needle grass (*Nassella neesiana*)  
P1; for the whole of the State
- Chinee apple (*Ziziphus mauritiana*)  
P1, P5; For the municipal districts of Broome (S), Derby-West Kimberley (S), Halls Creek (S), Wyndham-East Kimberley (S).  
P1; For the municipal districts of Albany (C), Armadale (C), Ashburton (S), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narembeen (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam

(S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Plantagenet (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Yalgoo (S), Yilgarn (S), York (S).

Cleavers (*Galium aparine*)

P1, P2; for the whole of the State

Creeping knapweed (*Acroptilon repens*; *Rhaponticum repens*)

P1, P2; for the whole of the State

Devil's claw, small fruit Devi's claw, and purpleflower Devi's claw (*Martynia annua*) and (*Proboscidea louisianica*)

P1, P2; for the whole of the State

Field bindweed (*Convolvulus arvensis*)

P3; For the municipal districts of Esperance (S).

P1; for the whole of the State

Floating water chestnut (*Trapa spp*)

P1, P2; for the whole of the State

Gamba grass (*Andropogon gayanus*)

P1, P2; for the whole of the State

Golden dodder (*Cuscuta campestris*)

P1, P2; For the municipal districts of Armadale (C), Ashburton (S), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broome (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Derby-West Kimberley (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Halls Creek (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narembene (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Wyndham-East Kimberley (S), Yalgoo (S), Yilgarn (S), York (S).

P1, P4; For the municipal districts of Albany (C), Cranbrook (S), Denmark (S),

- Plantagenet (S).
- Gorse, Furze (*Ulex europaeus*)  
P1; for the whole of the State  
P2; For the municipal districts of Armadale (C), Ashburton (S), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broome (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Derby-West Kimberley (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Halls Creek (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narembene (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Wyndham-East Kimberley (S), Yalgoo (S), Yilgarn (S), York (S).
- P3; For the municipal districts of Albany (C), Cranbrook (S), Denmark (S), Plantagenet (S).
- Harrisia cactus (*Harrisia martinii*)  
P1, P3; for the whole of the State
- Hoary cress (*Cardaria draba*, *Lepidium draba*)  
P1, P2; for the whole of the State
- Horehound (*Marrubium vulgare*)  
P1, P2; For the municipal districts of Albany (C), Ashburton (S), Broome (S), Broomehill (S), Carnarvon (S), Cranbrook (S), Cue (S), Denmark (S), Derby-West Kimberley (S), Dumbleyung (S), East Pilbara (S), Exmouth (S), Gnowangerup (S), Halls Creek (S), Katanning (S), Laverton (S), Leonora (S), Meekatharra (S), Menzies (S), Mount Magnet (S), Murchison (S), Ngaanyatjarraku (S), Port Hedland (T), Roebourne (S), Sandstone (S), Shark Bay (S), Tambellup (S), Upper Gascoyne (S), Wagin (S), West Arthur (S), Wiluna (S), Woodanilling (S), Wyndham-East Kimberley (S), Yalgoo (S).
- P1, P3; For the municipal districts of Plantagenet (S).
- P1, P4; For the municipal districts of Coolgardie (S), Dundas (S), Esperance (S), Jerramungup (S), Kalgoorlie/Boulder (C), Kent (S), Kojonup (S), Ravensthorpe (S).
- Horsetails, common horsetail (*Equisetum spp*) (*Equisetum arvense*)  
P1, P3; for the whole of the State
- Hydrocotyl (*Hydrocotyle ranunculoides*)



P1, P3; for the whole of the State  
 Hymenachne (*Hymenachne amplexicaulis*)  
 P1, P2; for the whole of the State  
 Ivy gourd (*Coccinia grandis*)  
 P1, P3; for the whole of the State  
 Jointed goatgrass (*Aegilops cylindrica*)  
 P1, P2; for the whole of the State  
 Kochia (*Bassia scoparia*)  
 P1, P2; for the whole of the State  
 Lagarosiphon (*Lagarosiphon spp.*)  
 P1, P2; for the whole of the State  
 Lantana (*Lantana camara*)  
 P1; for the whole of the State  
 Leafy elodea (*Egeria densa*)  
 P1, P3; for the whole of the State  
 Mesquite (*Prosopis spp. and hybrids*)  
 P4; for the area on Mardie Station bordered by the coast, the boundary  
 between Mardie and Karratha stations, the North West Coastal Hwy,  
 Peter's Creek and the boundary between Yarraloola & Mardie stations  
 P2; for the whole of the State except the area on Mardie Station bordered by  
 the coast, the boundary between Mardie & Karratha stations, the North  
 West Coastal Hwy, Peter's Creek and the boundary between Yarraloola &  
 Mardi stations  
 P1; for the whole of the State  
 Miconia (*Miconia spp*)  
 P1, P2; for the whole of the State  
 Mimosa; Common sensitive plant (*Mimosa pudica*)  
 P1, P3; for the whole of the State  
 Mimosa; Giant sensitive plant (*Mimosa invisa*)  
 P1, P2; for the whole of the State  
 Mimosa; Giant sensitive plant (*Mimosa pigra*)  
 P1, P2; for the whole of the State  
 Mintweed (*Salvia reflexa*)  
 P1, P3; for the whole of the State  
 Needle burr, spiny amaranth (*Amaranthus spinosus*)  
 P1, P2; for the whole of the State  
 Nodding thistle (*Carduus nutans*)  
 P1, P2; for the whole of the State  
 Noogoora burr (*Xanthium strumarium (formerly X. occidentale)*)  
 P1; for the whole of the State  
 P2; For the municipal districts of Albany (C), Armadale (C), Ashburton (S),  
 Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont  
 (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-  
 Greenbushes (S), Brookton (S), Broomehill (S), Bruce Rock (S), Bunbury  
 (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah  
 (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T),  
 Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S),  
 Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S),  
 Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S),  
 Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S),  
 East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S),  
 Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling  
 (S), Gosnells (C), Greenough (S), Harvey (S), Irwin (S), Jerramungup  
 (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning  
 (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S),  
 Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S),  
 Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S),

- Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Naremben (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Plantagenet (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Yalgoo (S), Yilgarn (S), York (S).
- P4; For the municipal districts of Broome (S), Derby-West Kimberley (S), Halls Creek (S), Wyndham-East Kimberley (S).
- Parkinsonia (*Parkinsonia aculeata*)
- P1; for the whole of the State
- P2; For the municipal districts of Ashburton (S), Carnarvon (S), Coolgardie (S), Cue (S), Dundas (S), East Pilbara (S), Exmouth (S), Kalgoorlie/Boulder (C), Laverton (S), Leonora (S), Meekatharra (S), Menzies (S), Mount Magnet (S), Murchison (S), Ngaanyatjarraku (S), Port Hedland (T), Roebourne (S), Sandstone (S), Shark Bay (S), Upper Gascoyne (S), Wiluna (S), Yalgoo (S).
- P4; For the municipal districts of Broome (S), Derby-West Kimberley (S), Halls Creek (S), Wyndham-East Kimberley (S).
- Parrot's feather (*Myriophyllum aquaticum*)
- P1, P3; for the whole of the State
- Parthenium weed (*Parthenium hysterophorus*)
- P1, P2; for the whole of the State
- Paterson's curse (*Echium plantagineum*)
- P1; for the whole of the State
- P3; For the municipal districts of Augusta-Margaret River (S), Broomehill (S), Bunbury (C), Busselton (S), Capel (S), Chittering (S), Collie (S), Cranbrook (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Esperance (S), Gingin (S), Harvey (S), Kent (S), Kojonup (S), Mandurah (C), Moora (S), Murray (S), Ravensthorpe (S), Serpentine-Jarrahdale (S), Tambellup (S), Victoria Plains (S), Wagin (S), Waroona (S), West Arthur (S), Wongan-Ballidu (S), Woodanilling (S).
- P4; For the municipal districts of Albany (C), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Bruce Rock (S), Corrigin (S), Cuballing (S), Dumbleyung (S), Gnowangerup (S), Jerramungup (S), Katanning (S), Kondinin (S), Kulin (S), Lake Grace (S), Manjimup (S), Merredin (S), Mukinbudin (S), Nannup (S), Naremben (S), Narrogin (S), Nungarin (S), Pingelly (S), Plantagenet (S), Wandering (S), Westonia (S), Wickepin (S), Williams (S), Yilgarn (S). and those portions of the municipal districts of Carnamah and Coorow west of the M idlands Road
- Penny cress (*Thlaspi arvense*)
- P1, P2; for the whole of the State
- Perennial thistle or Canada thistle (*Cirsium arvense*)
- P1, P3; for the whole of the State
- Physic nut (*Jatropha curcas*)
- P1; for the whole of the State
- P2; For the municipal districts of Albany (C), Armadale (C), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton

- (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), Esperance (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narembeen (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Plantagenet (S), Quairading (S), Ravensthorpe (S), Rockingham (C), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickiepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Yalgoo (S), Yilgarn (S), York (S).
- P4; For the municipal districts of Ashburton (S), Broome (S), Carnarvon (S), Derby-West Kimberley (S), East Pilbara (S), Exmouth (S), Halls Creek (S), Port Hedland (T), Roebourne (S), Wyndham-East Kimberley (S).
- Pond apple (*Anona glabra*)  
P1, P2; for the whole of the State
- Praxelis (*Praxelis clematidea*)  
P1, P2; for the whole of the State
- Prickly pear (*Opuntia elata*, *O. engelmannii*, *O. ficus-indica*, *O. monacantha*, *O. stricta*)  
P1; For the municipal districts of Ashburton (S), Broome (S), Carnarvon (S), Derby-West Kimberley (S), East Pilbara (S), Exmouth (S), Halls Creek (S), Murchison (S), Port Hedland (T), Roebourne (S), Shark Bay (S), Upper Gascoyne (S), Wyndham-East Kimberley (S).
- P4; For the municipal districts of Carnarvon (S), Exmouth (S), Murchison (S), Shark Bay (S), Upper Gascoyne (S).
- P2; For the municipal districts of Ashburton (S), Broome (S), Derby-West Kimberley (S), East Pilbara (S), Halls Creek (S), Port Hedland (T), Roebourne (S), Wyndham-East Kimberley (S).
- Ragwort (*Senecio jacobaea*)  
P1, P2; for the whole of the State
- Rubber vine (*Cryptostegia madagascariensis*)  
P1, P3; for the whole of the State
- Rubber vine (*Cryptostegia grandiflora*)  
P1, P2; for the whole of the State
- Saffron thistle (*Carthamus lanatus*)  
P3; For the municipal districts of Albany (C), Augusta-Margaret River (S), Broomehill (S), Bunbury (C), Busselton (S), Capel (S), Carnamah (S), Collie (S), Coorow (S), Cranbrook (S), Cunderdin (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Gnowangerup (S), Harvey (S), Katanning (S), Kellerberrin (S), Kojonup (S), Koorda (S), Mandurah (C), Mount Marshall (S), Murray (S), Plantagenet (S), Serpentine-Jarrahdale (S), Tambellup (S), Tammin (S),

- Trayning (S), Wagin (S), Waroona (S), West Arthur (S), Woodanilling (S), Wyalkatchem (S).
- P1; for the whole of the State
- P4; For the municipal districts of Ashburton (S), Beverley (S), Boddington (S), Brookton (S), Broome (S), Bruce Rock (S), Carnarvon (S), Chittering (S), Coolgardie (S), Corrigin (S), Cuballing (S), Cue (S), Dalwallinu (S), Dandaragan (S), Derby-West Kimberley (S), Dundas (S), East Pilbara (S), Esperance (S), Exmouth (S), Gingin (S), Goomalling (S), Halls Creek (S), Jerramungup (S), Kalgoorlie/Boulder (C), Kent (S), Kondinin (S), Kulin (S), Lake Grace (S), Laverton (S), Leonora (S), Meekatharra (S), Menzies (S), Merredin (S), Moora (S), Mount Magnet (S), Mukinbudin (S), Murchison (S), Narembeen (S), Narrogin (S), Ngaanyatjarraku (S), Northam (S), Northam (T), Nungarin (S), Pingelly (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Roebourne (S), Sandstone (S), Shark Bay (S), Toodyay (S), Upper Gascoyne (S), Victoria Plains (S), Wandering (S), Westonia (S), Wickiepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Wyndham-East Kimberley (S), Yalgoo (S), Yilgarn (S), York (S).
- Sagittaria (*Sagittaria platyphylla*)
- P1, P3; for the whole of the State
- Salvinia (*Salvinia molesta*)
- P1, P2; for the whole of the State
- Senegal tea (*Gymnocoronis spilanthoides*)
- P1, P3; for the whole of the State
- Serrated tussock (*Nasella trichotoma*)
- P1, P2; for the whole of the State
- Shield pennywort (*Hydrocotyle verticillata*)
- P1, P2; for the whole of the State
- Siam weed (*Chromolaena odorata*)
- P1, P2; for the whole of the State
- Sicklepod (*Senna tora* - see also *Senna obtusifolia*)
- P1, P2; for the whole of the State
- Sicklepod, javabean (*Senna obtusifolia*)
- P1, P3; for the whole of the State
- Sida (*Sida acuta* and *Sida cordifolia*)
- P1; For the municipal districts of Ashburton (S), Broome (S), Derby-West Kimberley (S), Esperance (S), Halls Creek (S), Port Hedland (T), Roebourne (S), Wyndham-East Kimberley (S). for all that part of the State north of the 26th parallel of latitude.
- Skeleton weed (*Chondrilla juncea*)
- P1, P2; For the municipal districts of Albany (C), Armadale (C), Ashburton (S), Augusta-Margaret River (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Boyup Brook (S), Bridgetown-Greenbushes (S), Brookton (S), Broome (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Busselton (S), Cambridge (T), Canning (C), Capel (S), Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Collie (S), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cranbrook (S), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Dardanup (S), Denmark (S), Derby-West Kimberley (S), Donnybrook-Balingup (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Greenough (S), Halls Creek (S), Harvey (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Mandurah (C), Manjimup (S),

Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mullewa (S), Mundaring (S), Murchison (S), Murray (S), Nannup (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Northampton (S), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Plantagenet (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Serpentine-Jarrahdale (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), Waroona (S), West Arthur (S), Westonia (S), Wickiepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Wyndham-East Kimberley (S), Yalgoo (S), York (S).

P1, P3; For the municipal districts of Narembeen (S), Yilgarn (S).

South African Cape rush (*Elegia tectorum*)

P1, P2; for the whole of the State

St. John's wort (*Hypericum perforatum*)

P1, P2; For the municipal districts of Albany (C), Armadale (C), Ashburton (S), Bassendean (T), Bayswater (C), Belmont (C), Broome (S), Broomehill (S), Cambridge (T), Canning (C), Carnamah (S), Carnarvon (S), Chapman Valley (S), Chittering (S), Claremont (T), Cockburn (C), Coolgardie (S), Coorow (S), Cottesloe (T), Cranbrook (S), Cue (S), Dalwallinu (S), Dandaragan (S), Denmark (S), Derby-West Kimberley (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Geraldton (C), Gingin (S), Gnowangerup (S), Gosnells (C), Greenough (S), Halls Creek (S), Irwin (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kent (S), Kojonup (S), Kondinin (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Meekatharra (S), Melville (C), Menzies (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mullewa (S), Mundaring (S), Murchison (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northampton (S), Peppermint Grove (S), Perenjori (S), Perth (C), Plantagenet (S), Port Hedland (T), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Three Springs (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wanneroo (S), West Arthur (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyndham-East Kimberley (S), Yalgoo (S).

Thatching reed (*Thamnochortus insignis*)

P1, P2; for the whole of the State

Three-horned bedstraw (*Galium tricornutum*)

P1, P2; for the whole of the State

Tutsan (*Hypericum androsaemum*)

P1, P2; for the whole of the State

Tutsan, flair (*Hypericum x inodorum*)

P4; for lands approved for cultivation by the Chief Officer.

P2; for the whole of the State , except lands approved for cultivation by the Chief Officer.

Variiegated thistle (*Silybum marianum*)

P1; for the whole of the State

P2; For the municipal districts of Armadale (C), Ashburton (S), Bassendean (T), Bayswater (C), Belmont (C), Beverley (S), Boddington (S), Brookton (S), Broome (S), Broomehill (S), Bruce Rock (S), Bunbury (C), Cambridge (T), Canning (C), Carnamah (S), Carnarvon (S), Chittering (S),

Claremont (T), Cockburn (C), Coolgardie (S), Coorow (S), Corrigin (S), Cottesloe (T), Cuballing (S), Cue (S), Cunderdin (S), Dalwallinu (S), Dandaragan (S), Derby-West Kimberley (S), Dowerin (S), Dumbleyung (S), Dundas (S), East Fremantle (T), East Pilbara (S), Esperance (S), Exmouth (S), Fremantle (C), Gingin (S), Gnowangerup (S), Goomalling (S), Gosnells (C), Halls Creek (S), Jerramungup (S), Joondalup (C), Kalamunda (S), Kalgoorlie/Boulder (C), Katanning (S), Kellerberrin (S), Kent (S), Kojonup (S), Kondinin (S), Koorda (S), Kulin (S), Kwinana (T), Lake Grace (S), Laverton (S), Leonora (S), Meekatharra (S), Melville (C), Menzies (S), Merredin (S), Mingenew (S), Moora (S), Morawa (S), Mosman Park (T), Mount Magnet (S), Mount Marshall (S), Mukinbudin (S), Mundaring (S), Murchison (S), Narembeen (S), Narrogin (S), Narrogin (T), Nedlands (C), Ngaanyatjarraku (S), Northam (S), Northam (T), Nungarin (S), Peppermint Grove (S), Perenjori (S), Perth (C), Pingelly (S), Port Hedland (T), Quairading (S), Ravensthorpe (S), Rockingham (C), Roebourne (S), Sandstone (S), Shark Bay (S), South Perth (C), Stirling (C), Subiaco (C), Swan (S), Tambellup (S), Tammin (S), Three Springs (S), Toodyay (S), Trayning (S), Upper Gascoyne (S), Victoria Park (T), Victoria Plains (S), Vincent (T), Wagin (S), Wandering (S), Wanneroo (S), West Arthur (S), Westonia (S), Wickiepin (S), Williams (S), Wiluna (S), Wongan-Ballidu (S), Woodanilling (S), Wyalkatchem (S), Wyndham-East Kimberley (S), Yalgoo (S), Yilgarn (S), York (S).

P3; For the municipal districts of Augusta-Margaret River (S), Boyup Brook (S), Busselton (S), Capel (S), Chapman Valley (S), Collie (S), Cranbrook (S), Geraldton (C), Greenough (S), Harvey (S), Irwin (S), Mandurah (C), Mullewa (S), Murray (S), Nannup (S), Northampton (S), Serpentine-Jarrahdale (S), Waroona (S).

P4; For the municipal districts of Albany (C), Bridgetown-Greenbushes (S), Dardanup (S), Denmark (S), Donnybrook-Balingup (S), Manjimup (S), Plantagenet (S).

Water hyacinth (*Eichhornia crassipes*)

P1, P3; for the whole of the State

Water lettuce (*Pistia stratiotes*)

P1, P3; for the whole of the State

Willows (*Salix spp*, except weeping willow (*S.babylonica*), pussy willow (*S.x calodendron*) and sterile pussy willow (*S.x reichardtii*))

P1; for the whole of the State

Witchweed (*Striga spp* - all non-indigenous *Striga* species)

P1, P2; for the whole of the State

Yellow burr weed (*Amsinckia spp.*)

P1, P2; for the whole of the State

# APPENDIX J

## Fauna Database Search Results



360 Environmental  
Attn: Ross Cullen  
PO Box 14  
WEST PERTH WA 6872

Dear Ross

### REQUEST FOR THREATENED FAUNA INFORMATION

I refer to your request of 2<sup>nd</sup> September for information on threatened fauna occurring in the vicinity of the Dampier study area.

A search was undertaken for this area of the Department's Threatened Fauna database, which includes species which are declared as '*Rare or likely to become extinct* (Schedule 1)', '*Birds protected under an international agreement* (Schedule 3)', and '*Other specially protected fauna* (Schedule 4)'.

Attached also are the conditions under which this information has been supplied. Your attention is specifically drawn to the sixth point that refers to the requirement to undertake field investigations for the accurate determination of threatened fauna occurrence at a site. The information supplied should be regarded as an indication only of the threatened fauna that may be present.

An invoice for \$200.00 (plus GST), being the set charge for the supply of this information, will be forwarded.

It would be appreciated if any populations of threatened fauna encountered by you in the area could be reported to this Department to ensure their ongoing management.

If you require any further details, or wish to discuss threatened fauna management, please contact my Principal Zoologist, Dr Peter Mawson on 08 9334 0421.

Yours sincerely

.....  
for Keiran McNamara  
DIRECTOR GENERAL  
Department of Environment and Conservation

13 September 2011



**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

THREATENED FAUNA INFORMATION

Conditions In Respect Of Supply Of Information

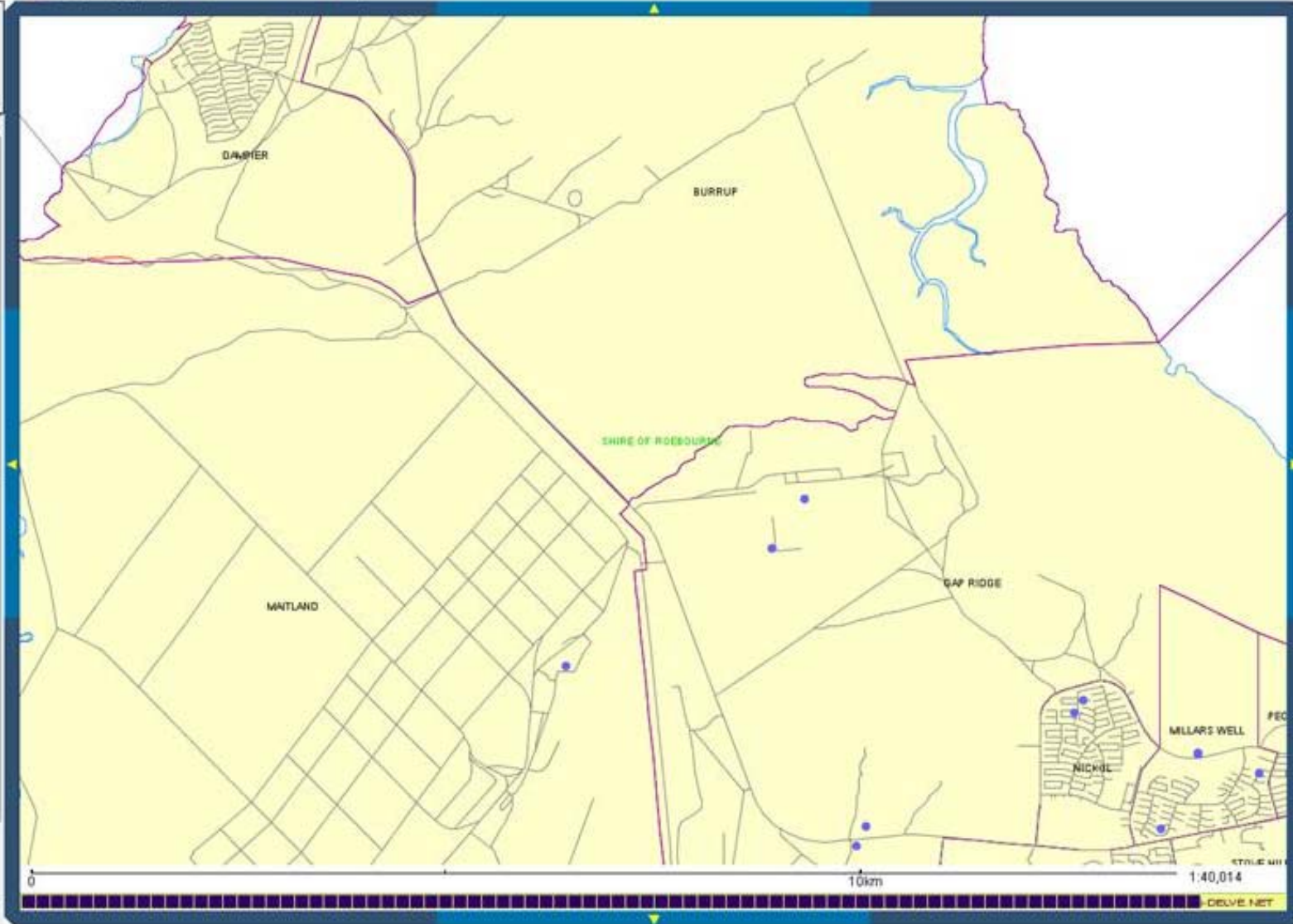
- \* All requests for data to be made in writing to the Executive Director, Department of Environment and Conservation, Attention: Principal Zoologist, Species and Communities Branch.
- \* The data supplied may not be supplied to other organisations, nor be used for any purpose other than for the project for which they have been provided without the prior consent of the Executive Director, Department of Environment and Conservation
- \* Specific locality information for Threatened Fauna is regarded as confidential, and should be treated as such by receiving organisations. Specific locality information for Threatened Fauna may not be used in reports without the written permission of the Executive Director, Department of Environment and Conservation. Reports may only show generalised locations or, where necessary, show specific locations without identifying species. The Principal Zoologist is to be contacted for guidance on the presentation of Threatened Fauna information.
- \* Receiving organisations should note that while every effort has been made to prevent errors and omissions in the data, they may be present. The Department of Environment and Conservation accepts no responsibility for this.
- \* Receiving organisations must also recognise that the database is subject to continual updating and amendment, and such considerations should be taken into account by the user.
- \* It should be noted that the supplied data do not necessarily represent a comprehensive listing of the Threatened Fauna of the area in question. Its comprehensiveness is dependent of the amount of survey carried out within a specified area. The receiving organisation should employ a biologist/zoologist, if required, to undertake a survey of the area under consideration.
- \* Acknowledgment of the Department of Environment and Conservation as the source of data is to be made in any published material. Copies of all such publications are to be forwarded to the Department of Environment and Conservation, Attention; Principal Zoologist, Species and Communities Branch.

# APPENDIX K

## Department of Water Geographic Data Atlas Results



- Planning and Cadastre
  - Cadastre - DLI
  - DoW Estate
  - Location
  - Localities - DLI
  - Boundaries
    - Clearing Control Calculators
    - Water Resource Management
    - Water Demand Regions
    - Local Government Authorities
- Environment
  - F101 Swan River and Tributaries
  - F101 Drywater Weirs
  - Drywater Subways
  - F101 Surface Water Areas
  - F101 Ingestion Dams
  - RDA Rivers
  - Allocation Water Supply 24
- Public Drinking Water Source
  - Protection Area - P1
  - Protection Area - P2
  - Protection Area - P3
  - Protection Area - Not Assign
  - Surface Water Allocation Sub
  - Surface Water Allocation Area
- Wetland Management Areas
- Water Management Zones
- Geoscientific Information
  - GW contours, Historical max
  - GW contours, May 2003
  - Hydrogeology GW Salinity G
  - Hydrogeology (250K)



## Welcome

The Geographic Data Atlas is an interactive web mapping tool that allows you to freely view and download DoW geographic data.

Note that some datasets belong to other government agencies and are provided for viewing purposes only. These are identified in the theme selector by an agency acronym (eg: DLI).

All downloads of geographic data are subject to a standard licence agreement for data transfer. Data downloaded is in ESRI shapefile format with symbology and metadata bundled together in a zip file.

[Click here](#) for a quick introduction to using the Geographic Data Atlas mapping interface.

[Click here](#) to contact us or provide feedback on the site.

# APPENDIX L

## Contaminated Sites results



Search for Known Contaminated Sites

Search Criteria [Switch to Advanced Search](#)

Street of No.:

Street Name:

Suburb/Town:

Title (Volume/Folio):

Crown Land Reserve No.:

Please enter at least one of the following:  
Street Name, Suburb/Town, Title or Crown Land Reserve Number.

# APPENDIX M

## Ass Self-Assessment form

## Applicant

The applicant is the person with whom the WAPC will correspond and, if the application is approved, the person to whom the approval will be sent.

WAPC reference no

Full name

Applicant signature

Date

Application property  
details

## Step 1

### Assess the possibility of acid sulfate soils disturbance

Question 1: Are any dewatering or drainage works (either temporary or permanent) proposed to be undertaken?

yes  no

Question 2: Is excavation of 100 cubic metres or more of soil proposed?

yes  no

(In lay person's terms 100 cubic metres is about 10 standard-sized dump truck loads.)

If no to both question 1 and question 2 then no further investigation is required at this stage. Please sign this form and submit it, together with a completed 'Clearance of Conditions Request' form and required information, to the Department of Environment and Conservation (DEC).

If yes to either question 1 or question 2 go on to step 2.

## Step 2

### Conduct an acid sulfate soils investigation in accordance with the DEC's *Identification and Investigation of Acid Sulfate Soils* guideline

Question 3: Did the acid sulfate soils investigation indicate that there are acid sulfate soils present?

yes  no

If no to question 3, then no further investigation is required at this stage. Please sign this form and submit it, together with the written results of the investigation (in the form of an acid sulfate soils report) and a completed 'Clearance of Conditions Request' form and required information, to the DEC with a request for clearance of the acid sulfate soils condition.

If yes to question 3, please sign this form and submit it, together with the written results of the investigation (in the form of an acid sulfate soils report), an acid sulfate soils management plan and a copy of the approved subdivision plan, to the DEC with a request for approval of the management plan.

Note: After completion of site works in accordance with the approved management plan you will be required to submit a closure report, prepared in accordance with the DEC's acid sulfate soils guideline series, to the DEC together with a request for clearance of the acid sulfate soils condition.

## Declaration

I declare that the information provided is true and correct to the best of my knowledge.

A completed 'Clearance of Conditions Request' form and required information is attached to this form (a copy can be downloaded from <http://www.dec.wa.gov.au/management-and-protection/land-use-planning/land-use-planning-forms.html>)

Applicant signature: .....

Date: .....

Submit form to the

Department of Environment and Conservation (DEC)  
Locked Bag 104  
Bentley DC WA 6983

If you have any questions relating to the Acid Sulfate Soils Self-Assessment form, please contact Acid Sulfate Soils Section (DEC) on 1300 762 982 for assistance.

# APPENDIX N

## Vegetation Clearing Assessment Report



## MRWA Vegetation Clearing Assessment Report

This report has been prepared to assist MRWA in addressing condition 7 “Assessment of Clearing Impacts” under Clearing Permit CPS 818.

For guidance on how to complete the form, refer to DEC completed reports (active permits) at [https://secure.dec.wa.gov.au/cps\\_reports/](https://secure.dec.wa.gov.au/cps_reports/).

# MRWA Vegetation Clearing Assessment Report

This report has been prepared to assist MRWA in addressing condition 7 "Assessment of Clearing Impacts" under Clearing Permit CPS 818.

For guidance on how to complete the form, refer to DEC completed reports (active permits) at [https://secure.dec.wa.gov.au/cps\\_reports/](https://secure.dec.wa.gov.au/cps_reports/).

## 1. AREA UNDER ASSESSMENT DETAILS

### Proponent (Main Roads) details

Contacts:

Project Manager:  
Phone:  
Environment Officer:  
Phone:

### Property details

Property/Road:

- Intersection of Dampier Highway and Burrup Road
- Intersection of Dampier Highway and Two Mile Access Road
- Intersection of Dampier Highway and Carr Civil Access Road

Colloquial name:

### Area under assessment

Clearing Area (ha) or No. Trees	Method of Clearing	For the purpose of:	Site Plan Attached
	Vegetation clearing will be undertaken via mechanical means using a bulldozer (or similar)	The upgrade to the existing intersections.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

### Avoidance/Minimise clearing

How have the clearing impacts been minimised?

- Only areas required to be cleared for the purposes of upgrading the intersections and maintaining safety has been included in area proposed to be cleared.

## 2. BACKGROUND

### Existing environment and information

Description of the native vegetation under application

(suggestion: To determine Vegetation Condition use - Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.)

Site Visit Undertaken	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fauna / Flora Survey Undertaken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Site Report Attached	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Fauna / Flora Survey Report Attached	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Site Photos Attached	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other Relevant References Attached	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Vegetation Complex(s)	Clearing Description	Vegetation Condition(s)	Comment
589: Mosaic of Short bunch grassland - savanna /grass plain (Pilbara) / Hummock grasslands, grass steppe; soft Spinifex. 171.99997: Hummock grasslands, grass steppe; soft spinifex	Permanent	Unknown	

## 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**

Site is not known for DRF, Priority Flora or Threatened Ecological Communities (TEC's). The DEC databases list none of these as occurring on the site. The DEC advises that there are no known DRF and 4 known examples of Priority Flora within 5 km of the site (the search area was 10 km). The DEC advises that there are no TEC's on or near the site but examples of A search of the DEC's Threatened Ecological Community (TEC) database (2011) indicates there is an occurrence of the 'Priority 1' ecological community - 'Roebourne Plains coastal grasslands with *gilgai microrelief* on deep cracking clays (Roebourne Plains gilgai grasslands)' within 5 km of the intersections (Figure 5) (Appendix A). Buffers for examples of this Priority Ecological Community (PEC) are located over the Carr Civil Access Track intersection (database search radius 5 km from site).

Previous surveys engaged by MRWA have not located any DRF, Priority Flora, PECs or TECs within the proposed disturbance footprints.

Native vegetation mapping on the Natural Resource Management (NRM) Shared Land Information Platform (SLIP) database indicates the area of the Burrup Road and Two Mile Access Track intersections is classified as a mosaic of hummock grasslands, grass steppe and soft Spinifex. The area of the Carr Civil Access Track intersection is classified on the NRM SLIP database as a mosaic of short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe and soft Spinifex.

Searches of DEC and SEWPAC databases indicates the potential presence of a number of conservation significant fauna however as remnant vegetation is typically degraded adjacent to existing roads it is unlikely the vegetation present provides significant habitat. The area proposed to be cleared is also relatively small.

**Methodology** DEC Database Searches  
DSEWPAC database searches  
Beard 1975

**(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 three intersection areas are not known to support significant populations of threatened fauna. Although searches of the DEC and SEWPAC databases indicated the potential presence, or habitat, of conservation significant fauna, the landforms and habitats are likely to be considered well represented in the region. In addition, the small size of the three clearing areas (5.29 ha) is not likely to be considered a significant loss of existing habitat.

**Methodology** DEC Database searches  
DSEWPAC database searches  
Site visit

**(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 listed occurrences of DRF on or near the site (DEC database). The DEC databases list no DRF or Priority Flora in any of the investigation areas. The DEC advises that there are no known DRF listed as occurring within 5 km of the site (which was the database search area). Four populations of examples of Priority Flora were located near to the investigation areas.

Based on the available information, the proposal is unlikely to be at variance to this principle.

**Methodology** DEC Database searches  
DSEWPAC database searches

**(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 unlikely to be at variance to this Principle**

There are no listed occurrences of TECs on or near any of the investigation areas.

Based on the available information, the proposal is unlikely to be at variance to this proposal.

**Methodology** DEC Database searches  
DSEWPAC database searches

**(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 vegetation communities described as present over the three investigation areas are well represented throughout the Pilbara region. Although PEC buffers are located over the Carr Civil Access Track Road, these have not been identified in the area proposed for disturbance.

Based on the available information, it is unlikely this proposal will be at variance to this principle.

**Methodology** DEC Database searches  
DSEWPAC database searches

Site visit

**(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**

Available information indicates there are no natural drainage lines or watercourses intersected by or directly adjacent to the three investigation areas.

Based on this available information, it is unlikely this proposal will be at variance to this principle.

**Methodology** DoW database search  
Site visit

**(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**

Due to the relatively small area (5.29 ha) of disturbance required for the upgrade of the intersections, no conservation significant environmental values and appropriate construction management actions, the proposal is unlikely to cause appreciable land degradation.

Based on available information, it is unlikely this proposal will be at variance to this principle.

**Methodology**

**(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**

There are no nearby conservation areas. The nearest terrestrial conservation area is the Millstream-Chichester National Park, located approximately 60 kilometres south-east of the application area. Given the distance of the application area from any conservation areas, the removal of 5.29 ha of native vegetation is not expected to have an impact on the environmental values of these conservation areas.

Based on available information, it is unlikely this proposal will be at variance to this principle.

**Methodology**

**(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 proposal does not involve deep excavation or dewatering and as such is unlikely to impact on the quality of underground water. As there are no watercourses on the site, and due to the minor clearing required (5.29 ha) the proposal is unlikely to have a significant impact upon surface or underground water in the Karratha region.

Based on available information, it is unlikely this proposal will be at variance to this principle.

**Methodology** DoW database searches  
Site visit

**(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**

Due to the relatively small area of the clearing (5.29 ha) within the Karratha coastal catchment area (approximately 774,300 ha) and no significant watercourses likely to be impacted by the proposed upgrade to the three intersections, it is unlikely this proposal will be at variance to this principle.

**Methodology**

**Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.**

**Comments** Land access is managed through MRWA and Native Title is likely to have been previously dealt with. However, management of Native Title or other Aboriginal Heritage issues will be continually managed through the project.

**4. SUBMISSIONS**

Not applicable

**5. ASSESSOR'S RECOMMENDATIONS**

**List of Principles seriously at variance, at variance or maybe at variance** **Recommendation** Proposal is unlikely to be at variance to the clearing principles.

**6. REFERENCES**

**OFFICER PREPARING REPORT**

Report prepared on 15/09/2011 by  
Joseph Toon  
Senior Environmental Scientist  
360 Environmental  
9388 8360



# 360

environmental



10 Bermondsey Street West Leederville WA 6007 **t** (+618) 9388 8360 **f** (+618) 9381 2360  
PO BOX 14, West Perth WA 6872  
**w** 360environmental.com.au **e** admin@360environmental.com.au

● people ● planet ● professional